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PROTOCOL

Clinical decision-making among nurses in pediatric air transport: scoping review protocol

Toma de decisiones clínicas de los enfermeros en el transporte aéreo pediátrico: protocolo de revisión de alcance

Tomada de decisão clínica dos enfermeiros no transporte pediátrico aéreo: protocolo de revisão de escopo

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Abstract

The aim is to map the available scientific evidence on nurses' clinical decision-making in pediatric air transport. A scoping review will be conducted in accordance with the JBI Manual for Evidence Synthesis and reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR). The search strategy was developed for MEDLINE Complete and CINAHL Complete (via EBSCOhost), Scopus, Web of Science Core Collection (via Clarivate), LILACS, and BDENF (via Virtual Health Library - VHL), using controlled vocabulary, when available, and free-text terms structured according to the Population, Concept, and Context (PCC) framework. Evidence sources will be selected by two independent reviewers, followed by data extraction, organization, and synthesis. The protocol is registered on the Open Science Framework (OSF). The review is expected to contribute to the understanding of nurses' clinical decision-making in pediatric air transport by identifying the concepts used, associated factors, contexts investigated, strategies described, and knowledge gaps, thereby informing future research, strengthening evidence-based practice, and promoting child safety during specialized pediatric transport.

Descriptors: Clinical Decision-Making; Nursing; Transportation of Patients; Patient Safety; Pediatrics.

Resumén

El objetivo es mapear la evidencia científica disponible sobre la toma de decisiones clínicas de los enfermeros en el transporte pediátrico aéreo. Se realizará una revisión de alcance conforme al JBI Manual for Evidence Synthesis y se reportará de acuerdo con las recomendaciones del Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR). La estrategia de búsqueda se desarrolló para las bases de datos MEDLINE Complete y CINAHL Complete (vía EBSCOhost), Scopus, Web of Science Core Collection (vía Clarivate), LILACS y BDENF (vía Biblioteca Virtual en Salud - BVS), utilizando descriptores controlados, cuando estén disponibles, y términos libres estructurados según la estrategia Población, Concepto y Contexto (PCC). La selección de las fuentes de evidencia será realizada por dos revisores independientes, seguida de la extracción, organización y síntesis de los datos. El protocolo se encuentra registrado en la plataforma Open Science Framework (OSF). Se espera que la revisión contribuya a la comprensión de la toma de decisiones clínicas de los enfermeros en el transporte pediátrico aéreo, identificando los conceptos utilizados, los factores asociados, los contextos investigados, las estrategias descritas y las lagunas de conocimiento, orientando futuras investigaciones, fortaleciendo la práctica basada en la evidencia y promoviendo la seguridad del niño durante el transporte pediátrico especializado.

Descriptores: Toma de Decisiones Clínicas; Enfermería; Transporte de Pacientes; Seguridad del Paciente; Pediatría.

Resumo

Objetiva-se mapear a evidência científica disponível sobre a tomada de decisão clínica dos enfermeiros no transporte pediátrico aéreo. Será conduzida uma revisão de escopo conforme o *JBI Manual for Evidence Synthesis*, reportada de acordo com as recomendações do *Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews* (PRISMA-ScR). A estratégia de busca foi desenvolvida para as bases de dados MEDLINE *Complete* e CINAHL *Complete* (via EBSCOhost), Scopus, *Web of Science Core Collection* (via Clarivate), LILACS e BDENF (via Biblioteca Virtual em Saúde – BVS), utilizando descritores controlados, quando disponíveis, e termos livres estruturados segundo a estratégia População, Conceito e Contexto (PCC). A seleção das fontes de evidência será realizada por dois revisores independentes, seguida da extração, organização e síntese dos dados. O protocolo encontra-se registado na plataforma *Open Science Framework* (OSF). Espera-se que a revisão contribua para a compreensão da tomada de decisão clínica dos enfermeiros no transporte pediátrico aéreo, identificando os conceitos utilizados, os fatores associados, os contextos investigados, as estratégias descritas e as lacunas do conhecimento, subsidiando futuras investigações, fortalecendo a prática baseada em evidências e promovendo a segurança da criança durante o transporte pediátrico especializado.

Descritores: Tomada de Decisão Clínica; Enfermagem; Transporte de Pacientes; Segurança do Paciente; Pediatria.

