



2019 ACEP INTERNATIONAL AMBASSADOR COUNTRY REPORT COMPILATION

**American College of Emergency Physicians
International Ambassador Program**

Editorial Staff

Editor-in-Chief:

Andrés M. Patiño, MD | Co-Chair, ACEP International Ambassador Program; Assistant Professor, Department of Emergency Medicine, Emory University School of Medicine

Data Collection Tool Development:

Elizabeth DeVos, MD MPH | Co-Chair, ACEP International Ambassador Program; Chair, ACEP International Section; Associate Professor, Department of Emergency Medicine, University of Florida College of Medicine--Jacksonville

Christian Arbelaez, MD MPH | Chair, ACEP International Committee; Vice Chair Academic Affairs, Department of Emergency Medicine, Brown University

Chuan-Jay Jeffrey Chen, MD | PGY-4, Harvard Associated Emergency Medicine Residency, Massachusetts General and Brigham and Women's Hospital

Report Compilation and Formatting:

Co-Lead: **J. Austin Lee, MD MPH** | Global Emergency Medicine Fellow, Brown University

Co-Lead: **Kate Anderson, MD** | PGY-2, University of Chicago Emergency Medicine Residency

Sean M. Kivlehan, MD MPH | Director, Global Emergency Medicine Fellowship, Brigham and Women's Hospital and Harvard Medical School

Rachel R. Koval, MD MPH | Instructor, Department of Emergency Medicine, Emory University School of Medicine

Monalisa N. Muchatuta, MD MS | ACEP Ambassador; Assistant Professor, Department of Emergency Medicine, SUNY Downstate Medical Center

Halley J. Alberts | MSIV Joan C. Edwards School of Medicine at Marshall University

Kristina N. Ledbetter | OMS II Lake Erie College of Osteopathic Medicine

Maria Marquez | MSIII Georgetown University School of Medicine

Jerry Z. Oommen | OMS IV Michigan State University College of Osteopathic Medicine

Kelly K. Poe | MSII University of Maryland School of Medicine

Spencer S. Seballos | MSIV Cleveland Clinic Lerner College of Medicine

Ricki Sheldon | OMS II Arkansas College of Osteopathic Medicine

Introduction:

Co-Lead: **Ramu Kharel, MD MPH** | Global Emergency Medicine Fellow, Brown University

Co-Lead: **Chuan-Jay Jeffrey Chen, MD** | PGY-4, Harvard Affiliated Emergency Medicine Residency, Massachusetts General and Brigham and Women's Hospital

Christian Arbelaez, MD MPH | Chair, ACEP International Committee; Vice Chair Academic Affairs, Department of Emergency Medicine, Brown University

Elizabeth DeVos, MD MPH | Co-Chair, ACEP International Ambassador Program; Chair, ACEP International Section; Associate Professor, Department of Emergency Medicine, University of Florida College of Medicine--Jacksonville

Sushant Chhabra, MD | Head of Emergency Medicine, Manipal Hospital, New Delhi, India

Contact:

ambassadorprogram@acep.org

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Executive Summary

The **2019 ACEP International Ambassador Country Report Compilation** provides a unique overview of the current state of emergency medicine development in 62 countries around the world through reports from the International Ambassadors of the American College of Emergency Physicians, who work with pioneers of emergency medicine around the world to help improve emergency care and promote the growth of the specialty.

