UDC 81'276.6:616.22/.23-083.98:81'25
DOI https://doi.org/10.32447/2663-340X-2026-19.6

VERBALIZATION OF AIRWAY MANAGEMENT IN CRISIS MEDICINE: TRANSLATIONAL AND DISCURSIVE ASPECTS

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In crisis medicine, effective airway management requires not only technical competence but also clear, structured, and coordinated verbal communication. In high-risk environments, including emergency departments, prehospital settings, combat zones, and mass casualty incidents, language functions as an operational instrument that structures clinical actions, enhances collective situational awareness, and facilitates team coordination. Communication in such settings must be concise, unambiguous, and standardised to minimise delays and prevent misunderstandings that may negatively affect patient outcomes. This study examines the verbalisation of airway management in crisis medicine from translational and discursive perspectives. The research integrates findings from simulation-based studies, discourse analysis, applied linguistics, and clinical communication research in order to identify key linguistic patterns and communicative strategies used in time-critical situations. The analysis identifies imperative constructions, reduced syntax, and standardised terminology as key linguistic features of airway-related communication. These linguistic characteristics enable rapid, unambiguous information exchange, support decision-making, and enhance team performance in complex clinical environments. The study also explores discourse structures such as online commentaries, metacommentaries, and offline commentaries, which contribute to team organisation, coordination, and clinical decision-making. These discourse elements facilitate shared mental models among team members and promote efficient task distribution. From a translational perspective, the research highlights challenges related to terminological discrepancies, interdisciplinary communication, and multilingual contexts in crisis medicine. The findings underscore the importance of standardised communication frameworks, mnemonics, and cognitive aids as essential tools for improving communication efficiency, reducing cognitive load, and ensuring patient safety in high-risk medical settings.

Key words: *crisis medicine, airway management, verbalisation, medical discourse, translational aspects, discursive aspects, communication.*

The statement of the problem. Airway management is a critical operation in emergency medicine, and communication is essential to ensuring patient safety. Although the technical facets of airway control have been extensively examined, the linguistic and communication features are still little investigated. In high-risk settings, ambiguous or inconsistent communication can lead to delays, errors, and negative clinical outcomes. Studying airway-related communication from both translational and discursive viewpoints is crucial.

The purpose and objectives of the article. The purpose of this article is to analyse the verbalisation of airway management in crisis medicine from translational and discursive perspectives. The aims encompass defining essential language characteristics of airway communication, analysing discourse structures in emergency communication, and investigating translational issues associated with terminology and interdisciplinary communication.

The outline of the main research material. The study analyses linguistic features of airway communication, including imperative constructions, reduced syntax, and standardised terminology. It also analyses discourse structures that facilitate collaboration and decision-making in crisis scenarios. The study underscores translational barriers and emphasises the need for standardised communication frameworks and mnemonics to improve communication effectiveness and patient safety.

Analysis of recent research and publications. Airway management is widely considered one of the most important and risky procedures in emergency crisis and tactical medicine. Not being able to quickly and reliably secure a patent airway is still one of the main causes of preventable death and serious illness in the prehospital and emergency department (Rozenfeld, 2016). The technical aspects of airway management, such as intubation and surgical airway access, have been thoroughly examined; the verbal and communicative aspects of these procedures have garnered relatively limited systematic scholarly scrutiny. Crisis medicine necessitates swift, precise, and coordinated communication amidst severe time constraints, cognitive demands, and emotional strain. In these kinds of

places, language is not just a way to share information; it is also a way to take action, keep everyone on the same page, and be a key factor in how well a team does. The language employed or omitted by clinicians during the declaration of an airway emergency, the request for medications, the allocation of tasks, and the validation of clinical actions plays a crucial role in determining the outcomes of resuscitation efforts (Myatra, 2020). Given that any ambiguity or inconsistency may delay intervention and increase the risk of adverse clinical outcomes, effective communication must be precise, standardised, and unambiguous. This study examines the verbalisation of airway management in crisis medicine from both translational and discursive perspectives. It aims to identify the key linguistic features of airway-related communication, analyse communicative frameworks in emergency contexts, and explore the impact of translation practices and terminological standardisation on clinical effectiveness.

The articulation of airway management in emergency medicine comprises two analytically distinct yet interconnected domains. The first is translational: it examines how technical and clinical terms are created, standardised, used, and shared across different fields, institutions, language groups, and the lay-professional interface. The second is discursive: how certain types of speech, discourse, and communication sequences structure teamwork, help people make decisions, and affect the results of real and simulated emergencies. Contemporary evidence on the verbalisation of airway management in crisis medicine is integrated, with particular emphasis on its translational and discursive dimensions, as well as on empirical findings from simulation-based research, conversation analysis, discourse studies, and applied linguistics.