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Introduction

The Nursing Process is a method that guides nurses' critical thinking and clinical judgment. It is structured into interrelated stages that support the provision of care to individuals, families, and communities[1]. In this context, clinical decision-making is a central process in nursing practice, directly influencing patient safety, quality of care, and clinical outcomes. In settings characterized by high complexity, uncertainty, and the need for rapid responses, this process requires the integration of the best available scientific evidence, nurses' clinical experience, and the needs of children and their families, in accordance with the principles of Evidence-Based Practice[2,3].

Among the settings that pose the greatest challenges to clinical decision-making is pediatric air transport, which involves transferring critically ill children between healthcare institutions to ensure timely access to specialized care and continuity of care. The use of helicopters and fixed-wing aircraft reduces travel time and expands access to diagnostic, therapeutic, and technological resources, particularly when a child's clinical condition requires immediate intervention or transfer to a referral center[4-6].

Despite these advantages, pediatric air transport takes place in a highly complex care environment characterized by physical limitations, restricted space, noise, vibration, changes in altitude, and the need for continuous coordination among professionals and institutions. Combined with the clinical severity of the children being transported, this complexity increases the risk of adverse events and underscores the need for rapid, accurate, and evidence-informed clinical decisions, making patient safety a central concern at every stage of the transfer[6-8].

In this context, nurses play an important role in clinical monitoring, child stabilization, the management of healthcare technologies, communication between teams, and responses to unexpected changes in clinical status. Continuous clinical assessment, interpretation of signs of instability, prioritization of interventions, and anticipation of risks require well-grounded decisions, often made under time pressure and with limited information[2,3].

According to Benner[9], competence in clinical decision-making develops progressively through professional experience, enabling nurses to recognize patterns, interpret complex situations, and respond safely and effectively across different care settings. In pediatric air transport, which is characterized by considerable dynamism and unpredictability, this competence is particularly relevant to maintaining the child's clinical stability and managing transport-related risks.

Although studies have examined aeromedical transport, pediatric critical care, and patient safety, the evidence concerning nurses' clinical decision-making remains dispersed across different concepts, contexts, and methodological designs. Previous studies have addressed specific aspects of decision-making in the dispatch of pediatric transport teams, triage for interhospital transport, and the organization of transport teams[10-12]. However, a comprehensive synthesis of the scientific evidence specifically focused on nurses' clinical decision-making in pediatric air transport is still lacking.

A preliminary search of MEDLINE Complete, CINAHL Complete, Scopus, Web of Science Core Collection, LILACS, and BDENF did not identify any scoping reviews specifically designed to map scientific evidence on nurses' clinical decision-making in pediatric air transport. It is therefore relevant to synthesize and map the available knowledge. This review is expected to contribute to a more structured understanding of the phenomenon by identifying the concepts used, associated factors, investigated contexts, and knowledge gaps. Its results are also intended to guide future research, support nurses' training initiatives, and inform strategies to improve clinical practice and promote child safety during pediatric air transport.

Accordingly, this scoping review aims to map the available scientific evidence on nurses' clinical decision-making in pediatric air transport.

Methodology

This scoping review will be conducted in accordance with the JBI Manual for Evidence Synthesis[13] and reported according to the recommendations of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR)[14].

The protocol is registered on the Open Science Framework (OSF) platform at the electronic address indicated in the original document. This registration supports methodological transparency and traceability and helps minimize the risk of duplication of scientific efforts.

A comprehensive search strategy was developed for MEDLINE Complete and CINAHL Complete (via EBSCOhost), Scopus, Web of Science Core Collection (via Clarivate), LILACS, and BDENF (via the Virtual Health Library - BVS). Controlled vocabulary terms, where available, and free-text terms related to the components of the PCC strategy were used. The search strategies were adapted to the syntax and specific search features of each information source. Evidence sources from quantitative, qualitative, and mixed-methods studies, reviews, and grey literature addressing nurses' clinical decision-making in pediatric air transport will be included, according to the established eligibility criteria. Evidence source selection will be conducted in two stages: title and abstract screening, followed by full-text assessment. Two independent reviewers will perform the selection. Disagreements will be resolved by consensus or, when necessary, by a third reviewer.

