Australasian Emergency Care xxx (xxxx) xxx–xxx

Contents lists available at ScienceDirect

Australasian Emergency Care

journal homepage: www.elsevier.com/locate/auec

The experiences of patients not conveyed after evaluation by emergency medical services in Southwest Finland – A qualitative survey study

Anne Kuoppala [a], Eetu Skaffari [b], Timo Iirola [c,1], Hilla Nordquist [d,*,2]

[a] Med Group Ensihoitopalvelu Oy, Emergency Medical Services, Southwest Finland, Teollisuuskuja 8, Lieto FI-21420, Finland
[b] Centre for Prehospital Emergency Care, Emergency Medical Services, Wellbeing Services County of Pirkanmaa, Satakunnankatu 16, Tampere FI-33100, Finland
[c] Emergency Medical Services, Turku University Hospital and University of Turku, PO Box 52, Turku FI-20521, Finland
[d] South-Eastern Finland University of Applied Sciences, Department of Healthcare and Emergency Care, Pääskysentie 1, Kotka FI-48220, Finland

ARTICLE INFO

Article history:
Received 8 March 2024
Received in revised form 16 May 2024
Accepted 16 May 2024

Keywords:
Emergency medical services
Patient experience
Non-conveyance
Surveys and questionnaires
Qualitative research

ABSTRACT

Background: The amount of non-critical Emergency Medical Services missions has been increasing. After examination and treatment, paramedics can decide, based on guidelines, not to convey the patient to a healthcare facility. This study aimed to investigate patients' experiences in non-conveyance situations in Southwest Finland. Our research questions were: 1) Which patient concerns were not addressed? 2) What key actions improved patient comfort? and 3) What possible enhancements could make the patient experience more positive?
Methods: This was a qualitative survey study. In March 2023, all the patients who met the inclusion criteria (N = 1017) received a survey via mail. The data from three open-ended questions were analyzed using inductive content analysis.
Results: The response rate was 22.2 % (n = 226). The unaddressed patient concerns were related to inadequate immediate care and guidance and non-clinical factors causing concern. Key actions for improved patient comfort were related to immediate treatment and guidance, as well as non-clinical factors that impact the patient experience. More thorough treatment processes and more attentive encounters would have enhanced the patient experience.
Conclusions: Predominantly, patients reported having received excellent services. Utilizing paramedics' soft skills and keeping the patient as the central focus is key to improving the non-conveyance process and experience.

1. Introduction

Emergency Medical Services (EMS) are a crucial part of acute healthcare outside of the hospital. In recent years, EMS has experienced a significant rise in low-acuity, non-critical situations-related missions [1,2]. The primary role of EMS is to manage urgent and life-threatening emergencies [3,4], and misusing EMS resources can lead to insufficient responses to critical conditions, as units may be occupied with patients who could be served by other healthcare or social services [5,6]. Valuable EMS resources are likely to be more readily available if those patients who do not require urgent care are not conveyed [7], meaning they are not transported to a medical facility. In Finland, paramedics can make the decision not to convey after conducting a thorough examination and interview, following local and national guidelines [4,5,8]. A non-conveyance decision is not straightforward and is influenced by, for example, professional, patient, and system-related factors, alongside non-medical elements such as guidelines, feedback, experience, and resource availability [9–12]. Finnish paramedics always have the option of requesting care instructions from a physician to ensure that each decision is tailored to the patient's specific circumstances and clinical condition [5,8].

Studies examining the patient experience in situations that conclude with non-conveyance are limited [13] but they are needed to continuously refine paramedics' implementation of the non-conveyance process based on evidence. Patient experience is a multi-dimensional and multi-faceted concept, and it is recognized as a separate dimension of healthcare quality, alongside clinical effectiveness and patient safety [14]. Patient experience includes all interactions with healthcare personnel, as well as exposure to the

* Corresponding author.
E-mail address: hilla.nordquist@xamk.fi (H. Nordquist).
[1] ORCID iD: 0000–0002-9019–849X
[2] ORCID iD: 0000–0001-9641–6518

https://doi.org/10.1016/j.auec.2024.05.001

medical environment, equipment, procedures, and the overall structure of services during a care episode [15]. Examining the patient experience in non-conveyance situations provides valuable information necessary to develop services; ensuring that patients receive the appropriate care and guidance they need and helping prevent unnecessary contact with already overburdened healthcare services [1,6,8].

