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IMPLEMENTING AN ISO 10001-BASED PROMISE IN INPATIENTS CARE

Abstract: *This paper presents the implementation of a Customer Satisfaction Promise (CSP) that requires nurses to introduce themselves and explain the care plan to the patients of a hospital unit in Canada. The CSP implementation, maintenance and improvement activities were based on ISO 10001:2007. Qualitative and quantitative performance data were collected from nurses, the unit manager and patients, and improvement suggestions were made. During the implementation, nurses introduced themselves 95% of the time and explained the care plan 86% of the time. When interviewed, some nurses stated that the CSP was a good reinforcement of a practice already expected of them, which made patients happy, satisfied and more comfortable. Data from a small sample of patients was not adequate in clearly indicating the CSP's performance or improvement, but was useful in validating the survey and the feedback form. To our knowledge, applications of ISO 10001:2007 in health care have not been studied. Furthermore, this paper may be the first example of the integrated use of ISO 10001 and ISO 10002 in health care.*

Keywords: *Customer satisfaction, Service guarantee, Health care, ISO 10001, ISO 10002, Standards*

1. Introduction

On a sunny Tuesday morning, a person in scrubs walks into a patient's room and says: "*Hi, I need to check your vitals*". The patient is under a medication that makes him somewhat drowsy. Unsettled, he sits up and allows the person in scrubs to measure his blood pressure. The person says: "*The doctor will see you in a moment*", and leaves. The patient, now coming to his senses, is feeling enraged and thinking: "*Who is this? She is not my regular nurse. Is she a nurse, a student or someone else? Couldn't she mention who she is? Why did she measure the same things that my nurse did earlier?"* The patient decides that he should complain to the doctor. However, the doctor on duty is not a regular in this hospital, but covering for a sick colleague. This doctor may pass the issue to the Unit Manager (UM) or may simply forget about it, because she has so much on her plate. The issue remains unsolved and the patient's anger turns into dissatisfaction.

Such an event is not rare in a hospital. In many articles involving health care environments around the globe, communication issues can be found as a common aspect of service quality that

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impacts customer satisfaction (Baalbaki *et al.*, 2008; Naidu, 2009; Andaleeb *et al.*, 2007). In an inpatients care unit, there may be various care providers (such as the nurses, therapists, technologists and physicians), trainees (such as medical and nursing students), support staff (social workers, dietary and cleaning), and even volunteers. Most likely, these personnel wear scrubs or have uniforms, which can be confusing even for a regular person, let alone a patient under medication who is experiencing weak cognitive functions. Many patients may want the comfort of knowing who the care providers are and what they are doing. Baalbaki *et al.* (2008) emphasized the communication skills of care providers and *"shaping their way in treating customers as human beings that have needs rather than taking them for granted"*. Poor communication, on the other hand, can account for the majority of all complaints, as reported in a study involving inpatients care (Siyambalapitiya *et al.*, 2007). Many of the complaints can be prevented with proper communication and information, which also have a positive impact on satisfaction (Baalbaki *et al.*, 2008; Billing *et al.*, 2007).

This paper presents an implementation of a Customer Satisfaction Promise (CSP) intended to address potential communication issues between the patient and the assigned nurse. A literature review detailing the applications and implementation of promises and guarantees in health care is presented first. Then, the method of CSP implementation in the Case Study Organization (CSO), an inpatients unit of a hospital in Canada, is detailed. The CSP's performance is analyzed, suggestions about improvement are made and the learning that can be replicated in implementing similar CSPs is discussed.

2. Literature review

The word "promise" is defined as *"a legally binding declaration that gives the person to whom it is made a right to expect or to claim the performance or forbearance of a specified act"* (Merriam-Webster Dictionary, 2012). In the literature, the term "guarantee" is more commonly used to depict the same meaning (Hart, 1988; Hart *et al.*, 1992; Hogreve and Gremler, 2009; Brown, 1986). For simplicity, no differentiation between the two terms is made in this paper. Although the service guarantee literature has many articles on successful implementations of guarantees, only a handful of health care examples can be found about the implementation of promises. For instance, a promise stating *"Patients will be seen within 15 minutes by a nurse and within 30 minutes by a physician or the hospital pays your bill"* was implemented at the Emergency Department (ED) of a New Jersey hospital, intended to change the customer perception about the care (Pallarito, 1995). The hospital employed a "floating registrar" and a second triage nurse to speed up the registration and triage processes, and shortened length of shifts for physicians so that they could stay up late whenever additional service is needed. The changes improved patient flow by 15%, eliminated walkouts and increased the number of patients who left the facility within two hours of entering by 25% (Pallarito, 1995). Inspired by the same program, another hospital implemented an identical "15/30 program" and sped up the triage process by performing bedside registrations of 90% of the patients, resulting in an 11% increase in patient visits and less than 10 patients claiming the refunds (Anonymous, 2002). Another example includes two hospitals in Ohio that promised treating the patient in 30 minutes and experienced similar results and reduced the overall length of stay (Anonymous, 2004). An ED in Virginia even extended the promise to "a no-waiting experience" by having a registered nurse at the ED entrance who would greet patients and ask about their chief complaint in order to determine the care plan (Anonymous, 2010). Levy (1999) discussed examples of how to effectively

