QUALITY OF CARE AND PATIENT SAFETY: ASSESSMENT BASED ON INDICATORS

Daniela Patrícia Tres¹, João Lucas Campos Oliveira², Dagmar Willamowius Vituri³, Sidnei Roberto Alves⁴, Denise de Fátima Hoffmann Rigo⁵, Anair Lazzari Nicola⁶

ABSTRACT: Descriptive, cross-sectional, prospective, observational, quantitative study that was aimed at assessing the quality of care, using indicators related to falls prevention and patient identification at a teaching hospital. The data were collected on 15 random days in August and September 2015 at two services of a hospital in the interior of Paraná-Brazil, using previously validated tools. Descriptive statistical analysis was applied, followed by the calculation of the Positivity Ratio. In total, 1068 observations were made. The quality of care, illustrated by the indicators of patient identification by the bed/wristband and presence of bedrails to prevent fall was classified as low (0%), borderline (76.60%) and appropriate (95.48%), respectively. In conclusion, improvements in patient identification are imminently necessary, which could be made feasible by the rational choice of the identification method and through the empowerment of the nurse for decision making on this indicator.

DESCRIPTORS: Quality of health care; Patient safety; Quality indicator; Nursing; Health evaluation.

QUALIDADE DA ASSISTÊNCIA E SEGURANÇA DO PACIENTE: AVALIAÇÃO POR INDICADORES

RESUMO: Estudo descritivo, transversal, prospectivo, observacional, quantitativo, que objetivou avaliar a qualidade da assistência com indicadores relacionados à prevenção de quedas e identificação do paciente de um hospital universitário. Os dados foram coletados em 15 dias aleatórios dos meses de agosto e setembro de 2015, em duas unidades de um hospital do interior do Paraná-Brasil, utilizando-se instrumentos previamente validados. Foi fez-se análise estatística descritiva, seguido do cálculo do Índice de Positividade. Foram realizadas 1068 observações. A qualidade da assistência ilustrada pelos indicadores de identificação do paciente pelo leito/pulseira e presença de grades no leito à prevenção de quedas foi classificada como sofrível (0%), limítrofe (76,60%), e adequada (95,48%), respectivamente. Conclui-se a necessidade iminente de melhorias na identificação do paciente, o que possivelmente poderia ser viabilizado pela escolha racional do método de identificação e através do empoderamento do enfermeiro em relação à tomada de decisão quanto a este indicador.

DESCRIPTORES: Qualidade da assistência à saúde; Segurança do paciente; Indicador de qualidade; Enfermagem; Avaliação em saúde.

CALIDAD DE LA ATENCIÓN Y SEGURIDAD DEL PACIENTE: EVALUACIÓN POR INDICADORES

RESUMEN: Estudio descriptivo, trasversal, prospectivo, observacional, cuantitativo, con objeto de evaluar la calidad de la atención con indicadores relacionados a la prevención de caídas e identificación del paciente de un hospital universitario. Los datos fueron recolectados en 15 días aleatorios de los meses de agosto y septiembre del 2015, en dos unidades de un hospital del interior de Paraná-Brasil, utilizándose instrumentos previamente validados. Fue aplicado análisis estadístico descriptivo, seguido del cálculo del Índice de Positividad. Fueron efectuadas 1068 observaciones. La calidad de la atención ilustrada por los indicadores de identificación del paciente por el lecho/pulsera y presencia de grades en el lecho para prevención de caídas fue clasificada como sufrible (0%), límite (76,60%) y adecuada (95,48%), respectivamente. Se concluyó la necesidad inminente de mejoras en la identificación del paciente, lo que posiblemente podría ser viabilizado por la elección racional del método de identificación y a través del empoderamiento del enfermero con relación a la toma de decisión respecto a este indicador.

DESCRIPTORES: Calidad de la atención de salud; Seguridad del paciente; Indicador de calidad; Enfermería; Evaluación en salud.

