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Simon Ouellet, Guy Bélanger and Mélanie Bérubé

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Article abstract

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Interrater Reliability of a Tool Measuring the Quality of Nursing Triage in the Emergency Department

Fidélité interjuges d'un outil mesurant la qualité des triages infirmiers au département d'urgence

Simon Ouellet  <https://orcid.org/0000-0001-5572-7504>, RN, MSN, Ph. D. student, Faculty of Nursing, Université Laval, Quebec, Canada

Guy Bélanger  <https://orcid.org/0000-0003-0808-1215>, Ph. D. RN, Professor, Department of Nursing, Université du Québec à Rimouski, Campus de Rimouski, Quebec, Canada

Mélanie Bérubé  <https://orcid.org/0000-0002-6657-3915>, Ph. D. RN, Assistant Professor, Faculty of Nursing, Université Laval, Scientist- University Laval Research Center (Hôpital de l'Enfant-Jésus) (Population Health and Optimal Practices Research Unit) (Trauma - Emergency - Critical Care Medicine), Quebec, Canada

Correspondance | Correspondence:

Simon Ouellet, RN, MSN, Ph. D. student
Faculty of Nursing, Université Laval
Pavillon Ferdinand-Vandry
1050 avenue de la Médecine, Québec, QC, Canada, G1V 0A6
simon.ouellet.24@ulaval.ca

Keywords

triage; reliability; quality improvement; audit; emergency department

Abstract

Introduction: Triage plays an essential role in the Emergency Department (ED), helping maintain a safe patient flow. Although assessing the quality of the triage process is crucial, to date, there has been no metrological testing of a tool measuring the quality of nursing triage. **Objective:** This study aimed to assess the interrater reliability of the Audit Triage Tool (ATT) in Quebec, Canada. **Methods:** This retrospective cohort study took place in a regional ED. Fifty triages were selected using a systematic random sampling technique with quotas of 10 triages grouped under 5 chief complaints: chest pain, abdominal pain, neurological problems, major blunt trauma and fever. A total of 4 auditors individually applied the 49 criteria of the ATT to 50 triages. The interrater reliability was measured with the intraclass correlation coefficient (ICC), percentage of unanimity (PU) and percentage of agreement (PA). **Results:** Based on the ICC, 33/49 criteria showed fair (ICC < 0.60) or poor (ICC < 0.40) interrater reliability. This number decreased to 18/49 when adding complementary statistical test: PU < 60 % or PA < 80 %. Further analyses showed that 14/23 explicit criteria reached an ICC > 0.60, comparatively to only 2/26 implicit criteria. **Discussion and conclusion:** Findings showed that a quarter of the ATT criteria had poor interrater reliability according to various statistical tests. Solutions to improve the reliability of the ATT, mostly regarding the implicit criteria, are needed. Finally, future methodological research on triage quality assessment should focus on a thorough validation of the ATT.

Résumé

Introduction : Le triage joue un rôle essentiel dans les départements d'urgence, permettant de prioriser adéquatement le traitement des patients. À ce jour, il n'existe aucun instrument de mesure de la qualité du triage dont la valeur métrologique est reconnue. **Objectif :** Cette étude visait à évaluer la fidélité interjuges de l'*Audit Triage Tool* (ATT) au Québec, Canada. **Méthodes :** Cette étude de cohorte rétrospective s'est déroulée dans une urgence régionale. Cinquante triages ont été sélectionnés à l'aide d'une technique d'échantillonnage aléatoire avec quotas de 10 triages pour chacun des 5 motifs de consultation : douleur thoracique, douleur abdominale, problèmes neurologiques, trauma, fièvre. Un total de 4 auditeurs ont appliqué individuellement les 49 critères de l'ATT aux 50 triages. La fidélité interjuges a été mesurée par le coefficient de corrélation intraclass (CCI), le pourcentage d'unanimité (PU) et le pourcentage d'accord (PA). **Résultats :** Basés sur les résultats du CCI, 33/49 critères ont montré une fidélité interjuges faible (CCI < 0,60) ou très faible (CCI < 0,40). Ce nombre a diminué à 18/49 en ajoutant les statistiques complémentaires : PU < 60 % ou PA < 80 %. Aussi, 14/23 critères explicites ont atteint un ICC > 0,60 comparativement à seulement 2/26 critères implicites. **Discussion et conclusion :** En somme, le quart des critères de l'ATT présentaient une mauvaise fidélité interjuges. Des solutions pour améliorer la fidélité de l'ATT, principalement concernant les critères implicites, sont nécessaires. Les futures recherches portant sur l'évaluation de la qualité des triages devraient se concentrer sur une validation approfondie de l'ATT.

Mots-clés

triage; fidélité; amélioration continue de la qualité; audit; département d'urgence

INTRODUCTION

The Emergency Department (ED) can become a very chaotic place where every minute counts and a timely intervention can be critical to patient survival. Patients consult for a variety of reasons, and it is often the nurse's responsibility to perform triage to determine their treatment priority (Mosley et al., 2013; Ryan et al., 2016). The adequacy of patient management for those requiring priority care, depends mainly on the quality of the triage performed by the nurse upon their arrival at the ED (Ordre des infirmiers et infirmières du Québec [OIIQ] & Collège des médecins du Québec [CMQ], 2019). This is a complex task that requires knowledge, clinical judgment and intuition from the nurse (Corbett & Quinn Griffin, 2016).

The four most commonly used triage scales in the world with five levels of priority are: the Australasian Triage Scale, the Canadian Triage and Acuity Scale (CTAS), the Emergency Severity Index and finally the Manchester Triage System (Ebrahimi et al., 2020). In Canada, the CTAS is used by all nurses triaging in EDs. Solheim (2016) summarizes the triage process in seven steps: 1- Perform a quick look; 2- Obtain the chief complaint from the patient; 3- Identify if the patient meets the immediate bedding criteria; 4- Document the complete triage; 5- Determine the priority level according to the triage scale used (P1-Resuscitation: immediate care, P2-Emergent: 15 minutes, P3-Urgent: 30 minutes, P4-Less Urgent: 60 minutes and P5-Non Urgent: 120 minutes); 6- Initiate appropriate treatment (bandage, ice, analgesia protocol, etc.) or diagnostic test (EKG, X-ray and blood test protocols, etc.); 7- Re-evaluate the patient (if such a referral procedure exists in the facility) or re-evaluate (if not seen by the physician according to the priority level assigned to the patient). For step 3, immediate bedding criteria, all three are required: 3.1- Obviously ill or injured, 3.2- Open bed (currently available or able to obtain rapidly) and 3.3- Available care providers (nursing or physician).

The quality of triage can be studied mainly from two different angles. First, from the

perspective of the nurse's skills in the triage process (Visser & Montejano, 2018, 2021; Zimmermann, 2006). Secondly, from the perspective of the quality and relevance of triage documentation (Castner, 2011). The present study is interested in the adequate evaluation and documentation of triage.

To date, no instrument for measuring the quality of nursing triage has been subjected to rigorous metrological testing to establish its validity and reliability. Australian researchers interested in the measurement and evaluation of nursing triages report that clinicians design instruments for measuring the quality of nursing triage without performing rigorous validity and reliability tests (Hodge et al., 2013). Recognizing the importance of ensuring the quality of triage, a team of researchers and clinicians (Filiatrault, 2016; Pomey & Settecasi, 2013) developed the Audit Triage Tool (ATT). The ATT, which is based on the CTAS standards, is currently used in some Quebec (Canada) EDs in order to improve the quality of triage.

The ATT requires auditors to analyse nursing triage quality *a posteriori*. Each of the criterion of the ATT tool is applied to a specific, documented triage event. For some criteria, the objective observation of a given element's presence is sufficient, while for others, the auditor must rely on clinical judgment and experience to determine to which degree they have been attained. When clinical judgment is required, it is particularly important to determine the impact on the reliability of the measure that different auditors may generate. Unfortunately, while currently used in some EDs (N is unknown because there are no official statistics), the reliability of the ATT tool has not been measured yet. The question supporting this study is: What is the interrater reliability of the ATT measurement instrument? Action plans to improve the quality of triage depends on the accuracy of the results provided by the measurement tool used.

OBJECTIVE

This study aimed to assess the interrater reliability of the Audit Triage Tool (ATT) in Quebec, Canada.

METHODS

STUDY DESIGN

A retrospective cohort design was used to measure the interrater reliability of the ATT's criteria.

