

ORIGINAL ARTICLE

DEVELOPMENT AND VALIDATION OF A PAMPHLETS TO ASSESS, PREVENT, AND TREAT INCONTINENCE-ASSOCIATED DERMATITIS

HIGHLIGHTS

1. The pamphlet is clear and relevant to society.
2. Promotion of perineal health is observed, as well as prevention and treatment.
3. Monitors the evolution of the injury, minimizing risks and damages.
4. Has a clinical view regarding incontinence-associated dermatitis.

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ABSTRACT

OBJECTIVE: Develop and validate an educational pamphlet for nurses and caregivers, aiming at the assessment, prevention, and treatment of Incontinence-Associated Dermatitis. **METHOD:** Methodological study of a descriptive nature. The construction process took place from July to November 2023, following the steps: situational diagnosis, literature review, pamphlet development, and content validation of the pamphlet by a panel of judges (83 nurses). The evaluation was done by calculating the content validity coefficient. **RESULTS:** The pamphlet addresses the clinical assessment of the genital, perigenital, and perineal areas, as well as hygiene procedures to prevent and treat incontinence-associated dermatitis. The second round of validation obtained a content validity coefficient between 0.84 and 0.91. **CONCLUSION:** This pamphlet standardizes hygiene care, improves injury monitoring, reduces risks and adverse events, and guides clinical decisions based on evidence, promoting safer and higher-quality nursing.

KEYWORDS: Skin hygiene; Diaper rash; Urinary incontinence; Enterostomal therapy; Pamphlets.

HOW TO REFERENCE THIS ARTICLE:

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INTRODUCTION

Incontinence-associated dermatitis (IAD) is characterized by areas of erythema and edema on the skin, often accompanied by blistering lesions with exudation, erosion, or secondary infection, resulting from exposure to bodily fluids such as urine, feces, and wound exudate^{1,2}. In hospital settings, the prevalence of incontinence-associated skin lesions is significant, affecting between 36% and 42% of patients admitted to general inpatient units. These data highlight the importance of effective interventions to prevent and treat IAD, given the high vulnerability of patients and the risks of associated complications³⁻⁵.

Risk factors for IAD, such as limited mobility and prolonged hospitalization periods, are similar to those observed in hospital pressure injuries⁵. Using disposable diapers can worsen skin irritation due to the increased skin pH caused by urea converted into ammonia, in addition to the action of fecal enzymes that damage the skin's surface layer. These factors increase the risk of secondary infections, especially in patients receiving antibiotics associated with diarrhea^{6,7}.

Healthcare professionals must assess the condition of patients' skin daily, adopting preventive measures such as frequent diaper changes and maintaining body hygiene. Educational materials, such as the pamphlet developed in this study, play a crucial role in empowering nurses and caregivers to assess and properly manage IAD. These educational resources improve knowledge and adherence to care and promote the prevention of complications and ensure safer and more effective care for patients⁷⁻¹⁰.

The proposed pamphlet aims to provide detailed guidance on the clinical assessment of IAD, preventive measures, and appropriate treatment, benefiting both healthcare professionals and the caregivers and families of patients¹¹⁻¹². This research aims to develop and validate an educational pamphlet for nurses and caregivers aiming at the assessment, prevention, and treatment of incontinence-associated dermatitis (IAD).

METHOD

Methodological study of a descriptive nature. The development process took place from July to November 2023, following the steps: 1- situational diagnosis; 2 - literature review; 3 - development of the pamphlet; and 4 - validation of the pamphlet content by a panel of judges, using the Delphi Technique.

First stage – situational diagnosis

The idea of developing this pamphlet arose during the clinical practice of researchers at the Samuel Libânio Hospital of the Universidade do Vale do Sapucaí in Pouso Alegre, Minas Gerais, where it was observed that some nurses faced difficulties in assessing, prescribing preventive measures, and treating patients with risk factors or who had already developed IAD.

This situational diagnosis was conducted over 12 months, during which nursing students observed nurses' clinical practice, along with the supervising professors of the final year internship. The observations occurred at specific moments of clinical practice, such as bathing and dressing changes. Subsequently, the teachers, together with the students, discussed and reflected on the performance, as well as allowing the identification of the need for educational material to improve clinical practice related to IAD.