apply guarantees in various health care areas, and concluded that they can have a positive impact on patient satisfaction, service quality, cost reduction and outcomes of the service. Understanding the perspectives of the patient, employees, organization and the competition on a continuous basis can be possible with appropriate service guarantees (Levy, 1999).

Brown (1986) discussed the experience of establishing a patient satisfaction guarantee at a Diagnostic Radiology department in a hospital, including the step-by-step method followed and the use of patient feedbacks in identifying problem areas. The success included receiving zero complaints from 250,000 patients at the end of the year, positive changes in the patients' perception of the care, and higher morale and job satisfaction among the personnel (Brown, 1986). Lewis (1993) showed how the United Weight Control Corporation (UWCC) used a promise to invoke patient complaints about the problem areas. UWCC promised refunds to patients who complained on a "Gray card" specifically what the problem was, while, if a patient was exceptionally pleased, she could also record on a "Blue card" the reason for the satisfaction (Lewis, 1993). These examples show how promises and feedback handling can go hand in hand in leading improvement and innovation.

In the examples, a common feature is that hospitals implemented one or more improvement activities before making a promise (Brown, 1986; Pallarito, 1995; Anonymous, 2004). Another interesting aspect is that some promises were ambitious, yet the hospitals pursued them as a push for excellence (Brown, 1986; Pallarito, 1995). It can be, therefore, concluded that a carefully designed and established promise can help in both achieving challenging goals and improving a particular aspect of the care. Nevertheless, there is a lack of research in the health care literature on frameworks or methods for implementing promises.

3. Research background, objective and methodology

This research focused on applying an ISO 10001:2007-based method in establishing CSPs in the inpatients care. It consisted of two phases. Phase I, detailed in (Khan and Karapetrovic, 2013), involved the planning, designing and developing of the CSP (illustrated in Figure 1). In Phase II, the CSP was implemented by nurses and a UM. In this paper, the implementation is analyzed, including the evaluation of performance and potential improvements to the CSP and the supporting processes, and suggestions for establishing additional CSPs are presented.

The inpatients unit where the CSP was implemented has a capacity of 30 patients (with a typical turnover of two patients per day) and between 18 to 22 different nurses providing care. The CSP was implemented following Clause 7 of ISO 10001:2007. The CSP supporting processes included an evaluation of the CSP performance (based on ISO 10001:2007, Clauses 8.1 and 8.2), the collection and analysis of patient feedback (based on ISO 10002:2004, Clause 7), and the administration of a survey to evaluate the CSP fulfillment and patient satisfaction (based on ISO 10001:2007, Clause 8.3).

The UM informed the patients about the existence of the CSP, mentored and trained nurses, facilitated the collection of performance data from both patients and nurses, and obtained feedback. The UM informed each nurse orally and through a "CSP Manual" (a three-page document created by the authors with details on the CSP implementation) and encouraged participation in the implementation, which was voluntary. As a reminder, the UM would put white stickers on the clip file the nurses carry with them with the message: *"Do not forget to fulfill your promise today, and do not forget to take your CSP Checklist out when you visit your patients"*.