According to a previous Finnish study, patients and their family members perceive EMS personnel as professional and friendly, but would have appreciated more psychological support and better time management [16]. A Swedish study highlights the importance of taking patients seriously and demonstrates its connection with facilitating person-centred care in non-conveyance [17]. A doctoral dissertation from Sweden found that involving patients and carefully listening to them increased paramedics' confidence in decisions about non-conveyance, especially when made collaboratively, which in turn enhanced patient respect [18]. Another Swedish study indicates insufficient information and poor communication in non-conveyance situations may lead to patient dissatisfaction [19]. According to a Dutch interview study, the attitude, diligence, and perceived competence of EMS personnel, the examination and treatment capabilities of the ambulance, and the creation of a safety net by, for example, directing the patient to their own physician during office hours or providing efficient home care instructions, influenced how confidently a patient or family members viewed the non-conveyance [20]. According to a literature review, as sudden illness often arouses fear and uncertainty, patients appreciate the ability of paramedics to provide reassurance and are generally satisfied with their actions [13].

It is expected that non-conveyance will continue to increase along with the globally increasing EMS mission numbers [1,2,11,12,21]. Additionally, as service structures continue to evolve and patients are directed to appropriate services, non-conveyance may increase further. Therefore, it is important to study patient experiences to refine the non-conveyance implementation and develop services. This study aimed to investigate patient experiences in non-conveyance in Southwest Finland. Our research questions were: 1) Which patient concerns were not addressed? 2) What key actions improved patient comfort? and 3) What possible enhancements could make the patient experience more positive?

2. Material and methods

This was a qualitative postal survey study on non-conveyed EMS patients in Southwest Finland. The inclusion criteria were: 1) the person was a patient of EMS services in the study area between 1 March and 31 March 2023, 2) aged over 18 years old, 3) a known home address in Finland and not in a long-term care facility, and 4) after examination and assessment by paramedics or receiving treatment at the scene, the patient did not require a visit to the emergency department. The COREQ (Consolidated Criteria for Reporting Qualitative Research) Checklist [22] was utilized when reporting the results.

2.1. Setting

In the Wellbeing Services County of Southwest Finland, EMS is provided by 33 ambulances and a physician-staffed helicopter EMS unit, complemented by a Finnish Border Guard helicopter unit. The area has a population of 485,567 (31 December 2022) and approximately 65,000 EMS missions annually. In March 2023, there were 3775 EMS missions with patients over 18 years old, and 31 % (n = 1156) of the patients were not conveyed. The demographics of the patients are described in Table 1.

In the area, ambulances are staffed by two paramedics, one of whom is always an advanced-level paramedic. Advanced-level paramedics hold a dual bachelor's degree in emergency care or nursing with a specialized out-of-hospital advanced emergency care qualification. Basic-level paramedics have three years of vocational education, a role that firefighters can also perform as per Finnish legislation [23].

Table 1
Demographics of EMS[a] patients aged over 18 years in March 2023.

	All patients	Conveyed	Not conveyed
Number	3775 (100 %)	2619 (69 %)	1156 (31 %)
Women (%)	54	52	57
Age (years)[b]	69 (45-81)	71 (48-82)	67 (39-80)

[a] EMS, Emergency Medical Services.
[b] Age is expressed as median (interquartile range).

The local non-conveyance guidelines adhere to the national EMS guidelines [8,24]. In short, if an adult patient presents with non-urgent symptoms, maintains stable vital signs (including normal blood sugar), and shows no risk symptoms (like chest pain or seizures), then a non-conveyance decision may be made. Additional tests, such as neurological checks and an eletrocardiogram are also conducted before making a non-conveyance decision, and the results must not raise concerns or require immediate medical follow-up. Further, the patient has to be capable of managing their own care needs and move independently.

It is also possible for an adult patient not to be conveyed based on care instructions provided by a physician. Thus avoiding unnecessary transportation for further evaluation or treatment. Instead, the patient can receive diagnostic or treatment procedures at the scene that would typically be provided in an emergency department. In such cases, the previous criteria for evaluation and treatment are still met.

A study describing non-conveyance in three Finnish regions showed that these two types of non-conveyance situations are by far the most common (90.3 % of non-conveyed patients in 2022). However, some patients are non-conveyed because of their own refusal (6.2 %), being handed over to the police authority (2.6 %), or they have been guided to receive other kinds of help (0.9 %). [12].

2.2. The survey

This study used three qualitative questions from a survey developed by Bernard et al. [25] (Table 2). Five background questions were included in order to elicit the following information: 1) who completed the survey, 2) who made the emergency call, 3) what time, to the closest hour, the emergency call was made, 4) the patient's gender and 5) the patient's age in years.

2.3. Data gathering

A total of 1017 patients met the inclusion criteria for this study. An invitation letter with a survey and information about data protection and a prepaid return envelope were sent to them. The invitation letter also included a QR code that directed respondents to an online survey on the Webropol Survey & Reporting 3.0 platform [26]. Patients were contacted in two stages: those who received EMS services in early March were surveyed mid-month, and the others at the end of March, ensuring their EMS encounter remained memorable. They had three weeks from the survey's distribution to respond. A total of 247 responses were received (24.3 %). For the purposes of this study, we included only the 226 survey forms in which respondents provided a response to at least one qualitative question (response rate 22.2 %) (Table 2). It is notable that only responses that had an input to the actual question were included. It was commonly said that there were no other concerns, that

Table 2
The open ended questions (Bernard et al., 2007) included in the survey and the total number of received, included and excluded responses (n = 226).