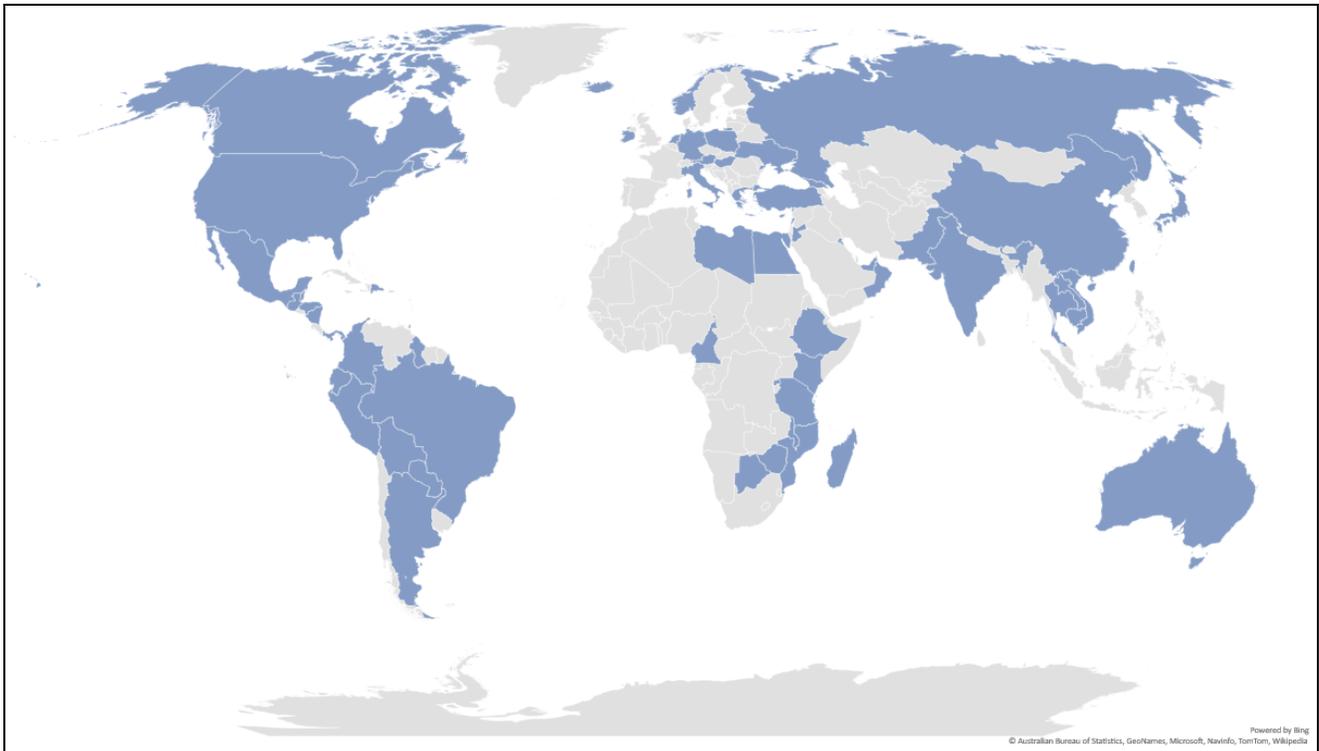
The target audience of this Compilation are pioneers and leaders of emergency medicine globally as well as stakeholders in emergency care.

The goal of the Compilation is to inform stakeholders, aid advocacy, and to promote exchange of ideas and collaboration in global emergency medicine.

How to use this Compilation:

The Compilation starts with Summary Tables that allow country comparisons within World Health Organization Regions. Then individual Country Reports are listed alphabetically and provide in-depth information for each country.

Countries in the 2019 ACEP International Ambassador Country Report Compilation



Highlights

WHO Region	Country Reports	Countries Recognizing EM	Countries with at least 1 EM residency / number of EM residencies	Countries with at least 1 EM professional society / number of societies	Countries with a national prehospital phone number
African Region	10	8	8 countries / 11 EM residencies	5 countries / 6 societies	5
Region of the Americas*	19	15	16 countries / 212 EM residencies	15 countries / 22 societies	16
Eastern Mediterranean Region	8	8	8 countries / 41 residencies	8 countries / 11 societies	5
South-East Asia Region	2	2	2 countries / 102 EM residencies	2 countries / 4 societies	2
European Region	15	12	11 countries / 200 EM Residencies	14 countries / 17 societies	14
Western Pacific Region	8	8	7 countries / 756 EM residencies	7 countries / 12 societies	7

*Excludes data from the United States of America

Submit Updates and Corrections:

