

The safety of care focused on patient identity: an observational study

Rita Romano^{1,2}, Giuseppe Marletta^{1,2}, Alfonso Sollami^{1,2}, Rachele La Sala^{1,2}, Leopoldo Sarli², Giovanna Artioli³, Martina Nitro⁴

¹University Hospital of Parma, Italy; ²University of Parma, Italy; ³Azienda USL-IRCCS, Reggio Emilia, Italia; ⁴Guglielmo da Saliceto Hospital, Piacenza, Italy

Abstract. *Background and aim:* Healthcare organizations, to reduce errors and extend the number of safe practices, are looking for possible solutions to enhance the clients' health quality care and trying to spread the culture of safety healthcare. Although in the literature the field of research "patient safety" is very debated, there are few empirical studies that investigate about the strategies undertaken by nursing students for the patients' identification process during their care pathway. The aim of this study is to investigate the knowledge of the Ministerial Recommendation No. 3/2008 among nursing students, a specific Italian directive that aims to guarantee the safety of cares. *Methods:* A four-weeks single-centered observational study was conducted, involving a convenient sample of 112 students of the 2nd and 3rd year of the Nursing Course Degree of the University of Parma. The survey was conducted using an *ad-hoc* questionnaire. *Results:* The use of the identification wristband is considered one of the most important strategy to make sure the patient identification; unfortunately, it is in practice used just on few occasions and only when performed specific procedures; it is furthermore noted that patients are not enough informed about the use and finalities of the identification wristband. *Conclusions:* Considering the importance of the patient identification process to guarantee the safety of cares, the results produced, suggest that this investigation field deserves further insights in order to collect more substantial data and expand knowledge on the specific subject, so as to fill knowledge gaps and sensitize nursing students to the correct use of the identification wristband.

Key words: safety, healthcare, nursing student, nurse, patient identification, wristband

Introduction

Patient safety is a health discipline that emphasizes the reporting, analysis, and prevention of medical errors that often lead to adverse health events and has become a critical care component to prevent unnecessary harm to patients (1). Over time, the topic has become a real attribute of nursing care's quality, as important as efficacy, because adverse events entail significant social and economic costs and can imply irreversible harm for patients and their families, constituting a serious public healthcare problem (2).

The importance of safety culture in healthcare is widely shared and well documented in literature, supporting its relevance through two hypotheses: the first recalls the idea that a positive safety culture is associated with an improvement in care performance and the second focuses on the assumption that starting from a good safety culture it is possible to improve the culture of an organization (3).

Since the 2000s, patient safety has thus become the central theme of a broad field of research and it is recognized internationally as "a fundamental dimension of the quality of health" (4). In the healthcare

settings of several countries, the point of departure reveals a common origin in the guidelines issued by organizations operating at an international level in terms of quality improvement in healthcare: the Joint Commission International (JCI) and the World Health Organization (WHO). In the area of patient safety, one of the most critical aspects that deserves particular attention is incorrect patient identification, since from an epidemiological point of view it is not an easily verifiable event; this is attributable both to the underestimation of the problem, to the fear of receiving sanctions, and that not all identification errors translate into real damages for the patient (or near miss) (5). There are many critical points during the patient care process where identification is necessary and can be jeopardized: homonymy, patient transfer, medication management and administration, transfusion management, errors in the context of surgical procedures, devices and implants. In addition, there may be intrinsic patient factors that can increase the risk of misidentification that could cause serious disruption to verbal communication: critical condition, coma or anesthesia, delirium or dementia, impaired communication (6). JCI and WHO, in 2005, created the Collaborating Center for Patient Safety Solutions, to share six patient safety objectives internationally, the first of which is the correct patient identification process (7). This gives rise to the commitment at the national level of the Italian Ministry of Health (Department of health and social care), in collaboration with experts from Regions and Autonomous Provinces in Italy, which has drawn up recommendation No. 3/2008 *“Recommendation for the correct identification of patients, the surgical site and procedure”*, which aims to ensure that the procedures are addressed to the patient who must receive them, to try to minimize preventable errors that lead to an increase in the period of hospitalization, an increase in health costs and the occurrence of adverse, even fatal, events. The ministerial document lists the actions to be carried out in 5 stages that precede the execution of any intervention/procedure: informed consent process, marking/flagging the operating site, patient identification, time out, double check. The Recommendation refers, at first instance, to the procedures that will be performed in the operating room but, if simplified/adapted, it can be used in any context (8). In individual