Second stage – literature review

A literature review was conducted after formulating a guiding question, searching electronic databases, selecting relevant studies, critically analyzing the data, and synthesizing the evidence. The chosen theme was Evaluation, prevention, and treatment of Incontinence-Associated Dermatitis (IAD). The review aimed to answer the following guiding question: What is the evidence on assessment, prevention, and treatment of IAD?

For this question, we sought to identify robust evidence, such as that obtained through systematic reviews and high-quality primary studies, which addressed specific interventions for IAD, effective assessment methods, and prevention strategies. The PICO format was used to define the research question, as detailed below:

Population (P): Patients at risk of developing or who have already developed Incontinence-Associated Dermatitis; Intervention (I): Evaluation methods, preventive measures, and treatment strategies for IAD; Comparison (C): Comparison between different interventions or the absence of intervention; Outcome (O): Effectiveness of interventions in the prevention and treatment of IAD¹³. The search was conducted in databases such as PubMed, LILACS, and SciELO in November 2023, covering publications between 2019 and 2023. The selection of studies followed predefined inclusion and exclusion criteria, focusing on articles that presented high methodological quality and clinical relevance.

The descriptors used were: ("Urinary Incontinence" OR "Fecal Incontinence") AND ("Dermatitis") AND ("Nursing Care" OR "Skin Hygiene" OR "Disease Prevention" OR "Efficacy" OR "Therapeutics"), and their corresponding terms in Portuguese, English, and Spanish. The search strategy was determined by combining the selected descriptors and the boolean operators "AND" and "OR".

The inclusion criteria for selecting publications were full-text articles available in peer-reviewed journals, published in Portuguese, English, or Spanish, and addressing the assessment, prevention, and treatment of IAD. The exclusion criteria included theses, dissertations, monographs, technical reports, case or experience reports, and expert opinions. Although these documents may contain valuable information, they often do not undergo the same peer review rigor as articles published in scientific journals. This can impact the quality and consistency of the presented data. Furthermore, its availability is often limited, hindering universal access and replication of findings.

To select articles identified during the literature review, two authors read titles, abstracts, and articles independently to ensure that the texts covered the study's theme and met the established inclusion criteria. The search and selection of studies followed the flowchart of the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA). During the literature review, PRISMA was used as a methodological guide to guide the process of searching, selecting, and excluding articles, to guide the development of the pamphlet.

To classify the level of evidence of the selected studies, the categories of the Agency for Healthcare Research and Quality were used, which encompass six levels: Level 1: evidence resulting from meta-analysis of multiple controlled and randomized clinical trials; Level 2: evidence obtained from individual studies with experimental design; Level 3: evidence from quasi-experimental studies; Level 4: evidence from descriptive (non-experimental) studies or qualitative approach; Level 5: evidence from case reports or experience; Level 6: evidence based on expert opinions.

In addition to the level of evidence, several other data were extracted from the identified studies, such as study title, year of publication, country of origin, article language, research objective, the method used, main results found, authors' conclusions, and description of the interventions. These data were essential for a critical and

comprehensive analysis of the available evidence on the subject, providing valuable insights for clinical practice and future research in IAD. From this survey, the pamphlet's content was constructed, comprising three stages.

The **first stage** involved defining the IAD, clinical assessment of the skin in the genital, perigenital, and intimate perineal areas, and application of the Perineal Assessment Tool¹⁴ scale.

The Perineal Assessment Tool (NIX Scale) is a scale used to assess skin integrity in the genital, perigenital, and perineal areas. The Perineal Assessment Tool was developed by Denise Henrique Nix in 2022; for this reason, it is known as the NIX Scale¹⁴. It was translated and adapted to Brazilian culture in 2018¹⁵. This scale helps healthcare professionals identify risk factors for developing IAD, such as type of irritant agent, duration of contact, condition of the perianal skin, and the number of contributing factors that can cause diarrhea. This systematic assessment helps formulate personalized care plans to prevent the development of incontinence-associated dermatitis and guide appropriate therapeutic interventions¹⁴⁻¹⁶.

The **second stage** covers the standardization of care and products that should be used daily in hygiene in the genital, perigenital, and intimate perineal regions and the preventive measures of IAD. These were built according to the results of the clinical evaluation and the results of the Perineal Assessment Tool (NIX Scale)¹⁶⁻¹⁷ scale.

In the **third stage**, the standardization of therapeutic conducts to be used for the treatment of IAD and the appropriate products for hygiene in the genital, perigenital, and perineal areas is presented. Therapeutic approaches were developed according to the results of the assessment in the genital, perigenital, and perineal areas and the results of the NIX Scale¹⁸.

