

Patient-reported incidents in hospital: do scores for surgical and non-surgical patients differ? Results from a national survey

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Introduction

In the Norwegian national system for measuring patient experiences, the experiences of somatic inpatient are divided into 10 indicators. One of these, patient reported patient safety, consists of 12 items. Available literature indicate that surgical patients experience more adverse events than other patients (1, 2). We wanted to find out if there were differences in surgical and non-surgical patients' experiences of patient safety. Surgical patients were defined as patients who had undergone any procedure in the chapters A-H, J, K, N, P or Q in the Nomesco classification of surgical procedures (NCSP). This applied to 4,531 patients with a score on the patient safety indicator.

Material and Methods

A national postal survey was conducted in 2015 including 23,460 patients, response rate on 59%.

The patient safety indicator was constructed by categorizing the original items into positive or negative evaluations (table 1), and given as the percentage of positive evaluations to the items. A total of 12,586 patients obtained a score on the indicator with an average score on 88.

Table 1: Items and categories and scores to the patient safety indicator. Scores are percent positive responses

Item	Positive categories	Negative categories	n	Non-surgical	Surgical
Did you experience that important information about you had reached the right people?	To a great extent To a very great extent	Not at all To a small extent To some extent	12264	73	80
Do you believe you were incorrectly treated by the hospital in any way (as far as you yourself are able to judge)?	Not at all To a small extent	To some extent To a great extent To a very great extent	12380	89	92
Did you experience any administrative mistakes during your hospital stay?	No	Yes, once Yes, more than once	12565	88	90
Did you experience that the staff forgot to check your identity?	No	Yes, once Yes, more than once	12571	96	98
Did you experience that the staff forgot to give you important information?	No	Yes, once Yes, more than once	12561	91	93
Did you get a wrong or delayed diagnosis in connection with your hospital stay?	Not at all To a small extent	To some extent To a great extent To a very great extent	10243	91	95
Did you suffer any unnecessary injury or unnecessary problem as a result of a surgical procedure or examination?	Not at all To a small extent	To some extent To a great extent To a very great extent	9893	91	90
Did you receive the wrong medication, or were you incorrectly medicated in any other way?	Not at all To a small extent	To some extent To a great extent To a very great extent	11302	94	96
Did you experience insufficient hand hygiene (hand washing) among the staff?	Not at all To a small extent	To some extent To a great extent To a very great extent	11189	96	97
Did you get an infection in connection with your hospital stay?	No	Yes	11840	92	92
If you experienced mistakes or unnecessary problems in connection with your hospital stay, did the staff handle the mistake or problem in a satisfactory way?	To a great extent To a very great extent	Not at all To a small extent To some extent	3964	48	52
Was an updated list of your medications reviewed with you when you were discharged from hospital?	Yes	No	8290	68	67
Total score on the Patient safety indicator			12586	87	90

Scores were calculated for surgical and non-surgical patients. The differences in scores were assessed by t-test. A multivariate linear regression was conducted to assess the influence of surgical procedures when adjusted for relevant background variables.

Results

Surgical patients gave significantly more positive evaluations on the patient safety indicator and most of its underlying items than non-surgical patients (table 1). Unadjusted mean score 90 vs 87 (p<0,001).

When adjusted for relevant background variables (table 2), we found no difference between surgical and other patients on the patient safety indicator (p=0,653). The variables with strongest effect on the indicator score were self-rated health (better health, more positive evaluation), age (higher age, more positive evaluation) and number of admissions last two years (more admissions more negative evaluation).

Table 2: Influence of background variables on the patient safety indicator

	B	Std. Error	Beta	t	sig
(Constant)	74,049	1,370		54,038	,000
University hospital	-,621	,572	-,011	-1,086	,277
Length of stay	-,153	,030	-,048	-5,082	,000
Charlson score	,208	,114	,017	1,818	,069
Volume of surgical procedures at hospital	-1,567	,248	-,066	-6,320	,000
Emergency admission	-1,334	,350	-,041	-3,811	,000
Age	,148	,009	,155	15,961	,000
Self rated health	2,767	,156	,187	17,697	,000
Patients' number of hospital admissions last 2 years	-2,356	,160	-,148	-14,772	,000
Who filled in the questionnaire	1,365	,437	,030	3,127	,002
Type of hospital	1,151	,175	,071	6,580	,000
Surgical patients	-,151	,335	-,005	-,450	,653

Conclusion

The difference reported in better scores on experienced patient safety among patients undergoing surgical procedures is mainly explained by patient characteristics, and not regarding whether they have undergone a surgical procedure or not. This result is surprising when compared to the published scientific literature, which point to increased reporting of incidents of breach of patient safety among patients undergoing surgical procedures.