¹RN. Specialist in Medical and Surgical Clinical Nursing Management. Universidade Paranaense. Cascavel, PR, Brazil.
²RN. Ph.D. candidate in nursing. Professor in Nursing and Residency Program in Medical and Surgical Clinical Nursing Management at Universidade Estadual do Oeste do Paraná. Cascavel, PR, Brazil.
³RN. Ph.D. in Nursing. Hospital Universitário da Universidade Estadual de Londrina. Londrina, PR, Brazil.
⁴RN. M.Sc. in Health Promotion. Hospital Universitário do Oeste do Paraná. Cascavel, PR, Brazil.
⁵RN. Graduate student, Residency Program in Medical and Surgical Clinical Nursing Management. Hospital Universitário do Oeste do Paraná. Cascavel, PR, Brazil.
⁶RN. Ph.D. in Nursing. Professor in Nursing and coordinator of Residency Program in Medical and Surgical Clinical Nursing Management at Universidade Estadual do Oeste do Paraná. Cascavel, PR, Brazil.

Corresponding author: Daniela Patrícia Tres
Universidade Estadual do Oeste do Paraná
R. Universitária, 1619 - 83819-110 - Cascavel, PR, Brasil
E-mail: danielapatriciatres@gmail.com

Received: 02/02/2016
Finalized: 03/07/2016
Mainly in view of the accelerated scientific-technological advance; the consumers’ increased requirements; and the growing competitiveness in the contemporary globalized world, service providers, like health institutions, are increasingly confronted with the need to guarantee the quality of care. In that sense, some health services have incorporated the classical principles of quality from a management perspective, especially regarding the search to improve care through systematic and cyclical assessment actions.[1]

Although assessment is an elementary management practice in favor of qualified care, quality in health is a complex and polysemous good, ruled by goods that surpass their guarantee, made feasible solely by the evaluation processes, such as efficacy, efficiency, accessibility, acceptability, equity and, more recently, safety[2].

Safety does not mean the guarantee of fully qualified care, but it is nevertheless one of the pillars that supports quality in health, as the risks associated with care in this particular production sector are evident[2,3]. In this respect, patient safety is defined as the reduction of the risk of unnecessary damage associated with health care to an acceptable minimum since, in view of the complexity of procedures and treatments instilled in care service providers, the potential to damage the patient is real[4].

Different practices exist that favor safe patient care, ranging from the promotion of an organizational culture favorable to this good[3] to the establishment of punctual targets, measures and protocols to reduce the risks associated with care[4]. Thus, the prevention of falls during hospitalization and patient identification figure among the strategies to reduce safety incidents, which are some of the targets established in the National Patient Safety Program (PNSP)[4].

The falls patients are victims of during hospitalization are one of the most important incidents in the rupture of care safety, and are frequently responsible for the increase in the number of hospitalization days and for worse recovery conditions[5]. That is so because the occurrence of falls in the hospital environment can aggravate the patient’s health problems and the main consequences are: traumas; unprogrammed removal of catheters, drains and tubes; fear of falling again; emotional problems; clinical worsening and even death[6].

Another practices that deserves attention in the promotion of care safety is patient identification, which is comprehensive and a multidisciplinary responsibility, as it involves aspects of structure, designs of work processes, organizational culture, professional practice and user participation[7]. Therefore, it is postulated that non-compliance in the patient’s identification is a concerning factor in health care, evidencing that this practice can induce to a range of errors and even adverse events[8].

Fall prevention and correct patient identification are elements that support the promotion of safe care[4]. Therefore, knowing the risk of falls can represent an indicator to monitor patient safety in this aspect[8,30].

The assessment of patient identification is another indicator to control the quality of care that can support the prevention of errors and adverse events, thus favoring safer care[11]. That is relevant because the quality indicators stand out as management tools/instruments that support rational assessment practices, which favors decision making for the sake of continuous improvement[12].

This study is justified because the analysis of quality and patient safety indicators can underlie the decision process, with a view to supporting measures that favor safe care.