SETTING

The study took place in the ED of a regional level 2 trauma centre, open 24 hours a day, 7 days a week, with an average of 32,500 annual visits.

PARTICIPANTS (AUDITORS)

Although there is no gold standard for the number of auditors to perform interrater reliability studies, two to three auditors are usually recommended (Fortin & Gagnon, 2016; Portney & Watkins, 2015). Four expert auditors were involved in this study. The auditors were recruited in the hospital where the study was conducted. The inclusion criteria for the four expert auditors were having at least a college diploma in nursing; being a member of the OIIQ; having completed the CTAS course; and having completed three years of practice in nursing triage. These inclusion criteria are based on those established by the developers of the ATT (Filiatrault, 2016). In addition, it is important to note that the selected auditors were recognized as local experts by their peers. There were no auditor exclusion criteria for this study. The auditors were given a presentation explaining the project and training on how to use the measurement tool (i.e., description of the ATT and two simulations with the auditors on the use of the tool).

VARIABLES (MEASUREMENT TOOL)

The ATT, which is only available in French, has a total of 64 quality criteria (Supplementary File) (Filiatrault, 2016; Pomey & Settecasì, 2013). The purpose of this tool is to assess the quality of the triage process in the ED and the compliance of the triage score with the recommendations of the CTAS in Quebec health care institutions. The ATT is divided into five sections: Documentation Standards (8 criteria), Brief Triage (2 criteria), Full

Triage (49 criteria), End of Triage (3 criteria), and Re-Evaluation (2 criteria). For this study, only the Full Triage section (49 criteria) was used. The other four sections of the ATT were not retained, because these sections were not directly related to the triage, moreover, for the other sections the information is often not documented (e.g., Brief triage and Re-Evaluation). The 49 criteria of the ATT can be classified into 23 explicit and 26 implicit criteria. Explicit criteria consist of an objective observation by the auditor who makes no value judgment on the observed item. These criteria are clearly defined before being measured (Whittington & Ellis, 1993). A good example of an explicit criterion is for the auditor to identify whether the start and end time of the triage was indicated on the nurse's triage sheet. Implicit criteria, on the other hand, require the auditor to make a value judgment on a specific observation (Donabedian, 1988; Whittington & Ellis). This judgment is intended to be subjective, contextual and based on the expertise of the auditor. A good example of an implicit criterion would be the assignment of the correct priority level according to the CTAS.

The ATT uses a three-point ordinal-type measurement scale: conform, suboptimal, non-optimal. Since this type of scale cannot compute means, it is impossible to obtain a reliability coefficient based on the analysis of variance. Therefore, we modified this scale to meet the minimal metrological requirements of an interval-type scale, i.e., the intervals between each anchor point must be equal and it must have at least one arbitrary zero (Portney & Watkins, 2015). To do this, a numerical value was assigned to each anchor point: conform = 1, suboptimal = 0.5 and non-optimal = 0, making it possible to calculate an average means. The quality assessment for each triage was calculated by: The sum of numeral value for each criterion (conform = 1, suboptimal = 0.5 and non-optimal = 0) divided by 49 and multiplied by 100 % (Ouellet, 2019).

DATA SOURCES

According to the COSMIN reference guide, a sample size of 50 or more is considered adequate to measure the interrater reliability of a measurement tool (Mokkink et al., 2019). A sample

of 50 triage cases was drawn from the complete list of ED consultations for the period from August 1, 2016, to September 30, 2016 (N = 1345). This list was generated using the Stat-Urgence software (V. 14.0.3). The list of the 1345 consultations was printed out and the 50 triages were selected according to the method described in the following section. Then, the four auditors each separately applied the ATT's 49 quality assessment criteria to the 50 selected triage events (50 triage cases x 4 auditors x 49 criteria = 9800 raw data). The 50 triages were printed in paper version (excluding the patient's information, except for the age and sex) and redistributed to the auditors.

TRIAGE SAMPLING

In order for the triage cases to be included, the chief complaint had to be one of the following: chest pain, abdominal pain, neurological problems, major blunt trauma, fever. There were two main considerations underlying this selection. First, inadequate triage in the presence of these cases may have serious consequences on patients' mortality and morbidity (Ahmad et al., 2006; Najafi et al., 2019). Second, they are very common in the ED in the province of Quebec, Canada (Association des infirmiers et infirmières d'urgence du Québec [AIUQU] et al., 2011). Furthermore, no triage with the P1 score was retained. The main reason supporting this choice was that these patients are systematically installed in the shock room and therefore receive immediate care. For those cases, triage is often incomplete and it would have been impossible to measure the interrater fidelity of the ATT.

A systematic random sampling technique using quotas was applied to the 1345 consultations recorded during the targeted period. A starting point was randomly determined (random function in Excel) and then each of the 5th following chief complaint was assessed until the quota of 10 triage cases for each of the five selected chief complaint was reached.

STATISTICAL ANALYSES

Data were analyzed with the SPSS V.23 software. The interrater reliability was measured

with the intraclass correlation coefficient (ICC) type two-way model random-effect (2.1). This choice was based on: the scale used is not dichotomous, more than two auditors were selected, the ATT criteria left little room for random effect since they required the auditors to make an observation or judgment and the test robustness in avoiding systematic errors (Li et al., 2015; Portney & Watkins, 2015). The Cicchetti (1994) model was used to categorize the ICC results: 0.75 and greater (excellent fidelity), 0.60 to 0.74 (good fidelity), 0.40 to 0.59 (fair fidelity), and under 0.40 (poor fidelity). This classification of the interrater reliability level was done *a priori* from the beginning of the study.

Although the ICC was used to measure interrater reliability, it cannot be calculated in the presence of agreement, since in this case the variance is zero. For this reason, a value of 1.0 was manually assigned to the ICC result when the auditors were unanimous.

Portney and Watkins (2015) strongly recommend not relying solely on the ICC to establish the reliability of a measurement tool, but to also consider other statistical tests for interrater assessment. With this in mind, the research team used two complementary statistical tests to improve the interpretation of the ICC results: percentage of unanimity (PU) and percentage of agreement (PA). These tests make it possible for a criterion to be adequate, even in the presence of an ICC lower than 0.60, when the PU is greater than 60 % and the PA is greater than 80 % (Lynn, 1986). Unanimity was calculated on a binary basis (0 absence or 1 presence of unanimity) for each of the 49 criteria of the ATT tool applied to the 50 triage cases. The percentage of agreement was calculated by the sum of agreements / the total number of responses multiplied by 100 % (Gisev et al., 2013).

The research team defined a classification system for the level of interrater reliability based on the results of the ICC, PU and PA as follows: ICC > 0.60, PU > 60 % and PA > 80 % (excellent); ICC < 0.60, PU > 60 % and PA > 80 % (good); ICC < 0.60, PU < 60 % or PA > 80 % (fair); ICC < 0.60, PU < 60 % and PA < 80 % (poor). The addition of PU and PA to the ICC was done *a posteriori* to data collection in order to help interpret the ICC results.

ETHICAL CONSIDERATIONS

This study was approved by the ethical review board of the *Hôpital de Rimouski* and of the *Université du Québec à Rimouski*, Quebec, Canada, approval no. CER-CISSBSL-20160705-05. The dataset from the patient (triage) registry was anonymised with no link to individual patients.

RESULTS

AUDITORS AND TRIAGE SAMPLE CHARACTERISTICS

All four auditors had more than five years of triage experience. Three had a bachelor's degree and one had a college degree. Table 1 presents the characteristics of the 50 triage cases selected for the study. The mean age for the sample was 46.2 years (ranges: 2-91 years old). Patients whose chief complaint was Fever had the lowest mean age with 25.4 years, while patients whose chief complaint was Major blunt trauma had the highest mean age with 60.8 years. Four out of five chief complaint triage samples had a 50 % women to men ratio. Only the abdominal pain triage sample comprised more men than women.

VARIATION IN THE QUALITY OF THE AUDITED TRIAGE CASES

The overall mean for the quality assessment of the 50 triage cases audited was 88.6 % (SD: 2.49). There seems to be an agreement between the auditors, as the means for each auditor varied from 84.9 % to 91.9 % and did not exceed the total mean for all audited triage by more than 3.7 %. There was a small variation in the overall results for each auditor when categorized by the chief complaint, which did not vary by more than 5.0 % from the total mean (Angina means: 89.6 %, Abdominal pain means: 90.0 %, Major blunt trauma means: 85.7 %, Neurological means: 88.8 % and Fever means: 89.1 %). The highest mean for the quality assessment was for triage #36 (neurological chief complaint), with 97.3 %, and the lowest mean for the quality assessment was for triage #31 (neurological chief complaint), with 75.8 %.