Data will be extracted independently by two reviewers using an instrument developed and tested for this review. The extracted data will be systematically organized and presented in tables, charts, and a narrative synthesis, in accordance with recommendations for data extraction, analysis, and presentation in scoping reviews[15]. The synthesis will characterize the concepts used, associated factors, investigated contexts, strategies described, and knowledge gaps related to nurses' clinical decision-making in pediatric air transport.

As this is a literature review based exclusively on published studies and publicly available documents, the

investigation will not involve human participants or access to identifiable data. Therefore, review by a research ethics committee will not be required.

Research Question and PCC Strategy

The research question for this scoping review was formulated using the PCC strategy (Population, Concept, and Context), as recommended by the JBI Manual for Evidence Synthesis for scoping reviews[13]. This strategy guided the definition of the research question, eligibility criteria, search strategy, selection of evidence sources, and synthesis of results.

The research question guiding this review is: "What scientific evidence is available on nurses' clinical decision-making in pediatric air transport?" The PCC components used to formulate the research question are presented in Chart 1.

Chart 1. PCC strategy. Coimbra, Portugal, 2026

Acronym	Identification
Population (P)	Nurses involved in pediatric air transport
Concept (C)	Clinical decision-making
Context (C)	Pediatric air transport

Eligibility Criteria

The eligibility criteria were defined according to the PCC strategy (Population, Concept, and Context), ensuring consistency with the research question and the review objective.

Evidence sources addressing nurses' clinical decision-making in pediatric air transport will be included. Quantitative, qualitative, and mixed-methods studies, reviews, and grey literature will be considered, regardless of methodological design, if they contain information relevant to the research question. No restrictions will be imposed on publication period or language. Whenever necessary, potentially eligible evidence sources will be translated to enable full-text assessment and data extraction. Evidence sources that do not address nurses' clinical decision-making in pediatric air transport will be excluded, as will studies whose populations consist exclusively of other healthcare professionals or patients, and sources that do not provide sufficient information to answer the research question. When the full text is unavailable, attempts will be made to obtain it before the evidence source is excluded.

Evidence Sources and Search Strategy

The search will be conducted in MEDLINE Complete and CINAHL Complete (via EBSCOhost), Scopus, Web of Science Core Collection (via Clarivate), LILACS, and BDENF (via the Virtual Health Library - BVS). The search strategy was developed comprehensively and adapted to the specific characteristics of each information source, in accordance with the methodological recommendations of the JBI Manual for Evidence Synthesis[13]. Controlled vocabulary terms, where available, and free-text terms related to the PCC components were used. Search terms were identified and refined during the calibration stage, covering concepts related to clinical decision-making, nursing, and pediatric air transport. In addition, the reference lists of included evidence sources will be manually searched to identify potentially relevant publications not retrieved through electronic search strategies.

Evidence Source Selection

Evidence source selection will be performed by two independent reviewers in two consecutive stages: (1) title and abstract screening and (2) full-text assessment. Search results will be exported to Rayyan® software, where duplicate records will be identified and managed before the selection process begins. Disagreements between reviewers will be resolved by consensus or, when necessary, through the involvement of a third reviewer. The entire selection process will be documented and presented in a flow diagram, in accordance with PRISMA-ScR recommendations. Reasons for excluding evidence sources after full-text assessment will be recorded.

Search Strategy

Controlled vocabularies, where available, free-text terms, search fields, and the syntax specific to each database were considered. Terms related to the PCC components (Population, Concept, and Context) were combined using the Boolean operators "AND" and "OR". No restrictions will be imposed on publication period or language, with the aim of broadening the identification of available evidence on the phenomenon under study. The complete search strategies, developed in accordance with the recommendations of the JBI Manual for Evidence Synthesis[13] and adapted to each information source, are presented in Charts 2-7.