Verbal communication during airway management is vital for coordinating clinical actions, especially in crises that require swift and precise decision-making. In these situations, language is not only a means of sharing information but also of planning clinical action, assigning roles, and confirming steps in a procedure. As any vagueness or inconsistency could delay intervention and increase the risk of adverse outcomes, communication must be clear, standardised, and accurate.

Language plays a very important role in airway emergencies. This is because differences between the language used in guidelines and that used in everyday clinical practice can make communication difficult (Myatra, 2020). For instance, the term Front of Neck Access, which is preferred by the guidelines, is often used alongside the more traditional clinical term emergency cricothyroidotomy. This can confuse high-stakes situations. Such inconsistency in language can make decision-making harder, weaken team spirit, and, in the end, put patients at risk. The authors therefore call for a reevaluation of airway emergency terminology to ensure its accuracy and universal applicability across clinical fields and professional environments. Discourse studies reveal that structured communication facilitates coordination and mitigates the likelihood of contradictory instructions during essential patient care. In crises, verbal communication exhibits distinct linguistic characteristics, such as imperative constructions, simplified syntax, and standardised terminology.

The use of imperative constructions is one of the most important parts of airway communication. These kinds of speech acts are meant to get people to act right away and make things less clear. Some common examples are: *Check the airway, open it, put in an airway adjunct, get ready for intubation, suction the airway, give oxygen, start ventilation, get the equipment ready, preoxygenate the patient, and make sure the placement is correct* (TCCC Guidelines, 2025). These commands are short, to the point, and easy to understand quickly. Imperative constructions remove extra grammatical parts and focus on important actions. This is very important in situations where time is of the essence (Duggan, 2018). Reduction is another important linguistic aspect of airway communication. Elliptical constructions help doctors talk to each other more clearly by leaving out unneeded grammatical parts: *The airway is blocked, there is no breathing, the airway is hard to reach, the tube is in the wrong place, and the oxygen saturation is dropping* (TCCC Guidelines, 2025). These constructions make it easy to communicate quickly while keeping the meaning clear. Elliptical forms are especially prevalent in high-stress contexts characterised by constrained cognitive resources (Myatra, 2020).

The *"cannot intubate, cannot oxygenate" (CICO)* scenario is among the most serious and linguistically challenging in airway management. In these cases, a quick, clear verbal declaration is necessary to initiate the immediate use of other airway strategies. The CICO acronym has been suggested as a memory aid to help people quickly recognise and organise their responses to life-threatening airway events (Duggan, 2018). Using standardised verbal frameworks like CICO during airway emergencies makes it easier for everyone to understand what is happening, reduces cognitive load, and improves team coordination. These structured verbal models also work as communicative triggers that start a series of clinical and team-based responses.

These findings underscore the importance of structured verbalisation practices in translating complex clinical concepts into effective communication, especially in crisis medicine, including combat scenarios, mass casualty events, and other high-risk emergency contexts.

Research on communication in crisis medicine has progressively highlighted the critical importance of discourse organisation in high-stakes clinical settings. From a linguistic standpoint, communication in emergency contexts exemplifies a type of institutional discourse marked by temporal urgency, role disparity, and action-oriented language. In this context, language functions not merely as a conduit for information exchange but also as a structural mechanism that influences interaction, organises collaborative efforts, and facilitates collective cognition. Gundrosen conducted discourse analyses of both real emergency admissions and simulated medical emergencies, identifying three principal discourse types: online commentaries (ONC), metacommentaries (MC), and offline commentaries (OFC). These discourse types represent distinct communicative functions and interactional objectives in emergency team communication (Gundrosen, 2018).

Online commentaries (ONC) are spoken descriptions of the patient's condition or ongoing clinical observations that are made in real time. From a discourse-analytic standpoint, these statements serve as situational updates that preserve a collective situational awareness among team members. Linguistically, these kinds of comments are often short, use ellipses, and have declarative structures. For example, *"Airway obstructed,"* "*Saturation dropping*," and "*No breath sounds*." These statements not only convey information but also elicit immediate clinical responses, exemplifying the performative aspect of language in crises.

Metacommentaries (MC) help organise communication within a team. These words organise what the team does, plan out the order of actions, and divide up tasks among team members. Metacommentaries often include directive speech acts, procedural framing, and sequencing markers, like "*Let's get ready for intubation,*" "*You manage the airway*," and *"Next step: surgical airway."* These kinds of phrases show how institutional communication is structured and task-focused, which helps teams work together better.