After the pamphlet was developed, validation was started by 83 judges. Nurses who work in wound treatment at the Samuel Libânio Clinical Hospital, located in the municipality of Pouso Alegre/MG, participated in the study, as did nurses with postgraduate degrees in stomatherapy registered with the Brazilian Association of Stomatherapy and nurses with degrees in Dermatology registered with the Brazilian Association of Dermatology Nursing.

For the sample calculation, the formula for an infinite population was used, where $n = Z_{1-\alpha/2}^2 \cdot P(1-P)/e^2$, where $Z_{1-\alpha/2}$ refers to the adopted confidence level (95%); P represents the expected proportion of experts (80%), indicating the adequacy of each item; and "e" represents the acceptable proportion difference about what would be expected (15%) and a minimum sample of 68 professionals was obtained.

The judges were selected through convenience sampling and snowball sampling. The inclusion criteria for the evaluators were professionals with a certificate of graduation in nursing and a minimum of two years of experience in preventing and treating people with wounds. The exclusion criteria referred to nurses who agreed to participate in the research but did not respond and/or submit the evaluation questionnaire within the 15-day deadline.

For the validation of the pamphlet, an invitation letter was sent to the evaluators by email, containing: an initial personal presentation and clarifications about the research topic; opinion of the Institutional Research Ethics Committee; explanations about the importance of the evaluator's role in the research; and, the step-by-step process for the evaluator's effective participation. The deadline of 15 days was set, starting from the day the invitation was sent, to complete the questionnaire and submit the answers.

The questionnaire for validating the pamphlet's content was constructed in two parts. The first addressed the identification of the evaluators in five questions related to: time since graduation; type of undergraduate course; whether they completed a postgraduate course (specialization, master's, or doctorate); time of experience in teaching and/or experience in assistance.

The second part of the questionnaire was designed to validate the pamphlet and contained 12 questions: suitable for the teaching-learning process, clarify doubts about the topic, language appropriate to the audience, correct information, logical sequence of ideas, current topics, definition of IAD, clinical evaluation of the skin, application technique of the NIX Scale, preventive measures for IAD, coverage to treat IAD.

The questions were answered using the Likert Scale. The answers that the judges marked were classified for language clarity and practical relevance of the content; answers with low and moderate ratings were not excluded. For these, the corrections suggested by the judges were made, and the booklet was resubmitted for the second round with a new judgment from the judges. The validation was completed after reaching a consensus of 100% approval among the judges. This type of procedure is called the Delphi technique. The Delphi Technique is when the evaluators are experts in the field, and there must be a 100% consensus among the evaluators. After making corrections based on the reviewers' suggestions, the researchers must reassess the instrument until a consensus is reached among all the experts¹⁸.

The statistical analysis used was the Content Validity Coefficient (CVC) test for the clarity of language and the practical relevance of each piece of content. The cutoff point was adopted to determine satisfactory levels of 0.70 for each item. The items that obtained a percentage below 0.70% agreement were reformulated based on the experts' suggestions¹⁹.

The Ethics Committee in Research of the Universidade do Vale do Sapucaí approved the research under opinion number 5,347,179.

RESULTS

A total of 5,415 articles were identified through the search in health sciences databases, with 23 selected to assist in developing the pamphlet (Figure 1). A total of 58 articles were excluded from the study for not meeting the established inclusion criteria for assessing, preventing, and treating IAD.

