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## **Cover Page Footnote**

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## Abstract

**Objective:** The objective of this study was to report changes in patient pain satisfaction and quality indicator scoring of post-operative pain using key phrasing, or standardised scripts, as the nursing intervention.

**Sample/setting:** Data was collected from an ambulatory surgery clinic in an American non-profit, 185-bed community hospital which is part of a nationally ranked health system.

**Method:** This study used a before-and-after design in which quality improvement data was collected from the Press Ganey™ ambulatory surgery surveys completed by patients undergoing hand surgery. Changes in outcomes were measured three months before and during the key phrase intervention.

**Results:** Data indicated a 16.7 per cent increase in patient satisfaction scores with pain management during the key phrasing intervention.

**Implications:** Use of key phrasing in patient education prior to surgical procedures in this American health care setting improved patient satisfaction scores and can translate to improved quality and safety and satisfaction scores and better reimbursement rates for health care organisations.

**Keywords:** Pain management, patient satisfaction, preoperative, quality improvement, key phrasing

## Introduction

Patients have immediate access to online information about health care providers and facilities which translates to higher expectations regarding patient care services provided and the overall patient experience<sup>1</sup>. Similar to hospitals in Australia using the Australian hospital patient experience question set (AHPEQS), hospitals in the United States (US) collect Hospital Consumer Assessment of Health Care Providers and Systems (HCAHPS or CAHPS®) survey data to measure patient experiences in hospitals and day services. Pain

management is part of patient experience and satisfaction data. In the autumn of 2012, meaningful use legislation was instituted as part of the Affordable Care Act in the USA. The US government health care reimbursement agency then began withholding hospitals' reimbursements based on their quality performance and patient satisfaction results<sup>2</sup>. If certain expectations were not met, hospitals were penalised with reduced reimbursements. Since 2013, reimbursements to hospitals have been withheld by 25 per cent each year. (For example, if a hospital used

to get \$100 000 in reimbursements, it now only gets \$75 000.

HCAHPS data is also publicly reported on the Hospital Compare website<sup>4</sup> which allows US consumers the ability to compare health care institutions. The US health system is a competitive environment in which patients can select what they perceive to be the 'best' health care, basing their judgement on reports or website data such as Hospital Compare<sup>5</sup>. A recent US study on compassion fatigue in emergency nurses indicates that patient experiences can directly affect a health care organisation's brand reputation and competitive advantage<sup>6</sup>.

Researchers found that patient perception regarding post-operative pain management has remained stagnant over the past two decades<sup>7</sup>. Other research showed a direct correlation between the level of patient satisfaction regarding care and patients' overall experiences with how well their pain was managed following surgery<sup>8</sup>. Poor pain management was also noted to lead to impaired health, decreased patient satisfaction and increased health care costs. Research has also shown that perioperative education and communication addressing patients' level of knowledge, attitudes and fears regarding post-operative pain can enhance patient outcomes and pain management satisfaction<sup>9,10</sup>.

In January 2018, pain management measures on HCAHPS changed to focus on communication about pain between hospital staff and patients<sup>5</sup>. One way to improve patient outcomes and pain management satisfaction is for nurses to openly and consistently communicate with, ask and teach patients about pain. Key phrasing, or standardised scripts, is an essential tool that

nurses can use during patient education and communication and can change patient behaviour and expectations without additional cost to an organisation<sup>11,12</sup>. Research suggests that satisfaction with care may be influenced by managing patient expectations and decreasing anxiety through clear communication of the care plan and the use of words that convey a sense of care by the provider<sup>9</sup>. Perioperative nurses who educate patients and communicate consistently through patient interviews before surgery can play a crucial role in successful patient outcomes and overall patient satisfaction with pain management<sup>10,13</sup>.

## Objectives

This quality improvement (QI) project involved adding a key phrase (see below right) about expected pain management to the education provided by nurses to patients before they had hand surgery. The primary aim for this QI project was to improve patient perceptions and scoring of post-operative pain. It is hypothesised that enhanced preoperative education regarding expected pain management will help increase patient satisfaction and hence pain management and post-surgical survey scores.

