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Patient-Experienced Quality in Five Emergency Departments in Denmark: A Multi-Centre Cross-Sectional Questionnaire Survey

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Abstract

Background: Although the implementation of fast tracks for acute patients aims at improving quality and satisfaction in Emergency Departments (EDs), it is unknown whether patients' expectations are being met. Using an interview concept suitable for assessing acute fast-track patients' satisfaction, the study aimed to assess patient-experienced quality in EDs.

Method: A multicentre cross-sectional questionnaire survey including 750 patients from five emergency departments in a region in Denmark. The 18 content items and 18 priority items concerned *reception, treatment and involvement*, *information*, and *time after discharge*. Data were collected in telephone interviews.

Results: The response rate for the 750 interviews was 65.4%. Responders' mean age was 57.2 years; 42.7% were men. With more than 90% top ratings, patient satisfaction was highest for feeling welcome, comprehensibility of information, and staff courtesy and respect. Confidence in discharge decision increased with admission length (p=0.02), with women expressing significantly better confidence than men (p<0.0001).

Conclusion: Staff conduct and information are key issues in the acute patient pathway. Best evaluations and highest priority are given to feeling welcome, comprehensible information, and courtesy and respect. Confidence at discharge increases with hospitalization length. Telephone interviewing is a reliable and valid method.

Keywords: Patient satisfaction; Questionnaire survey; Emergency department; Acute patient pathway

Background

Inspired by the introduction of routine surgery fast-tracking, the Region of Southern Denmark is seeking to reduce waiting time [1-3] and increase continuity and satisfaction [4] among acute admitted patients. Systematic procedures for examination, diagnosis, treatment and discharge/referral have been implemented to improve the quality of pathways [5], as documented in vision papers and recommendations for Emergency Departments (EDs) [5,6], However, the expected positive effects of fast tracks for acute patients have yet not materialized [6], possibly because patients' experiences are not fully described by technical and organizational aspects; equally important are the circumstances under which tasks are performed. The quality of health care depends not so much on what is done, but rather on what is accomplished [7]. There is ample evidence that patient satisfaction is essential for recovery; personalized care [8] and perceptions of the adequacy [9-11] and comprehensibility of the information provided by doctors [10,12] should thus be prioritized. A reliable assessment of the quality of patient pathways must be based on knowledge of patients' satisfaction and priorities [13-16], which offers a way towards improvement in the planning and organization of health care. Treatment compliance also tends to improve with satisfaction [17,18].

The study aimed to assess patient-experienced quality in emergency departments using telephone interviews eliciting both content and priority assessments from ED patients.

Methods

A multicentre cross-sectional questionnaire survey in all five ED's in the Region of Southern Denmark. Data collection took place in autumn 2012 by telephone interviewers using a web-based questionnaire.

Sample

The study included 750 patients who had been admitted to and discharged from one of the five EDs in the region during the period 8-28 October 2012. Only patients aged 18 years or older who were able to understand and speak Danish were eligible. We derived lists of all patient contacts in the included ED's during the inclusion period and the patients were included consecutively until a total of 150 patients had been interviewed for each ED (=a total of 750 patients).

The patients were contacted by telephone between 14 and 21 days after their discharge. Answers were entered directly into a web-based data bank (Enalyzer Survey Solution: https://system.enalyzer.com).

Questionnaire

The 18-item questionnaire covered four overall areas: *reception* (five items), *treatment and involvement* (three), *information* (five), and *time after discharge* (five). Information about gender, age and admission length was also elicited. The questionnaire was adjusted to local conditions through a Delphi procedure; from the original 32-item instrument, which had been tested and validated in a survey of 1,940

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emergency patients in the Capital Region of Denmark [19], we selected 15 relevant items to which we added three concerning the involvement of relatives, written information and the courtesy and respect shown by staff, factors which have been shown to be strong predictors of patient satisfaction [17]. Responses were scored on a dichotomous scale or a Likert-scale. In each case, an "Undecided" response option was given. Follow-up priority questions gauged patients' assessment of the importance of each item, for which the options were "Yes, very much"; "Yes, rather" or "No". After the described alterations, the questionnaire was validated in a Delphi procedure with a group of five experts representing each of the centres. Minor modifications were prompted by validity testing of the construct and content in mock telephone interviews with seven standardized patients.