Question	Received responses	Included responses	Excluded responses
Did you have any other concerns related to your emergency that you felt were not addressed by our personnel?	202	37	165
Please tell us the single most important action we took that made you feel better.	218	199	19
What could we have done differently that might have made your experience more positive?	170	44	126

everything had gone well, or that there was nothing to improve. These were excluded from the study.

2.4. Analysis

Background information on the respondents was reported descriptively with frequencies and percentages. The qualitative material was analyzed using inductive content analysis [27–29]. Each open survey question was analyzed separately in accordance with the research questions. Initially, the first author, who is an experienced advanced-level paramedic, carefully reviewed the responses received and began to condense the material into codes. Subsequently, the codes were grouped into categories based on their shared content and context, and the categories were named based on their content. The categories were then grouped into main categories and named. The qualitative results are reported one research question at a time, with quotations from the original survey responses provided to validate the analysis conducted. The last author, who is an experienced senior researcher, closely supervised the analysis process, and continuous discussion was conducted regarding the categories formed and the reporting of the results. Finally, the results were quantified by counting how many responses by different patients formed each category.

2.5. Ethical considerations

The study followed good scientific practices and ethical guidelines defined by the Finnish National Board on Research Integrity TENK [30,31]. The ethical committee of South-Eastern Finland University of Applied Sciences evaluated the research plan and provided a favorable ethical statement for the study on 16. December 2022 (the ethical committee does not provide specific numbers for their statements). A research permit was granted by the Turku Clinical Research Center (T14/2023). The patients were provided comprehensive information about the study, data protection, and contact details for further questions. Responding to the survey was deemed as providing informed consent. Data protection and information security protocols were adhered to.

3. Results

Of the 226 respondents (response rate 22.2 %), 62 % (n = 141) were women (Table 3). The median age was 74 (interquartile range 61, 82). Patients reported that 50 % (n = 114) of the emergency calls occurred during the day, between 8 am and 9 pm, while 31 % (n = 71) happened at night, between 10 pm and 7 am; however, for 18 % (n = 41), the time was not disclosed. Almost half of the calls were made by the patients themselves. The patient completed the survey form themselves in 83 % (n = 187) of the responses received.

3.1. Unaddressed patient concerns

The open-ended responses regarding other patient concerns not addressed by paramedics formed two main categories: Inadequate immediate care and guidance, and Non-clinical factors causing concern (Table 4).

Table 3
Background information (n = 226).

	Answer options	% (n)
Patient's gender	Women	62.4 (141)
	Men	37.2 (84)
	Prefer not to answer	0.4 (1)
Patient's age in years	18-29	7.5 (17)
	30-39	4.9 (11)
	40-49	2.7 (6)
	50-59	8.0 (18)
	60-69	16.4 (37)
	70-79	28.8 (65)
	80-89	24.3 (55)
	90 or more	6.6 (15)
	Not disclosed	0.8 (2)
Time of Emergency call	Day 8 am – 9 pm	50.4 (114)
	Night 10 pm – 7 am	31.4 (71)
	Not disclosed	18.2 (41)
Emergency call made by	Patient themselves	46 (104)
	Family member	39.4 (89)
	Friend	4.9 (11)
	Bystander	9.3 (21)
	Not disclosed	0.4 (1)
Person completing the survey	Patient themselves	82.7 (187)
	Family member	14.2 (32)
	Friend	1.3 (3)
	Other	0.9 (2)
	Not disclosed	0.9 (2)

3.1.1. Inadequate immediate care and guidance

Some patients expressed that they were not treated as their symptoms warranted. These patients felt that the paramedics did not recognize the cause of their symptoms.

Patients could also find the information provided by the paramedics to be insufficient. They desired more detailed information about their condition, measurement results, and likely causes of symptoms.

> *"I was quite absent during the situation and would have perhaps preferred more proactive information about my condition and the measurement results. I was left with a slight impression that my suspicion of (X) disease too strongly influenced the final decision about my condition." (Patient=P143)*

A few patients explained that they were not conveyed to the hospital by ambulance, although they believed there was a clinical or practical need for it.

> *"They didn't take me (to hospital), even though I asked." (P211)*

3.1.2. Non-clinical factors causing concern for the patient

According to the experience of a few patients, consideration of family members during the EMS mission was not always sufficient. There was a desire for EMS to better clarify the situation to family members and to ensure that the family member was also coping.

> *"The calming of a close family member was too modest in the situation. The close family member was very vulnerable in the acute situation. And scared: what's happening now?" (P140)*

There were also some challenges in regard to reaching the patient. The patients or family members felt that they had not been reached quickly or smoothly enough. There were also

Table 4
Results for unaddressed patient concerns (n = 37).