This fact can be better clarified through the production of scientific knowledge, in view of its potential to (re)orient managers and health professionals’ practices regarding the monitoring and cyclical assessment of factors that permeate the quality of care and patient safety.

In view of the problem presented, the following question emerges: What is the quality of care related to fall prevention and patient identification at a public teaching hospital? To answer this question, this study aimed to assess the quality of care through indicators related to fall prevention and patient identification at a public teaching hospital.
METHOD

A descriptive, cross-sectional, prospective and observational study with a quantitative approach was undertaken. It was developed at a public university hospital in the interior of the State of Paraná, Brazil, involving patients hospitalized at the Medical Clinical and General Surgery wards (F2); and Neurology, Orthopedics and Vascular Wards (G3).

The study hospital offers 195 beds. It is the only public hospital in the West of the State of Paraná, with 100% of its operating capacity attending to the Unified Health System (SUS). In addition, at the time of the study, the services studied had 25 beds at the ward attending to the specialty areas orthopedics (12), neurology (10) and vascular (3) – G3; and 28 beds at the medical clinic (12), surgical clinic (14) and cardiology (02) – F2.

The research population consisted of patients hospitalized at the units mentioned between August and September 2015. The sample was defined in line with the following eligibility criteria: patients over 18 years of age, with preserved orientation in time and space (this criterion was assessed by the researcher), or presence of a companion/responsible caregiver for people younger than 18 years and/or in clinical conditions unfavorable to the response and orientation in time and place.

The data were collected through the application of a tool called “Active Search Registration Tool”, which investigates the quality of nursing care, elaborated and validated at another hospital in the South of Brazil[13]. The tool was used in accordance with the research objectives, that is, by extracting the variables concerning the indicators related to the patient identification (in bed and by wristband) and fall prevention through the presence of rails in the patients’ bed, according to risk.

To assess the risk of falls from the bed, the Morse Fall Scale was used, in its version translated to and validated for Portuguese[10], which consists of the following assessment criteria: history of falls, secondary diagnosis, walking aid, intravenous therapy/salinized or heparinized intravenous device, walking and mental condition.

In the assessment, each of the above criteria was scored between zero and 30 points, totaling a final risk score based on the sum of all scores in the respective criteria, that is: low risk 0 – 24; medium risk 25 – 44 and high risk ≥45[10]. When measuring the indicator, the patients classified under medium and high risk were considered to verify the presence of bedrails, in accordance with the methodological framework chosen[13].

The pilot test was undertaken in August, involving six randomly selected patients, to verify possible problems in the use of the tool, which were not observed. Next, the patients were observed and the instrument items were completed during 15 random days in August and September 2015, beyond what the reference framework advises, which establishes observation of 14 casually determined days[13]. A single researcher performed the data collection to mitigate the common bias of observational studies.

For analysis purposes, the indicators measured were calculated in line with the formulae recommended in the tool used[13]. Then, to classify the quality each indicator illustrates, the data were analyzed in accordance with the positivity ratio (PR), which refers to the percentage of positive answers, classified as: Desirable care (100% positivity); Appropriate care (90 to 99% positivity); Safe care (80 to 89% positivity); Borderline care (71 to 79% positivity); and Low-level care (Inferior to 70% positivity)[14].

It is highlighted that all analytic phases and the descriptive statistical analysis were executed after summarizing the information in an electronic database in the software Microsoft Office Excel 2010.

The research project underlying the study was submitted to and received approval from the Research Ethics Committee at Universidade Estadual do Oeste do Paraná, under protocol 180.282/2015.

RESULTS

In total, 1068 observations were obtained, corresponding to 74.68% of the population hospitalized during the period, that is, which complied with the eligibility criteria. The remainder did not comply
with the criteria or refused to participate. Thus, in Table 1, the analysis results of the research variables are displayed.

Chart 1 illustrates the results of the classification of nursing care quality, based on the positivity rate of the indicators assessed.

