

Introduction

Pre-hospital telecommunications (patches) are a specific type of conversation between two people used.

Receiving and processing information correctly is critical for termination of resuscitation.

Analysis of data from a study of paramedic-physician telecommunications revealed that patches had a common structure.

Understanding patch structure allows manipulation of the patch process to improve telecommunication used for critical clinical decisions.

Objective

Determine the structure of paramedic-physician patches during out of hospital cardiac arrest calls when paramedics were seeking termination of resuscitation (ToR) orders.

Participants

Advanced Care and Primary Care paramedics from 4 paramedic services (Grey, Bruce, Huron, and Perth Counties) in south west Ontario, Canada.

Base Hospital Physicians who provide on-line medical oversight during ambulance calls.

Methods

Retrospective analysis of all ToR patches recorded by the Central Ambulance Communication Centre between physicians providing on-line-medical-control and paramedics from 4 paramedic services between January 01 and December 31, 2014.

Three services had Primary Care Paramedics (PCP) and 1 service had PCP and Advanced Care Paramedics (ACP).

MP3 patch recordings were transcribed by 2 authors.

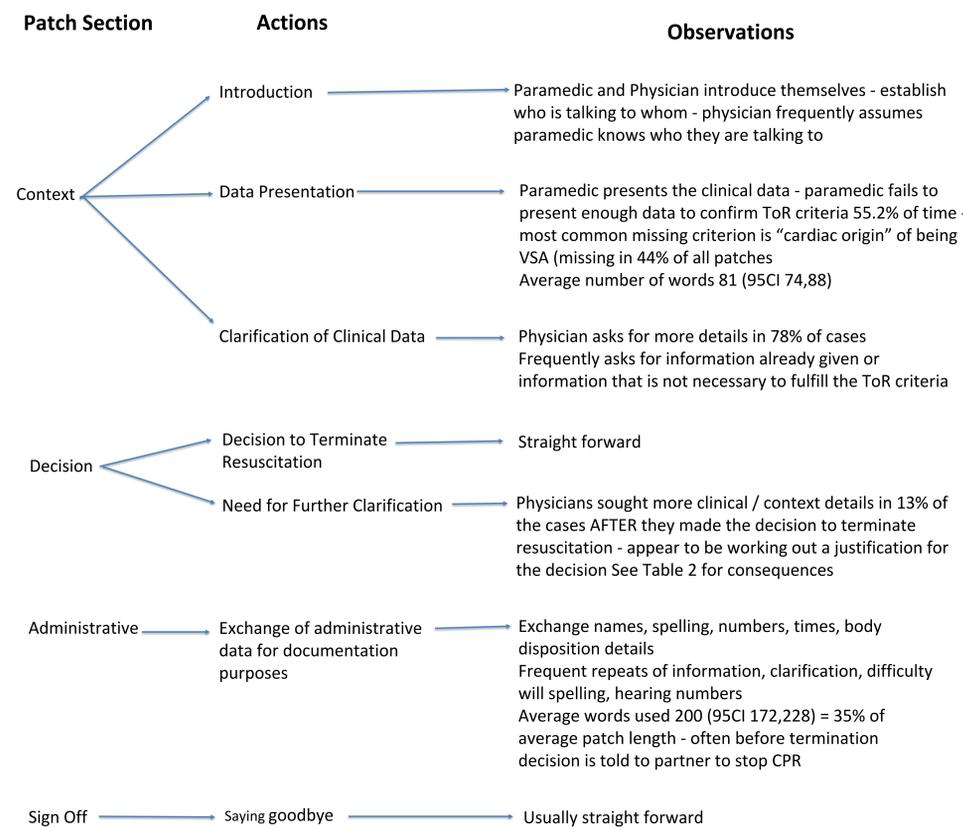
Anonymized transcripts were read multiple times and analyzed using mixed methods - quantitative descriptive statistics and coded to allow for qualitative thematic framework analysis.

Results

Data Set

127 Termination of Resuscitation Patches (PCP 120, ACP 7)
 466 pages of transcripts

Framework Analysis: Patch Structure



Termination of Resuscitation Criteria

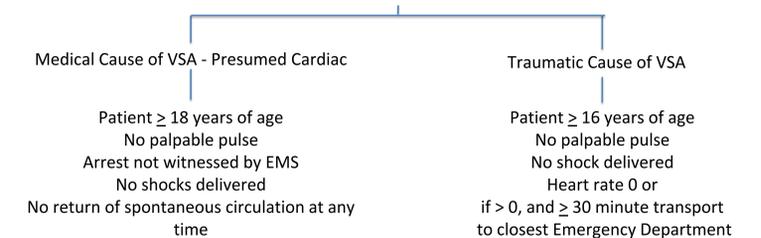


Table 1: Patch Word Count and Length in Standard vs. Non Standard Structure

	Total	Words in Patch	Length of Patch (seconds)
Standard Structure Patch	116 (91.3%)	234 (CI95 216,252)	286 (CI95 240,332)
Non-standard Structure Patch	11 (8.7%)	558 (CI95 519,598)	654 (CI95 518,791)

Table 2: Patch Word Count and Length when Physician Seeks Clarification of Data

		Words in Patch	Patch Length (seconds)
Total		567 (CI95 530,604)	238 (CI95 221,255)
Physician seeks clarification before ToR decision	yes	590 (CI95 548,633)	246 (CI95 226,266)
	no	479 (CI95 403,555)	207 (CI95 177,238)
Physician seeks further clarification AFTER ToR decision	yes	551 (CI95 630,872)	311 (CI95 261,361)
	no	538 (CI95 501,575)	227 (CI95 209,244)

Conclusions

The most common patch structure consisted of participant introduction, data presentation, clarification of data, making the clinical decision, exchange of administrative information, and a sign off

Deviation from this patch structure resulted in significantly longer patches.

Patching paramedics were unavailable to assist with patient care 25% longer when an unusual patch structure occurred