

Lancashire Teaching Hospitals NHS
NHS Foundation Trust

Time-motion study evaluating the cost of Intravenous Patient – Controlled Analgesia: a service evaluation

Michelle Ting Ying Hui[1]

Shiva S Tripathi[2]

[1]University of Manchester, UK

[2]Consultant in Anaesthesia and Pain Medicine, Lancashire Teaching Hospitals NHS Foundation Trust,, PR2 9HT, UK

Abstract

Background: Intravenous patient-controlled analgesia (IV PCA) is effective and commonly used in the acute post – operative setting. However, previous studies identified a large variation in the cost of IV PCAs.

Methods: A time-motion study was conducted to evaluate the costs, non-value added activities and potential cost-effective measures. An external observer observed 14 patients over 121 hours on the Major Trauma Ward and Colorectal Surgical Ward, alternating between 6 days shifts and 5 night shifts over 6 weeks.

Results: The median time spent by healthcare professionals (HCPs) on managing PCAs over 48 hours per patient was 4.31 hours (range: 3.20 – 7.14 hours). Nurses carried 61% of the workload of IV PCA among HCPs. The median total cost over 48 hours was £88.10 for morphine PCA and £99.55 for oxycodone PCA. The non-value added activities that were identified included waiting time for nurse and physician, searching for IV PCA components, excessive travelling time, poor pain assessment and inappropriate patient selection.

Discussion: Results suggest that the cost of IV PCA falls into the lower end of range suggested by the current literature. There is potential to maximize cost-effectiveness by minimising the non-value added activities identified. This service evaluation developed recommendations from four aspects: education, policy, device design and storage to improve patient satisfaction while minimising cost.

Biography

Michelle Ting is currently in her 4th year at Manchester Medical School with a strong interest in global health, anaesthetics and pain management. Dr Shiva Tripathi is a consultant anaesthetist and clinical director for pain management at Lancashire Teaching Hospitals.

Presenting author details

Full name: Michelle Ting Ying Hui

Session name/number: Pain management through nursing

Category: Oral

Email id: michelle.ting-2@student.manchester.ac.uk

Contact number: + 44 7561 075977