Published data on emergency medicine development in many countries is limited or non-existent. Thus, the country reports in this Compilation often rely on verbal accounts and the Ambassadors' experiences working in-country. If you have updates or corrections, please submit them through this online form:

<https://forms.gle/Wu4B4Yb3hZmjp2cF8>

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Introduction

Emergency medicine is a relatively young specialty, first developing in the U.S. in the 1970s, in the UK in the 1968, and since spreading to other countries around the world.^{1,2} The specialty emerged in response to the need for quality expedient care of patients arriving to the hospital with time-sensitive complaints, such as trauma, chest pain, and severe infection.³ Emergency medicine exists in different stages of development around the world.⁴ Milestones in the development of the specialty include but are not limited to the creation of emergency medicine residency programs, board certification, specialty associations, peer-reviewed journals, clinical guidelines, and subspecialties.^{5,6} Each country reaches these milestones in its own particular order.⁴ For example some countries recognized the specialty first and then developed residency programs. Others have developed residencies first and then recognized the specialty.

Although emergency medicine still does not exist or remains a young specialty in many countries, the last two decades have seen rapid growth of the specialty on the global stage, with many countries developing their first emergency medicine residency programs or achieving formal recognition of the specialty. Several authors have described the evolution of emergency medicine in local settings and individual countries.⁸⁻¹³ Furthermore, the World Health Organization (WHO) has recently developed the Emergency, Trauma, and Acute Care Program in recognition of the heavy burden of emergent conditions in low and middle-income countries. Similarly, the WHO adopted Resolution 72.16 at the General Assembly in 2019, which “calls for near-term additional efforts globally to strengthen the provision of emergency care as part of universal health coverage so as to ensure the timely and effective delivery of life-saving health care services to those in need.”¹⁴

Interestingly, the level of development of emergency medicine as a specialty is not always related to the country’s level of economic development.⁴ For example, some high income countries have yet to develop the specialty. However, the coronavirus disease 2019 (COVID-19) pandemic has highlighted the importance of developing strong emergency care systems in all settings, for both disease surveillance as well as providing care.

International Ambassador Program of the American College of Emergency Physicians (ACEP)

The American College of Emergency Physicians, ACEP, is made up of more than 38,000 emergency physicians, residents, and medical students, mostly in the United States but also internationally. The ACEP International Ambassador Program currently includes 159 ACEP members who represent ACEP and collaborate with local partners in 70 countries to promote improvements in emergency care and the growth of emergency medicine. The Ambassador Delegation representing ACEP in a given country consists of several kinds of Ambassadors. Lead Ambassadors, Deputy Ambassadors, and Resident Representatives are based in the United States. ACEP Liaisons are based in the country of interest. The Ambassador Delegation for each country is responsible for completing a standardized country report every two years detailing the current state of emergency medicine in the country. For the first time, the individual country reports are being published in this Compilation for easy reference of those working to advance emergency care internationally.

2019 ACEP Ambassador Country Report Compilation

In 2019, the ACEP Ambassadors completed Country Reports on 63 countries including information on the current state of emergency medicine in the specific country including information on residency programs, educational curricula, medical associations, pre-hospital training programs, medical journals, challenges for emergency medicine providers, future directions, and several other inquiries that aim to describe the evolution of the specialty. This document includes these Country Reports in alphabetical order as well as summary tables for comparisons across countries.

Goal

The 2019 ACEP Ambassador Country Report Compilation provides a general overview of the state of the specialty in 62 countries with emphasis on current strengths and challenges, with the goal of informing emergency medicine pioneers and stakeholders worldwide as they confront their own challenges improving emergency care and developing the specialty. Furthermore, we hope this Compilation sparks exchange of ideas and collaborations within and across regions and levels of specialty development.

Disclaimer

The opinions expressed in the Country Reports are those of the individual country report authors and may not represent the opinions of the Compilation editors or ACEP. Published data about emergency medicine development is very limited in many countries, and many of the data reported are based on experiences of the ambassadors and their local partners working in-country rather than official government, specialty society, or institutional data. ACEP and the authors have not independently verified information in the reports. Though references were encouraged for all material when available, references were often not available in many countries. Minimal editing was performed on the country reports, mainly for style and punctuation.