INTERRATER RELIABILITY

The interrater reliability results for each of the criteria applied to the 50 triage cases are presented in Table 2. The 49 criteria, categorized solely on the basis of the ICC results, were classified as follows: excellent reliability (ICC: ≥ 0.75) for 13/49 (27 %) criteria (#1, 7, 8, 9, 12, 13, 14, 15, 17, 19, 25, 48, 49), good reliability (ICC: 0.60 to 0.74) for 3/49 (6 %) criteria (#26, 39, 44), fair reliability (ICC: 0.40 to 0.59) for 6/49 (12 %) criteria (#2, 5, 18, 35, 36, 46) and poor reliability (ICC: < 0.40) for 27/49 (55 %) criteria (#3, 4, 6, 10, 11, 16, 20, 21, 22, 23, 24, 27, 28, 29, 30, 31, 32, 33, 34, 37, 38, 40, 41, 42, 43, 45, 47).

Interrater results with fair and poor reliability ($n=33$), based on the ICC, were further analyzed with the percentage of unanimity and agreement (Table 3). Fifteen criteria in the ATT instrument had ICC < 0.60 , PU > 60 % and PA > 80 % (#2, 4, 5, 6, 18, 20, 21, 22, 28, 29, 30, 32, 33, 34, 40). Thirty-one out of the 49 criteria demonstrated sufficient interrater reliability when these 15 criteria were combined with the 16 criteria presenting an excellent or good level of fidelity according to the classification system by Cicchetti (1994).

When the ICC results are categorized as recommended by Cicchetti (1994), 33/49 (67 %) criteria would present fair or poor interrater reliability. This number decreases to 12/49 (24 %) (#11, 23, 24, 31, 37, 38, 41, 42, 43, 45, 46, 47) when the following rule is applied: ICC less than 0.60, PU < 60 % and PA < 80 % (Table 4).

Further analyses on explicit and implicit criteria (Table 4) showed that 14/23 (61 %) explicit criteria reached an ICC > 0.60 while this was true for only 2/26 (8 %) implicit criteria. However, none of the explicit criteria had poor interrater reliability, while 12/26 (46 %) implicit criteria had poor interrater reliability when considering ICC < 0.60 , PU < 60 % and PA < 80 %. Six other criteria (three explicit and three implicit) have also shown fair interrater reliability when considering ICC < 0.60 , PU < 60 % and PA > 80 %.

Figure 1 provides an overview the interrater reliability of the ATT categorized according to explicit and implicit criteria.

Table 1*Characteristics of the sample 50 triage cases events selected from the study site*

Numbers assigned to the triage	Chief complaints	Number of visits in 2016 (N=32 612)		Age of patients				Men (%)
		N	%	Mean	Ranges	Median	Q1-Q3	
1 to 10	Angina (chest pain)	784	2.4	43.9	16-69	41.0	32-61	50.0
11 to 20	Abdominal pain	2085	6.4	51.0	31-72	50.0	37-58	70.0
21 to 30	Major blunt trauma	713	2.2	60.8	14-91	56.0	36-64	50.0
31 to 40	Neurological (headache, dizziness, stroke)	1033	3.2	50.0	24-82	48.5	28-69	50.0
41 to 50	Fever (cough and fever)	1574	4.8	25.4	2-68	8.5	4-60	50.0
Total triages		6189	19.0	46.2	2-91	48.5	28-64	54.0

Table 2

Intraclass Correlation Coefficient (ICC), percentage of unanimity (PU) and percentage of agreement (PA) obtained for each of the quality criteria applied to all the audited triage cases

Criteria numbers	Types of criteria	Criteria	ICC (2.1)	Confidence intervals (95%)		% of unanimity by criterion	% of agreement by criterion
				Inferior	Superior		
1		Chief complaint	1.000	-	-	100.0	100.0
2		Provoked / Palliated	0.435	0.291	0.586	72.0	90.0
3		Quality / Quantity	0.304	0.166	0.630	50.0	80.0
4		Region and irradiation	0.077	-0.035	0.226	80.0	92.5
5		Signs and associated symptoms	0.482	0.340	0.626	76.0	92.5
6		Time	0.333	0.191	0.493	98.0	99.0
7		Allergies	1.000	-	-	100.0	100.0
8	Subjective data	Medication (prescribed, non-prescribed)	0.798	0.713	0.868	98.0	99.5
9		Past history (medical, surgical, family)	0.798	0.713	0.868	98.0	99.5
10		Last meal	0.197	0.066	0.356	38.0	81.5
11		Event, environment, psychosocial (vitamins, alcohol, tobacco, caffeine, drugs)	0.317	0.178	0.476	20.0	72.5
12		Temperature	1.000	-	-	100.0	100.0
13		Blood pressure	0.855	0.788	0.907	98.0	99.5
14		Respiratory rate	0.923	0.885	0.952	98.0	99.5
15		Heart rate	1.000	-	-	100.0	100.0
16	Objective data	Capillary refill time	0.010	-0.074	0.131	56.0	87.5
17		SPO2	1.000	-	-	100.0	100.0
18		Assessment of pain	0.404	0.261	0.557	76.0	91.5
19		Was a pain scale used?	0.864	0.801	0.913	94.0	98.0
20		Capillary glucose	0.198	0.072	0.354	72.0	92.5
21		Last menstrual period	-0.007	-0.103	0.128	94.0	98.5
22		Respiratory distress	0.000	-0.094	0.134	94.0	97.5
23		Circulatory status	-0.042	-0.117	0.069	0.0	67.5
24	First order modifiers	Level of consciousness	0.214	0.072	0.381	20.0	75.0
25		Temperature	1.000	-	-	98.0	99.5
26		Pain	0.649	0.527	0.760	74.0	91.5
27		Coagulation disorders	0.041	-0.033	0.150	58.0	88.5
28		Mechanism of injury	0.116	0.001	0.266	78.0	93.0

Table 2

Intraclass Correlation Coefficient (ICC), percentage of unanimity (PU) and percentage agreement (PA) obtained for each of the quality criteria applied to all the audited triage cases (continued)

Criteria numbers	Types of criteria	Criteria	ICC (2.1)	Confidence intervals (95%)		% of unanimity by criterion	% of agreement by criterion
				Inferior	Superior		
29	Second order modifiers	Blood sugar	0.310	0.172	0.469	74.0	92.0
30		Dehydration	0.173	0.050	0.328	66.0	88.0
31		Hypertension	0.215	0.081	0.377	0.0	59.5
32		Pregnancy greater than 20 weeks	0.000	-0.097	0.136	96.0	99.0
33		Mental Health	0.075	-0.033	0.222	88.0	96.5
34		Pediatrics	-0.009	-0.103	0.124	88.0	96.5
35	Physical exam	Inspection	0.498	0.357	0.639	50.0	83.5
36		Palpation	0.489	0.347	0.632	56.0	88.5
37		Auscultation	0.317	0.178	0.476	40.0	79.5
38		Glasgow	0.243	0.095	0.412	22.0	75.0
39		Neurological signs	0.624	0.497	0.741	76.0	91.5
40	Priority level	The FIRST ORDER modifiers used by the nurse to change the triage priority level	-0.011	-0.101	0.118	86.0	96.5
41		The SECOND ORDER modifiers used by the nurse to change the triage priority level	0.043	-0.049	0.174	10.0	67.0
42		Priority level CHANGED by the NURSE	0.244	0.113	0.402	30.0	78.0
43		Priority level - CTAS compliance	0.282	0.146	0.441	34.0	79.5
44	Diagnostic measures	Diagnostic measures	0.648	0.522	0.760	78.0	94.0
45		Diagnostic measures initiated according to a collective order in triage	0.168	0.038	0.329	24.0	73.0
46	Therapeutic measures	Therapeutic measures	0.409	0.262	0.564	38.0	79.5
47		Therapeutic measures initiated according to a collective order in triage	0.059	-0.020	0.173	14.0	63.5
48	Orientation	Orientation	1.000	-	-	100.0	100.0
49	Signature	Nurse's signature on triage	1.000	-	-	100.0	100.0
Means						67.6	89.1