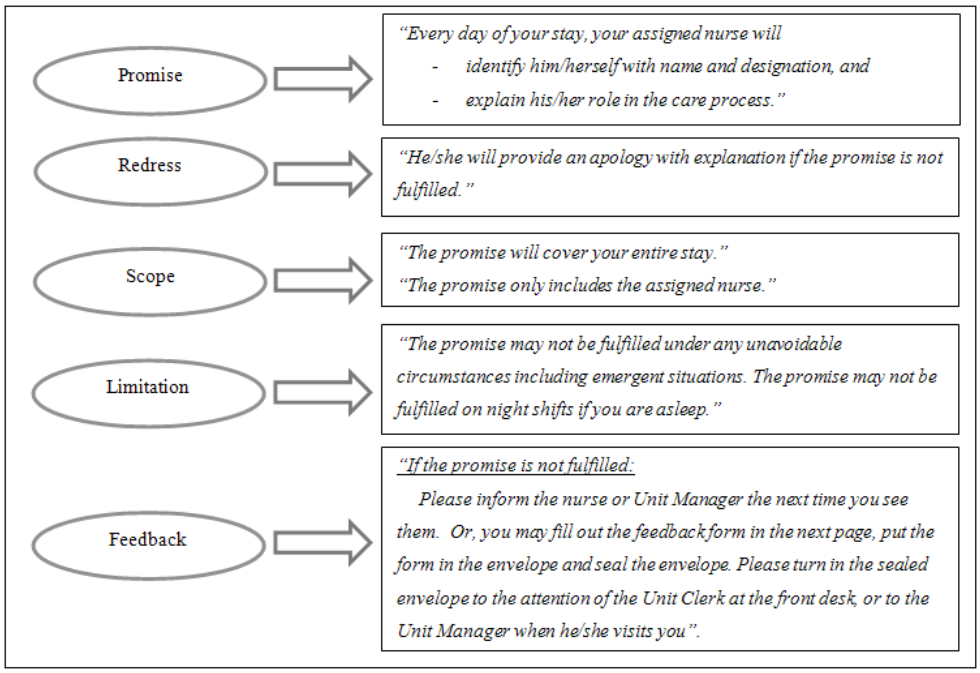

Figure 1: The CSP with its components based on ISO 10001:2007, Clause 6.4 (Khan and Karapetrovic, 2013)

At the start of a shift, each nurse introduced him/herself, explained the care plan to his/her patient and recorded both actions on a "CSP Checklist". Following the CSP, if a patient complained that the promise had not been previously fulfilled, the nurse would apologize with an explanation. At the end of the shift, each nurse submitted the completed checklist to the Unit Clerks (UCs). Accounting for all checklists submitted each day, UCs recorded the total number of times nurses implemented the CSP on a spreadsheet. This aggregate data was then sent to the authors for analysis. If a patient wanted to convey a feedback, the nurse would inform the UM, who would collect the feedback on a supplied "CSP Feedback Form". The UM also distributed among patients a "CSP Survey" with specific questions about the CSP and its performance. The UM considered the ability of a patient before approaching him/her for participation because many patients within the unit were not cognitively and/or physically able to participate. Both the CSP Survey and the CSP Feedback Form came with envelopes in which a patient would insert a filled form and seal it, and then hand the envelope to the UM, who would pass the envelope to the authors for analysis.

The following sources of performance data were used to assess the fulfillment of the CSP objectives, the appropriateness, usefulness and performance of the CSP and improvement opportunities:

1. Aggregate data from the "CSP Checklist" showed, for each day, the number of beds visited by the nurses who filled their checklists, the number of times they introduced themselves to patients and explained the care plan, and the reasons for non-fulfillment of the CSP.
2. "CSP Feedback Forms" included a two-page information letter for patients explaining the CSP and the use of the data, and option for the actual feedback on the third page.

3. "CSP Surveys" also included a two-page information letter, followed by a questionnaire. The items included both Likert-type and open-ended questions. To pretest the questionnaire, the PM was requested to verify its usefulness, conciseness and appropriateness. The UM's response was incorporated in the final survey.
4. The UM and eight nurses were interviewed based on a set of open-ended questions.

4. Results

The results obtained from the CSP implementation and maintenance activities are presented and analyzed below.

4.1. CSP Checklist

Table 1 shows a summary of the aggregate data from the CSP Checklists. The implementation spanned 65 calendar days. A total of 174 CSP Checklists were filled and turned in. No checklist was turned in for 14 days, which included the days the UM was away for vacation and training, statutory holidays and weekends on some occasions. The number of times nurses introduced themselves and explained the care plan to patients is quite high. As learnt from the UM, some patients might have been sleeping or cognitively incapable of comprehending the CSP or the care plan.