Main categories	Categories
Inadequate immediate care and guidance	Symptoms were untreated and their cause was unidentified (n = 13) Insufficient information provided (n = 5) Unjustified non-conveyance (n = 2)
Non-clinical factors causing concern for the patient	Inadequate consideration of family members (n = 3) Reaching and communicating (n = 3) Improvement needs in paramedics' behavior (n = 12)

communication challenges between EMS, patients, and sometimes family members.

According to some patients, there was room for improvement in paramedics' behavior. In some instances, patients felt they were treated in an unfriendly manner. They also expressed a desire for EMS to take the patient more into account. For instance, patients perceived their wishes were not paid sufficient attention and that their wellbeing at home after EMS had left was not satisfactorily ensured.

"I had to wait for another transport alone at home for two hours with a mat against the door. I am visually impaired and I was scared." (P182)

3.2. Key actions for improved patient comfort

The responses regarding what made patients feel better during their EMS encounter resulted in two main categories: Immediate treatment and guidance, and Non-clinical factors impacting the EMS patient experience (Table 5).

3.2.1. Immediate guidance and treatment

Patients appreciated the understandable and reassuring information given by paramedics about the situation, examinations, and findings, along with clear aftercare instructions.

Patients felt they were examined and treated appropriately. The examinations were purposeful, care instructions were requested from a physician when needed, and patients felt that the care and actions taken were effective.

"Checks were done, and I could be sure that it wasn't a heart attack." (P30)

3.2.2. Non-clinical factors impacting the EMS patient experience

Patients reported satisfaction with the pleasant demeanor of the paramedics. The latter was described as friendly, empathetic, and able to lighten the mood with humor in some cases. The EMS encounter progressed in a patient-friendly fashion, as paramedics were professional and kind, and their operations were practical and efficient. Patients also felt that their situations were taken seriously.

"The entire encounter and actions during it were professional and calm. My experience was taken seriously and not trivialized. The emergency dispatcher was also professional, trustworthy, and calm. I was left with a good and trusting impression of the authorities' actions." (P86)

Patients also pointed out that EMS arrived quickly and did not hurry away from the patient. Respondents felt that the paramedics had sufficient time for them.

"It was particularly calming that the operation was unhurried, without the feeling that they had to rush to help elsewhere. They were focused just on this situation." (P117)

The patients described how the paramedics made them feel better. They felt comfortable and safe with the EMS service. Further, familiar paramedics present at the scene also made the patient feel better, as did those who listened to the patient and considered family members during the encounter. Cooperation with family members was reported to have gone well.

"We received appropriate information on how to manage at home, how to continue treatment, and what to consider when noticing symptoms." (P110)

3.3. Enhancing the patient experience

Responses regarding what paramedics could have done differently to enhance the experience formed two main categories: More thorough treatment processes and more attentive encounters (Table 6).

3.3.1. More thorough treatment processes

A few patients expressed a desire for more comprehensive examinations by EMS, better pain management, and improved knowledge about the patient's existing conditions.

"I would have liked help with pain relief. I did not receive it!" (P195)

A few patients also wished for more thorough advice from EMS. It emerged that patients felt that they should have been given more information and better instructions for follow-up care.

3.3.2. More attentive encounters

Some patients indicated a desire for a more comprehensive service from paramedics and for patients to be transported to further care upon request.

"To be taken directly to the emergency room or at least have someone wait with me." (P182)

A few responses expressed a wish for faster assistance. EMS should have reached the patient more effortlessly and swiftly. Additionally, support resources, such as physician consultations, should have been quicker.

Table 5
Key actions for improved patient comfort (n = 199).

Main categories	Categories
Immediate guidance and treatment	Clear communication (n = 35) Appropriate examination and treatment (n = 73)
Non-clinical factors impacting the EMS patient experience	Pleasant demeanor (n = 88) Sufficient time (n = 17) Creating safety (n = 48)

Table 6
Results for enhancing the patient experience (n = 44).

Main categories	Categories
More thorough treatment processes	Precise treatment (n = 6) Comprehensive guidance (n = 6)
More attentive encounters	Service-oriented approach (n = 20) Faster assistance (n = 7) Human approach (n = 9)

"The on-call physician didn't have their phone with them; we waited for contact for about 20 min." (P225)

Some patients would have preferred a more human approach from the paramedics. EMS should have listened better and considered the overall situation more carefully. Overall, more considerate treatment of patients by paramedics was expected.

4. Discussion

The aim of this study was to investigate patient experiences in non-conveyance in Southwest Finland. According to the main results: 1) Unaddressed patient concerns were related to inadequate immediate care and guidance, and non-clinical factors causing concern for the patient; 2) Key actions for improved patient comfort were related to immediate treatment and guidance, and non-clinical factors impacting the EMS patient experience; and 3) More thorough treatment processes and more attentive encounters would have enhanced the patient experience.

