

Original Article

Benchmarking as a tool of continuous quality improvement in postoperative pain management

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Summary

Background and objective: Quality of acute pain management is far from being satisfactory. These deficits are not caused by the complexity of the medical problem but by difficulties in organization and hospital structures, and procedures. Continuous quality improvement is a recommended tool to overcome such difficulties and to increase quality in the long run. This study reports the implementation of benchmarking-based continuous quality improvement to improve postoperative pain management at a university hospital. **Methods:** A specialised pain nurse interviewed patients of three surgical departments on the first day after surgery, and continuously assessed process and outcome quality parameters. A multidisciplinary team of anaesthetists, surgeons, nurses and pharmacists implemented a regular procedure of data analysing and internal benchmarking. Results and suggested improvements were fed back to the healthcare teams. **Results:** From 1998 to 2002, 6756 patients were assessed. Average pain on ambulation and maximal pain were 3.7 ± 2.4 and 5.0 ± 2.5 (mean \pm SD) on a 11-point numeric rating scale. Pain intensity at rest was 1.9 ± 1.8 . Over time, pain intensity on ambulation decreased ($P = 0.022$) whereas maximal pain and pain at rest remained unchanged. There was an increase in the number of patients who received non-opioid analgesia ($P < 0.001$). **Conclusions:** A continuous quality improvement process could be established and is now successfully used in clinical routine. Cornerstones of this project were frequent assessments of process and outcome parameters, regular benchmarking and implementation of feedback mechanisms. Changes in organization of medical management and multidisciplinary teamwork seem to be more important than medical or technical aspects.

Keywords: QUALITY ASSURANCE, health care; BENCHMARKING; PAIN POSTOPERATIVE.

Introduction

Reduction of postoperative pain is not only an ethical commitment but may improve surgical outcome under certain circumstances [1]. Surveys from various countries show that the quality of acute pain management is far from being satisfactory [2–4], although numerous reports about appropriate techniques and

drugs have been published. Thus, the reasons for inadequate pain treatment are mainly deficits in organisation and personal resources and not medical problems: '... it appears that the solution to the problems of postoperative pain management lies not so much in the development of new techniques but in the development of an organisation to exploit existing expertise' [5].

The American Pain Society recommended implementation of continuous quality improvement (CQI) strategies to detect and improve deficits in pain management [6,7]. Key elements of a CQI include continuous re-assessment and analysis of processes and outcomes. In the field of acute pain, several studies have shown the effectiveness of particular

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