Kaipio, Johanna; Stenhammar, Hanna; Immonen, Susanna; Litovuo, Lauri; Axelsson, Minja; Lantto, Minna; Lahdenne, Pekka

**Improving hospital services based on patient experience data**

*Published in:*
Building Continents of Knowledge in Oceans of Data

*DOI:*
10.3233/978-1-61499-852-5-266

*Published: 01/01/2018*

*Document Version*
Publisher's PDF, also known as Version of record

*Published under the following license:*
CC BY-NC

*Please cite the original version:*
Improving Hospital Services Based on Patient Experience Data: Current Feedback Practices and Future Opportunities

Johanna KAPIO\textsuperscript{a,1}, Hanna STENHAMMAR\textsuperscript{a}, Susanna IMMONEN\textsuperscript{a}, Lauri LITOVOU\textsuperscript{b}, Minja AXELSSON\textsuperscript{c}, Minna LANTTO\textsuperscript{a}, Pekka LAHDENNE\textsuperscript{c}

\textsuperscript{a}Aalto University, Department of Computer Science, Espoo, Finland
\textsuperscript{b}Tampere University of Technology, Laboratory of Industrial and Information Management, Finland
\textsuperscript{c}Hospital for Children and Adolescents, Helsinki University Hospital, Helsinki, Finland

Abstract. Patient feedback is considered important for healthcare organizations. However, measurement and analysis of patient reported data is useful only if gathered insights are transformed into actions. This article focuses on gathering and utilization of patient experience data at hospitals with the aim of supporting the development of patient-centered services. The study was designed to explore both current practices of collecting and utilizing patient feedback at hospitals as well as future feedback-related opportunities. Nine people working at different hierarchical levels of three university hospitals in Finland participated in in-depth interviews. Findings indicate that current feedback processes are poorly planned and inflexible. Some feedback data are gathered, but not systematically utilized. Currently, it is difficult to obtain a comprehensive picture of the situation. One future hope was to increase the amount of patient feedback to be able to better generalize and utilize the data. Based on the findings the following recommendations are given: attention to both patients' and healthcare staff's perspectives when collecting feedback, employing a coordinated approach for collecting and utilizing patient feedback, and organizational transformation towards a patient-centric culture.

Keywords. Feedback, formative feedback, hospital nursing staff, hospital-patient relations, patient satisfaction, patient-centered care

1. Introduction

Like other organizations, hospitals have started to collect feedback from their customers, i.e. patients. Often, a large amount of data about patients’ experiences is collected, but very little of it is used to improve care [1], so far. Such data provides opportunities to identify and address problems and gaps in service flow and to monitor the effects of interventions [2]. Additionally, it allows for the comparison of healthcare providers and benchmarking of hospital performance [3].

However, several challenges have been identified. First, healthcare has unique characteristics: in the hospital context, the relationship between clinician and patient is

\footnotetext{1}{Johanna Kaipio, Aalto University, School of Science, Department of Computer Science, Espoo, Finland; E-mail: johanna.kaipio@aalto.fi.}
beyond customer service – it is a therapeutic relationship, which focuses on giving care to an individual patient, not only providing a service to a customer [4]. Secondly, patient experience (PX) is an emerging concept. While a commonly accepted definition is lacking [2,5], the PX concept encompasses various themes, such as continuum of care, focus on expectations, more than satisfaction alone, individualized care, and alignment with patient-centered care principles [5]. Multiple cross-cutting terms, such as patient satisfaction and engagement, make conceptual distinction of PX even more difficult [3].

Thirdly, gathering PX data would ideally exceed organizational boundaries, since a patient’s continuum of care may include multiple encounters with several different healthcare professionals and providers [5,6]. These elements all influence the total assessment of experience. Healthcare providers who view themselves as part of a broader systemic network, i.e. a healthcare ecosystem, where PX is created and measured collaboratively, would be better able to design and provide services for their patients [7].

Several methods can be used to measure PX [2]. Questionnaires are widely used to gather numeric data for comparison, whereas qualitative methods can offer a richer understanding of needs, values, and improvement areas [8]. In order to capture a holistic view of PX, a mixture of quantitative and qualitative methods is recommended [1].

Analysis of PX is useful only if gathered insights are transformed into actions [1]. Beyond mere measurement, achieving real impact requires a strategic approach [9]. Healthcare organizations that have succeeded in fostering patient-centered care have adopted a broad, strategic approach that includes active measurement and feedback reporting of PX [9]. Thus, patient-centricity requires organizational change.