Chart 2. Search strategy used in the MEDLINE Complete database (via EBSCOhost). Coimbra, Portugal, 2026

Database	Set	Search strategy	No. of results
MEDLINE Complete (via EBSCOhost)	**S1**	MH ("Nurses" OR "Nursing Staff" OR "Pediatric Nursing" OR "Critical Care Nursing")OR TI (nurs* OR "registered nurse*" OR "pediatric transport nurse*" OR "paediatric transport nurse*" OR "critical care nurse*" OR "transport nurse*" OR "retrieval nurse*" OR "flight nurse*" OR "air medical nurse*" OR "aeromedical nurse*")OR AB (nurs* OR "registered nurse*" OR "pediatric transport nurse*" OR "paediatric transport nurse*" OR "critical care nurse*" OR "transport nurse*" OR "retrieval nurse*" OR "flight nurse*" OR "air medical nurse*" OR "aeromedical nurse*")	637.863
	S2	MH ("Clinical Decision-Making" OR "Decision Making" OR "Judgment") OR TI ("clinical decision making" OR "clinical decision-making" OR "decision making" OR "decision-making" OR "clinical judgment" OR "clinical judgement" OR "nursing judgment" OR "nursing judgement" OR "professional judgment" OR "professional judgement" OR "clinical reasoning" OR "critical	397.369

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		thinking") OR AB ("clinical decision making" OR "clinical decision-making" OR "decision making" OR "decision-making" OR "clinical judgment" OR "clinical judgement" OR "nursing judgment" OR "nursing judgement" OR "professional judgment" OR "professional judgement" OR "clinical reasoning" OR "critical thinking")	
	S3	MH ("Air Ambulances") OR TI ("air ambulance*" OR "air transport*" OR "aeromedical transport*" OR "air medical transport*" OR "aeromedical evacuation*" OR "air medical evacuation*" OR medevac* OR "helicopter emergency medical service*" OR HEMS OR "helicopter ambulance*" OR "emergency helicopter*" OR helicopter* OR "rotary-wing" OR "rotary wing" OR "rotor-wing" OR "rotor wing" OR "fixed-wing" OR "fixed wing" OR "aeromedical retrieval*" OR "air retrieval*" OR "air medical service*" OR "aeromedical service*" OR "flight nursing" OR "flight nurse*") OR AB ("air ambulance*" OR "air transport*" OR "aeromedical transport*" OR "air medical transport*" OR "aeromedical evacuation*" OR "air medical evacuation*" OR medevac* OR "helicopter emergency medical service*" OR HEMS OR "helicopter ambulance*" OR "emergency helicopter*" OR helicopter* OR "rotary-wing" OR "rotary wing" OR "rotor-wing" OR "rotor wing" OR "fixed-wing" OR "fixed wing" OR "aeromedical retrieval*" OR "air retrieval*" OR "air medical service*" OR "aeromedical service*" OR "flight nursing" OR "flight nurse*")	1.294.192
	S4	MH ("Infant, Newborn" OR "Infant" OR "Child" OR "Child, Preschool" OR "Adolescent" OR "Pediatrics") OR TI (pediatric* OR paediatric* OR neonat* OR newborn* OR infant* OR child* OR adolescen* OR teen* OR youth*) OR AB (pediatric* OR paediatric* OR neonat* OR newborn* OR infant* OR child* OR adolescen* OR teen* OR youth*)	5.311.847
Final search	**S5**	**S1 AND S2 AND S3 AND S4**	**10**

Chart 3. Search strategy developed for the CINAHL Complete database (via EBSCOhost). Coimbra, Portugal, 2026