Interviewers

The telephone interviews were performed by five Master level health care students, who were given three hours of instruction on the web-based questionnaire and a thorough review of the interview guide, which was adapted from the one used in the Capital Region survey [19]. Test interviews with instructed figurants were supervised and reviewed. The interviewers had access to round-the-clock support on any problems pertaining to the web-based questionnaire. A cell phone was provided. Interviewers signed a confidentiality statement.

Analysis

For each of the questions on the quality of *reception, treatment and involvement, information* and *the time after discharge,* patients' responses were dichotomized into top rating(s) versus the collapsed results of lower ratings. The results were described by proportions and analysed by chi-square and Wilcoxon rank-sums tests using Stata, version 12 (StataCorp. 2011. Stata Statistical Software: Release 12. College Station, TX: StataCorp LP).

Ethical considerations

The survey was described in posters and flyers placed in the ED examination rooms during the inclusion period; staff received a mail-distributed newsletter. Prior to interviewing the aim and content of the survey was explained to the participants, who were assured of their anonymity and right to withdraw at any time without consequences for present or future care and treatment? Identification by the researcher was precluded as all personal identifiers were removed or disguised. The study was approved by the Danish Data Protection Agency, heads of EDs, hospital managements and the regional board. No ethical approval was required.

Results

Population

During the three weeks inclusion period, the inclusion criteria were met by 1,854 patients, for 274 of whom no telephone number was provided, 177 were not available when called and 68 were excluded for various reasons, e.g. subsequent readmission or transferral (n=18); death (n=18); hearing impairment (n=11) and erroneously admitted (n=18). This left an eligible sample of 1335. Participation was declined by 188, resulting in a response rate of 65.4%. Men numbered 320 (42.7%), women 430 (57.3%). Mean age was 57.2 years, SD 19.3 (57.3 years for men, SD 18.3 and 57.1 years for women, SD 20.0).

Reception

Five questions focused on the patients' experience of their reception in the EDs: the feeling of being welcome, privacy, waiting time and introduction by staff. A total of 93.1% (n=698) felt welcome on admission, something that 99.5% considered as "very important" or "rather important". The opportunity to describe their illness or injury without being overheard by others was reported as "very good" or "good" by 77.2% (n=579), which 76.3% found "very important" or "rather important". The waiting time was considered "acceptable" by 82.3% (n=617), while 89.8% saw avoidance of waiting time as a "very important" or "rather important" aspect. Asked how the health care professionals' had introduced themselves, 85.6% (n=642) reported that "everybody" or "the majority" had supplied their name. The corresponding figure for profession was 71.4% (n=532) considered "very important" or "rather important" by 89.7% and 83.9%, respectively. Tables 1 and 2 show top rating proportions and patients' priorities, respectively.

Treatment and involvement

Three questions elicited patients' assessment of their treatment and the extent to which they and their relatives had been involved in decisions. A total of 87.4% stated that they felt "very confident" or "confident" that they had received the appropriate treatment. The degree of involvement of themselves, or their relatives, was deemed appropriate by 80.7% and 65.2%, respectively. Of these aspects, confidence in appropriate treatment was given highest priority, with 99.4% considering this "very important" or "rather important", while 94.6% and 79.3%, respectively, deemed it "very important" or "rather important" that they, or their relatives, were involved in decisions.

Information

The evaluation of the information supplied during admission was elucidated in five questions. The information was experienced as comprehensible by 91.6%, while 78.4% stated that information was given continuously during admission; written information was supplied to 21.5%. Overall, the information was described as adequate by 86.1%, while 93.8% reported that they were "always" or "usually" treated with courtesy and respect. The respondents regarded it as "very important" or "rather important" (99.5%) to receive comprehensible information during admission and to be informed continuously (99.2%). In contrast, only 50.7% described written information as "very important" or "rather important". Receiving adequate information and being met with courtesy and respect were considered "very important" or "rather important" by 99.4% and 99.0%, respectively.