healthcare settings, checking the patient's identity through the identification bracelet is one of the most effective and safest methods, alongside verbal identification and checking the health documentation (9). The bracelet's format/shape is usually standardized thanks to the protocols that each healthcare organization puts in place to ensure the achievement of patients' safety objectives; it is however recommended to have at least two of the following descriptors that should always be considered in the design of an identification bracelet: name and surname (full name of the mother for newborns), date of birth and medical record number (10). The use of non-recommended identifiers such as bed number, age, and hospitalization data would not guarantee safe assistance to the user as it could represent misleading information (4), as in fact is reported in the cross-sectional study by Hoffmeister de Moura, where the main non-conformities detected on the identification bracelets were: incomplete/wrong name, different medical record number, unreadable data, and bracelet integrity problems (11). Similarly, it is important that the identification bracelet is compliant from the point of view of integrity, in order not to affect the legibility of the data in the event that it is missing and that it is correctly positioned for easy control by the staff and to avoid occurrence of the “tourniquet” effect on the patient's limb (10). The presence of these irregularities could cause identification errors during the procedures (12); therefore, the “simple” use of the identification bracelet (i.e. uncritical use) is not enough, since such use does not guarantee safety for the patient (13). In this respect, it is interesting to note that the healthcare staff's opinion regarding the patient identification procedures does not always seem in line with the principles expressed above. In fact, most professionals would consider the margin of error linked to an incorrect identification process as negligible (9) and would not use the good identification practices and checklists made available by the WHO, stating rather that the care procedures could be carried out even not using specific practices for patient identification (14). Other studies showed that the most experienced nurses seemed to be those who considered the identification process less important, that the patient identification procedure was used for safety only in situations in which interruptions and distractions occurred (and therefore not

habitually) (15) and that professionals tend to think that they know patients well enough to the point of not deeming further identity checks necessary in order not to compromise the relationship with them (which it was feared could be undermined by repeated identity checks) (5). Even among nursing students, patient identification does not appear to be a consistently used practice, as investigated by Nilsson, Brulin, Grankvist, & Juthberg in a cross-sectional study, in which the compliance's percentage with a correct patient identification process decreased over time during the course attendance, probably in association with the increase in socialization with the patients during clinical practice (16). It would seem evident that healthcare professionals are experiencing certain difficulties in implementing identification processes in clinical practice (15), due to the presence of multiple factors contributing to a lack of patient identification: lack of time to apply the recommendations, communication obstacles and work complexity, priority of other processes, forgetfulness, lack of collaboration among professionals (17). Härkänen, Tiainen and Haatainen distinguished, in this regard, factors related to the healthcare professional such as tiredness, negligence, or lack of skill and system-related factors such as a heavy workload, intensive care patients, inadequate workload division and many activities to perform simultaneously, night shift, similar characteristics or symptoms among multiple patients, moving and handling patients, presence of LASA drugs, patient communication failed (18). In other cases, as highlighted by Hoffmeister and de Moura, the failure to identify the patient would seem to be linked to the absence of the identification bracelet on the patient, due to the bracelet's size (usually too large), the patient's refusal to wear it, dismissal and lack of professionals' replacement (11). To improve the outcomes deriving from the patient identification process, it would be necessary to implement new protocols to increase patient safety and to develop practices and strategies aimed at supporting safety practices (7).

Some authors argue that technology could bring innovation and improvement in this regard, proposing solutions to mitigate human error factors such as the use of automated systems: barcode technology, radio frequency identification (RFID), biometric technologies (such as iris or fingerprint scanning) and adoption

of facial recognition technologies (5,6). Other authors promote the need to actively involve the patient in the identification process, as a "constant factor" in the care process and consequently able to provide additional support to the action of healthcare professionals (19), it being understood that health professionals are primarily responsible for verifying the patient's identity (5). The patient's active participation as a positive factor for their own safety is also proposed in addition to the use of different identification methods (identification bracelet, verbal confirmation of identity, control of health records) (9) and the proposal to involve health professionals in training activities for the verification of the patient's identity, encouraging reporting in the event of an incorrect identification of the patient, without being afraid of sanctions or the judgments of other colleagues (14). The implementation of the healthcare professional's knowledge is considered a valid proposal to improve the outcomes of the patient's identification process with the dissemination of educational strategies presented through parallel distribution channels, such as posters within hospital wards, computer training, meetings (17) and/or brochures, to achieve an increase in the percentage of adherence to safety practices for the patient in a collaborative and constructive way (7).