Database	Set	Search strategy	No. of results
CINAHL Complete (via EBSCOhost)	**S1**	MH ("Nurses" OR "Pediatric Nurses" OR "Critical Care Nursing" OR "Flight Nurses" OR "Transport Nurses") OR TI (nurs* OR "registered nurse*" OR "pediatric transport nurse*" OR "paediatric transport nurse*" OR "critical care nurse*" OR "transport nurse*" OR "retrieval nurse*" OR "flight nurse*" OR "air medical nurse*" OR "aeromedical nurse*") OR AB (nurs* OR "registered nurse*" OR "pediatric transport nurse*" OR "paediatric transport nurse*" OR "critical care nurse*" OR "transport nurse*" OR "retrieval nurse*" OR "flight nurse*" OR "air medical nurse*" OR "aeromedical nurse*")	689.671
	S2	MH ("Decision Making" OR "Clinical Judgment" OR "Critical Thinking" OR "Problem Solving" OR "Clinical Reasoning") OR TI ("clinical decision making" OR "clinical decision-making" OR "decision making" OR "decision-making" OR "clinical judgment" OR "clinical judgement" OR "nursing judgment" OR "nursing judgement" OR "professional judgment" OR "professional judgement" OR "clinical reasoning" OR "critical thinking") OR AB ("clinical decision making" OR "clinical decision-making" OR "decision making" OR "decision-making" OR "clinical judgment" OR "clinical judgement" OR "nursing judgment" OR "nursing judgement" OR "professional judgment" OR "professional judgement" OR "clinical reasoning" OR "critical thinking")	172.262
	S3	MH ("Air Ambulances") OR TI ("air ambulance*" OR "air transport*" OR "aeromedical transport*" OR "air medical transport*" OR "aeromedical evacuation*" OR "air medical evacuation*" OR medevac* OR "helicopter emergency medical service*" OR HEMS OR "helicopter ambulance*" OR "emergency helicopter*" OR helicopter* OR "rotary-wing" OR "rotary wing" OR "rotor-wing" OR "rotor wing" OR "fixed-wing" OR "fixed wing" OR "aeromedical retrieval*" OR "air retrieval*" OR "air medical service*" OR "aeromedical service*" OR "flight nursing" OR "flight nurse*") OR AB ("air ambulance*" OR "air transport*" OR "aeromedical transport*" OR "air medical transport*" OR "aeromedical evacuation*" OR "air medical evacuation*" OR medevac* OR "helicopter emergency medical service*" OR HEMS OR "helicopter ambulance*" OR "emergency helicopter*" OR helicopter* OR "rotary-wing" OR "rotary wing" OR "rotor-wing" OR "rotor wing" OR "fixed-wing" OR "fixed wing" OR "aeromedical retrieval*" OR "air retrieval*" OR "air medical service*" OR "aeromedical service*" OR "flight nursing" OR "flight nurse*")	6.114

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	S4	MH ("Infant" OR "Infant, Newborn" OR "Child" OR "Adolescent" OR "Neonatology" OR "Pediatrics") OR TI (pediatric* OR paediatric* OR neonat* OR newborn* OR infant* OR child* OR adolescen* OR teen* OR youth*) OR AB (pediatric* OR paediatric* OR neonat* OR newborn* OR infant* OR child* OR adolescen* OR teen* OR youth*)	1.134.644
Final search	**S5**	**S1 AND S2 AND S3 AND S4**	**7**

Chart 4. Search strategy developed for the Scopus database. Coimbra, Portugal, 2026

Database	Set	Search strategy	No. of results
Scopus	**S1**	TITLE-ABS-KEY (nurs* OR "registered nurse*" OR "pediatric transport nurse*" OR "paediatric transport nurse*" OR "critical care nurse*" OR "transport nurse*" OR "retrieval nurse*" OR "flight nurse*" OR "air medical nurse*" OR "aeromedical nurse*")	1.129.145
	S2	TITLE-ABS-KEY ("clinical decision making" OR "clinical decision-making" OR "decision making" OR "decision-making" OR "clinical judgment" OR "clinical judgement" OR "nursing judgment" OR "nursing judgement" OR "professional judgment" OR "professional judgement" OR "clinical reasoning" OR "critical thinking")	1.512.192
	S3	TITLE-ABS-KEY ("air ambulance*" OR "air transport*" OR "aeromedical transport*" OR "air medical transport*" OR "aeromedical evacuation*" OR "air medical evacuation*" OR medevac* OR "helicopter emergency medical service*" OR HEMS OR "helicopter ambulance*" OR "emergency helicopter*" OR helicopter* OR "rotary-wing" OR "rotary wing" OR "rotor-wing" OR "rotor wing" OR "fixed-wing" OR "fixed wing" OR "aeromedical retrieval*" OR "air retrieval*" OR "air medical service*" OR "aeromedical service*" OR "flight nursing" OR "flight nurse*")	120.600
	S4	TITLE-ABS-KEY (pediatric* OR paediatric* OR neonat* OR newborn* OR infant* OR child* OR adolescen* OR teen* OR youth*)	7.125.162
Final search	**S5**	**S1 AND S2 AND S3 AND S4**	**20**

Chart 5. Search strategy developed for the Web of Science Core Collection database (via Clarivate). Coimbra, Portugal, 2026