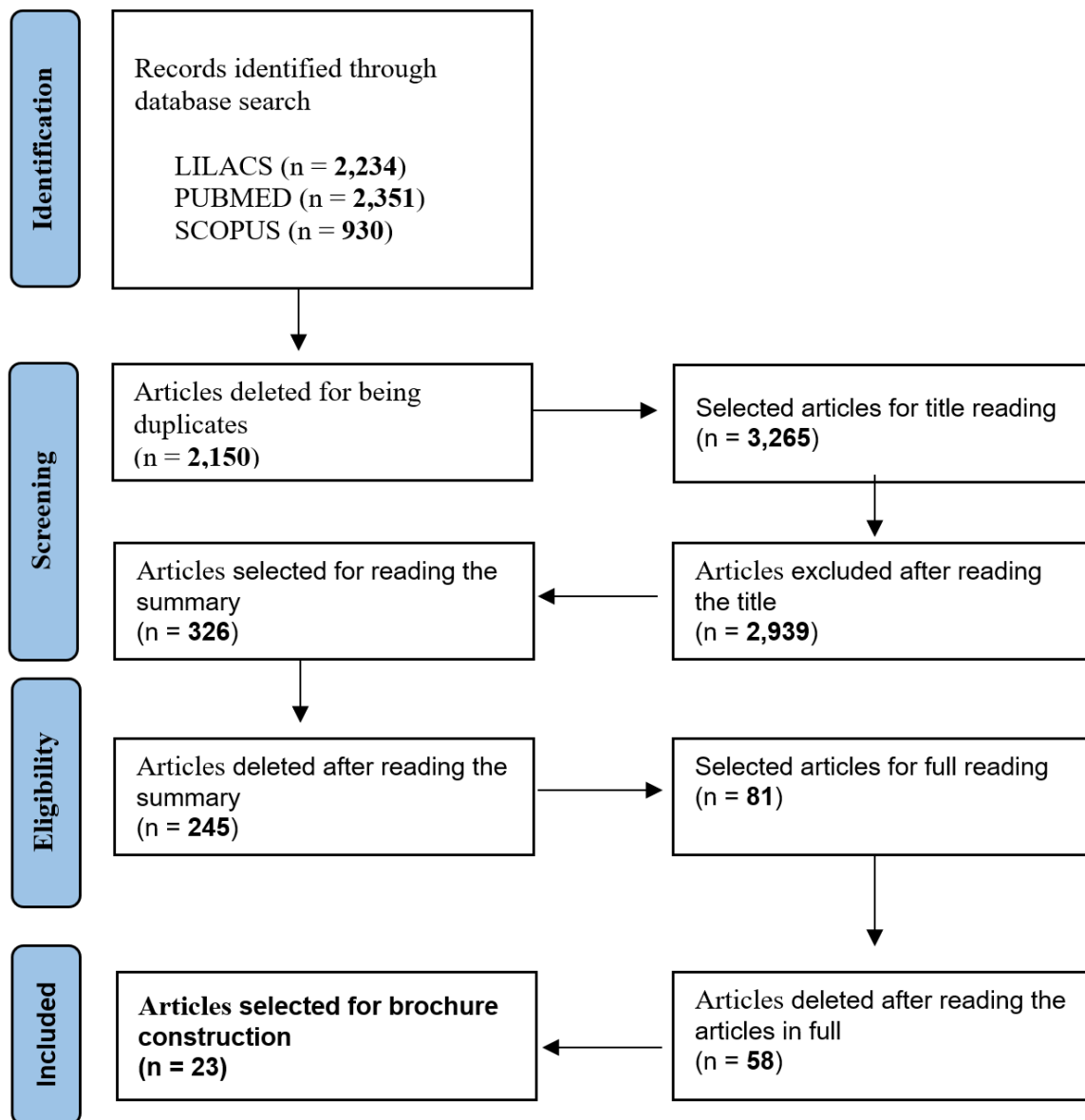


Figure 1 - Flowchart of the identification, selection, and inclusion process of the studies selected to develop the pamphlets. Pouso Alegre, MG, Brazil, 2023

Source: The authors (2023).

Regarding the training of judges, 21 (25.30%) of the evaluators had between 2 and 5 years of training; 43 (51.80%) 6 to 10 years; and, 19 (22.90%) over 10 years of training. As for their specializations, 42 (50.60%) were specialists in stomatherapy or dermatology, 20 (24.10%) were masters, and 21 (25.30%) were doctors.

Regarding the suggestions made by the nurses who evaluated the pamphlet, the following stand out: replace dressing with barrier cream; include the references used for the development of the educational material; increase the font size; add skin hygiene; improve the formatting of the figures; add, in the barrier cream item, Starch or d-panthenol; add an item related to the daily assessment of incontinence-associated dermatitis and skin with the presence of candidiasis.