Table 1 – Assessment of compliance of indicators related to patient identification and presence of bedrails in fall prevention. Cascavel, PR, Brazil, 2015

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Compliance</th>
<th>Non Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Identification of Patient Bed</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Patient with Identification Wristband</td>
<td>818</td>
<td>76.60</td>
</tr>
<tr>
<td>Presence of Bedrails*</td>
<td>782</td>
<td>95.48</td>
</tr>
</tbody>
</table>

*Compliance calculated for patients at medium and high risk of falls, assessed by means of the Morse Scale.

Chart 1 – Quality of care illustrated by the indicators assessed, according to the Positivity Rate. Cascavel, PR, Brazil, 2015

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Positivity Rate (%)</th>
<th>Quality of Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification of patient bed</td>
<td>0</td>
<td>Low-level care</td>
</tr>
<tr>
<td>Patients with identification wristband</td>
<td>76.60</td>
<td>Borderline care</td>
</tr>
<tr>
<td>Presence of bedrails</td>
<td>95.48</td>
<td>Appropriate care</td>
</tr>
</tbody>
</table>

DISCUSSION

In Table 1, the (non) compliance of each indicator assessed can be observed. It is noteworthy that the identification of the patient’s bed was not present in any observation site, signaling that the institution does not adopt this practice in its routine, while it seems to have complied – with limited efficacy – to the identification by means of a wristband. Thus, this finding differs from what was found in the validation study of the tool used, in which the place of study, also located in the State of Paraná, adopted the identification of the bed as an organizational standard. This fact may have caused the compliance rate of 95.8% (13).

This finding is relevant because, in clinical practice, it is known that the conditions inherent in the patient can negatively influence the correct positioning and/or adherence with the identification wristband, such as limb and/or generalized edema, excessive sweating, limb amputation, reduced consciousness level, excessive care devices, among others. Therefore, the patient’s identification through the bed could be a measure that eliminates the absence of identification when a wristband cannot be used, in line with the guidelines of the nursing entity responsible for patient safety in Brazil (15).

What the patient’s identification through a wristband is concerned, the compliance rate was considerably higher when compared to the identification of the patient’s bed (Table 1). Nevertheless, the patient identification by means of a wristband did not reach a satisfactory quality level of care either (Chart 1). This assertion becomes even more importance when linked to similar data found in a study at another public teaching hospital in Ribeirão Preto (SP), in which the quality of care regarding the patient’s identification by means of a wristband was also classified as borderline (16).

It should be reminded that, in Brazil, the recommendation establishes the patients’ identification upon admission (continuing throughout the hospitalization) by means of the wristband; in addition, the service should define how to identify patients who cannot use this device (17). This again underlines the essentially negative perspective in the analysis of the bed identification indicator, which could be
an alternative for the 250 cases not identified by means of a wristband (Table 1), nor the headrest of the hospital bed, therefore possibly being more exposed to errors and, hence, adverse events.

What the use of the identification wristband is concerned, the institution should use at least two identifiers, such as: patient's full name, mother's full name (in case of infants), birth data and/or number of patient history[^17]. These aspects were not assessed because they go beyond the research goal, but they undoubtedly deserve the hospital leaderships' attention and future studies.

In view of the results and the literature, it is considered that the compliance with patient safety protocols and measures, such as the patient's identification with a wristband, should not follow the not unusual logic of the acritical consumption of scientific knowledge, but contribute to the systemic organizational culture, in favor of quality and safety, which remains a challenge due to the persisting culture against continuing improvement in the hospital sector[^3,18].

In line with the above, the mention that the patient's "mere" use of the wristband (that is, acritical use) does not guarantee his safety, as the professionals should verify it before executing any procedure, in order to avoid errors and culminate in the goal of the wristband, which is to contribute to patient safety[^19]. In that sense, authors[^7] have recently affirmed that, in daily work, the professionals end up neglecting the verification of the wristbands, mainly in patients with lengthy hospitalizations; therefore, they recommend mutual cooperation among professionals, users and health managers, with a view to consolidating identification as a lever of patient safety instead of a bureaucratic procedure in the organization[^7].