The aim of this paper is to promote collection and analysis of PX data at hospitals to support the development of patient-centered services. The reported study is part of the “Lapsus” research project, which focuses on researching PX in the context of children’s hospitals in Finland. The project has received permission from the ethical committee.

In the article, the term ‘feedback’ refers to data about patients’ experiences and satisfaction. The study was designed to explore current practices of collecting and utilizing patient feedback in the context of three university hospitals and their pediatric departments in Finland. Based on qualitative interview data, we report the strengths and challenges of current practices and identify opportunities for future improvement. The research questions are: In the context of Finnish children’s hospitals, what are the strengths and challenges of the current feedback collection and utilization practices? What opportunities exist for improving these practices in the future?

2. Method and Analysis

The study was conducted using semi-structured interviews. The interview framework included the following themes: (1) interviewee’s background information, e.g. role and responsibilities at the hospital, connection to feedback process, and role in feedback utilization; (2) current practices for collecting and utilizing feedback, and reasons for collecting feedback; (3) evaluation of current feedback practices: strengths and challenges, attitudes towards feedback collection, utility of the gathered data; and (4) consideration of future possibilities for feedback processes.

Nine people from different hierarchical levels of three Finnish university hospitals participated individually in in-depth interviews (Table 1). First, interviews with five individuals working at university hospital A were carried out in March and April 2017. These interviewees worked in different hierarchical levels within the hospital and were
chosen to be able to reflect knowledge of different parts and levels of the feedback process. Next, interviews with head nurses working in the pediatrics and adolescent medicine department of two other university hospitals (B and C) took place between May and October 2017. Participants were recruited from multiple organizations in order to obtain comparable data and validate the findings from the university hospital A.

Table 1. Background information of study participants

<table>
<thead>
<tr>
<th>Organization</th>
<th>Participant ID</th>
<th>Title / role / responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital A</td>
<td>1–3</td>
<td>Planning manager, development manager, chief physician and head of digital and innovation services</td>
</tr>
<tr>
<td>Hospital A / Pediatrics and adolescent medicine department</td>
<td>4–5</td>
<td>Deputy nurse manager, nurse manager</td>
</tr>
<tr>
<td>Hospital B / Pediatrics and adolescent medicine department</td>
<td>6–7</td>
<td>Nurse manager, nurse administrator</td>
</tr>
<tr>
<td>Hospital C / Pediatrics and adolescent medicine department</td>
<td>8–9</td>
<td>Nurse manager, nurse administrator</td>
</tr>
</tbody>
</table>

Seven interviews were face-to-face interviews conducted at the workplace of the interviewees at a predetermined time. Two interviews were conducted via phone due to geographic distance. Each interview lasted approximately 30 to 60 minutes.

The data include recordings and detailed notes from the interviews. One of the interviewees did not allow recording. The analysis was conducted in two phases: (1) analysis of the data from five interviews at hospital A, and (2) analysis of four interviews from hospitals B and C. The first phase of analysis included the following tasks: organizing data into an excel sheet; categorizing the results under thematic areas (background, current data collection and utilization, positives and negatives, the future); and using an affinity diagram for further analysis. The second phase followed a similar procedure: after organizing the data into a spreadsheet and categorizing the results, findings were compared with the results gained from interviews 4–5. The aim was to find possible differences and similarities between the findings and to validate earlier results.

3. Results

Collected data showed several drivers that motivate the collection of patient feedback at the hospitals. The overall aim is to improve services, since the underlying principle is to work in a patient’s best interest. Feedback provides understanding of how people perceive current services and helps to identify problem areas and improvement opportunities. Another important reason for collecting feedback is to receive comparable data between healthcare units and organizations. In general, our findings suggest that the three hospitals share similar situation and challenges with feedback practices, including low response rates, low utility of data, and staff motivation. No significant differences between the organizations were found.

Collecting and utilizing feedback: Four categories of feedback collecting practices were identified: (1) official and structured (e.g. web-based feedback forms or paper questionnaires); (2) unstructured (e.g. informal discussions with patients); (3) pilot projects (e.g. new ways of collecting data using digital devices such as tablets); and (4) occasional studies (e.g. nursing students’ diploma work). Even though several official
channels for feedback exist, a large amount of feedback is received through informal channels such as e-mail or face-to-face discussions with patients and their families.