Aim

The aim of the study, based on the results of the bibliographic research, is to describe the perception of the students of the Nursing Course Degree of the University of Parma on the Ministerial Recommendation No. 3/2008, focusing on the correct identification of the patient.

Method

Study design. A single-centered observational study was conducted within the space of four weeks between September 2019 and October 2019.

Setting. This study was conducted in a northern Italy University, involving the Nursing Course Degree, University of Parma.

Sample. A convenience sampling was used to select 112 students of the 2nd and 3rd year of the Nursing Course Degree, University of Parma (who had then already attended almost one internship period), without using additional specific inclusion criteria.

Procedure. The students were informed about the study's aim with several meetings carried out in their classroom underlying the principles about the anonymity guarantee. The students were then invited to complete the questionnaire prepared in Google Drive[®] whose link has been sent to them via personal mail. The data obtained were therefore translated into electronic format (Excel database) for the subsequent statistical analyses.

Instrument. The survey was conducted using an *ad-hoc* questionnaire provided by the Departmental Structure for Clinical Government, Risk Management and Quality Coordination and Accreditation of Parma used during a previous research conducted with the healthcare professionals of the Azienda Ospedaliero-Universitaria of Parma in 2011; the authorization for use has been requested and obtained directly from the authors. The questionnaire consists of two parts; the first part contained 10 questions with various answer modes. The first item was "to what extent do you consider the Ministerial Recommendation No. 3/2008 applicable in your internship/traineeship context?", With a 6-step Likert-type response mode (1 = not applicable and 6 = fully applicable). The second item was "How relevant is Ministerial Recommendation No. 3/2008 in your opinion?", With response mode on a 6-step Likert type scale (1 = not relevant and 6 = totally relevant). The third item was "According to your experience, do you think that patients/family members/caregivers are sufficiently informed about the use of the identification bracelet?" (1 = not informed at all; 6 = fully informed). The response mode to items 4, 6, 8, 9, 10 was on a 6-step Likert-type scale (1 = never and 6 = always); this is an example of an item: "In your experience, after applying the identification bracelet, do patients/family members/caregivers require further information on its use?". The fifth item was "In case of request for information from whom is it mainly provided?" with multiple choice answer mode on 4 options listed. The seventh item was "Put the following activities in rank (importance order) in relation to the use of the identification bracelet, indicating from 1

= most important activity to 11 = least important activity", with indication of "ranking" a list of 11 assistance activities. The second part of the questionnaire was dedicated to the social-demographic data such as age, year of course and Department of their last internship.

Data analysis. The descriptive analysis included the lemma qualitative analysis and the chi-square tests, useful for assessing the statistical significance of the choices made, were computed through the IBM SPSS statistical program, Statistics Version 23.0 software package (IBM Corp. 2014); *p values* <0.05 were considered statistically significant.

Ethical implications. Participation was voluntary; participants (2nd and 3rd year nursing students) were informed that any information given was strictly confidential and used exclusively for research purposes and that no personal information will be used to identify the author (in accordance with the regulation UE n. 2016/679, issued April 27th 2016, published in the EU Official Journal on May 4th 2016, came into force on May 25th 2016 and executive since May 25th). The consent to participate in the study was based on their acceptance to complete the questionnaire once completed.

Results

Sample characteristics. The distribution of participants per year of course is described in table 1. Participation was homogeneous between second (N = 53, 47.3%) and third year (N = 57, 50.9%) students, coming to a total of 112 students. No questionnaires were excluded because they were all correctly filled out in all their parts.

Table 1. Sample number by course year

Course year	N	%
Second year	53	47.3%
Third year	57	50.9%
Graduating	2	1.8%
Total	112	100%

Table 2 shows the distribution of participants in relation to the Departments of their last curricular

internship: 2 (1.8%) students from the geriatric-rehabilitation Department, 28 (25.0%) from the general and specialist surgery Department, 52 (46.4%) from the emergency Department, 18 (16.1%) from the maternal and child health Department and finally 12 (10.7%) from the general and specialist medicine Department. The choice not to include these data in the quantitative comparative analyses derives from the inhomogeneity of the distributions that could have affected the validity of the data.