Database	Set	Search strategy	No. of results
Web of Science Core Collection (via Clarivate)	**S1**	TS= (nurs* OR "registered nurse*" OR "pediatric transport nurse*" OR "paediatric transport nurse*" OR "critical care nurse*" OR "transport nurse*" OR "retrieval nurse*" OR "flight nurse*" OR "air medical nurse*" OR "aeromedical nurse*")	516.465
	S2	TS= ("clinical decision making" OR "clinical decision-making" OR "decision making" OR "decision-making" OR "clinical judgment" OR "clinical judgement" OR "nursing judgment" OR "nursing judgement" OR "professional judgment" OR "professional judgement" OR "clinical reasoning" OR "critical thinking")	770.541
	S3	TS= ("air ambulance*" OR "air transport*" OR "aeromedical transport*" OR "air medical transport*" OR "aeromedical evacuation*" OR "air medical evacuation*" OR medevac* OR "helicopter emergency medical service*" OR HEMS OR "helicopter ambulance*" OR "emergency helicopter*" OR helicopter* OR "rotary-wing" OR "rotary wing" OR "rotor-wing" OR "rotor wing" OR "fixed-wing" OR "fixed wing" OR "aeromedical retrieval*" OR "air retrieval*" OR "air medical service*" OR "aeromedical service*" OR "flight nursing" OR "flight nurse*")	49.754
	S4	TS= (pediatric* OR paediatric* OR neonat* OR newborn* OR infant* OR child* OR adolescen* OR teen* OR youth*)	4.052.597
Final search	**S5**	**S1 AND S2 AND S3 AND S4**	**4**

Chart 6. Search strategy developed for the LILACS database (via VHL). Coimbra, Portugal, 2026

Database	Set	Search strategy	No. of results
LILACS (via BVS)	**S1**	mh:("Nurses" OR "Nursing Staff" OR "Pediatric Nursing" OR "Critical Care Nursing") OR tw:(nurs* OR "registered nurse*" OR "pediatric transport nurse*" OR "paediatric transport nurse*" OR "critical care nurse*" OR "transport nurse*" OR "retrieval nurse*" OR "flight nurse*" OR "air medical nurse*" OR "aeromedical nurse*" OR enfermeir* OR enfermer*)	130.674
	S2	mh:("Clinical Decision-Making" OR "Decision Making" OR "Judgment") OR tw:("clinical decision making" OR "clinical decision-making" OR "decision making" OR "decision-making" OR "clinical judgment" OR "clinical judgement" OR "nursing judgment" OR "nursing judgement" OR "professional judgment"	24.604

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		OR "professional judgement" OR "clinical reasoning" OR "critical thinking" OR "tomada de decisão clínica" OR "tomada de decisao clinica" OR "decisão clínica" OR "decisao clinica" OR "julgamento clínico" OR "julgamento clinico" OR "raciocínio clínico" OR "raciocinio clinico" OR "pensamento crítico" OR "pensamento critico" OR "toma de decisiones clínicas" OR "toma de decisiones clinicas" OR "juicio clínico" OR "juicio clinico" OR "razonamiento clínico" OR "razonamiento clinico" OR "pensamiento crítico" OR "pensamiento critico")	
	S3	mh:("Air Ambulances") OR tw:("air ambulance*" OR "air transport*" OR "aeromedical transport*" OR "air medical transport*" OR "aeromedical evacuation*" OR "air medical evacuation*" OR medevac* OR "helicopter emergency medical service*" OR HEMS OR "helicopter ambulance*" OR "emergency helicopter*" OR helicopter* OR "rotary-wing" OR "rotary wing" OR "rotor-wing" OR "rotor wing" OR "fixed-wing" OR "fixed wing" OR "aeromedical retrieval*" OR "air retrieval*" OR "air medical service*" OR "aeromedical service*" OR "flight nursing" OR "flight nurse*" OR "ambulância aérea" OR "ambulancia aerea" OR "transporte aéreo" OR "transporte aereo" OR "transporte aeromédico" OR "transporte aeromedico" OR "evacuação aeromédica" OR "evacuacao aeromedica" OR "evacuación aeromédica" OR "evacuacion aeromedica" OR helicóptero* OR helicoptero* OR "asa rotativa" OR "asa fixa" OR "ala rotatoria" OR "ala fija" OR "enfermagem de voo" OR "enfermería de vuelo" OR "enfermeria de vuelo")	755
	S4	mh:("Infant, Newborn" OR "Infant" OR "Child" OR "Child, Preschool" OR "Adolescent" OR "Pediatrics") OR tw:(pediatric* OR paediatric* OR pediatr* OR neonat* OR newborn* OR infant* OR child* OR adolescen* OR teen* OR youth* OR recém-nascid* OR recem-nascid* OR "recién nacid*" OR "recien nacid*" OR lactent* OR criança* OR crianca* OR niñ* OR nin* OR jovem* OR joven*)	768.964
Final search	**S5**	**S1 AND S2 AND S3 AND S4**	**0**