As opposed to the data presented and discussed, the indicator regarding the presence of bedrails for patients classified under medium or high risk of falls, according to the Morse Scale[^10], obtained satisfactory compliance, which according to the reference framework illustrated the quality of care in this respect as appropriate (Chart 1). Notless important, this finding is also ratified by another study undertaken at a private hospital which, using the same methodological framework, classified the quality of the indicator similarly[^19].

It is acknowledged, however, that although this finding is clearly praiseworthy, the perspective may be limited to the structure of the research hospital, as what was measured only refers to the presence/absence of bedrails in the hospital beds, in line with the data collection tool and based on the data analysis[^13].

Therefore, the presence of the bedrails alone is insufficient to prevent falls, as raising the bedrails should be a continuous process of activism in search of patient safety, besides other equally important measures, such as: orientation of relatives: environmental care (floor humidity, positioning of furniture, belongings close to the patient, among others); neurological assessment; keeping the bell close to the patient when present; among others[^20].

The above care is important and necessary because evidencing the risk associated with care is more enhanced in the hospital context[^3,18]. This fact highlights fall prevention as a crucial element to promote patient safety, especially the constant and preventive surveillance of the nursing team, which is knowingly the sole professional category that monitors the hospitalized patient 24 hours per day.

In that sense, researchers suggest that, besides care intrinsic to the patient, fall prevention involves issues inherent in the human capital of nursing, such as appropriate staff dimensioning, i.e. the quality and quantity should be adjusted to respond to the care demand in a qualified and safe manner[^21].

The above premise is strengthened in a recent study developed at a large hospital in Porto Alegre, which evidenced that, when exposed to a high workload – which can be associated with the lack of staff –, the nursing team presented equally deficient performance indicators, including increased rates of falls from the bed[^22].

In addition, it should be mentioned that fall prevention may start with the detection of the risk for the occurrence of this unwanted and potentially harmful event[^9,10]. Nevertheless, care organization tools need to be used, such as fall risk scales[^10], in a rational and critical manner. Therefore, it is suggested that the nurse's role is highlighted as, in nursing education, professionals are prepared to develop methods that favor the analysis of the care process, with a view to responding to the patients'
expectations and needs, and the quality control activities enable these professionals to continuously assess the care practice in search of excellence in nursing care (23).

Concerning the above, it is clear that the nursing team’s participation in fall prevention in the hospital context is fundamental and, in accordance with the results, although this is but a punctual perspective, the organization reached satisfactory quality parameters.

Nevertheless, the need is reaffirmed to investigate the aspects that go beyond the bed structure, permitting the analysis of the actual care process, that is, the measures to predict fall prevention which nursing makes feasible. This suggestion also applies to the verification and control of the use of wristbands and other possible patient identification devices.

**CONCLUSION**

Through this study, relevant indicators for patient safety could be assessed and, consequently, factors that influence the quality of care. In that sense, the results of the indicators illustrated the multifaceted nature of quality, as it was classified as satisfactory (bedrails) and unsatisfactory, concerning the patient’s identification by means of a wristband, and mainly through the identification of the bed.

Based on the results, it is concluded that the research hospital lacks investments in the effective compliance with patient identification. One suggestion to improve this problem is the empowerment of nursing for decision making to identify the patient as needed, that is, for rational choice.

Despite the favorable perspective identified regarding the prevention of falls, the need is reaffirmed to investigate the care process within the scope of this good, in view of its importance for safety promotion. In addition, the research limitations, such as its cross-sectional design and the absence of inferential statistical analysis, encourage new studies, especially regarding the rational and critical use of patient identification, as well as care related to the prevention of falls.

**REFERENCES**


18. de Souza VS, Kawamoto AM, Oliveira JLC, Tonini NS, Fernandes LM, Nicola AL. Errors and adverse events: the interface with health professionals' safety culture. Cogitare enferm. [Internet] 2015; 20(3) [acesso em 01 nov 2015]. Disponível: http://dx.doi.org/10.5380/ce.v20i3.40687