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Summary Tables by World Health Organization Region

African Region

	Botswana	Cameroon	Ethiopia	Kenya	Madagascar	Malawi	Mozambique	Rwanda	Tanzania	Zimbabwe
Number of EM Professional Societies	0	2	1	0	1	0	0	1	1	0
Is EM a recognized specialty?	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Estimated number of residency-trained EM physicians	3	1	100	2	120	50	2	6	40	0
Percent of EDs with >1 residency trained EM-physician	1-20%	1-20%	1-20%	0	1-20%	1-20%	0	1-20%	21-40%	0
Number of EM residency programs	1	0	2	1	3	1	1	1	1	0
Estimated number of EM resident physicians currently in training	4	0	60	14	120	2	6	20	30	0
Is there a required board certification exam for EM after residency training?	Yes	No	No	No	Yes	No	Yes	Yes	No	No
Are medical student rotations with residency-trained EM specialists available in the country?	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	No
Are there any non-residency training programs for emergency care providers?	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No
Are there nationwide emergency care guidelines/protocols?	Yes	No	No	No	No	0	Yes	Yes	Yes	No
Percentage of national emergency medical care costs paid by private health insurance	20%	0%	10%		20%	0%	10%	0%		30%
Percentage of national emergency medical care costs paid by government healthcare funds/ insurance	80%	0%	30%		70%	60%	70%	70%		50%
Percentage of national emergency medical care costs paid out of pocket	0%	80%	70%	60%	10%	40%	20%	30%		20%
Is there a prehospital system?	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes
Is there a national emergency phone number?	Yes	No	Yes	No	Yes	Yes	No	Yes	No	No
Are there medical control protocols for pre-hospital care in the country?	No	No	No	No	No	No	No	Yes	Yes	No
Are there national laws or regulations regarding emergency medical care?	No	No	No	Yes	No	Yes	No	Yes	No	No

Region of the Americas

	Argentina	Belize	Bolivia	Brazil	Canada	Colombia	Costa Rica	Dominican Republic	Ecuador	El Salvador
Number of EM Professional Societies	3	0	0	1	1	1	1	1	1	1
Is EM a recognized specialty?	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
Estimated number of residency-trained EM physicians	250	0	1	150	3000	300	110	244	200	2
Percent of EDs with >1 residency trained EM-physician	21-40%	0	0	1-20%	61-80%	1-20%	61-80%	1-20%	1-20%	1-20%
Number of EM residency programs	35	0	1	24	31	8	1	9	2	0
Estimated number of EM resident physicians currently in training	40	0	2	150	420	200	21	344	110	0
Is there a required board certification exam for EM after residency training?	No	No	No	Yes	No	No	No	No	No	No
Are medical student rotations with residency-trained EM specialists available in the country?	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
Are there any non-residency training programs for emergency care providers?	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Are there nationwide emergency care guidelines/protocols?	No	No	No	No	Yes	No	No	No	Yes	No
Percentage of national emergency medical care costs paid by private health insurance	20%	10%	10%	20%	20%	40%	20%	30%	10%	10%
Percentage of national emergency medical care costs paid by government healthcare funds/ insurance	70%	80%	80%	70%	70%	50%	70%	50%	80%	60%
Percentage of national emergency medical care costs paid out of pocket	10%	10%	10%	10%	10%	10%	10%	20%	10%	30%
Is there a prehospital system?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is there a national emergency phone number?	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Are there medical control protocols for pre-hospital care in the country?	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No
Are there national laws or regulations regarding emergency medical care?	No	No	No	Yes	No	Yes	Yes	Yes	Yes	No

Region of the Americas (Continued)

