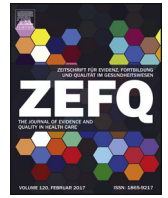




Contents lists available at ScienceDirect

Z. Evid. Fortbild. Qual. Gesundh. wesen (ZEFQ)

journal homepage: <http://www.elsevier.com/locate/zefq>

Schwerpunktreihe / Special Section „Patient First“

## Implementation and first results of a tablet-based assessment referring to patient-reported outcomes in an inpatient cancer care unit



### Implementierung unter Routinebedingungen und erste Ergebnisse einer Tablet-basierten Patientenbefragung zur Erfassung von patientenberichteten Outcomes (PRO) der stationären onkologischen Versorgung

Markus Schuler<sup>a,b,1</sup>, Freya Trautmann<sup>c,d,\*,1</sup>, Mirko Radloff<sup>a</sup>, Leopold Hentschel<sup>a,e</sup>, Thomas Petzold<sup>c,f</sup>, Maria Eberlein-Gonska<sup>f</sup>, Gerhard Ehninger<sup>a,e</sup>, Jochen Schmitt<sup>c,d,e</sup>

<sup>a</sup> Department of Internal Medicine I, University Hospital and Medical Faculty Carl Gustav Carus, TU Dresden, Dresden, Germany

<sup>b</sup> Clinic for Internal Medicine II, HELIOS Hospital Emil von Behring, Berlin, Germany

<sup>c</sup> Center for Evidence-Based Healthcare, University Hospital and Medical Faculty Carl Gustav Carus, TU Dresden, Dresden, Germany

<sup>d</sup> National Center for Tumor Diseases (NCT), partner site Dresden and German Cancer Research Center (DKFZ) Heidelberg, Dresden, Germany

<sup>e</sup> University CancerCenter, University Hospital and Medical Faculty Carl Gustav Carus, TU Dresden, Dresden, Germany

<sup>f</sup> Department of Quality and Medical Risk Management, University Hospital and Medical Faculty Carl Gustav Carus, TU Dresden, Dresden, Germany

#### ARTICLE INFO

##### Article History:

Received: 6 October 2016

Received in revised form: 6 March 2017

Accepted: 7 March 2017

Available online: 1 April 2017

##### Keywords:

patient-reported outcomes  
quality of life  
routine care  
implementation study

#### ABSTRACT

**Background:** Inclusion of patient-reported outcomes (PROs) in routine cancer care is of key importance for individualized treatment, shared decision making and patient satisfaction.

**Objective:** To describe the implementation under routine conditions of an electronic self-administered PRO assessment and comparison of PROs before and after inpatient treatment in oncologic care.

**Methods:** In a tablet-based survey PROs on symptom burden, global health status/ quality of life (QoL) and health utility were collected twice (at hospital admission and discharge) in an inpatient oncological setting over a 17-month period using the EORTC QLQ-C30 and EQ-5D questionnaires. Data were linked to the hospital information system (HIS). Patient acceptability, recruitment rates, symptom burden, and clinically meaningful changes in PROs over time were analyzed.

**Results:** From a total of 384 hospitalized patients invited to participate at admission 371 (96.6 %) participated. At discharge, 195 patients were approached for a follow-up assessment, and 192 patients (98.5 %) participated. Despite strong acceptance among patients, recruitment rates were decreasing over time. During the hospital stay clinically meaningful improvements were observed for health utility (33.3 %, n = 64) and global health status/QoL (43.2 %, n = 83). Patients reported a variety of symptoms at admission and discharge.

**Conclusions:** Implementation of PRO assessment in routine care and data integration into the HIS provides valuable information for the entire medical staff as symptom burden is present during the entire hospital stay.

**Implications for Practice:** Long-term maintenance of PRO assessment in a clinical setting as a prerequisite of value-based healthcare requires continuous involvement of the nursing team, which can only be achieved by allocating resources to this task.

**Abbreviations:** CMC, Clinically meaningful change; CN, Coordinating nurse; EORTC, European Organization for Research and Treatment of Cancer; HIS, Hospital information system; MN, Malignant neoplasms; PCCL, Patient Clinical Complexity Level; PRO, Patient-reported outcomes; QoL, Quality of Life.

\* Corresponding author: Freya Trautmann, Center for Evidence-Based Healthcare, University Hospital and Medical Faculty Carl Gustav Carus, TU Dresden, Fetscherstr. 74, 01307 Dresden, Germany.

E-mail: [freya.trautmann@uniklinikum-dresden.de](mailto:freya.trautmann@uniklinikum-dresden.de) (F. Trautmann).

<sup>1</sup> authors contributed equally

## ARTIKEL INFO

## Artikel-Historie:

Eingegangen: 6. Oktober 2016  
 Revision eingegangen: 6. März 2017  
 Akzeptiert: 7. März 2017  
 Online gestellt: 1. April 2017

## Schlüsselwörter:

patientenberichtete Outcomes  
 Lebensqualität  
 Routineversorgung  
 Implementierung

## ZUSAMMENFASSUNG

**Hintergrund:** Die Berücksichtigung von patientenberichteten Outcomes (PRO) ist von wesentlicher Bedeutung für die Verbesserung individueller Behandlungsansätze, gemeinsamer Entscheidungsfindung und Patientenzufriedenheit.

**Ziel:** Beschreibung der Implementierung unter Routinebedingungen eines elektronischen Instrumentes zur Erfassung von PRO sowie Vergleiche patientenberichteter Outcomes vor und nach Behandlung in der stationären onkologischen Routineversorgung.