Table 1 presents the judges' assessment related to the clarity of the language of the pamphlet content using the Delphi technique. In the first evaluation, the judges assessed the pamphlet's content as having "little clarity of the language to a lot of clarity of the language" and the CVC ranged between 0.66 and 0.77. After corrections of the items requested by the judges, the pamphlet was reassessed in terms of content, with clarity of the language and with great clarity of the language; the CVC ranged between 0.71 and 0.85

Table 1 - Evaluation of the language clarity of the Pamphlet's content for preventing and treating Incontinence-Associated Dermatitis, by judges according to the Delphi technique, n=98. Pouso Alegre, MG, Brazil, 2023

First assessment / Clarity of Language	Little	Moderate	Appropriate	Very	CVC
	n (%)	n (%)	n (%)	n (%)	
Is the content suitable for the target audience?	8 (9.6)	10 (12.0)	34 (40.9)	31 (37.3)	0.73
Is the sequence of the text logical and coherent?	14 (16.8)	15 (18.0)	23 (27.7)	31 (37.3)	0.70
Does content facilitate the teaching and learning process on the topic?	14 (16.8)	11 (13.2)	29 (34.9)	29 (34.9)	0.72
Does the content clarify doubts about the subject?	13 (15.6)	20 (24.0)	35 (42.1)	15 (18.0)	0.66
Is verbal language easy to assimilate?	14 (16.8)	13 (15.6)	43 (51.8)	13 (15.6)	0.67
Do illustrations motivate the manipulation of the pamphlet?	10 (12.0)	09 (10.8)	50 (60.2)	14 (16.8)	0.70
The text formatting?	2 (2.4)	8 (9.6)	34 (40.9)	39 (46.9)	0.74
Definition of IAD	1 (1.2)	11 (13.2)	46 (55.4)	25 (30.1)	0.77
Skin assessment and risk factors for the patient to acquire IAD	10 (12.0)	7 (8.4)	36 (43.3)	30 (36.1)	0.75
Application of the NIX scale score	1 (1.2)	8 (9.6)	32 (38.5)	42 (50.6)	0.76
Preventive measures for IAD	3 (3.6)	5 (6.0)	47 (56.6)	28 (33.7)	0.75
Type of coverage to treat IAD, according to the NIX scale result	2 (2.4)	8 (9.6)	46 (55.4)	27 (32.5)	0.74
Second evaluation					
Is the content suitable for the target audience?	0 (0.0)	0 (0.0)	70 (63.8)	30 (36.1)	0.77
Is the sequence of the text logical and coherent?	0 (0.0)	0 (0.0)	23 (27.7)	77 (72.2)	0.71
Does content facilitate the teaching and learning process on the topic?	0 (0.0)	0 (0.0)	29 (34.9)	71 (65.0)	0.76
Does the content clarify doubts about the subject?	0 (0.0)	0 (0.0)	35 (42.1)	48 (57.8)	0.74
Is the verbal language easy to assimilate?	0 (0.0)	0 (0.0)	43 (51.8)	57 (48.2)	0.72
Do illustrations motivate the manipulation of the pamphlet?	0 (0.0)	0 (0.0)	50 (60.2)	33 (39.6)	0.75
The text formatting?	0 (0.0)	0 (0.0)	61 (53.0)	39 (46.9)	0.76
Definition of IAD	0 (0.0)	0 (0.0)	46 (55.4)	54 (44.5)	0.85
Skin assessment and risk factors for the patient to acquire IAD	0 (0.0)	0 (0.0)	36 (43.3)	64 (56.6)	0.83
Application of the NIX scale score	0 (0.0)	0 (0.0)	41 (49.3)	42 (50.6)	0.79
Preventive measures for IAD	0 (0.0)	0 (0.0)	47 (56.6)	53 (43.3)	0.80
Type of coverage to treat IAD, according to the NIX scale result	0 (0.0)	0 (0.0)	46 (55.4)	54 (44.5)	0.80

Source: The authors (2023).

Table 2 presents the judges' evaluation related to the practical relevance of the pamphlet's content through the Delphi technique. In the first evaluation, the judges assessed the pamphlet's content as having little practical relevance to a lot of practical relevance, and the CVC ranged from

0.78 to 0.83. After corrections, the items requested by the judges were reassessed as ranging from little practical relevance to high practical relevance, and the CVC ranged from 0.84 to 0.91

Table 2 - Evaluation of the practical relevance of the pamphlet's content for preventing and treating friction injury by judges according to the Delphi technique, n=98. Pouso Alegre, MG, Brazil, 2023