Table 1. A Summary of the CSP Checklist data

Item	Total	Per day average	Percentage of Fulfillment
Beds visited	700	14.29	-
Times nurse introduced him/herself to the patient	665	13.57	95.00
Times nurse explained the care plan	604	12.58	86.29

Figures 2 and 3 depict aggregate data and the percentage of times the CSP was not fulfilled, respectively. The figures excluded days when no CSP Checklist was turned in. The number of times nurses introduced themselves was typically higher than the times they explained the care plan (Figure 2), possibly because nurses may have only introduced themselves, but not explained the care plan to those patients who were cognitively incapable at the time of the visit. The number of beds visited per day was low, considering 20 different nurses working every day and 4 or 5 patients assigned to each nurse. The variation in the number of beds visited in Figure 2 explains the varying rate of the participation of nurses. Based on the discussions with the UM, the following reasons for the low number of bed-visits were identified:

- Patients might have been sleeping, or unconscious, or cognitively incapable of communication.
- Because participation was voluntary, many nurses might not have filled CSP Checklists.
- A nurse might have forgotten filling and/or turning in the CSP Checklist.
- The "floating" nurses may not be as committed as the "regulars" in implementing the CSP.
- Whenever the UM was away, the number of turned in CSP Checklists went down.
- No CSP Checklist was filled on the night shift because typically patients are asleep or are non-responsive.

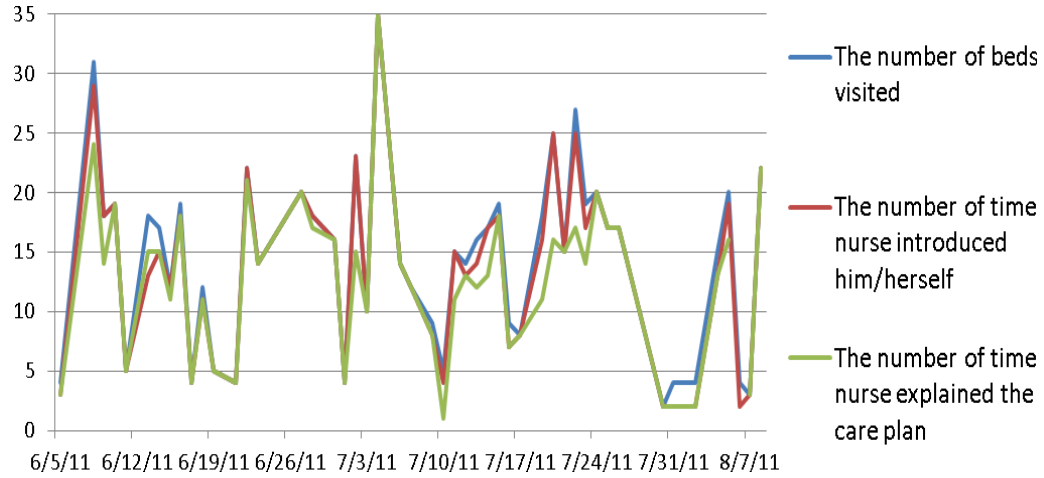

Figure 2. Aggregate data from the CSP Checklists

The effect of the UM's absence on the CSP performance was significant. Excluding the days when five or less CSP Checklists were turned in, the average number of beds visited by the nurses per day was 17.62, which is 23.33% higher than the average including all data. Investigating the two spikes in Figure 3 revealed that both instances happened on Sundays with only five and four bed visits recorded, respectively. Perhaps only one or two nurses turned in CSP Checklists those days and/or have encountered multiple patients who were cognitively challenged.