Offline commentaries (OFC), on the other hand, put off immediate action for a short time so that everyone can understand and work together to make decisions. These statements usually ask for clarification, make judgments, or make reflective comments, like "*Let's reassess"* or *"What's the plan?"* From a discourse perspective, offline commentaries are times when team members reach agreement on what something means and update their shared mental model of the situation. This typology provides a robust analytical framework for investigating the influence of language on clinical interactions in crisis contexts. From a philological point of view, communication in crisis medicine is organised by systematic linguistic patterns and functional discourse strategies (Gundrosen, 2018). These findings underscore language's role as an operational instrument that coordinates collaborative efforts, facilitates decision-making, and influences outcomes in high-risk institutional environments.

Various interdisciplinary perspectives, including applied linguistics, translation studies, and clinical communication research, have examined the translational aspects of communication in crisis medicine. In high-risk settings such as emergency departments, prehospital care, and combat medicine, communication often occurs across linguistic, professional, and cognitive barriers. These translational challenges emerge not only among distinct natural languages but also between professional and lay communication, disciplinary terminologies, and varying degrees of clinical expertise. The multilingual realities of crisis response have been emphasised, as unforeseen emergencies frequently reveal substantial deficiencies in the training of intercultural mediators and the incorporation of interpreters into frontline response protocols (Federici). In multilingual crises, communication often occurs under significant time constraints, and even minor misunderstandings can delay or render interventions unsuitable. For instance, different ways of understanding basic medical terms like "*difficulty breathing," "choking,"* or *"unconscious"* could lead to different medical responses. Likewise, differences in culturally specific symptom descriptions may make communication even harder. Language barriers in crisis situations not only impede understanding but can also directly impact clinical decision-making and patient outcomes (Federici).

The phrase *"I (don't) think"* has been studied as an epistemic marker in emergency dispatch calls (Riou, 2025). Their conversation-analytic study revealed that callers employing this phrase generally convey a position rather than authentic epistemic uncertainty. However, call-takers often see these kinds of phrases as signs of doubt and ask for confirmation, which can slow dispatch decisions. For instance, if someone calls and says, *"I think he's not breathing,"* they may be trying to stress how urgent the situation is, but the dis-

patcher may think the caller is unsure and ask for confirmation. This discrepancy between lay and professional interpretations of prevalent linguistic forms constitutes a considerable translational challenge at the lay-professional interface. These findings show how small language differences can have big effects on how people communicate during a crisis. Structured mnemonics and shared frameworks have been proposed as mechanisms to mitigate translational friction among various clinical disciplines. For example, the PREPARE mnemonic for airway management was created to ensure that anaesthesiology and emergency medicine teams communicate consistently. Structured frameworks like PREPARE, ABCDE, and MARCH are not only helpful for thinking but also for language and communication. These mnemonics make things less confusing, encourage the use of the same words, and make it easier to talk quickly when time is of the essence. These frameworks help people communicate and keep everyone on the same page: ABCDE: Airway, Breathing, Circulation, Disability, and Exposure. MARCH: Huge bleeding, breathing, circulation, and hypothermia. These structured verbal frameworks help teams communicate more effectively and make fewer mistakes.

Different professional groups use different terms, which translates even harder. For instance, people may interpret the phrase "secure the airway" differently depending on their training and the situation. Anaesthesiologists, emergency doctors, and paramedics may all have different ideas about what it means. Terms like *"prepare for intubation," "difficult airway,"* or *"failed airway"* may have different meanings in different fields. These differences show how important it is to have standardised language and shared ways of communicating. Translational challenges are especially evident in international and military medical settings, where communication often occurs across multilingual teams. Words like *"tourniquet," "airway adjunct,"* or *"rapid sequence intubation"* may not have direct translations in other languages, so they need to be standardised and carefully adapted. In these situations, structured communication protocols and standardised terminology are necessary to ensure that people from different fields can work together effectively. These studies show that the translational aspects of communication in crisis medicine go beyond mere translation to include ideas, disciplines, and ways of thinking. Standardised terminology, structured communication frameworks, and interdisciplinary training can help solve these problems and make communication more efficient and safer for patients in crisis situations.

Communication models are essential for ensuring everyone works together effectively during an airway crisis, especially in high-risk settings such as emergency rooms, prehospital settings, battlefield medicine, and mass casualty events. In these situations, structured communication frameworks help clarify confusion, increase awareness of what's going on, and boost team performance. One of the most well-known models in crisis medicine is closed-loop communication. This way of communicating has three important steps: giving a command, confirming receipt, and checking that it was done. For instance: Get ready for intubation, get the intubation tools ready, and get ready for intubation. These communication patterns make things clearer and reduce the risk of misunderstandings. Closed-loop communication is very important for managing the airway, as taking the wrong action or waiting too long can be deadly (Marzuki, 2020).