Post-discharge

The remaining five questions concerned patients' experiences after discharge. Information about plans for their further treatment was received by 75.1%. Instruction on important symptoms was deemed as "very good" or "good" by 71.6% and 68.8%, respectively ("Very/rather important": 98.3%, 93.9%, respectively). Contact information for use in case of post-discharge symptoms was regarded as "very good" or "good" by 68.8%. Importance: 95.6% ("Very/rather important"). A total of 79.4% felt confident about their discharge from the ED. When asked whether their problem had been dealt with, 86.4% affirmed this ("Very important": 94.9%).

Associations

To identify associations and variation between genders and age groups, chi-square and Wilcoxon rank sum (Mann-Whitney) tests were performed.

Significantly more women than men gave top ratings to the

	All
	% (n)
Did you feel welcome when you were admitted to the emergency department? (Yes)	93.1 (698)
What were the opportunities for describing your illness without being overheard by others? (Very good/Good)	77.7 (579)
How would you rate the overall waiting time during your admission in the emergency department? (Acceptable)	82.3 (617)
Did staff introduce themselves by name? (Yes, everybody/Yes, the majority)	85.6 (642)
Did staff introduce themselves by profession? (Yes, everybody/Yes, the majority)	71.4 (536)
How confident are you that you received the appropriate treatment? (Very confident/Confident)	87.4 (656)
To what extent were you involved in decisions concerning your treatment? (Appropriate extent)	80.7 (605)
To what extent were your relatives involved in decisions concerning your treatment? (Appropriate extent)	65.2 (401)
Was it your experience that you were informed in a comprehensible way? (Yes)	91.6 (687)
Did you receive information continuously during admission? (Yes)	78.4 (558)
Did you receive written information during admission? (Yes)	21.5 (161)
Was the information you received adequate for your needs? (Yes)	86.1 (646)
Did you feel you were treated with courtesy and respect during admission? (Always/Usually)	93.8 (703)
Were you informed about further plans for your treatment – that is, what was going to happen after discharge? (Yes)	75.1 (563)
How would you rate the information about important symptoms for your attention after discharge? (Very good/Good)	71.6 (429)
How would you rate the information about contact person(s) after discharge? (Very good/Good)	68.8 (516)
How confident did you feel about being discharged? (Very confident/Confident)	79.4 (596)
Was your problem dealt with? (Yes)	86.4 (648)

Table 1: Assessments, Top rating(s).

	Yes, very important	Yes, rather important	No
Is it important to you to receive information about contact person(s) after your discharge?	81,9	13,7	4,4
Is it important to you to receive information about important symptoms for your attention after discharge?	80,0	13,9	6,1
Is it important to you to receive information about further plans?	88,4	9,9	1,7
Is it important to you to be treated with courtesy and respect during admission?	90,9	8,1	0,9
Is it important to you to receive adequate information?	85,5	13,9	0,7
Is it important to you to receive written information during admission?	25,9	24,8	49,3
Is it important to you to be continuously informed during admission?	86,1	13,1	0,8
Is it important to you to be informed in a comprehensible way?	94,4	5,1	0,5
Is it important to you for your relatives to be involved in decisions about your examination and treatment?	50,1	29,2	20,7
Is it important to you to be involved in decisions about your examination and treatment?	68,3	26,3	5,5
Is it important to you to feel confident about receiving the appropriate treatment?	94,7	4,7	0,7
Is it important to you for staff to introduce themselves by profession?	56,7	27,2	16,1
Is it important to you for staff to introduce themselves by name?	55,7	34,0	10,3
Is it important to you to avoid waiting time during admission?	40,7	49,1	10,3
Is it important to you to be able to describe your illness or injury without being overheard by others?	46,0	30,3	23,7
Is it important to you to feel welcome on admission to the emergency department?	87,6	11,9	0,5

Table 2: Priorities, by topic (proportions).