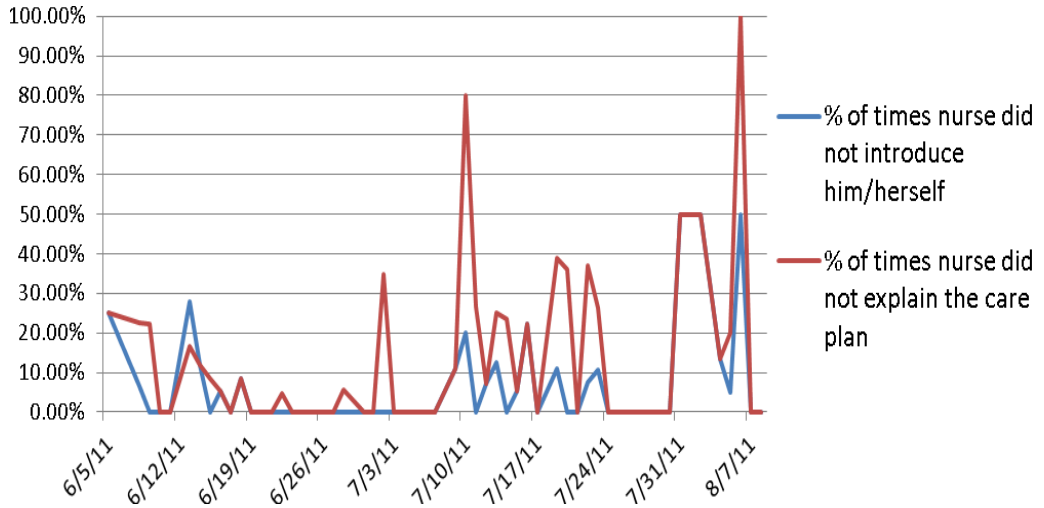

Figure 3. Percentage of times the CSP was not fulfilled

As for the reasons for non-fulfillment, the CSP Checklist had three columns titled "Patient was asleep", "An emergent situation" and "Other", respectively, and nurses would check the reason as appropriate. Some reasons put in the 'Other' column were recurring, as summarized in Table 2, along with the UM's explanation.

Table 2. Explanations of "Other" reasons for non-fulfillment of the CSP

Reasons reported in the "Other" column	Explanation provided by the UM
"Confused"	Patients may not be able to think rationally, are forgetful of their recent experiences, and - may not realize where they are at the moment
"Language barrier"	Patients incapable of speaking and understanding English
"Off unit"	Patient is out of the unit because of: - Out of the unit for the day - a diagnostic test or to see a doctor - waiting at home for test results
"Drowsy"	Patient's condition or the effect of medication
"Unresponsive"	

4.2. CSP Feedback Form

The UM handed out to patients 28 CSP Feedback Forms and seven were filled and returned (25% response). One was discarded because it was improperly filled (the patient simply placed check marks at the end of all lines). The remaining six patients replied 'yes' when asked if the promise was fulfilled. Five patients provided comments or recommendations, as reported in Figure 4.

Patient 1: "Excellent care. No matter what I asked, they were very good."

Patient 2: "Provides technical skills with kindness and empathy."

Patient 3:

"1. The nurse identified herself to me, explained the promise to me.

2. My nurse was caring - to the point of making sure I took my medication on time.

3. She made sure that U had an extra blanket when I asked for one.

4. She gave me over + beyond care, at all times, including at night

5. Her caring and compassion were very much appreciated - particularly at night."

Patient 4: "They do a good job"

Patient 5: "(The nurse) lets the patient know where she is, which simplifies communication."

Figure 4. Feedbacks from patients

It is evident that some feedbacks were not specific to the CSP, which means some patients were unclear about the objective of the CSP Feedback Form.

4.3. CSP Survey

The UM handed out 24 CSP Surveys to patients, but only four were returned (16.67% response). Two patients did not answer all Likert-type questions and two did not attempt any open-ended questions. From such a small number of responses, it is not possible to derive significant outcomes. However, these responses from patients validate the feasibility and usefulness of the CSP Survey and its objectives.

4.4. Interviews of the nurses and the UM

Table 3 below presents key findings from the interviews of the nurses and the UM:

Table 3. Summary of interviews involving nurses and the UM

Item	Nurses	UM
Difficulty in CSP Implementation	All nurses indicated that the CSP was *"Not difficult", and "What was promised is already part of the job".*	It was time consuming for the UM to - train nurses about the CSP, - distribute CSP Feedback and Survey forms to patients, and - explain the purposes of the CSP and the forms.
Patient awareness about the CSP	Nurses carried out the promised actions, but did not explain the CSP to the patients.	The UM informed patients about the existence and the use of the CSP.
CSP's impact on communication and patient satisfaction	Most nurses commented that there was no direct impact of the CSP on improving patient-nurse communication. However, some stated that the CSP is a good reinforcement for those who forget introducing or explaining the care procedure to patients. Nurses agreed that explaining the care procedure made patients happy, satisfied and more comfortable. A nurse commented that patients would like to see that their privacy is respected, and that someone simply should not walk in and start doing a procedure without an explanation.	The UM felt no direct impact of the CSP on improving the patient-nurse communication, and stated that what was promised was already part of the job.
Usefulness of the CSP Checklist and its improvement	Most suggested that documenting the implementation of the CSP was not really helpful. However, it might help the forgetful and new nurses and nursing students.	Not applicable.
Additional ways of obtaining patient feedback about the CSP	One nurse suggested involving the patient family in obtaining feedbacks.	The UM suggested not to depend entirely on the survey and feedback forms because the response rate was very low. Instead, a staff member can be assigned to visit the patients and ask questions orally.
Recommendations	The CSP may be more appropriate for the other staff that may not introduce themselves or explain to patients the care plan, such as physicians, occupational therapists (OTs), physical therapists (PTs), discharge and care coordinators, and social workers.	The CSP can include the medical staff (e.g., resident physicians and medical students) as a form of early training. The CSP Manual should be limited to one page to make it easy for nurses.