First assessment / Practical relevance	Little	Moderate	Appropriate	Very	CVC
	n (%)	n (%)	n (%)	n (%)	
Is the content suitable for the target audience?	6 (7.2)	4 (4.8)	62 (74.7)	11 (13.2)	0.81
Is the sequence of the text logical and coherent?	9 (10.8)	3 (3.6)	67 (80.7)	04 (4.8)	0.80
Does content facilitate the teaching and learning process on the topic?	5 (6.0)	5 (6.0)	67 (80.7)	06 (7.2)	0.83
Does the content clarify doubts about the subject?	4 (4.8)	2 (2.4)	67 (80.7)	10 (12.0)	0.80
Is the verbal language easy to assimilate?	2 (2.4)	2 (2.4)	72 (86.7)	07 (8.4)	0.80
Do illustrations motivate the manipulation of the pamphlet?	2 (2.4)	3 (3.6)	69 (83.0)	09 (10.8)	0.80
The text formatting?	3 (3.6)	7 (8.4)	58 (69.8)	15 (18.0)	0.80
Definition of IAD	4 (4.8)	3 (3.6)	67 (80.8)	09 (10.5)	0.80
Skin assessment and risk factors for the patient to acquire IAD,	4 (4.8)	3 (3.6)	66 (79.5)	10 (12.0)	0.78
Application of the NIX scale score	6 (6.1)	20 (20.4)	10 (10.2)	62 (63.2)	0.79
Preventive measures for IAD	5 (6.0)	3 (3.6)	65 (78.3)	10 (12.0)	0.80
Type of coverage to treat IAD, according to the NIX scale result	2 (02.4)	2 (02.4)	66 (79.5)	13 (15.6)	0.80
Second evaluation					
Is the content suitable for the target audience?	0 (0.0)	0 (0.0)	62 (74.7)	21 (25.2)	0.88
Is the sequence of the text logical and coherent?	0 (0.0)	0 (0.0)	67 (80.7)	16 (19.3)	0.91
Does content facilitate the teaching and learning process on the topic?	0 (0.0)	0 (0.0)	67 (80.7)	16 (19.3)	0.89
Does the content clarify doubts about the subject?	0 (0.0)	0 (0.0)	67 (80.7)	16 (19.3)	0.87
Is the verbal language easy to assimilate?	0 (0.0)	0 (0.0)	72 (86.7)	11(13.2)	0.86
Do illustrations motivate the manipulation of the pamphlet?	0 (0.0)	0 (0.0)	69 (83.0)	14 (16.9)	0.84
The text formatting?	0 (0.0)	0 (0.0)	58 (69.8)	25 (30.1)	0.88
Definition of IAD	0 (0.0)	0 (0.0)	67 (80.8)	16 (19.3)	0.90
Skin assessment and risk factors for the patient to acquire IAD,	0 (0.0)	0 (0.0)	66 (79.5)	17 (20.4)	0.89
Application of the NIX scale score	0 (0.0)	0 (0.0)	10 (10.2)	73 (89.8)	0.85
Preventive measures for IAD	0 (0.0)	0 (0.0)	65 (78.3)	18 (21.7)	0.86
Type of coverage to treat IAD, according to the NIX scale result	0 (0.0)	0 (0.0)	66 (79.5)	17 (20.4)	0.86

Source: The authors (2023).

The authors carried out the pamphlet's layout, taking into account the design graphic guidelines for health communication. Factors such as readability, visual organization of information, and aesthetic appeal were considered to make the pamphlet attractive and easy to use. The researchers used the Canva tool, which offers intuitive resources for creating graphic materials. These tools allow researchers to independently develop the pamphlet, ensuring control over the creative process and adjustments as needed.

The language used in the pamphlet was carefully adapted to be understandable by the target audience, which includes patients, caregivers, and family members. Technical terms were explained in a simple and accessible way, ensuring that the guidelines are easily understood and followed in everyday practice (Figure 2).

NIX SCALE SCORE BETWEEN 8 and 12

Duration of contact with the irritating agent

- Use a non-occlusive absorbent diaper that does not inhibit perspiration.
- Check the patient's diaper at each change of position.

Perineal skin conditions

- Evaluate the patient's skin daily.
- Keep the skin clean and dry.
- Trim the hair in the pubic area.
- Use cotton compresses or alcohol-free wet wipes.
- Use liquid soap with a slightly acidified pH (around 5.5) and warm water.
- Gently dry the skin with small pats (without rubbing), paying special attention to the skin folds.
- Apply barrier creams gently.
 - semi-occlusive protective layer, reduction of friction between damaged skin-diaper, damaged skin-urine/feces
- Combine polymeric film spray up to 48/48 h.
- Position the patient, if possible, three times a day for 30 minutes, to expose the skin to the ambient air.
- Pay attention to other sources of moisture, such as leakage of drain fluids onto the skin, wound exudate, perspiration, and lymph leakage.