Table 3*Interrater fidelity levels suggested according to the ICC result*

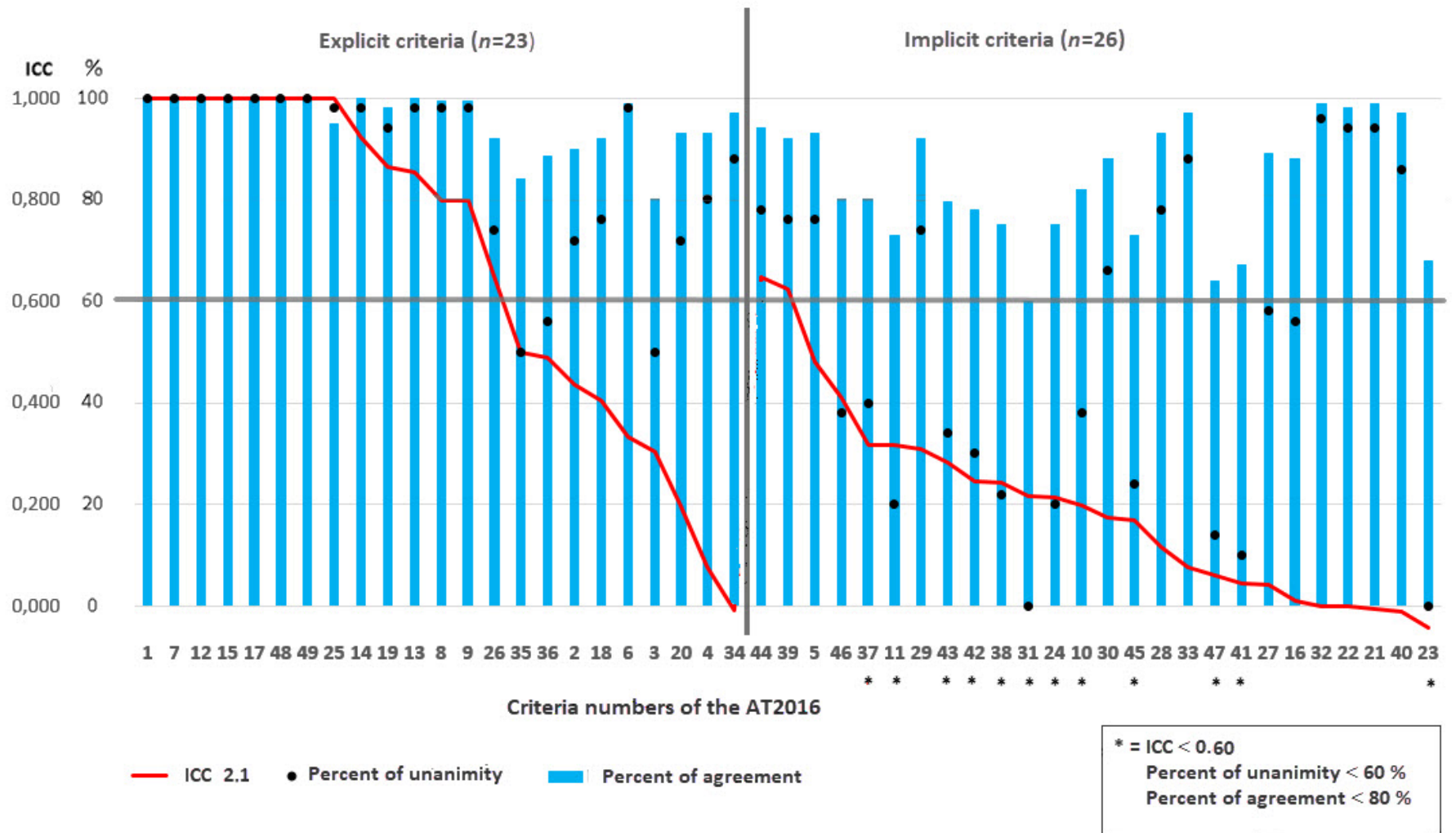
Interrater fidelity according to the result of ICC	Explicit criteria		Implicit criteria		Total	
	n	%	n	%	n	%
ICC \geq 0.75 (Excellent)	13	27.0	0	0.0	13	27.0
ICC from 0.60 to 0.74 (Good)	1	2.0	2	4.0	3	6.0
ICC from 0.40 to 0.59 (Fair)	4	8.0	2	4.0	6	12.0
ICC < 0.40 (Poor)	5	10.0	22	45.0	27	55.0
Total	23	47.0	26	53.0	49	100.0

Table 4*Interrater fidelity according to the result of ICC, Percentage of unanimity (PU) and Percentage of agreement (PA)*

Interrater fidelity according to the result of ICC, PU and PA	Explicit criteria		Implicit criteria		Total	
	n	%	n	%	n	%
ICC > 0.60, PU > 60 %, PA > 80 % (Excellent)	14	61.0	2	8.0	16	33.0
ICC < 0.60, PU > 60 %, PA > 80 % (Good)	6	26.0	9	35.0	15	31.0
ICC < 0.60, PU < 60 %, PA > 80 % (Fair)	3	13.0	3	11.0	6	12.0
ICC < 0.60, PU < 60 %, PA < 80 % (Poor)	0	0.0	12	46.0	12	24.0
Total	23	100.0	26	100.0	49	100.0

Figure 1

ICC results obtained for each of the explicit and implicit criteria of the ATT measuring instruments, presented in decreasing ICC (2.1) results.



DISCUSSION

The purpose of this study was to assess the interrater reliability of the ATT. When the 49 criteria were categorized according to ICC results: 13 had excellent reliability, 3 good reliability, 6 fair reliability and 27 poor reliability.

When the ICC results were combined with the percentage of unanimity and of agreement, findings showed that 31 out of the 49 criteria included in this tool had good reliability. Of these 31 criteria, 16 were retained only on the basis of the ICC results and 15 were added following the percentage of unanimity and agreement analysis. Thirty-three criteria were categorized as having fair and poor reliability, based solely on the ICC results. When the ICC, PU and PA results were combined, findings showed that 18/49 (37 %) criteria had fair or poor interrater reliability (ICC < 0.60 and PU < 60% or PA < 80 %).

Our findings provide evidence that the two complementary statistics (PU and PA) measured for each of the ATT criteria were of considerable help in the interpretation of the ICC. As mentioned by other authors (Bobak et al., 2018; Trevethan, 2017), we recommend that future researchers consider adding complementary statistics to facilitate the interpretation of the ICC. Two potential causes have been identified to explain the fair and poor interrater reliability for some of the ATT instrument criteria. The first, and probably the main cause, is the high proportion of implicit criteria in the ATT. Indeed, the reliability was generally higher for explicit criteria than for implicit criteria, and the 12 criteria showing the lowest interrater reliability (poor) fell within the implicit category. This phenomenon has been observed in many quality improvement studies (Geraci, 2000; Schriger et al., 1990; Weingart et al., 2002). Explicit criteria are based on an objective observation, which generally reflects the presence or absence of a particular element. Implicit criteria, on the other hand, rely more on a value judgment made by the auditor regarding the relevance of an item or task, depending on the context or the situation (Saucier & Brunelle, 1995). In addition to being based on the auditor's clinical experience, the value judgment also depends on several factors, such as the reason

for the consultation, the patient's age and sex, the presence of comorbidities as well as "the lack of precise guidelines for quantification" (Donabedian, 1988, p. 1747). Thus, measuring the quality of nursing triage using implicit criteria increases the likelihood of greater variability in results between different auditors. To decrease this effect, detailed guidelines on how to use the ATT instrument could be developed to provide more precise instructions on how to assess the quality of triage. Such guidelines may include the parameters to be taken into account, clear definitions of the terms used, the situations in which the criterion may or may not be met, or other details to guide the auditor's judgment, so as to maximize agreement when different auditors apply the measurement tool (Donabedian). Another proposed solution to improve interrater reliability would be to increase auditor training. This has also been documented as an effective strategy in various studies (Flinn et al., 2015; Hybbinette et al., 2021). It would be interesting to replicate this study with a more detailed information session on the ATT and more practical training before conducting another study.

