

System Management Software for Emergency Call

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Abstract. Present the experience of the development of a system as an effective communication strategy between the user/requester and the mobile prehospital care service. **Approach:** It is a methodological study, fragmented into five stages, developed by health and technology professionals and students. **Result:** The five stages were followed to reach the final product. **Conclusion:** The app is groundbreaking and contributes to the safe and efficient communication with healthcare professionals and users.

Keywords. Emergency Medical Services, information technology, informatics in nursing, technology in health, mobile applications

1. Introduction

The use of communication and information technology is a reality in health service, with tools like mobile internet, touchscreen displays, wireless networks, smartphones, and others, enables intuitive and instructive handling [1]. The mobile pre-hospital care service in Brazil works through the public health system that aims to assist the victim with sudden clinical, traumatic, obstetric, gynecological, pediatric and psychiatric injuries [2]. The literature report that the adoption of an effective and safe communication strategy between patients, health professionals and family members contribute to the patient's involvement in their own safety [3]. From that, this poster aims to present the system development as an effective communication strategy between the user/requester and the mobile pre-hospital care service.

2. Approach

It is a methodological study based on the consolidated software engineering five-stage life cycle model: analysis (identification of user's needs); design (detailing of goals, deadlines and assignments); development (programming, testing, corrections and documentation of the software); implementation (in the usability environment) and maintenance (adjustments and upgrades of the system), carried out in the period from

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2019 to 2021. The team was composed of health professionals (medicine and nursing) and Technology (Computer Engineering, Design and Information System), in addition to the participation of undergraduate and graduate academics from both areas. The app's home was based on the "three-click rule" to enter information about the victim, georeferencing call location (Google Maps), image uploads, health team chat and ambulance tracking in real time.

3. Results

The first stage for the development of the system was to conduct a survey to determine the user requirements. Five user profiles were identified: doctor, nurse, nursing technician, first responder driver and user requester, to then create stories to compose the backlog. The project used the Agile Scrum methodology for the management and organization of the project, where each month the project members could present their activities in the form of a report according to the goals and objectives stipulated. The prototype screens of the system was developed in *Figma* software, respecting the stories of users, covering their needs, and finally validated in stages according to development by the health team. Lastly, the implementation and maintenance through usability tests and other specifics was entrusted to software development professionals.

4. Conclusions

The app is groundbreaking in that it will solve the lack of pre-hospital care service in Brazil. It allows people with special hearing and speech needs to trigger the emergency service and contributes to effective and safe communication between the user and the healthcare professionals.

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