The results particularly reveal current patient expectations of the healthcare system and prehospital EMS. Patients expect paramedics to alleviate their concerns [32–34] and to provide unhurried care that takes into account their overall situation [13,19,35]. This is particularly emphasized among older people [36], who constituted the majority of respondents in this study and in a previous similar study [19]. However, patients may be dissatisfied with non-conveyance and expect to be taken to the hospital [19,37]. These expectations, which were also visible in our results, are somewhat in conflict with the fundamental purpose of EMS, which is to handle urgent and immediate life-threatening situations [3,4]. According to our results and previous studies [3,32,34,38], there appears to be an expectation that EMS should extend to primary healthcare when such services are otherwise unavailable. This kind of expectation might be emphasized among older people [32]. Clarifying the role of EMS within broader healthcare services has been a topic of discussion for a long time [1–3,6,37–41], and the conclusion should be communicated to the patients as well.

Notably, in this study, many responses were received on the same topic, exhibiting both negative and positive feedback. For instance, numerous patients praised the paramedics' pleasant demeanor, whereas some respondents described their behavior as poor. This finding highlights that the patient experience is quite dependent on the personnel that attended them. Predominantly, however, the paramedics were lauded by patients for their excellent service. The sparse content received for the first and third survey questions also supports this observation. Overall, the findings indicate that, in addition to professional competence, people also greatly value soft skills in paramedics, such as a compassionate approach, creating safety, effective communication abilities, and friendliness, as also demonstrated in previous studies [13,16,17,19,20,33,42]. These skills are also linked to the feeling of confidence in the service [43] and the overall motives, such as concern, for contacting EMS in non-acute situations [13,19,32,34,40,44]. The use of such soft skills should be emphasized when refining the non-conveyance process.

The EMS provider in the region of this study provides ongoing professional training for its paramedics, with regular simulations and training days focusing on new and existing processes and treatment protocols. In light of these results, it might also be beneficial to focus on soft skills. Training topics, based on the results of the study and previous evidence [13,16,17,19,20,32,34,40,42,44], could include how to communicate with and consider the emotions of patients and their family members.

In internal assessments of service quality, the time paramedics spend at a scene is often measured [45]. From a readiness perspective, the goal is for paramedics to act as quickly as possible and immediately when circumstances allow, to become an available resource in the field [41,46]. However, even if the patient's issue is non-acute, the moment the need for service arises, the desire is for it to be addressed quickly but in an unhurried fashion, without queueing at a healthcare facility or waiting for EMS [19,32,34,35,43,44]. In this study, the importance of appropriate examination and treatment was emphasized, which can be linked to giving time to the patient and taking them seriously. Consequently, it is worth contemplating whether the demand for services increases if the care is perceived as too rushed or the patient feels that they are not taken seriously [17,35]. The feeling of not being taken seriously might lead to a phenomenon of "suffering from care", which leads to a negative patient experience [47]. These kinds of experiences could potentially undermine patient trust in EMS [43], leading perhaps to more frequent calls for assistance due to concerns that previous issues were not adequately addressed. On the other hand, a bad experience and a previous experience of being not taken seriously may deter seeking necessary care in the future. Future research could explore associations between paramedics' soft and time management skills and the likelihood that patients will seek their services again. Still, in recent discussions concerning the quality of EMS, the patient has been the central focus [48], and the results of this study support this approach as the key to refining the implementation of the non-conveyance process.

4.1. Methodological considerations

Using the qualitative research evaluation criteria of Lincoln and Guba (1985) (see [49]), the credibility of this study is enhanced by the fact that all of the patients who met the inclusion criteria could be contacted quickly following the EMS visit. The inclusion criteria were designed with the goal of ensuring that respondents understood the importance and significance of their participation and provided responses personally. However, it is possible that some residents of facilities may have received the survey, as no list was available to exclude long-term facilities. In addition, although the letter sent out was in Finnish, a number of patients responded in English or Swedish. Furthermore, if someone other than the patient answered, it is possible that the response does not genuinely reflect the patient's views. The translation of results and quotations from Finnish to English may have contained errors, even though particular care was taken. However, providing quotations from the original material strengthens the study's confirmability [27–29].

The material for this study was gathered using three qualitative questions from a pre-developed survey [25]. Our survey also included quantitative questions modified from several other surveys, whose results are reported elsewhere [50]. Utilizing the entire survey by Bernard et al. [25] might have enhanced the dependability of the results. However, the dependability of this study was reinforced by meticulous documentation and reporting of the process utilizing the appropriate COREQ checklist [22].