**Methoden:** Mittels eines Tablet-basierten Fragebogens wurden die patientenberichtete Symptomlast, der Gesundheitszustand und die Lebensqualität je zu Aufnahme und Entlassung auf vier onkologischen Stationen über einen Zeitraum von 17 Monaten erfasst. Das Instrument basierte auf dem EORTC QLQ-C30 sowie dem EQ-5D Fragebogen. Die Daten wurden mit dem Klinikinformationssystem verknüpft. Patientenakzeptanz, Rekrutierungsraten, Symptomlast und klinisch relevante Veränderungen bezüglich der patientenberichteten Outcomes wurden analysiert.

**Ergebnisse:** Von insgesamt 384 Patienten, welche bei stationärer Aufnahme zur Teilnahme angesprochen wurden, nahmen 371 (96,6%) teil. Bei Entlassung wurden insgesamt 195 Patienten angesprochen, von denen 192 (98,5%) der Teilnahme zustimmten. Trotz hoher Patientenakzeptanz gingen die Teilnahme-raten im Zeitverlauf zurück. Während des Aufenthaltes wurden klinisch relevante Veränderungen im Gesundheitszustand (n=64, 33,3%) sowie in der Lebensqualität (n=83, 43,2%) beobachtet. Die Patienten berichteten zudem eine Vielzahl an Symptomen bei Aufnahme und Entlassung.

**Schlussfolgerung:** Die Implementierung eines Instrumentes zur Erfassung von PRO in die stationäre Routineversorgung mit Integration in das Klinikinformationssystem bietet wertvolle Informationen für das medizinische Personal, da eine hohe Symptomlast und Einschränkungen in Lebensqualität und Gesundheitszustand während des gesamten Aufenthaltes vorhanden sind.

**Implikationen für die Praxis:** Die langfristige Aufrechterhaltung einer elektronischen Patientenbefragung in der Routineversorgung als Voraussetzung für eine patientenzentrierte Gesundheitsversorgung ist nur durch die ständige Einbindung des medizinischen Personals möglich, was nur mit ausreichenden Ressourcen realisierbar ist.

## Background

Cancer patients suffer from a variety of physical and mental complaints. Symptom burden can be attributed to treatment as well as to the underlying disease or non-cancer related diseases. For a patient-centered treatment, it is essential for oncologists to receive as much information as possible regarding their patients' symptoms, cancer related problems and adverse events as well as toxicities caused by cancer treatment [1]. However, studies show that physical and mental complaints frequently remain undetected in current clinical practice [2,3]. Additionally, a low level of agreement exists between physicians and patients regarding reporting of symptoms and the corresponding intensities [3–6].

Patient-reported outcomes (PRO) are defined as "... any report of the status of a patient's health condition that comes directly from the patient, without interpretation of the patient's response by a clinician or anyone else." [7] and are completely based on patient's self-report, independent of the physician performed assessments. PRO cannot be ascertained via current diagnostic procedures and add valuable information to the sole symptom assessment by the physician and single clinical parameters. Further, they significantly improve the prediction of survival. Therefore PRO are essential to enhance mutual clinical decision making [8–10].

Several systematic reviews focused on PRO in cancer care [11–16]. This body of evidence clearly indicates that PRO assessment improves the communication between patient and clinical staff [12–14], especially regarding topics including symptoms, emotional functioning and quality of life (QoL) [11,14,15]. PRO assessment supports early detection of symptoms and adverse events, as well as respective surveillance [11,12], helps patients remain on chemotherapy for longer durations, reduces admission to emergency room or hospitalization [10] and assists in improving clinical decision making regarding psycho-oncological support [11]. PRO assessment also positively impacts patient satisfaction [11,14], as well as overall [11] and emotional wellbeing [12].

The use of PRO in clinical cancer care has been reinforced in recent years with PRO assessment being a requirement in the development of individualized treatment schedules in cancer patients. As treatment regimens and survival have improved in cancer patients in recent decades, new challenges regarding maintenance of quality of life as well as reducing symptom burden have arisen. Although PRO are frequently reported outcomes in clinical studies, data collection in routine settings remains scarce, despite the previously described advantages. PRO assessment persists in laws and guidelines for cancer in general [17] and palliative cancer care [18].

As importance of mobile information technology as well as time pressure on health care providers continue to increase in daily routine, several studies have been conducted to evaluate the feasibility of electronic PRO assessments. Accordingly, patients favor the application of questionnaires on tablet-PCs over paper-based questionnaires [19–21]. Also, increasing evidence indicates the feasibility of electronic assessments in daily routine [10,22–25].

## Objectives

The objectives of this study are: 1. Evaluation of the implementation under routine conditions of an electronic self-administered PRO assessment tool regarding patient acceptance and recruitment rates in the daily clinical routine of an oncological ward. 2. Explorative analysis of symptom burden, quality of life and health utility at hospital admission and discharge as well as patients' clinically meaningful changes in PRO from admission to discharge. Objective two was assessed with an explorative intention and did not aim at the detection of treatment specific effects.

## Material and methods

## Data collection

The PRO-ONK (patient-reported outcomes in oncology care) project was conducted at a large German University Hospital

Download English Version:

<https://daneshyari.com/en/article/5123521>

Download Persian Version:

<https://daneshyari.com/article/5123521>

[Daneshyari.com](https://daneshyari.com)