Chart 7. Search strategy developed for the BDENF database (via VHL). Coimbra, Portugal, 2026

Database	Set	Search strategy	No. of results
BDENF (via BVS)	**S1**	mh:("Nurses" OR "Nursing Staff" OR "Pediatric Nursing" OR "Critical Care Nursing") OR tw:(nurs* OR "registered nurse*" OR "pediatric transport nurse*" OR "paediatric transport nurse*" OR "critical care nurse*" OR "transport nurse*" OR "retrieval nurse*" OR "flight nurse*" OR "air medical nurse*" OR "aeromedical nurse*" OR enfermeir* OR enfermer*)	59.011
	S2	mh:("Clinical Decision-Making" OR "Decision Making" OR "Judgment") OR tw:("clinical decision making" OR "clinical decision-making" OR "decision making" OR "decision-making" OR "clinical judgment" OR "clinical judgement" OR "nursing judgment" OR "nursing judgement" OR "professional judgment" OR "professional judgement" OR "clinical reasoning" OR "critical thinking" OR "tomada de decisão clínica" OR "tomada de decisao clinica" OR "decisão clínica" OR "decisao clinica" OR "julgamento clínico" OR "julgamento clinico" OR "raciocínio clínico" OR "raciocinio clinico" OR "pensamento crítico" OR "pensamento critico" OR "toma de decisiones clínicas" OR "toma de decisiones clinicas" OR "juicio clínico" OR "juicio clinico" OR "razonamiento clínico" OR "razonamiento clinico" OR "pensamiento crítico" OR "pensamiento critico")	2.168
	S3	mh:("Air Ambulances") OR tw:("air ambulance*" OR "air transport*" OR "aeromedical transport*" OR "air medical transport*" OR "aeromedical evacuation*" OR "air medical evacuation*" OR medevac* OR "helicopter emergency medical service*" OR HEMS OR "helicopter ambulance*" OR "emergency helicopter*" OR helicopter* OR "rotary-wing" OR "rotary wing" OR "rotor-wing" OR "rotor wing" OR "fixed-wing" OR "fixed wing" OR "aeromedical retrieval*" OR "air retrieval*" OR "air medical service*" OR "aeromedical service*" OR "flight nursing" OR "flight nurse*" OR "ambulância aérea" OR "ambulancia aerea" OR "transporte aéreo" OR "transporte aereo" OR "transporte aeromédico" OR "transporte aeromedico" OR "evacuação aeromédica" OR "evacuacao aeromedica" OR "evacuación aeromédica" OR "evacuacion aeromedica" OR helicóptero* OR helicoptero* OR "asa rotativa" OR "asa fixa" OR "ala rotatoria" OR "ala fija" OR "enfermagem de voo" OR "enfermería de vuelo" OR "enfermeria de vuelo")	47
	S4	mh:("Infant, Newborn" OR "Infant" OR "Child" OR "Child, Preschool" OR "Adolescent" OR "Pediatrics") OR tw:(pediatric* OR paediatric* OR pediatr* OR neonat* OR newborn* OR infant* OR child* OR adolescen* OR teen* OR	29.016

		youth* OR recém-nascid* OR recem-nascid* OR "recién nacid*" OR "recien nacid*" OR lactent* OR criança* OR crianca* OR niñ* OR nin* OR jovem* OR joven*)	
Final search	**S5**	**S1 AND S2 AND S3 AND S4**	**0**

Data Analysis and Interpretation

Data analysis will be conducted in accordance with the objective of this scoping review, using a descriptive narrative synthesis.

Data extracted from the included evidence sources will be organized according to the components of the PCC strategy and the categories of interest for the review. This approach will enable the identification and description of the concepts used, associated factors, strategies described, contexts investigated, and knowledge gaps related to nurses' clinical decision-making in pediatric air transport.