Table 2. Sample number by internship department

Department	N	%
Geriatric-Rehabilitation	2	1.8%
General and Specialist Surgery	28	25.0%
Emergency-Urgency	52	46.4%
Mother and Child	18	16.1%
General and Specialist Medicine	12	10.7%
Total	112	100%

Table 3 shows the frequencies expressed by 102 students in relation to the 1st question (D1) of the questionnaire. The results show that only 2 (2.0%) believe that Ministerial Recommendation No. 3/2008 is not applicable in the context of internships, while it can be observed that the choices tend mainly towards subsequent values and prevail over the “fully applicable”, preferred by 56 students (54.9%).

Table 4 shows the frequencies relating to question 2 which, referring to Ministerial Recommendation No. 3/2008, asked to evaluate its relevance; 105 responses were obtained, which follow the trend of the previous question with limited preferences on values close to “not relevant” specifically chosen by only 2 (1.9%) students and much more substantial towards values close to “totally relevant” chosen by as many as 65 (60.7%) students.

Table 5 shows the frequencies related to question 3 (D3), to which 110 students answered. It can be observed that preferences follow a wider distribution

Table 3. Students’ frequencies expressed on question D1: Considering Ministerial Recommendation No. 3/2008, in your experience, how much do you consider it applicable in your internship context?

D1	Course year		Total	%
	Second year	Third year		
Not applicable	1	1	2	2.0%
2	2	0	2	2.0%
3	1	6	7	6.9%
4	5	9	14	13.7%
5	8	13	21	20.6%
Totally applicable	32	24	56	54.9%
Sub Total	49	53	102	100%

Table 4. Students’ frequencies expressed on question D2: how relevant is it?

D2	Course year		Total	%
	Second year	Third year		
Not relevant	2	0	2	1.9%
2	1	0	1	0.9%
3	2	1	3	2.8%
4	5	7	12	11.2%
5	10	14	24	22.4%
Totally relevant	32	33	65	60.7%
Sub Total	52	55	107	100%

with greater concentration on the average values. Extreme values range from 3 (2.7%) preferences agreed by students who have the perception that patients/family members/caregivers are fully informed about the use of the identification bracelet, to 12 (10.9%) who on the contrary think that there is no information to patients/family members/caregivers.

Table 6 shows the answers given by 109 students to question 4 (D4) of the questionnaire. According to only 2 (1.8%) students, patients/family members/

caregivers ask for further information regarding the use of the identification bracelet, while according to 38 (34.9%) students, no further information is ever requested.

Table 7 shows the responses of 110 students to the fifth question of the questionnaire (D5), who wanted to investigate which professional provided information regarding the use of the identification bracelet when requested. The overwhelming majority of students 100 (90.9%) identified the nurse as the professional who

Table 5. Students' frequencies expressed on question D3: Do you believe that patients / family members / carers are sufficiently informed on the use of the ID bracelet?

D3	Course year		Total	%
	Second year	Third year		
Not at all informed	4	8	12	10.9%
2	10	13	23	20.9%
3	17	16	33	30.0%
4	16	10	26	23.6%
5	5	8	13	11.8%
Totally informed	1	2	3	2.7%
Sub Total	53	57	110	100%

Table 6. Students' frequencies expressed on question D4: In your experience, after applying the ID bracelet, do patients / family members / carers request further information on its use?

D4	Course year		Total	%
	Second year	Third year		
Never	19	19	38	34.9%
2	19	19	38	34.9%
3	7	8	15	13.8%
4	6	6	12	11.0%
5	2	2	4	3.7%
Always	0	2	2	1.8%
Sub Total	53	56	109	100%

Table 7. Students' frequencies expressed on question D5: who mainly provides information when requested?

D5	Course year		Total	%
	Second year	Third year		
Nurse	48	52	100	90.9%
Medical Doctor	2	1	3	2.7%
Nursing coordinator	1	0	1	0.9%
All previous	2	4	6	5.5%
Sub Total	53	57	110	100%

most provides the information requested, followed by the doctor with 3 (2.7%) preferences, while only 1 (0.9%) indicated the figure of the nursing coordinator (Band 7 nurse); Relatively few, just 6 (5.5%) students indicated that the information was given by several professionals in cooperation.