The age and gender distribution of the sample was broadly similar to that of the region's overall non-conveyed patients, although this sample was slightly biased towards older patients. For qualitative research, 226 total responses are a substantial number, even though the patients often did not provide substantive responses to all questions, and the majority of the included responses related only to the issue that was foremost in each patient's mind. These can weaken the overall quality of the results. Additionally, it should be noted that the response rate of 22.2 % includes the possibility of non-response bias, further considering that all the respondents did not provide the desired in-depth content to the data. However, the data was considered sufficient, and following the principles of qualitative studies, generalizability was not sought [51].

Transferability was strengthened by providing detailed information about the research setting. A more detailed description of the study population through registry data and, for example, adding

information about the EMS missions would have strengthened transferability, but the responding patients were not identified in this study for ethical and data protection reasons. Future research would benefit from exploring patient experiences in more specific patient groups, which would strengthen the transferability of the findings to other areas. The study can be replicated in other EMS areas.

The research team was multidisciplinary. Two of the researchers (female + male) are experienced advanced-level paramedics with Master's degrees; one is a chief EMS physician and senior researcher (male), and another is a senior researcher with a background in health sciences and pedagogy (female). This multidisciplinarity was an advantage in terms of the design and implementation of the study and its reflexivity.

4.2. Conclusions

The results of this qualitative survey study indicate that while paramedics usually provide excellent service during EMS missions, resulting in non-conveyance, there is room for improvement in addressing patient concerns regarding immediate care and guidance, as well as non-clinical factors affecting their experience. A better patient experience could be achieved by prioritizing unhurried yet precise treatment, clear guidance, and improved thoroughness and attentiveness to care. The results of this study can be used to refine the implementation of the non-conveyance process, with particular emphasis on paramedics' soft skills and keeping the patient in the central focus.

Funding

The Wellbeing Services County of Southwest Finland paid postage.

Declaration of Competing Interest

None.

References

[1] Eastwood K, Morgans A, Smith K, Hodgkinson A, Becker G, Stoelwinder J. A novel approach for managing the growing demand for ambulance services by low-acuity patients. Aust Health Rev 2016;40(4):378–84. https://doi.org/10.1071/AH15134

[2] Gingold DB, Stryckman B, Liang Y, Harris E, McCarren WL, Marcozzi D. Analysis of an alternative model of definitive care for low-acuity emergency calls: a natural experiment. J Emerg Med 2022;62(1):38–50. https://doi.org/10.1016/j.jemermed.2021.07.063

[3] Institute of Medicine. Emergency Medical Services: At the Crossroads. Washington, DC: The National Academies Press; 2007. https://doi.org/10.17226/11629

[4] Ministry of Social Affairs and Health, Finland. Health Care Act 1326/2010. (Unofficial translation. Legally binding only in Finnish and Swedish). [Cited 20 April 2024] ⟨https://www.finlex.fi/en/laki/kaannokset/2010/en20101326_20131293.pdf⟩.

[5] Raatiniemi L, Brattebø G. The challenge of ambulance missions to patients not in need of emergency medical care. Acta Anaesthesiol Scand 2018 May;62(5):584–7. https://doi.org/10.1111/aas.13103

[6] Pekanoja S, Hoikka M, Kyngäs H, Elo S. Non-transport emergency medical service missions - a retrospective study based on medical charts. Acta Anaesthesiol Scand 2018 May;62(5):701–8. https://doi.org/10.1111/aas.13071

[7] Malm F, Elfström A, Ohlsson-Nevo E, Höglund E. Time consumption for non-conveyed patients within emergency medical services (EMS): a one-year prospective descriptive and comparative study in a region of Sweden. PLoS One 2021 May 13;16(5):e0251686. https://doi.org/10.1371/journal.pone.0251686

[8] Laukkanen L, Lahtinen S, Raatiniemi L, Ehrola A, Kaakinen T, Liisanantti J. Emergency department admission and mortality of the non-transported emergency medical service patients: a cohort study from Northern Finland. Emerg Med J 2022 Jun;39(6):443–50. https://doi.org/10.1136/emermed-2020-209914

[9] Oosterwold J, Sagel D, Berben S, et al. Factors influencing the decision to convey or not to convey elderly people to the emergency department after emergency ambulance attendance: a systematic mixed studies review. BMJ Open 2018;8:e021732. https://doi.org/10.1136/bmjopen-2018-021732

[10] Ingram C, Rees N, Sujan MA. Decision making for patients categorised as 'amber' in a rural setting. J Paramed Pract 2019;11(6):239–45.