The second cause is the lack of studies on the validation of the ATT instrument. Validity assessments focus on the extent to which an instrument measures what it is intended to measure, in the present case: the quality of triage (Portney & Watkins, 2015). No instruments to measure the quality of triage were identified in the literature by the research team. Therefore, it was not possible to compare the result of the ATT to other measurement tools. On the other hand, a Cochrane review reminds us that audit and feedback are used to improve professional practice either on its own or as a component of multifaceted quality improvement interventions (Ivers et al., 2012). Since the results of the assessment process rely primarily on the measurement tool, it is important to use a valid instrument to measure the quality of triage. According to those who designed the ATT (Pomey & Settecasì, 2013), it was developed with clinical experts, but there is no available data on content validity tests. Moreover, no other forms of validation, such as determining if high-quality triage predicts positive patient outcomes, were undertaken. Without validation studies of the ATT

tool, we can question whether it really measures the quality of ED triage.

LIMITATIONS

The main limitation of this study is that it was conducted in a single emergency department. Indeed, clinical and administrative practices may differ from one ED to another, not to mention the fact that some EDs have different areas of expertise. According to that rationale, since all the auditors came from the same emergency room, the results were more likely to be homogeneous. Furthermore, the fact that only five chief complaints and that triage cases performed in children and adults were selected may constitute limitations, since it cannot be excluded that certain reasons for consultation and wide differences in the patient's age could generate more or less variability in interrater reliability results.

CONCLUSION

Findings showed that 31 out of the 49 criteria included in this tool had excellent or good interrater reliability, while 18 out of 49 had fair or poor interrater reliability. These results underscore two observations. Firstly, it is important not to assess the interrater reliability of a criterion solely on the basis of the ICC result. In this study, the percentage of unanimity and of agreement were also measured, showing that 15 criteria had good interrater reliability, despite an ICC < 0.60. Secondly, there was an important difference between the results for the explicit and implicit criteria, in favour of the explicit criteria. There remain many challenges to improve the interrater reliability of the ATT. Future research to increase its reliability should focus on minimizing implicit criteria or providing more training and guidance on how to assess them. Another important step would be to proceed with a thorough validation of the instrument. It is important to keep in mind that nursing triage is the access point to emergency care and each triage decision could have a real impact on care safety. It is therefore essential to have a valid and reliable measurement tool to evaluate the quality of the nursing triage process, and to date no measurement tool has

demonstrated adequate metrological quality. The present study was a first step towards reaching this goal.

Authors' contribution: SO and GB wrote the research protocol. SO planned and carried out the data collection. SO wrote the first draft of this article. GB and MB reviewed and commented the first draft of the manuscript, making substantial contributions. The three authors reviewed and approved the final version of the manuscript.

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REFERENCES

- Ahmad, S., Molyneux, E., & Robertson, A. (2006). Improved triage and emergency care for children reduces inpatient mortality in a resource-constrained setting. *Bulletin of the World Health Organization*, *84*(4), 314-319. <https://doi.org/10.1590/S0042-96862006000400016>
- Association des Infirmiers et Infirmières d'Urgence du Québec, Association des Gestionnaires d'Urgence du Québec, Association des Médecins d'Urgence du Québec, & Association des Spécialistes en Médecine d'Urgence du Québec. (2011). *Canadian triage acuity scale (CTAS) : Manuel du participant*.
- Bobak, C. A., Barr, P. J., & O'Malley, A. J. (2018). Estimation of an inter-rater intra-class correlation coefficient that overcomes common assumption violations in the assessment of health measurement scales. *BMC Medical Research Methodology*, *18*(1), 1-11. <https://doi.org/10.1186/s12874-018-0550-6>
- Castner, J. (2011). Emergency Department Triage: What Data are Nurses Collecting? *JEN: Journal of Emergency Nursing*, *37*(4), 417-422. <https://doi.org/10.1016/j.jen.2011.01.002>
- Cicchetti, D. V. (1994). Guidelines, criteria, and rules of thumb for evaluating normed and standardized assessment instruments in psychology. *Psychological Assessment*, *6*(4), 284-290. <https://doi.org/10.1037/1040-3590.6.4.284>
- Corbett, A., & Quinn Griffin, M. T. (2016). Triage nurse expertise. In *Nursing Concept Analysis : Applications to Research and Practice* (pp. 249-255). Springer Publishing Company.
- Donabedian, A. (1988). The quality of care. How can it be assessed? *Jama*, *260*(12), 1743-1748.
- Ebrahimi, M., Mirhaghi, A., Najafi, Z., Shafae, H., & Hamechizfahm Roudi, M. (2020). Are Pediatric Triage Systems Reliable in the Emergency Department? *Emergency Medicine International*, *2020*, 1-8. <https://doi.org/10.1155/2020/9825730>
- Filiatrault, R. (2016). *Méthodologie détaillée : Audit triage 2015-CVAP soins d'urgence*. Communauté virtuelle d'apprentissage et de pratique en soins d'urgence du Québec.
- Flinn, L., Braham, L., & Nair, R. (2015). How reliable are case formulations? A systematic literature review. *British Journal of Clinical Psychology*, *54*(3), 266-290. <https://doi.org/10.1111/bjc.12073>
- Fortin, M.-F., & Gagnon, J. (2016). *Fondements et étapes du processus de recherche : méthodes quantitatives et qualitatives* (3rd ed.). Chanière éducation.
- Geraci, J. M. (2000). In-hospital complication occurrence as a screen for quality-of-care problems: what's next? *Medical Care*, *38*(8), 777-780. <https://doi.org/10.1097/00005650-200008000-00001>
- Gisev, N., Bell, J. S., & Chen, T. F. (2013). Interrater agreement and interrater reliability: key concepts, approaches, and applications. *Research in Social and Administrative Pharmacy*, *9*(3), 330-338. <https://doi.org/10.1016/j.sapharm.2012.04.004>
- Hodge, A., Hugman, A., Varndell, W., & Howes, K. (2013). A review of the quality assurance processes for the Australasian Triage Scale (ATS) and implications for future practice. *Australasian Emergency Nursing Journal*, *16*(1), 21-29. <https://doi.org/10.1016/j.aenj.2012.12.003>
- Hybbinette, H., Östberg, P., & Schalling, E. (2021). Intra- and Interjudge Reliability of the Apraxia of Speech Rating Scale in Early Stroke Patients. *Journal of Communication Disorders*, *89*, 1-13. <https://doi.org/https://doi.org/10.1016/j.jcomdis.2020.106076>
- Ivers, N., Jamtvedt, G., Flottorp, S., Young, J. M., Odgaard-Jensen, J., French, S. D., O'Brien, M. A., Johansen, M., Grimshaw, J., & Oxman, A. D. (2012). Audit and feedback: effects on professional practice and healthcare outcomes. *Cochrane Database of Systematic Reviews*(6): CD000259, 1-230.
- Li, L., Zeng, L., Lin, Z. J., Cazzell, M., & Liu, H. (2015). Tutorial on use of intraclass correlation coefficients for assessing intertest reliability and its application in functional near-infrared spectroscopy-based brain imaging. *Journal of biomedical optics*, *20*(5), 1-13. <https://doi.org/10.1117/1.JBO.20.5.050801>
- Lynn, M. R. (1986). Determination and quantification of content validity. *Nursing research*, *35*(6), 382-386.
- Mokkink, L. B., Prinsen, C. A., Patrick, D. L., Alonso, J., Bouter, L. M., de Vet, H. C., & Terwee, C. B. (2019). *COSMIN Study Design checklist for Patient-reported outcome measurement instruments*. Amsterdam University Medical Centers, location VUmc. https://www.cosmin.nl/wp-content/uploads/COSMIN-study-designing-checklist_final.pdf
- Mosley, I., Morphett, J., Innes, K., & Braitberg, G. (2013). Triage assessments and the activation of rapid care protocols for acute stroke patients. *Australasian Emergency Nursing Journal*, *16*(1), 4-9. <https://doi.org/https://doi.org/10.1016/j.aenj.2012.12.002>
- Najafi, Z., Abbaszadeh, A., Zakeri, H., & Mirhaghi, A. (2019). Determination of mis-triage in trauma patients: a systematic review. *European Journal of Trauma and Emergency Surgery*, *45*(5), 821-839. <https://doi.org/10.1007/s00068-019-01097-2>
- Ordres des Infirmiers et Infirmières du Québec, & Collège des Médecin du Québec. (2019). *Le triage à l'urgence : lignes directrices pour l'infirmière au triage à l'urgence* (2nd ed.). <https://www.oiiq.org/triage-a-l-urgence-lignes-directrices>