Table 8 shows that the frequencies expressed by 107 students in question 6 (D6) of the questionnaire, to investigate whether the identification bracelet was used as a risk management tool in internships, are heterogeneous. The lowest preference was reported on “never” with 6 (5.6%) students; all subsequent responses followed a tendency to rise up just before

the value “always” which with 14 (13.1%) expressed preferences reported a marked inversion of the trend.

Table 9 shows the results relating to question 7 (D7), in which the participants in the questionnaire were asked to rank in order of importance 11 assistance activities in relation to the use of the identification bracelet. The activity considered to be the most important was “blood transfusion” for both 2nd ($M = 7.87$; $SD = 4.25$) and 3rd ($M = 8.33$; $SD = 4.04$) year students. As regard the activities considered less important, 2nd year students agreed with the answer “patient transfer” ($M = 5.09$; $SD = 3.78$), while for 3rd year students “meal management” was listed as less important ($M = 4.40$; $SD = 3.77$).

Table 8. Students’ frequencies expressed on question D6: Is the ID bracelet used as a risk management tool?

D6	Course year		Total	%
	Second year	Third year		
Never	1	5	6	5.6%
2	6	11	17	15.9%
3	3	9	12	11.2%
4	15	9	24	22.4%
5	19	15	34	31.8%
Always	7	7	14	13.1%
Sub Total	51	56	107	100%

Table 9. Mean (M) and Standard Deviation (SD), by course year, of the importance of the activities in relation to the use of the ID bracelet

Activity	Course year			
	Second year		Third year	
	M	SD	M	SD
Health records management	6,26	3,32	6,49	3,40
Execution of instrumental exams	6,94	3,40	7,26	3,31
Blood transfusions	7,87	4,25	8,33	4,04
Preparation for surgery	7,21	3,99	7,74	3,62
Drug administration	7,06	3,52	7,54	3,65
Blood samples	6,62	3,46	7,12	3,52
Homonymous patient	6,92	3,89	7,16	3,86
Sending the patient to other UOOO/Services	5,49	3,47	5,67	3,57
Informed consent	6,28	3,35	6,60	3,39
Meal management	5,19	3,78	4,40	3,77
Moving the patient	5,09	3,66	5,23	3,73

Table 10 shows the heterogeneous responses of 110 students regarding the frequency of checking the identification bracelet; specifically only 4 (3.6%) declared that they did not perform the check during the execution of the procedures, while in 31 (28.2%) they checked it always.

Tables 11, 12, 13 and 14 analyze the responses of 110 students in relation to question 9 (D9) of the questionnaire. This latter question required to indicate the frequency of use of four tools (health records, bracelet's control, direct communication with the patient/carer/family member and double check identity) to ensure the safety of the procedures: 43 (39.1%) students declared that they always check the patients' health records, while 17 (15.5%) declared that they never check; 38 (34.5%) claimed to check the identification bracelet, while 13 (11.2%) declared they never checked it. There were 42 (38.2%) students who claimed to guarantee the safety of the procedures through direct

communication with the patient/caregivers/family member, while only 10 (9.1%) those who never used this tool. The answers regarding the frequency of use of the identity control together with another professional (double check identity) were heterogeneous, but there were only 23 (20.1%) who declared that they always use this method, while 11 (10.0%) never use it.

Table 15 shows that, according to the *Pearson chi-square statistical test*, the comparison between the data relating to the answers of the two groups of students to question 9 (D9) of the questionnaire didn't show significant differences. The data relating to the statistical comparisons on the four instruments listed in the question are shown below:

- Control of health records: $\chi^2 (5; 110) = 3.442; p = 0.63;$
- Identification bracelet: $\chi^2 (5; 110) = 9.914; p = 0.08;$

Table 10. Frequency of ID bracelet check during a procedure by course year

Frequency	Course year		Total	%
	Second year	Third year		
Never	1	3	4	3.6%
2	2	1	3	2.7%
3	7	7	14	12.7%
4	16	11	27	24.5%
5	15	16	31	28.2%
Always	12	19	31	28.2%
Sub Total	53	57	110	100%

Tab. 11 – Frequency of health records' control, for safety in health procedures

Frequency	Course year		Total	%
	Second year	Third year		
Never	8	9	17	15.5%
2	3	1	4	3.7%
3	5	4	9	8.2%
4	10	7	17	15.5%
5	10	10	20	18.2%
Always	17	26	43	39.1%
Sub Total	53	57	110	100%