[11] Ebben RHA, Vloet LCM, Speijers RF, Tönjes NW, Loef J, Pelgrim T, et al. A patient-safety and professional perspective on non-conveyance in ambulance care: a systematic review. Scand J Trauma Resusc Emerg Med 2017;25(1):71. https://doi.org/10.1186/s13049-017-0409-6

[12] Paulin J, Kurola J, Koivisto M, Iirola T. EMS non-conveyance: a safe practice to decrease ED crowding or a threat to patient safety? BMC Emerg Med 2021;21(1):115. https://doi.org/10.1186/s12873-021-00508-1

[13] King R, Oprescu F, Lord B, Flanagan B. Patient experience of non-conveyance following emergency ambulance service response: a scoping review of the literature. Austral Emerg Care 2021;24(3):210–23. https://doi.org/10.1016/j.auec.2020.08.006

[14] Oben P. Understanding the patient experience: a conceptual framework. J Patient Exp 2020;7(6):906–10. https://doi.org/10.1177/2374373520951672

[15] Walker K. Capturing patient experience. Nurs Stand 2023;38(8):78–82. https://doi.org/10.7748/ns.2023.e12100

[16] Salminen-Tuomaala M, Mikkola R, Paavilainen E, Leikkola P. Emergency patients' and family members' experiences of encountering care providers and receiving care in nonconveyance situations. Scand J Caring Sci 2018;32(4):1371–8. https://doi.org/10.1111/scs.12582

[17] Rantala A, Forsberg A, Ekwall A. Person-centred climate and psychometrical exploration of person-centredness and among patients not conveyed by the Ambulance Care Service. Scand J Caring Sci 2018;32(2):852–60. https://doi.org/10.1111/scs.12516

[18] Höglund, E. 2022. Non-Conveyance within the Swedish ambulance service – A prehospital patient safety study. A Doctoral Dissertation. Örebro University. ISSN: 1652–4063.

[19] Larsson G, Dagerhem A, Wihlborg J, Rantala A. Satisfaction among non-conveyed patients and significant others when discharged at the scene by the ambulance service: an exploratory cross-sectional survey. BMC Emerg Med 2022;22(1):100. https://doi.org/10.1186/s12873-022-00659-9

[20] van Doorn SCM, Verhalle RC, Ebben RHA, Frost DM, Vloet LCM, de Brouwer CPM. The experience of non-conveyance following emergency medical service triage from the perspective of patients and their relatives: a qualitative study. Int Emerg Nurs 2021;54:100952. https://doi.org/10.1016/j.ienj.2020.100952

[21] Christensen EF, Bendtsen MD, Larsen TM, Jensen FB, Lindskou TA, Holdgaard HO, et al. Trends in diagnostic patterns and mortality in emergency ambulance service patients in 2007-2014: a population-based cohort study from the North Denmark Region. BMJ Open 2017;7(8):e014508. https://doi.org/10.1136/bmjopen-2016-014508

[22] Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. Int J Qual Health Care 2007 Dec;19(6):349–57. https://doi.org/10.1093/intqhc/mzm042

[23] Ministry of Social Affairs and Health, Finland. Sosiaali- ja terveysministeriön asetus ensihoitopalvelusta (585/2017) (in Finnish). (In English: Ministry of Social Affairs and Health Decree on Emergency Medical Services (585/2017)). [Cited 16 May 2024]. ⟨https://www.finlex.fi/fi/laki/alkup/2017/20170585⟩.

[24] Iirola, T. (2024, April 17). Personal communication.

[25] Bernard AW, Lindsell CJ, Handel DA, et al. Postal survey methodology to assess patient satisfaction in a suburban emergency medical services system: an observational study. BMC Emerg Med 2007;7:5. https://doi.org/10.1186/1471-227X-7-5

[26] Webropol Survey & Reporting 3.0 platform. Webropol Ltd. [Cited 16 May 2024]. ⟨https://webropol.co.uk/survey-and-reporting/⟩.

[27] Elo S, Kääriäinen M, Kanste O, Pölkki T, Utriainen K, Kyngäs H. Qualitative content analysis: a focus on trustworthiness. SAGE Open 2014;4(1):2158244014522633. https://doi.org/10.1177/2158244014522633

[28] Elo S, Kyngäs H. The qualitative content analysis process. J Adv Nurs 2008;62(1):107–15. https://doi.org/10.1111/j.1365-2648.2007.04569.x

[29] Vaismoradi M, Turunen H, Bondas T. Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. Nurs Health Sci 2013;15(3):398–405. https://doi.org/10.1111/nhs.12048

[30] The Finnish code of conduct for research integrity and procedures for handling alleged violations of research integrity in Finland. Guideline of the Finnish National. Board on Research Integrity. Publications of the Finnish National Board on Research Integrity TENK 4/2023. ⟨https://tenk.fi/sites/default/files/2023–11/RI_Guidelines_2023.pdf⟩.

[31] The ethical principles of research with human participants and ethical review in the human sciences in Finland. Finnish National Board on Research Integrity TENK guidelines 2019. Finnish National Board on Research Integrity TENK publications 3/2019. ⟨https://tenk.fi/sites/default/files/2021–01/Ethical_review_in_human_sciences_2020.pdf⟩.