- Ouellet, S. (2019). *Étude de fidélité interauditeurs de l'instrument de mesure de la qualité des triages infirmiers audit triage 2016* [Mémoire de maîtrise, Université du Québec à Rimouski]. Sémaphore. http://semaphore.uqar.ca/id/eprint/1618/1/Simon_Ouellet_aout2019.pdf
- Pomey, M.-P., & Settecasi, E. (2013). L'audit clinique : *Bases méthodologiques de l'évaluation des pratiques professionnelles au triage des soins d'urgence*. Centre Ferasi. <https://docplayer.fr/43214555-L-audit-clinique-bases-methodologiques-de-l-evaluation-des-pratiques-professionnelles-au-triage-des-soins-d-urgence.html>
- Portney, G. L., & Watkins, P. M. (2015). *Foundations of clinical research applications to practice* (3rd ed.). F.A. Davis.
- Ryan, K., Greenslade, J., Dalton, E., Chu, K., Brown, A. F. T., & Cullen, L. (2016). Factors associated with triage assignment of emergency department patients ultimately diagnosed with acute myocardial infarction. *Australian Critical Care, 29*(1), 23-26. <https://doi.org/https://doi.org/10.1016/j.aucc.2015.05.001>
- Saucier, A., & Brunelle, Y. (1995). *Les indicateurs et la gestion par résultats*. Ministère de la santé et des services sociaux. <https://publications.msss.gouv.qc.ca/msss/fichiers/1995/95-760-01.pdf>
- Schriger, D. L., Baraff, L. J., & Fink, A. (1990). A comparison of implicit and explicit methods of process quality assurance for blunt trauma patients. *Annals of Emergency Medicine, 19*(7), 736-740. [https://doi.org/https://doi.org/10.1016/S0196-0644\(05\)81695-6](https://doi.org/https://doi.org/10.1016/S0196-0644(05)81695-6)
- Solheim, J. (2016). *Emergency Nursing: The Profession, The Pathway, The Practice*. Sigma Theta Tau.
- Trevethan, R. (2017). Intraclass correlation coefficients: clearing the air, extending some cautions, and making some requests. *Health Services and Outcomes Research Methodology, 17*(2), 127-143. <https://doi.org/10.1007/s10742-016-0156-6>
- Visser, L. S., & Montejano, A. S. (2018). *Fast Facts for the Triage Nurse, Second Edition : an Orientation and Care Guide* (2nd ed.). Springer Publishing Company.
- Visser, L. S., & Montejano, A. S. (2021). *Fast facts for the triage nurse: an orientation and care guide in a nutshell* (2nd ed.). Springer Publishing Company.
- Weingart, S. N., Davis, R. B., Palmer, R. H., Beth Hamel, M., Mukamal, K., Phillips, R. S., Davies, D. T., & Iezzoni, L. I. (2002). Discrepancies Between Explicit and Implicit Review: Physician and Nurse Assessments of Complications and Quality. *Health Services Research, 37*(2), 483-498. <https://doi.org/10.1111/1475-6773.033>
- Whittington, D., & Ellis, R. (1993). Quality Assurance in Health Care: the Implications for University Teaching. In R. Ellis (Ed.), *Quality assurance for university teaching* (pp. 57-77). Open University Press.
- Zimmermann, P. G. (2006). *Triage nursing secrets*. Elsevier Mosby.

1. GÉNÉRALITÉS

La Communauté virtuelle d'apprentissage et de pratique en soins d'urgence du Québec (CVAP) et le centre d'expertise en santé de Sherbrooke (CESS) sont heureux d'avoir collaboré à la conception de la présente grille d'audit.

Cette grille d'audit a été développée à partir des travaux réalisés dans le cadre de l'audit triage 2013. Inspirée par la documentation produite par le centre FERASI, la grille d'audit triage 2015 se veut une grille plus succincte qui vise principalement à évaluer deux préoccupations.

1. La conformité de la côte de triage à l'ETG
2. La conformité du processus de triage à l'ETG et aux bonnes pratiques

La grille d'audit comporte 5 étapes:

- 1 - Les normes de documentation
- 2 - L'évaluation brève
- 3 - L'évaluation complète, laquelle se subdivise en six sous-étapes:
 - . les données subjectives
 - . les données objectives
 - . l'examen physique
 - . le niveau de priorité
 - . les mesures diagnostiques et thérapeutiques
 - . la signature de l'infirmière
- 4 - La fin du triage
- 5 - La réévaluation

Plus d'une cinquantaine de critères ont été retenus dans la présente grille d'audit.

Le référentiel à partir duquel la grille d'audit a été conçue est l'échelle canadienne de triage et de gravité pour les départements d'urgence. Ce référentiel est endossé par l'Association canadienne des médecins d'urgence (ACMU - CAEP), la National Emergency Nurses Affiliation of Canada Inc. (NENA), l'Association des médecins d'urgence du Québec (AMUQ), l'Association des gestionnaires infirmiers d'urgence du Québec (AGIUQ) et l'Association des infirmières et infirmiers d'urgence du Québec (AIIUQ).

Nous espérons que cet outil s'inscrira dans une démarche qui conduira à l'amélioration de la qualité et de la sécurité des services offerts dans les urgences du Québec.

2. INSTRUCTIONS

Lisez attentivement les instructions suivantes avant de débiter l'audit.

Grille d'audit pour le triage aux urgences

Voici les consignes:

1) Observation sur la feuille de triage:

-L'auditeur révise la feuille de triage et note si l'information demandée a été documentée ou si elle est absente.

2) Observation attendue selon l'auditeur:

-L'auditeur, en appliquant les normes en vigueur, note si l'information aurait dû être documentée ou s'il convient qu'elle soit absente ou sans objet "N/A".

3) Évaluation de la conformité:

-L'évaluation de la conformité ou de la non conformité résultera de la combinaison des résultats découlant de l'observation faite sur la feuille de triage et de celle attendue par l'auditeur (voir la légende).

4) Commentaires :

Il s'agit d'un espace pour noter vos commentaires. Cet espace doit aussi être utilisé pour préciser des éléments audités (ex. : motifs de consultation, niveau de priorité sur l'échelle de triage, etc.)

NOTE IMPORTANTE

Vous devez remplir et valider tous les champs avant de quitter la grille d'audit. Vous ne pourrez pas accéder à une grille spécifique ultérieurement.

Vous ne devez pas utiliser le bouton de retour en arrière de votre navigateur internet. Si vous devez revenir pour corriger une information, utiliser le bouton "précédent" situé en bas de page.

Légende

AU TRIAGE ce critère a été	Selon l'ETG, l'auditeur estime que dans ce cas le critère aurait dû être	Le code à cocher dans la grille est	ÉVALUATION
DOCUMENTÉ	DOCUMENTÉ	DOC DOC	CONFORME
ABSENT	ABSENT ou NA	ABS ABS	CONFORME
DOCUMENTÉ	ABSENT ou NA	DOC ABS	SOUS-OPTIMAL
ABSENT	DOCUMENTÉ	ABS DOC	NON -CONFORME

3. Étape 1: IDENTIFICATEURS

1. Audit réalisé par:

Nom

Prénom

* 2. Nom de l'établissement:

ÉTABLISSEMENT 1

ÉTABLISSEMENT 2

Consignes:

Les réponses aux questions 3 et 4 serviront à générer le numéro de l'identifiant. La première partie peut prendre la valeur P1, P2, P3, P4 ou P5. La seconde partie, (XXXXX) est le nombre aléatoire obtenu à partir de la grille qui vous a été fournie. Ce nombre peut comprendre jusqu'à 5 chiffres.

Afin de conserver la traçabilité des dossiers audités, prenez note des numéros de dossiers correspondant à chacun des codes de l'identifiant dans un fichier que vous conserverez dans votre établissement.

* 3. L'identifiant - Niveau de priorité

P1 P2 P3 P4 P5

* 4. L'identifiant - Numéro aléatoire

Numéro:

4. Information sur le patient

* 5. Âge

- Moins de 17 ans 65 à 74 ans
 17 à 64 ans 75 ans et plus

* 6. Sexe

- Masculin
 Féminin

Veillez bien lire et comprendre cette légende avant d'évaluer les différents critères de l'audit.