following items: acceptable waiting time (p=0.04); confidence having received appropriate treatment (p=0.008); adequate information (p=0.01); being met with courtesy and respect (p=0.0007); information about important post-discharge symptoms (p=0.02). Gender-related differences were also apparent for priority questions; women thus placed greater emphasis on staff introducing themselves by name, involvement, comprehensibility of information, written information, courtesy and respect, and information about the post-discharge treatment plan. Confidence at discharge was significantly better among women (p=0.02), improving with admission length (p<0.0001). No age-related associations were detected. Significant associations were found between the following factors: Receiving written information and prioritizing this (p<0.0001); experiencing acceptable waiting time and receiving information continuously (p<0.0001); the same and being accompanied by relatives (p=0.002); confidence in appropriate treatment and being accompanied by relatives (p=0.004). Confidence at discharge was associated with *i*) adequate information, *ii*) courtesy and respect and *iii*) information about further plans, *iv*) contact persons and *v*) important symptoms (all p<0.0001). Confidence in appropriate treatment was significantly associated with involvement (p<0.0001) and being accompanied by relatives (p=0.025). The topics feeling adequately informed and receiving written information were not associated.

Discussion

The instrument was based on a questionnaire used for a previous study of emergency patients' evaluation of their admission [19]. This choice reflected our priority for testing and validation in a comparable population of acute admitted patients. The decision to reduce the number of content items [13,20,21] was based on recommendations that patients' evaluation should also be elicited [22,23]. The revised questionnaire was pilot-tested for face validity with standardized respondents. Furthermore, the training of the interviewers aimed at minimizing inter-interviewer variance and improving reliability. All answers were unambiguous. No problems were experienced with the web-based format, which allowed continuous oversight of the progression of interviews.

Groves et al. contend that participation in surveys is motivated by patients' sense of social responsibility and deference to authority

[24], reasons that might be reinforced by the personal relationship established in an interview. Survey outcomes have been found to be only marginally affected by such a relation [25]. There is no evidence that patient satisfaction is better for telephone interviewing compared to interviewing by land mail-distributed forms [26].

The interval from discharge to survey in our study varied from 14 to 21 days. There is no consensus on the impact of time from discharge to surveying, although a significant positive association between poor evaluations and the length of time after discharge has been found [27].

Patient satisfaction was most pronounced for the feeling of being welcome, met with courtesy and respect, and receiving comprehensible information, all scoring above 90% top ratings. The following items were given top ratings by 82-86% of patients: staff introduction by name, confidence in appropriate treatment, involvement, waiting time, problem dealt with, and adequate information. The results of previous surveys are corroborated by associations between satisfaction with information and waiting time, and between information and confidence at discharge [17].

The lowest proportion of top ratings was given for written information and prioritizing written information. If patients received written information they tended to consider it important ($p<0.0001$).

Although no inter-centre significance tests were performed, assessments varied considerably. One hospital received top ratings for 11 of 18 content items, one for 5/18 items, and two hospitals for 1/18 items.

Non-responders

Only marginal differences between responders and non-responders were found. Women made up 50.3% of non-responders against their 53.7% share of responders. Non-responders' mean age was 60.7 years, compared to responders' 57.2 years. Differences in mean admission times were negligible (data not shown). Previous studies have demonstrated little difference in responders' and non-responders' socio-demographic data [28-30], but otherwise research on non-response bias is ambiguous [31-33]. We therefore conclude that bias was minimal.

Conclusion

Our study shows that acute admitted patients are best satisfied with and give highest priority to the feeling of being welcome, staff courtesy and respect, and the comprehensibility of information**.** Waiting time is more likely to be considered acceptable when continuous information is received, while written information has low priority. Patients who are involved in their treatment are more likely to feel confident that the appropriate treatment is given. Confidence at discharge increases with the length of admission, and is associated with feeling well informed about further plans, important symptoms and contact persons. Confidence is also enhanced by adequate information and staff courtesy and respect. We conclude that accommodating and polite staff conduct and information are key issues in the acute patient pathway, and that surveys eliciting patients' priorities as well as their evaluations enhance the understanding of patient satisfaction. Telephone interviewing was a reliable and valid method for assessing patient-experienced quality in EDs.

We recommend that surveying is followed by initiatives to stimulate user involvement, e.g. in dialogue forums or focus group interviews for the implementation of our findings.

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