[32] Huibers L, Carlsen AH, Moth G, Christensen HC, Riddervold IS, Christensen MB. Patient motives for contacting out-of-hours care in Denmark: a cross-sectional study. BMC Emerg Med 2020;20(1):20. https://doi.org/10.1186/s12873-020-00312-3

[33] Togher FJ, O'Cathain A, Phung VH, Turner J, Siriwardena AN. Reassurance as a key outcome valued by emergency ambulance service users: a qualitative interview study. Health Expect 2015;18(6):2951–61. https://doi.org/10.1111/hex.12279

[34] Booker MJ, Purdy S, Barnes R, Shaw ARG. Ambulance use for 'primary care' problems: an ethnographic study of seeking and providing help in a UK ambulance service. BMJ Open 2019;9(10):e033037. https://doi.org/10.1136/bmjopen-2019-033037

[35] Rantala A, Ekwall A, Forsberg A. The meaning of being triaged to non-emergency ambulance care as experienced by patients. Int Emerg Nurs 2016;25:65–70. https://doi.org/10.1016/j.ienj.2015.08.001

[36] Bayliss EA, Edwards AE, Steiner JF, Main DS. Processes of care desired by elderly patients with multimorbidities. Fam Pr 2008;25(4):287–93. https://doi.org/10.1093/fampra/cmn040

[37] Hjälte L, Suserud BO, Herlitz J, Karlberg I. Why are people without medical needs transported by ambulance? A study of indications for pre-hospital care. Eur J Emerg Med 2007;14(3):151–6. https://doi.org/10.1097/MEJ.0b013e3280146508
[38] Snooks H, Wrigley H, George S, Thomas E, Smith H, Glasper A. Appropriateness of use of emergency ambulances. J Accid Emerg Med 1998;15(4):212–5. https://doi.org/10.1136/emj.15.4.212
[39] Allana A, Kuluski K, Tavares W, Pinto AD. Building integrated, adaptive and responsive healthcare systems - lessons from paramedicine in Ontario, Canada. BMC Health Serv Res 2022;22(1):595. https://doi.org/10.1186/s12913-022-07856-z
[40] Ahl C, Nyström M, Jansson L. Making up one's mind:–patients' experiences of calling an ambulance. Accid Emerg Nurs 2006;14(1):11–9. https://doi.org/10.1016/j.aaen.2005.10.002
[41] Malm F, Elfström A, Ohlsson-Nevo E, Höglund E. Time consumption for non-conveyed patients within emergency medical services (EMS): a one-year prospective descriptive and comparative study in a region of Sweden. PLoS One 2021;16(5):e0251686. https://doi.org/10.1371/journal.pone.0251686
[42] Bennett R, Mehmed N, Williams B. Non-technical skills in paramedicine: a scoping review. Nurs Health Sci 2021;23(1):40–52. https://doi.org/10.1111/nhs.12765
[43] Venesoja A, Castrén M, Tella S, Lindström V. Patients' perceptions of safety in emergency medical services: an interview study. BMJ Open 2020;10(10):e037488. https://doi.org/10.1136/bmjopen-2020-037488
[44] Booker MJ, Simmonds RL, Purdy S. Patients who call emergency ambulances for primary care problems: a qualitative study of the decision-making process. Emerg Med J 2014;31(6):448–52. https://doi.org/10.1136/emermed-2012-202124
[45] Howard I, Cameron P, Wallis L, Castren M, Lindstrom V. Quality indicators for evaluating prehospital emergency care: a scoping review. Prehosp Disaster Med 2018;33(1):43–52. https://doi.org/10.1017/S1049023X17007014
[46] Hjälte L, Suserud BO, Herlitz J, Karlberg I. Initial emergency medical dispatching and prehospital needs assessment: a prospective study of the Swedish ambulance service. Eur J Emerg Med 2007;14(3):134–41. https://doi.org/10.1097/MEJ.0b013e32801464cf
[47] Ahlenius M, Lindström V, Vicente V. Patients' experience of being badly treated in the ambulance service: a qualitative study of deviation reports in Sweden. Int Emerg Nurs 2017 Jan;30:25–30. https://doi.org/10.1016/j.ienj.2016.07.004
[48] Defining Quality in EMS. Prehosp Emerg Care. 2018;22(6):782–783. doi:⟨10.1080/10903127.2018.1448495⟩.
[49] Cypress BS. Rigor or reliability and validity in qualitative research: perspectives, strategies, reconceptualization, and recommendations. Dimens Crit Care Nurs 2017;36(4):253–63. https://doi.org/10.1097/DCC.0000000000000253
[50] Skaffari E, Iirola T, Nordquist H. Patient experience of non-conveyance in the EMS of Southwest Finland: a descriptive survey study. BMC Emerg Med 2024 Mar 13;24(1):42. https://doi.org/10.1186/s12873-024-00961-8
[51] Polit DF, Beck CT. Generalization in quantitative and qualitative research: myths and strategies. Int J Nurs Stud 2010 Nov;47(11):1451–8. https://doi.org/10.1016/j.ijnurstu.2010.06.004