The results will be presented in charts, tables, and a narrative synthesis to highlight the nature and characteristics of the available evidence. Any amendments made to this protocol will be duly documented and justified in the final publication of the scoping review.

Expected Results

This scoping review is expected to map the extent and nature of the scientific evidence on nurses' clinical decision-making in pediatric air transport, identifying the concepts used, associated factors, contexts investigated, strategies described, and knowledge gaps.

It is anticipated that the available evidence on nurses' clinical decision-making in pediatric air transport is dispersed and methodologically heterogeneous, addressing the factors influencing this decision-making process in a fragmented manner, particularly regarding child safety, professional experience, and the specific characteristics of the aeromedical environment. Evidence synthesis will provide a comprehensive and structured overview of literature, informing future research, supporting evidence-based practice, and contributing to the development of strategies to improve nursing practice and promote child safety during specialized pediatric transport.

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References

1. Conselho Federal de Enfermagem (COFEN). Resolução COFEN nº 736, de 17 de janeiro de 2024. Dispõe sobre a implementação do Processo de Enfermagem em todo contexto socioambiental onde ocorre o cuidado de enfermagem [Internet]. Brasília: COFEN; 2024 [citado em 17 out 2026]. Disponível em: https://www.cofen.gov.br/resolucao-cofen-no-736-de-17-de-janeiro-de-2024/
2. Melnyk BM, Fineout-Overholt E. Evidence-based practice in nursing & healthcare: a guide to best practice. 5th ed. Philadelphia: Wolters Kluwer; 2023.
3. Melnyk BM, Gallagher-Ford L, Fineout-Overholt E. Implementing the evidence-based practice competencies in healthcare: a practical guide. 2nd ed. Indianapolis: Sigma Theta Tau International; 2023.
4. Advanced Life Support Group. Paediatric and neonatal safe transfer and retrieval. Chichester: Wiley-Blackwell; 2008.
5. Orr RA, Felmet KA, Han Y, McCloskey KA, Dragotta MA, Bills DM, et al. Pediatric specialized transport teams are associated with improved outcomes. Pediatrics. 2009;124(1):40-8. https://doi.org/10.1542/peds.2008-0515
6. Stroud MH, Trautman MS, Meyer K, Moss MM, Schwartz HP, Bigham MT, et al. Pediatric and neonatal interfacility transport: results from a national consensus conference. Pediatrics. 2013;132(2):359-66. https://doi.org/10.1542/peds.2013-0529
7. World Health Organization (WHO). Global patient safety action plan 2021–2030: towards eliminating avoidable harm in health care. Geneva: WHO; 2021.
8. Institute of Medicine. To err is human: building a safer health system. Washington (DC): National Academies Press; 2000.
9. Benner P. From novice to expert: excellence and power in clinical nursing practice. Commemorative ed. Upper Saddle River (NJ): Prentice Hall; 2001.
10. Rajapreyar P, Marcdante K, Zhang L, Simpson P, Meyer MT. Decision-making in pediatric transport team dispatch using script concordance testing. Pediatr Crit Care Med. 2017;18(11):e530-e535. https://doi.org/10.1097/PCC.0000000000001327
11. Steffen KM, Noje C, Costabile PM, Henderson E, Hunt EA, Klein BL, et al. Pediatric transport triage: development and assessment of an objective tool to guide transport planning. Pediatr Emerg Care. 2020;36(5):240-7. https://doi.org/10.1097/PEC.0000000000001641
12. Colyer E, Sorensen M, Wiggins S, Struwe L. The effect of team configuration on the incidence of adverse events in pediatric critical care transport. Air Med J. 2018;37(3):186-98. https://doi.org/10.1016/j.amj.2018.02.006
13. Aromataris E, Munn Z, editors. JBI manual for evidence synthesis [Internet]. Adelaide: JBI; 2020 [citado em 17 out 2026]. https://doi.org/10.46658/JBIMES-20-01. Disponível em: https://synthesismanual.jbi.global
14. Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. Ann Intern Med. 2018;169(7):467-73. https://doi.org/10.7326/M18-0850
15. Pollock D, Peters MDJ, Khalil H, McInerney P, Alexander L, Tricco AC, et al. Recommendations for the extraction, analysis, and presentation of results in scoping reviews. JBI Evid Synth. 2023;21(3):520-32. https://doi.org/10.11124/JBIES-22-00123

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