Conclusions and directions for further research. The articulation of airway management in emergency medicine is an essential aspect of professional communication that directly impacts team coordination, decision-making, and patient safety. The analysis in this paper shows that both translational and discursive aspects influence communication during airway emergencies. These two aspects together make up the linguistic basis for clinical action in high-risk situations. From a discursive point of view, airway management communication is marked by imperative constructions, simpler syntax, and standardised language. These linguistic traits enable quick, clear communication, which is important in crises such as combat, mass-casualty events, and emergency medical settings. Using structured verbal frameworks such as CICO declarations, mnemonic-based communication, and standardised reporting helps everyone understand what is happening and makes it easier for teams to work together. The analysis also shows that crisis medicine communication follows certain patterns of speech. Online commentaries, metacommentaries, and offline commentaries serve complementary roles in organising team interactions and directing clinical decision-making. These communication strategies help people work together, clarify who is responsible for what, and support group thinking in high-stress situations. From a translational standpoint, the study underscores the significance of terminology standardisation and interdisciplinary communication.

Divergences in terminology among clinical disciplines, challenges in multilingual communication, and discrepancies between guideline language and clinical practice may jeopardise patient safety. The results show how structured mnemon-

ics, standardised language, and communication frameworks can help make communication easier and less confusing. Closed-loop communication, structured checklists, and mnemonic frameworks are all important for managing an airway crisis. These models make things clearer and less confusing, helping teams perform better when time is of the essence. Communication tools that use technology and specialised airway response teams also help to standardise communication and improve clinical outcomes. The articulation of airway management in emergency medicine exemplifies a multifaceted, interdisciplinary endeavour that integrates linguistic, cognitive, and organisational aspects. The results show that airway management training should include communication training and the development of standardised communication frameworks. Future studies should focus on authentic clinical communication and the multilingual dimensions of crisis medicine to improve communication standards and ensure patient safety in high-risk settings.

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ВЕРБАЛІЗАЦІЯ ЗАБЕЗПЕЧЕННЯ ПРОХІДНОСТІ ДИХАЛЬНИХ ШЛЯХІВ У КРИЗОВІЙ МЕДИЦИНІ: ПЕРЕКЛАДАЦЬКІ ТА ДИСКУРСИВНІ АСПЕКТИ

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У кризовій медицині ефективне забезпечення прохідності дихальних шляхів потребує не лише технічної компетентності, а й чіткої, структурованої та скоординованої вербальної комунікації. В умовах підвищеного ризику, зокрема у відділеннях екстреної медичної допомоги, на догоспітальному етапі, у зонах бойових дій та під час масових надзвичайних ситуацій, мова функціонує як операційний інструмент, що структурує клінічні дії, підвищує колективну ситуаційну обізнаність та сприяє командній координації. Комунікація в таких умовах має бути лаконічною, однозначною та стандартизованою з метою мінімізації затримок і запобігання непорозумінням, які можуть негативно вплинути на результати лікування пацієнтів. У статті досліджується вербалізація забезпечення прохідності дихальних шляхів у кризовій медицині з перекладацького та дискурсивного підходів. Дослідження інтегрує результати симуляційних досліджень, дискурс-аналізу, прикладної лінгвістики та досліджень клінічної комунікації з метою виявлення ключових мовних моделей і комунікативних стратегій, що використовуються в умовах обмеженого часу. У межах аналізу визначено імперативні конструкції, редукований синтаксис і стандартизовану термінологію як ключові лінгвістичні особливості комунікації, пов'язаної із забезпеченням прохідності дихальних шляхів. Ці мовні характеристики забезпечують швидкий і однозначний обмін інформацією, підтримують процеси прийняття рішень та підвищують ефективність командної роботи у складних клінічних умовах. У дослідженні також розглядаються дискурсивні структури, зокрема онлайн-коментарі, метакоментарі та офлайн-коментарі, які сприяють організації командної взаємодії, координації дій і прийняттю клінічних рішень. Ці дискурсивні елементи формують спільні ментальні моделі серед членів команди та забезпечують ефективний розподіл завдань. З перекладацького погляду дослідження акцентує увагу на труднощах, пов'язаних із термінологічними розбіжностями, міждисциплінарною комунікацією та багатомовними контекстами кризової медицини. Отримані результати підкреслюють важливість стандартизованих комунікаційних моделей, мнемонічних структур і когнітивних підказок як ключових інструментів підвищення ефективності комунікації, зниження когнітивного навантаження та забезпечення безпеки пацієнтів у високоризикових медичних умовах.

Ключові слова: *кризова медицина, забезпечення прохідності дихальних шляхів, вербалізація, медичний дискурс, перекладацькі аспекти, дискурсивні аспекти, комунікація.*

Дата першого надходження статті до видання: 12.03.2026
Дата прийняття статті до друку після рецензування: 07.04.2026
Дата публікації (оприлюднення) статті: 15.05.2026