Table 12. Frequency of ID bracelet's control, for safety in health procedures

Frequency	Course year		Total	%
	Second year	Third year		
Never	8	5	13	11.2%
2	0	5	5	4.5%
3	6	6	12	10.9%
4	10	8	18	16.4%
5	15	9	24	21.9%
Always	14	24	38	34.5%
Sub Total	53	57	110	100%

Table 13. Frequency of direct communication with the patient/carer/family member, for safety in health procedures

Frequency	Course year		Total	%
	Second year	Third year		
Never	7	3	10	9.1%
2	2	4	6	5.5%
3	4	6	10	9.1%
4	11	3	14	12.7%
5	14	14	28	25.5%
Always	15	27	42	38.2%
Sub Total	53	57	110	100%

Table 14. Frequency of double check identity, for safety in health procedures

Frequency	Course year		Total	%
	Second year	Third year		
Never	5	6	11	10.0%
2	6	4	10	9.1%
3	10	12	22	20.0%
4	9	9	18	16.4%
5	14	12	26	23.6%
Always	9	14	23	20.1%
Sub Total	53	57	110	100%

Table 15. Statistical significance of the comparison between the second year and third year

ITEM	c ² value	p value
Health records' control	3,442	0.623
ID bracelet's control	9.914	0.078
Direct communication with the patient/carer/family member	10.535	0.061
Double check identity	1.770	0.880

- Direct communication with the patient/carer/
family member: $\chi^2(5; 110) = 10.535; p = 0.06$

- Control together with another professional
(double control): $\chi^2(5; 110) = 1.770; p = 0.8$

Table 16 shows the responses of 110 students to question D10 of the questionnaire, relating the occurrence of a near-miss through the use of the identification bracelet in eleven listed procedures. The students' responses of both years of course were added together and the percentage was calculated for each frequency. According to 63 (57.3%) students at least 1 near-miss was always identified during the blood transfusion procedure, while according to 19 (17.3%) students it was always identified in the management of health records. For 21 (19.1%) students, on the other hand, a near-miss in meal management has never been intercepted.

In general, there are no significant differences between the students' responses regarding the items "management of health records", "informed consent", "management of meals" and "patient movement".

Table 17 shows how, comparing the answers between 2nd and 3rd year students in the analysis of the 10th question (D10), there is statistical significance only for one of all the procedures listed, that is, for patient movement: $\chi^2(5; 110) = 12.865; p < 0.05$.

Discussion

Data analysis shows that there's a decisive homogeneity of response among the students of both years of the course in considering the Ministerial

Table 16. Frequency of a near-miss interception with the use of the ID bracelet in the health records management

Frequency	Course year		Total	%
	Second year	Third year		
Never	11	8	19	17.3%
2	6	12	18	16.4%
3	7	7	14	12.7%
4	11	12	23	20.1%
5	10	7	17	15.5%
Always	8	11	19	17.3%
Sub Total	53	57	110	100%

Table 17. Statistical significance of the comparison between second year and third year

ITEM	c ² value	p value
Health records management	3.379	0.642
Execution of instrumental exams	6.291	0.279
Blood transfusions	3.602	0.608
Preparation for surgery	6.998	0.221
Drug administration	7.300	0.199
Blood samples	3.056	0.691
Homonymous patient	8.809	0.117
Sending the patient to other UUOO/Services	4.431	0.485
Informed consent	7.237	0.204
Meal management	8.135	0.149
Moving the patient	12.865	0.025