## Sample and setting

This QI project occurred in a preoperative evaluation clinic (PEC) affiliated with a US midwestern, non-profit, 185-bed community hospital serving a predominately Caucasian population in spring 2017. The hospital is part of a top-ranked national health care system with campuses located across the United States. Patient satisfaction survey results indicated pain management in the ambulatory surgery setting at this hospital had not seen improvements in recent months despite attempts to do so. The

Standards for Quality Improvement Reporting Excellence (SQUIRE) 2.0 guidelines provided a framework for this project to report new knowledge and to improve the quality, safety and value of health care<sup>14</sup>.

## Methods and variables

The study site hospital for this project and the university where the project coordinator was a graduate student deemed this study as exempt from requiring Institutional Review Board (IRB) approval as de-identified data was collected from a third party and the hospital name and corresponding employees would not be identified. The HCAHPS survey was sent to all ambulatory surgery patients upon hospital discharge. Comparison data was obtained three months' pre-intervention and three months' post-intervention. Only data from the question 'Degree to which your pain was controlled' on the ambulatory surgery survey was used. Options for answering this question used a five-point Likert-type scale (1 being 'very poor', 2 being 'poor', 3 being 'fair', 4 being 'good' and 5 being 'very good').

Seven PEC nurses who consented to participate in this pilot project made preoperative phone calls to patients scheduled for upcoming hand surgery, reading the following key phrase intervention.

## Key phrase

'A certain amount of pain is expected in the days following your surgery. The best way to control the pain is for you to take your prescription pain medication as directed by your surgeon. While it may not be possible to completely eliminate your pain, it is our goal to make you as comfortable as possible.'

## Results

During the three-month project timeframe, 96 patients had hand surgery at the PEC. The nurses were able to reach 26 patients by phone and read the key phrase intervention to them. Satisfaction survey results were returned by 17 of the 26 patients who had the intervention. Of these 17 patients in the key phrase intervention group (post-intervention group), eight were male, nine were female, and all were Caucasian between 23 and 43 years of age. Comparison data from a convenience sample of surveys from 17 patients who did not have the intervention (pre-intervention group) included six males and 11 females, all of whom were Caucasian and between 28 and 50 years of age.

Results indicated that no patients in either group rated their pain control as 'very poor,' 'poor,' or 'fair.' About one-fourth, 26.5 per cent (N=4), of patients rated their pain satisfaction as 'good' in the pre-intervention group, compared to 14.2 per cent (N=2) of patients in the post-intervention group. Most patients in both groups rated their pain satisfaction as 'very good,' with 73.5 per cent (N=13) of patients in the pre-intervention group and 85.8 per cent (N=15) in the post-intervention

group (Table 1). The mean pain management scores of the pre- and post-intervention groups were 4.76, and 4.88 respectively. Despite the small sample size and lack of statistical significance in this project, reduction of patients' perceptions of post-operative pain was clinically significant.

### Implications for perioperative nursing

Nurses are essential in the QI process because they continually communicate procedural and educational information to patients. An effective way nurses can improve communication, patient care and overall patient satisfaction may be through the use of key phrasing. This QI project concluded that better patient education and the use of key phrasing about pain management prior to procedures yielded an improvement with patient satisfaction scores on patient satisfaction surveys similar to the literature reviewed<sup>10</sup>. Thanks to the key phrase nursing intervention, improved satisfaction scores, such as AHPEQS and HCAHPS, are available and can be viewed by patients online. Patients reviewing such indicators can increase their confidence and guide their choice and selection of health care agencies.

### Knowledge translation

Patients can determine the best place for their health care and procedures by reviewing national quality metrics and data that are publicly available online. In addition, US health care agencies lose reimbursement if such quality metrics are not met. Nurses in this project used structured interviews and key phrasing to improve post-surgical patient satisfaction and pain management scores, which also improved the health care setting and its quality indicators and benchmarks, and therefore reimbursements received. Patient satisfaction as a direct and public measure of quality of care is changing the way health care across the world addresses quality improvement and nurses can be the impetus and provide the interventions for such change.

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### Declaration of conflicting interests

The authors declare there is no conflict of interest.

**Table 1: Post-operative pain management data between two groups**

	very good	good	fair	poor	very poor
Responses to: 'Degree to which your pain was controlled'	5	4	3	2	1
Patients without key phrasing intervention N=17	13 (73.5 per cent)	4 (26.5 per cent)	0	0	0
Patients with key phrase intervention N=17	15 (85.8 per cent)	2 (14.2 per cent)	0	0	0

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