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Introductory Chapter: The Role of Emergency Medical Service Physician

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1. Introduction: emergency medical services as medical subspecialty

Almost 45 years since the inception of first modern emergency medical services (EMS) in the United States with the Highway Safety Act of 1966 and the EMS Services Development Act of 1973 [1, 2], the American Board of Medical Specialties (ABMS) voted in 2011 to create a new physician subspecialty called “emergency medical services” [3]. The American Board of Emergency Medicine was named the parent board for this subspecialty and held its first board certification exam in 2013.

The first suggestions about an EMS subspecialty head back to late 1990s by the creation of an ABEM task force and later, in 2001, by National Association of Emergency Medical Society Physicians (NAEMSP’s EMS Physician) Certification Task Force. Yet, it took another ten years and the continuous tremendous advance in prehospital care in the last decades that finally led to the new emergency medicine subspecialty [4].

Today, the list of the existing subspecialties of emergency medicine [5] is:

- anesthesiology critical care medicine,
- emergency medical services,
- hospice and palliative medicine,
- internal medicine-critical care medicine,
- medical toxicology,
- pain medicine,
- pediatric emergency medicine,

- sports medicine, and
- undersea and hyperbaric medicine;

thus covering almost all kinds of emergency medical care.

However, outside US, emergency medical systems are considered a relative new addition to the Healthcare systems [2]. Even now (2018), the state of EMS still varies drastically from developed to developing countries [6].

Within the aforementioned frame, the present article aims at describing the possible roles of the EMS physician.

2. The role of EMS physician

2.1. On scene

EMS personnel are recognized as the extension of the physician in the field, a “delegated practitioner.” Even though the current level of training in other EMS personnel (EMTs, Paramedics) is continuously raising, active involvement of the physicians in prehospital emergency care of patients is still needed.

There are several studies about out-of-hospital cardiac arrest (OHCA), synthesized in a recent meta-analysis [7], that suggests that EMS-physician-guided CPR in OHCA is associated with improved survival outcomes. Yet, due to the fact that the meta-analysis is based solely on observational studies, some authors doubt its results [8]. The same dispute is ongoing when it comes to single country studies about the same subject [9]. On the contrary, in cases of traumatic OHCA and in cases of severe injured patients, the presence of an EMS physician on the field is related with increased survival [10–12].

2.2. Beyond direct patient care

The high level of EMS personnel allows the system to work, most of the time, independently on the scene. Yet, the role of EMS physician extent beyond direct patient care; as he can serve as a coordinator or team leader, as an EMS educator, as the legal component of the system, as the patient advocate, or as the link between EMS and the hospital health care [13].

Thus, EMS physician can serve as the ideal Medical Director that can provide management, supervision, and guidance in an effort to assure quality of care [14]. The recent American College of Emergency Physicians (ACEP) policy statement gives the main principles of the role [15].

2.3. The challenge for the best EMS physicians' utilization

Though recognition of EMS subspecialty seems to create a new dynamic in prehospital emergency medicine, the optimum way of utilization of EMS physicians remains a question.

Even in the US, EMS agencies have significant practice variability with regard to quality improvement resources, medical direction, and specific clinical quality measures [16]. At the same time, there is a lack of share in understanding of which quality indicators to be used by physician-staffed EMS [17]. The heterogeneity of EMS systems in terms of organization (Anglo-American concept or European), equipment availability, staffing (EMTs, paramedics, EMS physicians, anesthesiologists, etc.), and level of training, on the one hand, and the national or regional determinants of prehospital healthcare system (geographical, socioeconomic factors, etc.), on the other hand, make it even harder to find the answer.

The formation of a self-regulatory quality improvement system (SQIS) with flexible model of best human resource utilization, adapted to the data feedback from the local or regional characteristics of EMS utilization, may be the most prudent way for resolving the problem.

Conflict of interests

The author has no conflict of interest.

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