Légende			
AU TRIAGE ce critère a été	Selon l'ETG, l'auditeur estime que dans ce cas le critère aurait dû être	Le code à cocher dans la grille est	ÉVALUATION
DOCUMENTÉ	DOCUMENTÉ	DOC DOC	CONFORME
ABSENT	ABSENT ou NA	ABS ABS	CONFORME
DOCUMENTÉ	ABSENT ou NA	DOC ABS	SOUS-OPTIMAL
ABSENT	DOCUMENTÉ	ABS DOC	NON -CONFORME

* 7. Information sur le patient

	DOC DOC	ABS ABS	DOC ABS	ABS DOC
Mode d'arrivée	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Renseignements sur l'accompagnateur	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. Heure d'arrivée à l'urgence

Consignes:

- a) Saisir l'heure selon le format 0 - 24
- b) Sélectionner AM
- c) Ne rien inscrire si l'heure d'arrivée à l'urgence n'est pas disponible

Heure d'arrivée à l'urgence selon l'horodateur

JJ MM AAAA hh mm AM/PM
 / / : -

9. Commentaires généraux de l'auditeur concernant les " informations sur le patient "

--

5. ÉTAPE 2: Évaluation brève

Veillez bien lire et comprendre cette légende avant d'évaluer les différents critères de l'audit.

Légende

AU TRIAGE ce critère a été	Selon l'ETG, l'auditeur estime que dans ce cas le critère aurait dû être	Le code à cocher dans la grille est	ÉVALUATION
DOCUMENTÉ	DOCUMENTÉ	DOC DOC	CONFORME
ABSENT	ABSENT ou NA	ABS ABS	CONFORME
DOCUMENTÉ	ABSENT ou NA	DOC ABS	SOUS-OPTIMAL
ABSENT	DOCUMENTÉ	ABS DOC	NON -CONFORME

* 10. L'évaluation brève a-t-elle été effectuée?

- DOC DOC
- ABS ABS
- DOC ABS
- ABS DOC
- Mon établissement ne fait pas d'évaluation brève

6. Étape 2: Évaluation brève

Veillez bien lire et comprendre cette légende avant d'évaluer les différents critères de l'audit.

Légende

AU TRIAGE ce critère a été	Selon l'ETG, l'auditeur estime que dans ce cas le critère aurait dû être	Le code à cocher dans la grille est	ÉVALUATION
DOCUMENTÉ	DOCUMENTÉ	DOC DOC	CONFORME
ABSENT	ABSENT ou NA	ABS ABS	CONFORME
DOCUMENTÉ	ABSENT ou NA	DOC ABS	SOUS-OPTIMAL
ABSENT	DOCUMENTÉ	ABS DOC	NON -CONFORME

* 11. Évaluation brève

	DOC DOC	ABS ABS	DOC ABS	ABS DOC
Motif de la consultation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ATCD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consignes sur la prévention du contrôle des infections (si signes infectieux présents)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. Commentaires généraux de l'auditeur concernant " l'évaluation brève "

7. ÉTAPE 3: Évaluation complète - Données subjectives

*** 13. Durée du triage**

Consignes:

- a) Saisir l'heure selon le format 0 - 24
- b) Sélectionner AM

Début du triage

JJ	MM	AAAA	hh	mm	AM/PM
					-

Veillez bien lire et comprendre cette légende avant d'évaluer les différents critères de l'audit.

Légende

AU TRIAGE ce critère a été	Selon l'ETG, l'auditeur estime que dans ce cas le critère aurait dû être	Le code à cocher dans la grille est	ÉVALUATION
DOCUMENTÉ	DOCUMENTÉ	DOC DOC	CONFORME
ABSENT	ABSENT ou NA	ABS ABS	CONFORME
DOCUMENTÉ	ABSENT ou NA	DOC ABS	SOUS-OPTIMAL
ABSENT	DOCUMENTÉ	ABS DOC	NON -CONFORME

*** 14. Données subjectives**

	DOC DOC	ABS ABS	DOC ABS	ABS DOC
Raison de la consultation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provoqué / Pallié	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Qualité / Quantité	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Région et irradiation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Signes et symptômes associés	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Temps	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Allergies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Médication (prescrite, non prescrite), produits naturels,	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Passé ou antécédents (médicaux, chirurgicaux, familiaux)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Last meal (dernier repas)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Événement, environnement, histoire familiale et psychosociale (vitamines, alcool, tabac, caféine, drogues)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15. Commentaires généraux de l'auditeur concernant les " Données subjectives "

--

8. ÉTAPE 3: Évaluation complète - Données objectives

Veillez bien lire et comprendre cette légende avant d'évaluer les différents critères de l'audit

Légende			
AU TRIAGE ce critère a été	Selon l'ETG, l'auditeur estime que dans ce cas le critère aurait dû être	Le code à cocher dans la grille est	ÉVALUATION
DOCUMENTÉ	DOCUMENTÉ	DOC DOC	CONFORME
ABSENT	ABSENT ou NA	ABS ABS	CONFORME
DOCUMENTÉ	ABSENT ou NA	DOC ABS	SOUS-OPTIMAL
ABSENT	DOCUMENTÉ	ABS DOC	NON -CONFORME

* 16. Données objectives

	DOC DOC	ABS ABS	DOC ABS	ABS DOC
Température	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tension artérielle	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fréquence respiratoire	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fréquence cardiaque	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Temps de remplissage capillaire	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SPO2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Évaluation de la douleur	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Une échelle de douleur a-t-elle été utilisée?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Glycémie capillaire	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Date des dernières menstruations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Les modificateurs de PREMIER ORDRE:

Les modificateurs de premier ordre, applicables à la première étape, évaluent les anomalies au niveau des signes vitaux afin de permettre l'attribution d'un niveau de gravité approprié.

1ère étape : Signes vitaux (détresse respiratoire, stabilité hémodynamique, niveau de conscience, température);

2e étape : Échelle de douleur, troubles de la coagulation, mécanisme de blessure.

Veillez bien lire et comprendre cette légende avant d'évaluer les différents critères de l'audit

Légende

AU TRIAGE ce critère a été	Selon l'ETG, l'auditeur estime que dans ce cas le critère aurait dû être	Le code à cocher dans la grille est	ÉVALUATION
DOCUMENTÉ	DOCUMENTÉ	DOC DOC	CONFORME
ABSENT	ABSENT ou NA	ABS ABS	CONFORME
DOCUMENTÉ	ABSENT ou NA	DOC ABS	SOUS-OPTIMAL
ABSENT	DOCUMENTÉ	ABS DOC	NON -CONFORME

* 17. Modificateurs de premier ordre:

	DOC DOC	ABS ABS	DOC ABS	ABS DOC
Détresse respiratoire	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
État circulatoire	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Niveau de conscience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Température	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Douleur	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Troubles de coagulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mécanisme de blessure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Les modificateurs de DEUXIÈME ORDRE:

Les modificateurs de deuxième ordre sont davantage spécifiques à certaines raisons de consultation et peuvent effectivement amener l'infirmière à modifier la raison de la consultation initiale.

Les modificateurs de deuxième ordre de type 1 viennent compléter les modificateurs de premier ordre afin d'assurer l'attribution au patient d'un niveau de gravité approprié. Des exemples de ces modificateurs incluent : le niveau de glycémie et le degré de déshydratation.

* 18. Modificateurs de deuxième ordre:

	DOC DOC	ABS ABS	DOC ABS	ABS DOC
Glycémie	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Déshydratation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hypertension	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Grossesse supérieure à 20 semaines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Santé mentale	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pédiatrie	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

19. Commentaires généraux de l'auditeur concernant les " Données objectives "

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9. ÉTAPE 3: Évaluation complète - Examen physique

Veillez bien lire et comprendre cette légende avant d'évaluer les différents critères de l'audit.

Légende

AU TRIAGE ce critère a été	Selon l'ETG, l'auditeur estime que dans ce cas le critère aurait dû être	Le code à cocher dans la grille est	ÉVALUATION
DOCUMENTÉ	DOCUMENTÉ	DOC DOC	CONFORME
ABSENT	ABSENT ou NA	ABS ABS	CONFORME
DOCUMENTÉ	ABSENT ou NA	DOC ABS	SOUS-OPTIMAL
ABSENT	DOCUMENTÉ	ABS DOC	NON -CONFORME

* 20. Examen physique

	DOC DOC	ABS ABS	DOC ABS	ABS DOC
Inspection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Palpation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Auscultation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Glasgow	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Signes neurologiques	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

21. Commentaires généraux de l'auditeur concernant " l'examen physique "

10. ÉTAPE 3: Évaluation complète - Niveau de priorité

Veillez bien lire et comprendre cette légende avant d'évaluer les différents critères de l'audit.

