Emergency medicine in Switzerland: a laboratory for professional experimentation

Thomas Schmutz[a], Vincent Ribordy[a], Aristomenis K Exadaktylos[b] and Pierre-Nicolas Carron[c]

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[a]Department of Emergency Medicine, Fribourg Hospital and University, Fribourg, [b]Department of Emergency Medicine, Inselspital, University Hospital of Bern and [c]Department of Emergency Medicine, Lausanne University Hospital CHUV, University of Lausanne, Lausanne, Switzerland

Correspondence to Thomas Schmutz, MD, Department of Emergency Medicine, Fribourg Hospital and University, Fribourg, Switzerland
Tel: +41793225297; e-mail: thomas.schmutz@h-fr.ch

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Switzerland is a small country divided into 26 cantons and four language regions (German, French, Italian and Rhaeto-Romanic) with cultural imprints from neighboring countries [1]. The Federal Constitution specifies the distribution of responsibilities between the Confederation and the cantons. The cantons are responsible for hospital organization, health prevention and for the regulation of the health professions. Each canton, thus, has its own Ministry of Health and develops its health system according to its needs, resources and political orientations. Inspired by the health systems of European border countries, emergency medicine in Switzerland is also largely based on Anglo-Saxon concepts [2]. By experimenting with these different models, Switzerland is gradually developing emergency health care professions and building the foundation of a solid decentralized emergency medical aid system.

Emergency medicine professions in Switzerland

Emergency medical dispatch

Emergency medical dispatch (EMD) is based on 15 emergency health call centers, with the dedicated '144' phone number, equivalent to 112 or 15 in other European countries. Dispatch activities are handled by nonmedical health professionals (paramedics or nurses) and rely on keywords, algorithms or dedicated decision-making support tools such as the Advanced Medical Priority Dispatch System. The concept is similar to the Anglo-Saxon model of EMD, with emergency physicians not playing an active role in the dispatching, and only involved in training and quality control aspects [3,4].

Paramedics

Paramedics obtain a high level of autonomy after a 3-year training course, bringing them closer to the Anglo-Saxon 'paramedics' concept. The ambulance rescue services are the basis of the prehospital operational response. Paramedics provide urgent prehospital care, their role going well beyond the simple transport of patients. They have a wide range of skills and competencies, including the administration of emergency drugs within the framework of delegated medical competencies through individual protocols. For a few months, models of 'rapid responders' are being tested in some cantons, with the dispatching of experienced paramedics to cover delays before the arrival of the standard ambulance. This 'solo paramedic' initiates patient evaluation, confirms the severity of the patient's condition, and begins the first actions while waiting for help.

Mobile emergency unit

Mobile emergency units are mainly present in urban areas, particularly in the French-speaking cantons. As there is no medical emergency medicine specialty, the training of a prehospital emergency physician is formalized through an additional prehospital emergency medicine certificate, available for example for qualified general internists, anesthesiologists or intensive care physicians [5].

Helicopter emergency medicine service

For historical reasons and because of its mountainous geography, Switzerland has an exceptional helicopter rescue capability with about 20 helicopters. The Swiss Air Rescue, a private nonprofit foundation, provides most of the air rescues with 12 bases distributed over the country. Medical care is provided by emergency physicians from emergency departments (ED) or anesthesiology departments of the main hospitals. Three other private companies complete this response, particularly in the Alpine regions.

Primary care general practitioners

Primary care general practitioners ensure the medicalization of emergencies in areas not covered or not easily accessible by the emergency mobile unit. They are trained in emergency medicine, have basic equipment, and can be hired on request from the dispatch center. This activity is particularly well developed in mountainous and remote regions, with a concept similar to the French 'corresponding Service d'Aide Médicale Urgente doctors' [6].

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First responders

Networks of 'first responders', volunteer first-aiders who intervene to initiate care while waiting for ambulances to arrive, exist with different methods and skill levels, depending on the cantons. The police participate for example in this response with officers trained in basic life support.

Hospital emergency physicians

In Switzerland, there are about 100 hospitals with an ED, including five university hospitals. A multitude of small private companies completes the demand for emergency service by offering responses outside business hours but usually not at night [7]. To date, emergency medicine is not recognized as a specialty in its own right, although it has shown significant academic development in recent years.

An additional postgraduate certificate of 'hospital emergency medicine', available after acquiring a specialist title, validates medical practice in the ED. In academic or major Level-1 hospitals, the management of ED is increasingly entrusted to the emergency physician. The medical teams usually integrate doctors from other specialties, working in ED for training periods of limited duration. Small EDs more often operate in a traditional way, without a dedicated emergency physician, but with a medical staff structured with a co-responsibility between general internists and surgeons.

Emergency care expert nurses and advanced practice nurses

A diploma for expert nurses in emergency care proposes a 2-year postgraduate training after the nursing diploma [8]. In addition to this professionalization, Switzerland is setting up several programs to promote the implementation of advanced practice nurses, with a master's level based on the model implemented in other countries [9–11].

Advantages and limitations of the Swiss system

For prehospital emergencies, Switzerland seems to have found the right balance by creating a dual prehospital system based on paramedics and prehospital emergency physicians. There is no intermediate nursing response, and no firefighters are involved in prehospital care, as proposed by some countries [12]. This system facilitates role sharing and collaboration in the field, making it possible to engage an emergency physician in a reasoned and rational way in complex situations. Nevertheless, the content of delegated medical protocols and the autonomy of paramedics both need to be standardized in the future, as the lack of medical national regulation of prehospital activity sometimes finds its limits, particularly in the management of nonurgent interventions. Increases in incoming call volume, the evolution of primary care medicine, with recruitment difficulties, particularly in the most remote regions and disparity in hospital technical platforms contribute to the complexification of this activity. The implementation of emergency physician dispatchers in these situations would be a matter of debate in the next years.

In the ED, the increase in emergency workload and case complexity reinforce the need for professional emergency physicians. However, maintaining a mixed system with close collaboration with other specialties will avoid isolating the ED from the rest of the hospital.

Because of the development of emergency medicine and the linear growth in emergency medicine activity, Switzerland finds itself in a paradoxical situation in which it has to resort to foreign recruitment of emergency physicians from border countries, although the discipline is not recognized internally. This raises ethical and professional questions that need to be clarified, the main issue being the recognition of emergency medicine as a Swiss medical specialty.

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Conflicts of interest

There are no conflicts of interest.

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