The UM stated that it may not be fair to expect an apology from the UM when the nurse does not fulfill the CSP because the UM may remain unaware of the matter without the patient informing the UM. The UM also pointed out that:

- The UM does not visit every patient every day as a part of the daily routine. There may have been patients who may have had a feedback but did not call the UM to get the form.
- It was not always possible for the UM to inform and train the floating nurses about the CSP and its implementation.
- Some dissatisfied patients might not have bothered to complain (in this case, through filling the feedback form), which means the feedback would remain unknown.

5. Discussions

Some gaps between the planned activities and the actual practices identified are:

- Nurses filled CSP Checklists after visiting all patients instead of after each patient visit as planned. Potential errors, such as inputting wrong data or forgetting to fill it up or to turn it in can be avoided if data about each visit is entered sequentially.
- Details of the informal meetings between the UM and nurses regarding the CSP meetings were not recorded as planned because of the lack of resources and available time. Such details can help in the continual improvement of the CSP.
- Feedback handling activities did not entirely follow the ISO 10001:2007-based method. The CSP implementation was under research ethics constraints that did not allow the UM to open patient feedbacks because feedbacks were about the performance of the nurses, and the concern was patients' potential uncomfortable feeling or fear of retaliation. Therefore, the UM collected the feedbacks, but the authors analyzed them and discussed findings with the UM.
- The interviews of nurses were planned to be done twice: a few weeks into the CSP implementation, and after the end, with the intention to implement the learning and recommendations from the first interview and investigate potential change in performance at the end. However, the interviews were performed close to the end because of the relatively short duration of the CSP implementation and lack of time the participants could offer.

The following recommendations can be considered to improve the CSP:

1. On the CSP Checklist, additional columns titled "Confused", "Language barrier", "Off unit", "Unresponsive" (which may also include "drowsy") can be included, which may make recording the CSP implementation easier for nurses. Since the reminder about the CSP Checklists was effective, the UM should continue reminding the nurses and, when away, assign duties to the person in-charge. If filling the CSP Checklist is made part of nurses' job, the motivation should be higher.
2. If a person(s) independent of the nursing staff distributes the CSP Survey and Feedback Forms to patients and collects them back, a better impression of "objectivity" and "confidentiality" can be rendered (based on ISO 10002:2007, Clause 4). The feedback collector can collect oral responses from patients on the same questions, which may help in improving the response rate. The feedback collector can be a nursing student or volunteer, or another UM.
3. Consolidating the CSP Feedback Form and Survey into one form might be useful and efficient, allowing patients to fill the entire form or one part of it.
4. Actual implementation of the CSP within the CSO may not require continuous collection of CSP Checklists. Instead, it

can be administered perhaps once every quarter to monitor and improve the performance.

5. The CSP can be implemented in all inpatients units of the CSO and can include other care providers and support staff. Potential impact of the CSP on the communication can be measured by investigating performance before and after implementation.

Data obtained from nurses and patients could have been richer by including multiple units of the CSO with higher number of participants. Pre-testing the CSP Survey questionnaire should have been performed by collecting responses from a sample of patients, which could not be done because of the short duration of the CSP implementation and a small number of patients in the unit.

6. Conclusion

This paper shows an example of how to establish an ISO 10001:2007-based promise. The experience can be replicated in other areas of health care, and by involving other care providers and support staff in the CSP. It illustrates the use of tools that are generic (e.g., a CSP Survey and a CSP Feedback Form), as well as specific to the promise (e.g., CSP Checklist). It also presents the use of a CSP in a proactive way to address an issue. To our knowledge, this is the first work on applying ISO 10001:2007 in health care. Additionally, a health care example of the integrated use of ISO 10001:2007 and ISO 10002:2004 is presented. There are a few examples of the integrated use of these standards (Honarkhah, 2010; Karapetrovic, 2010; Karapetrovic, 2008a; Karapetrovic, 2008b), but none of them is specific to health care.

As for further research, additional CSPs can be established to address contemporary issues that need to be mitigated. The CSP's scope can be broadened by including physicians, medical students and nursing students. A multidisciplinary research team can plan, design and develop a CSP and investigate its application, feasibility and usefulness. Another avenue can be constructing the CSP Survey by applying ISO 10004:2012, which provides guidance on customer satisfaction monitoring and measurement.

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