Légende

AU TRIAGE ce critère a été	Selon l'ETG, l'auditeur estime que dans ce cas le critère aurait dû être	Le code à cocher dans la grille est	ÉVALUATION
DOCUMENTÉ	DOCUMENTÉ	DOC DOC	CONFORME
ABSENT	ABSENT ou NA	ABS ABS	CONFORME
DOCUMENTÉ	ABSENT ou NA	DOC ABS	SOUS-OPTIMAL
ABSENT	DOCUMENTÉ	ABS DOC	NON -CONFORME

*** 22. Modificateurs**

	DOC DOC	ABS ABS	DOC ABS	ABS DOC
Les modificateurs de PREMIER ORDRE utilisés par l'infirmière pour modifier le niveau de triage.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Les modificateurs de DEUXIÈME ORDRE utilisés par l'infirmière pour modifier le niveau de triage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Pour le niveau de priorité, veuillez utiliser la légende suivante:

Le niveau de priorité a été :	Selon l'ETG, l'auditeur estime que le niveau de priorité aurait dû être :	Le code à cocher dans la grille est :
Modifié	Modifié	DOC DOC
Non modifié	Non modifié	ABS ABS
Modifié	Non modifié	DOC ABS
Non modifié	Modifié	ABS DOC

*** 23. Niveau de priorité modifié par l'infirmière**

	DOC DOC	ABS ABS	DOC ABS	ABS DOC
Niveau de priorité MODIFIÉ par l'INFIRMIÈRE	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*** 24. Le niveau de priorité - La conformité à l'ETG est selon vous:**

Conforme Non-conforme

25. Commentaires généraux de l'auditeur concernant le "Niveau de priorité"

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11. ÉTAPE 3: Évaluation complète - Mesures diagnostiques

Veuillez bien lire et comprendre cette légende avant d'évaluer les mesures diagnostiques

Lors du triage il y a eu :	Selon l'ETG, l'auditeur estime que :	Le code à cocher dans la grille est :
Une ou plusieurs mesures diagnostiques documentées	Une ou plusieurs mesures diagnostiques auraient dû être documentées	DOC DOC
Aucune mesure diagnostique documentée	Aucune mesure diagnostique ne devait être documentée	ABS ABS
Une ou plusieurs mesures diagnostiques documentées	Aucune mesure diagnostique ne devait être documentée	DOC ABS
Aucune mesure diagnostique documentée	Une ou plusieurs mesures diagnostiques auraient dû être documentées	ABS DOC

* 26. Mesures diagnostiques

	DOC DOC	ABS ABS	DOC ABS	ABS DOC
Mesures diagnostiques	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 27. Mesures diagnostiques initiées selon une ordonnance collective au triage

- Disponible et initiée
- Disponible mais non applicable (contre indication)
- Disponible mais non initiée
- Non disponible
- Ne nécessite pas d'ordonnance collective

Veuillez bien lire et comprendre cette légende avant d'évaluer les mesures thérapeutiques

Lors du triage il y a eu :	Selon l'ETG, l'auditeur estime que :	Le code à cocher dans la grille est :
Une ou plusieurs mesures thérapeutiques documentées	Une ou plusieurs mesures thérapeutiques auraient dû être documentées	DOC DOC
Aucune mesure thérapeutique documentée	Aucune mesure thérapeutique ne devait être documentée	ABS ABS
Une ou plusieurs mesures thérapeutiques documentées	Aucune mesure thérapeutique ne devait être documentée	DOC ABS
Aucune mesure thérapeutique documentée	Une ou plusieurs mesures thérapeutiques auraient dû être documentées	ABS DOC

* 28. Mesures thérapeutiques

	DOC DOC	ABS ABS	DOC ABS	ABS DOC
Mesures thérapeutiques	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 29. Mesures thérapeutiques initiées selon une ordonnance collective au triage

- Disponible et initiée
- Disponible mais non applicable (contre indication)
- Disponible mais non initiée
- Non disponible
- Ne nécessite pas d'ordonnance collective

* 30. Orientation

- DOC DOC ABS ABS DOC ABS ABS DOC

31. Commentaires généraux de l'auditeur concernant les " Mesures diagnostiques et/ou thérapeutiques initiées "

12. ÉTAPE 3: Évaluation complète - Signature

Veillez bien lire et comprendre cette légende avant d'évaluer les différents critères de l'audit.



AU TRIAGE ce critère a été	Selon l'ETG, l'auditeur estime que dans ce cas le critère aurait dû être	Le code à cocher dans la grille est	ÉVALUATION
DOCUMENTÉ	DOCUMENTÉ	DOC DOC	CONFORME
ABSENT	ABSENT ou NA	ABS ABS	CONFORME
DOCUMENTÉ	ABSENT ou NA	DOC ABS	SOUS-OPTIMAL
ABSENT	DOCUMENTÉ	ABS DOC	NON -CONFORME

Commentaire sur la signature:

Les paraphes ne peuvent être considérées comme une signature.

* 32. Signatures de l'infirmière

	DOC DOC	ABS ABS	DOC ABS	ABS DOC
Signature de l'infirmière lors de l'évaluation brève	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Signature de l'infirmière lors du triage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Signature de l'infirmière lors de la réévaluation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

33. Commentaires généraux de l'auditeur concernant la "Signatures de l'infirmière"

13. ÉTAPE 4: Fin du triage

Veillez bien lire et comprendre cette légende avant d'évaluer les différents critères de l'audit.



AU TRIAGE ce critère a été	Selon l'ETG, l'auditeur estime que dans ce cas le critère aurait dû être	Le code à cocher dans la grille est	ÉVALUATION
DOCUMENTÉ	DOCUMENTÉ	DOC DOC	CONFORME
ABSENT	ABSENT ou NA	ABS ABS	CONFORME
DOCUMENTÉ	ABSENT ou NA	DOC ABS	SOUS-OPTIMAL
ABSENT	DOCUMENTÉ	ABS DOC	NON -CONFORME

* 34. Fin du Triage

	DOC DOC	ABS ABS	DOC ABS	ABS DOC
Nom de la personne qui prend en charge le patient	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Le patient a été informé d'aviser l'infirmière du triage de tout changement de son état de santé	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 35. Heure de la fin du triage

Consignes:

a) Saisir l'heure selon le format 0 - 24

b) Sélectionner AM

Fin du triage

JJ	MM	AAAA	hh	mm	AM/PM
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	/	/		:	- <input type="button" value="▼"/>

36. Commentaires généraux de l'auditeur concernant la " Fin du triage "

Fin de l'audit.

Nous vous remercions d'avoir complété cette grille d'audit.

14. ÉTAPE 5: La réévaluation

Veillez utiliser la cote de priorité qui aurait dû être attribuée selon l'ETG et les bonnes pratiques pour déterminer si la réévaluation est conforme.

Si la côte établie par le SIGDU est conforme, utilisez celle-ci,

Si la côte a été modifiée et est conforme, utiliser celle-ci,

Si la côte a été modifiée et n'est pas conforme, utilisez la côte qui aurait dû être attribuée

La réévaluation est :	Selon l'ETG, l'auditeur estime que :	Le code à cocher dans la grille est :
Documentée	La réévaluation A ÉTÉ effectuée dans le temps prescrit en fonction de la cote de priorité correspondant à l'épisode de triage.	Documentée et conforme
Non documentée	Le patient a été pris en charge ou a quitté	Non documentée et conforme
Documentée	N'A PAS été effectuée dans le temps prescrit en fonction de la cote de priorité correspondant à l'épisode de triage	Documentée et non conforme
Non documentée	La réévaluation aurait dû être documentée	Non documentée et non conforme

* 37. Évaluez la conformité des réévaluations

	Documentée et conforme	Non documentée et conforme	Documentée et non conforme	Non documentée et non conforme
Réévaluation 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Réévaluation 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Réévaluation 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Réévaluation 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 38. Avis de revoir l'infirmière si le patient se détériore lors des réévaluations

	DOC DOC	ABS ABS	DOC ABS	ABS DOC
Réévaluation 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Réévaluation 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Réévaluation 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Réévaluation 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

39. Commentaires généraux de l'auditeur concernant la " Réévaluation "

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