4. FOURTH STEP – THERAPEUTIC CONDUCT

Vulnerable skin treatment

- Minimize contact with irritating agents (urine, feces, and excessive moisture).
- Use liquid soap with a slightly acidified pH (around 5.5) and warm water.
- Gently dry the skin with small pats (without rubbing).
- Use barrier cream based on:
 - Polymer film, silicone, petrolatum, or zinc oxide.


Damaged skin treatment

- Minimize contact with irritating agents (urine, feces, and excessive moisture).
- Use liquid soap with a slightly acidified pH (around 5.5) and warm water.
- Gently dry the skin with small pats (without rubbing).
- Use barrier cream based on:
 - Polymer film, silicone, petrolatum, or zinc oxide.
- Combine polymeric film spray up to 48/48 h.

Skin treatment with candidiasis

- Minimize contact with irritating agents (urine, feces, and excessive moisture).
- Use barrier cream based on:
 - Nystatin with zinc oxide.
- Combine polymeric film spray up to 48/48 h.

Pamphlet for the assessment, prevention, and treatment of incontinence-associated dermatitis



1. DEFINITION

Incontinence-Associated Dermatitis is characterized by the presence of erythema and edema, and may present with blistering lesions with exudate, erosion, or secondary skin infection.


These symptoms are caused due to the constant exposure of this region to the presence of effluents, such as urine, feces, perspiration, and exudate from the lesion.

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2. CLINICAL EVALUATION

2.1. FIRST STEP

- Hand hygiene/Use of procedure gloves.
- PHYSICAL EXAM (detect risk factors)
 - Age; Ointments and oils; Skin deterioration due to aging; Decreased bladder capacity; Increased local pH in the pubic region; Urinary and/or fecal incontinence; Moisture exposure; Excessive sweating; Time and frequency of skin exposure to urine and feces; Constant use of soaps, ointments, and oils; Enteral diet; Use of incorrect products; Use of disposable diapers; Skin friction during hygiene.



LEARN MORE



References

BRAINDÃO, A., et al (2018). Adaptation of the "Perineal Assessment Tool" for Brazilian culture. *Estima-Brazilian Journal of Enterocolonial Therapy*, São Paulo, 16, e30618.

2.2. SECOND STEP

PERINEAL ASSESSMENT SCALE - Perineal Assessment Tool

1. Irritant agent intensity

- 1 point - Formed feces and/or urine
- 2 points - Soft/pasty stools with or without urine.
- 3 points - Liquid feces with or without urine

2. Duration of the annoying

- 1 point - Change of sheet or diaper at least every 8h.
- 2 points - Change of sheet or diaper at least every 4 hours
- 3 points - Change of sheet or diaper at least every 2 hours

3. Perineal skin conditions

- 1 point - Full and without color change
- 2 points - Erythema/dermatitis with or without candidiasis
- 3 points - Denuded/ with erosion, with or without dermatitis

4. Contributing factors (diarrhea): Low serum albumin, use of antibiotics, feeding catheters or Clostridium difficile infection and others

- 1 point - None or one contributing factor
- 2 points - Two contributing factors
- 3 points - Three or more contributing factors

3. THIRD STEP – PREVENTIVE CONDUCT

NIX SCALE SCORE BETWEEN 4 AND 7

Type and intensity of the irritating agent

- Use urinals, "bedpans" or "urinals".

Duration of contact with the irritating agent

- Instruct patients with preserved cognition to inform professionals when they are wet
- Adjust the diaper size to the patient.
- Avoid cloth diapers.
- Pay attention to the frequency of diaper changes, so as not to exceed the absorption capacity.
- Change the diaper with feces immediately.
- Keep sheets clean and dry.

Perineal skin conditions

- Evaluate the patient's skin daily.
- Keep the skin clean and dry.
- Trim the hair in the pubic area.
- Use cotton compresses or alcohol-free wet wipes.
- Use liquid soap with neutral pH and warm water.
- Gently dry the skin with small pats (without rubbing), paying special attention to the skin folds.
- Apply barrier creams gently.