Recommendation No. 3/2008 applicable and relevant in the context of internship. A congruence of response among all students is also identified in the assessment that the information relating to the use of the identification bracelet is lacking and that patients/family members/caregivers rarely request further information, which would be more provided by the nursing staff. Among the tools used in the Departments as a guarantee of safety of care, the students of both years of the course would agree on the more frequent use of health records checks; however, the least used tool would be the double check with another professional, although this latter method is listed in the Ministerial Recommendation No. 3/2008 as one of the 5 essential phases to be carried out before any intervention/procedure to ensure patient's safety (8). A fairly critical result is that relating to the control of the identification bracelet which would *always* be checked before each procedure only for just over a quarter of the interviewees. With regard to the importance of departmental activities in relation to the use of this risk management tool, the students of both years of the course would agree that the control of the identification bracelet before a blood transfusion is more important. The activity considered less important by students would seem to be patient movement and meal management; the answers to this question could suggest two possible explanations: on the one hand it could be argued that certain basic activities as moving the patients or managing meals, usually performed by the support staff, may not be perceived as activities for which a high level of security is required; on the other it could be hypothesized that among professionals there is the perception that in some activities the incorrect identification of the patient cannot cause an error/adverse event. This result could seem to line up with Bártlová et al. and Cengiz et al., according to which most professionals would consider the margin of error linked to an incorrect identification process as negligible (9) and would not use the good identification practices and checklists made available by the WHO (14). Regarding the frequency with which the identification bracelet allowed to detect a near-miss, the latter was detected to a lesser extent, among the students, in the management of health records, management of meals and patient displacement. Also in this case the considerations made previously could be

valid, since the result could suggest that the identification bracelet was used very little in activities in which a near-miss would have been detected to a lesser extent, according to Cengiz et al., which states that from the point of view of professionals the care procedures could be carried out even not using specific practices for patient identification (14). Furthermore, as shown by the cross-sectional study by Nilsson et al., even among nursing student, patient identification does not appear to be a consistently used practice (16), in accordance with the results of our study, which have highlighted heterogeneous responses on the use of the identification bracelet. From the literature review it emerged that there are no studies that investigate the perception of nursing students regarding the safety of care, in particular regarding the identification of the patient by means of the identification bracelet. A certain number of studies with nurses tracked, however, would have shown results corresponding to those resulting from the observational study conducted on nursing students. Bártlová et al had stated that the most used tools for patient identification were verbal identification and control of clinical records (9), while Cenciz et al. concluded that only a minimum of patients claimed to have been informed about the identification bracelet's importance in terms of safety and that the vast majority had not received information or had only partially received it (14); the conclusions of both studies are perfectly in line with the current study according to which the information given to the patient/relatives/ caregivers by professionals would generally be lacking. This last article provided another similarity with the data obtained from the study conducted on the students, as it stated that the identification of the patient with the use of the identification bracelet would be, as indicated and important, rarely adopted in practice (14).

Conclusions

The study conducted on the students of the Nursing Course Degree does not practically find any reference in the investigated literature, although some correspondence seems to have been traced to the studies that investigated the attitude of nurses regarding good patient identification practices. This

survey would seem to suggest that the perception of nursing students regarding the Ministerial Recommendation No. 3/2008 “*Recommendation for the correct identification of patients, surgical site and procedure*” and the importance of patient identification through the bracelet identification is uniform regardless of the course year attended, especially for some aspects, such as the consideration that the patient is not sufficiently informed by the healthcare staff on the real importance and use of the identification bracelet and the fact that this one is not frequently used by the students as a risk management’s tool during their internship. About the use of the identification bracelet to ensure the safety of care in the various assistencial activities, however, a variability of responses was found among students of the two years of the course. The main limitation of the current study concerns the fact that the local investigation, if on the one hand allows us to frame quite clearly the situation of the Nursing Course Degree of the University of Parma, on the other cannot ensure that we can generalise the findings from the research sample to the population as a whole for which would be more comprehensive a multi-centered study (e.g. at a regional level). Furthermore, a larger and more homogeneous sample would have made it possible to operationalize more data and statistical comparisons. The first innovative element of the study is represented by the sample study. The research field in fact offers very few contributions in the field of university education, even less on nursing students; the results produced suggest that this investigation field deserves further insights to collect more substantial data and expand knowledge on the specific subject. Similarly, the results of this study could be considered a starting point for spreading the knowledge of Ministerial Recommendation No. 3/2008 on the use of the identification bracelet as one of the safest identification tools, also at the level of study programs for making Nursing University education ever more solid for future health professionals.

Conflict of Interest: Each author declares that he or she has no commercial associations (e.g. consultancies, stock ownership, equity interest, patent/licensing arrangement etc.) that might pose a conflict of interest in connection with the submitted article

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Correspondence:

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Nitro Martina RN, Primary Care Department,
Guglielmo da Saliceto Hospital, Via Taverna Giuseppe, 49,
29121 Piacenza (PC) Italy

E-mail: martinanitro@gmail.com