Feedback is utilized at two levels. Official, structured feedback is processed at the hospital administration level, reported according to official processes, and delivered to individual units. Hence, the given feedback must be accurately linked to the unit, i.e. where the patient was treated. The managerial level processes feedback reports regularly and utilizes the data in various ways, e.g. to identify trends. In contrast, individual units are responsible for analyzing and responding to the three other feedback types. In particular, head nurses of individual care units have significant responsibility and influence regarding this data. In practice, utilization of feedback for service and care improvement depends on the unit. Typically, responses are given to unstructured feedback, which leads to further actions.

Strengths: The interviewees felt positive in terms of the direction that feedback practices and processes are moving. Collected feedback is processed regularly in care units. Official level (national and hospital-wide) questions were seen to be important because they enable the comparison of results between hospital districts.

Challenges: The way individuals deal with feedback varies between units and between different types of organizational and work roles. Current feedback collection practices do not seem to be fully aligned with the everyday work of nurses; in particular, the purpose of feedback collection is not always clear to nurses, leading to motivational challenges. Overall, current feedback processes were criticized as being poorly planned and inflexible. Some feedback data are collected, but not systematically utilized. There are several reasons for this. Current response rates are minimal, especially concerning official and structured feedback, leading to difficulties in receiving comprehensive and valid data. Feedback often does not focus on crucial aspects of the patient experience and is not informative enough to reveal specific improvement points that units feel they can influence. Furthermore, it is difficult to obtain a comprehensive picture of the situation, as unstructured 'hidden' feedback that isn’t captured by official channels is prevalent, even as multiple channels for more official feedback are used.

Future opportunities: Some interviewees voiced a vision of a truly meaningful system that enables continuous improvement towards a more patient-centered hospital. Top management in particular emphasized the importance of being able to see the big picture and the feedback process as a whole. Currently, practices are quite fragmented across different units. The overall aim is to observe and measure crucial aspects of the patient experience that can be influenced. The feedback process should enable healthcare staff to identify key improvement opportunities but should also report positive feedback.

4. Discussion

Collecting and analyzing data on patients’ experiences is fundamental for healthcare organizations to be able to improve their service quality [2,10]. The objective of this study was to describe benefits and challenges in current feedback collection and utilization practices at hospitals, as well as to identify opportunities for improvement.

From an ecosystem perspective, our findings indicate that healthcare staff take a positive stance toward both shared measurement of patient feedback and data sharing between organizations. However, measurement metrics and methods currently vary between units and are not easily comparable. One future hope was to increase the amount of feedback data to be able to better generalize and utilize the findings. A dual-sided
improvement opportunity appeared: both giving and collecting feedback should be effortless from patients’ and nurses’ perspectives. This includes improving the accessibility and usability of feedback tools. Another approach envisioned a multi-channel feedback system that would make the data collection process constant and automatic, supporting real-time presentation and reporting of results. Digitalization will enable the usage of new channels (e.g. SMS and tablets), which makes more personalized and constant feedback collection possible. Moreover, cultural change was seen as a crucial aspect in improving attitudes towards feedback data gathering and utilization.

In summary, we recommend that hospital management consider the following:
- **Attention to both patients’ and nurses’ perspectives when collecting feedback:** Enhance patient awareness of opportunities to give feedback to avoid biased results. Make feedback collection instruments user-friendly. Automate feedback collection to fit together with nurses’ everyday work.
- **Coordinated approach for collecting and utilizing patient feedback:** Measure experience instead of satisfaction. Identify relevant aspects and measure them to gather data which can be fully utilized. Apply a multi-channel approach and merge findings from all data sources.
- **Organizational transformation towards patient-centric culture:** Communicate the vision organization-wide. Work on motivating staff to collect and utilize feedback through understanding of the importance of feedback.

The study findings will be utilized in the Lapsus research project when co-designing feedback practices in children’s hospitals in Finland.

However, the study has some limitations. The research focused strongly on the context of one university hospital. The sample size (N=9) was rather small due to limited resources available for the study. Besides, the setup was found appropriate for an exploratory study. The approach focused on describing the current situation as experienced by the interviewees, whereas including other perspectives (e.g. research on organizational structures) could have diversified the findings. Furthermore, patients’, families’ and nurses’ viewpoints were not included in the study. Further research is needed to include these perspectives and to extend the research to other Finnish hospitals.

**References**