Figure 2 - Pamphlet for assessing, preventing, and treating incontinence-associated dermatitis. Pouso Alegre, MG, Brazil, 2023

Source: The authors (2023).

DISCUSSION

The choice of the theme for the pamphlet on the prevention and treatment of incontinence-associated dermatitis (IAD) arose from the difficulties encountered by researchers in academic and care activities. Frequently, during procedures, some nurses perform hygiene of the genital, perigenital, and perineal area with inappropriate soap, use two diapers, and treat IAD with mixtures of oils, ointments, or creams.

Then, a protocol was developed in the form of a booklet, with guidelines for the nurse to learn how to perform a clinical assessment of the genital, perigenital, and perineal regions, identify risk factors and types of IAD categories, apply the NIX scale, and prescribe preventive measures and appropriate treatments.

The educational pamphlet contributes positively to the communication process. It increases adherence to treatment and decision-making power, offers consistent information, enables portability, flexibility, patient feedback, and reinforcement of verbalized instruction²⁰. However, it must be developed with clear and easily understandable vocabulary and procedural techniques, an essential tool for managing care with quality and safety.

The pamphlet developed in this study was constructed after a literature review, with several researchers highlighting the need to develop scientifically based educational materials. Such pamphlets arouse the patient's interest, strengthen the received guidelines, and allow easy access to resolve doubts, assist in daily actions, and contribute to care with minimal risk, without harm and adverse events^{12-14,21}.

The development of a pamphlet for the evaluation, prevention, and treatment of wounds should be based on scientific evidence, including articles with clinical evidence. The aim is to assist in technical, clinical, administrative, and financial procedures. The goal is to improve patient care and reduce treatment costs, meeting the needs of both patients and healthcare organizations.¹⁷⁻¹⁸.

In this study, the judges used the Delphi technique. In the first evaluation cycle of the pamphlet, several suggestions were made related to formatting, vocabulary, preventive measures, and treatments. The suggestions were incorporated, and the pamphlet was resent for a second round of evaluation. In the second evaluation, there was a consensus for approval among the judges (100%).

The Delphi technique allows for the evaluation of each item in the pamphlet individually and then the instrument as a whole. It is crucial that the corrections requested by the judges are made to ensure that the pamphlet's content and images are of high quality, the language clear and appropriate, and easy to understand for nurses¹²⁻¹⁴.

The pamphlet should provide important information so that the nurse can apply and perform the procedure without doubts and with confidence, facilitating the search for information for decision-making¹²⁻¹³. When developing and using a pamphlet, the nurse will be able to apply their knowledge, ensure decision-making during clinical practice, disseminate their technical-scientific knowledge, and share their experiences with other professionals. Furthermore, the nurse plays a fundamental role in encouraging and assisting the patient and caregiver to become protagonists in the self-care process²³.

The pamphlet constructed in this study provides a theoretical foundation and clinical practice for nurses. It guides the standardization of assessment, hygiene in the genital, perigenital, and perineal areas, preventive measures, and treatment, resulting in

individualized and personalized care. This instrument systematizes prevention and care with the minimum possible risk, without harm and adverse events, promoting quality and safe care that can significantly impact patients' quality of life. It also represents a significant clinical and economic challenge in healthcare. However, the study presents limitations related to the generalization of the results due to the specific context in which it was conducted. Furthermore, the sample of nurses to validate the pamphlet may limit the representativeness of practices and opinions on the subject.

This study identified several knowledge gaps, such as the need for additional studies to validate the pamphlet in different clinical contexts and with different healthcare professionals. In addition, there is a clear need for longitudinal investigations that assess the long-term effectiveness of the pamphlet in clinical practice, monitoring the incidence and severity rates of IAD over time. International comparative studies are also essential to understanding how cultural variables and health systems influence approaches and outcomes. By guiding future research to address these issues, we can advance knowledge and management strategies, thereby improving outcomes for affected patients and optimizing available healthcare resources.

CONCLUSION

A consensus process was carried out among a group of expert judges to validate the pamphlet developed on IAD. This pamphlet presents detailed content for the clinical evaluation of the genital, perigenital, and perineal areas and guides hygiene procedures for preventing and treating IAD. The pamphlet, once validated, has the potential to improve patient safety by facilitating the application of consistent preventive and therapeutic measures based on evidence. This can reduce risks, damages, and adverse events associated with IAD, promoting better management and monitoring of skin conditions in vulnerable patients.

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