	Guatemala	Guayana	Honduras	Mexico	Nicaragua	Panama	Paraguay	Peru	Trinidad and Tobago	United States
Number of EM Professional Societies	2	0	0	5 or more	1	1	1	1	1	5 or more
Is EM a recognized specialty?	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Estimated number of residency-trained EM physicians	0	12	2	6000	200	38	25	70	41	35,856
Percent of EDs with >1 residency trained EM-physician	0	1-20%	0	61-80%	21-40%	1-20%	1-20%	21-40%	81-100%	81-100%
Number of EM residency programs	2	1	0	72	1	2	2	20	1	221
Estimated number of EM resident physicians currently in training	11	7	0	900	10	15	30	80	20	1,894
Is there a required board certification exam for EM after residency training?	No	No	No	Yes	No	Yes	Yes	No	Yes	Yes
Are medical student rotations with residency-trained EM specialists available in the country?	No	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes
Are there any non-residency training programs for emergency care providers?	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Are there nationwide emergency care guidelines/protocols?	No	Yes	No	No	No	No	No	No	Yes	Yes
Percentage of national emergency medical care costs paid by private health insurance	10%		10%	20%	30%	20%	10%	30%	0%	40%
Percentage of national emergency medical care costs paid by government healthcare funds/ insurance	50%		70%	60%	60%	80%	70%	50%	90%	40%
Percentage of national emergency medical care costs paid out of pocket	40%		20%	20%	10%	0	20%	20%	10%	20%
Is there a prehospital system?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is there a national emergency phone number?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Are there medical control protocols for pre-hospital care in the country?	Yes	Yes	No	Yes	No	Yes	No	No	Yes	Yes
Are there national laws or regulations regarding emergency medical care?	Yes	No	No	Yes	No	No	No	Yes	Yes	Yes

Eastern Mediterranean Region

	Egypt	Jordan	Kuwait	Lebanon	Libya	Oman	Pakistan	UAE
Number of EM Professional Societies	3	1	1	2	1	1	1	1
Is EM a recognized specialty?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Estimated number of residency-trained EM physicians	405	5	25	30	20	100	50	100
Percent of EDs with >1 residency trained EM-physician	1-20%	1-20%	61-80%	1-20%	1-20%	21-40%	1-20%	21-40%
Number of EM residency programs	2	5	1	1	10	10	7	5
Estimated number of EM resident physicians currently in training	405	121	20	20	400	100	50	100
Is there a required board certification exam for EM after residency training?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Are medical student rotations with residency-trained EM specialists available in the country?	Yes	Yes	No	Yes	No	No	Yes	Yes
Are there any non-residency training programs for emergency care providers?	No	Yes	Yes	Yes	Yes	No	Yes	No
Are there nationwide emergency care guidelines/protocol?	Yes	Yes	Yes	No	No	Yes	No	No
Percentage of national emergency medical care costs paid by private health insurance	20%	10%	10%	10%	0%	0%	0%	70%
Percentage of national emergency medical care costs paid by government healthcare funds/ insurance	70%	80%	80%	40%	100%	100%	10%	20%
Percentage of national emergency medical care costs paid out of pocket	10%	10%	10%	50%	0%	0%	90%	10%
Is there a prehospital system?	Yes	Yes	Yes	Yes	No	Yes	No	Yes
Is there a national emergency phone number?	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Are there medical control protocols for pre-hospital care in the country?	Yes	Yes	Yes	No	No	Yes	No	Yes
Are there national laws or regulations regarding emergency medical care?	Yes	Yes	Yes	No	No	No	No	Yes

South-East Asia Region

	India	Thailand
Number of EM Professional Societies	3	1
Is EM a recognized specialty?	Yes	Yes
Estimated number of residency-trained EM physicians	600	800
Percent of EDs with >1 residency trained EM-physician	1-20%	81-100%
Number of EM residency programs	84	18
Estimated number of EM resident physicians currently in training	200	300
Is there a required board certification exam for EM after residency training?	Yes	Yes
Are medical student rotations with residency-trained EM specialists available in the country?	Yes	Yes
Are there any non-residency training programs for emergency care providers?	Yes	Yes
Are there nationwide emergency care guidelines/protocols?	No	Yes
Percentage of national emergency medical care costs paid by private health insurance	20%	20%
Percentage of national emergency medical care costs paid by government healthcare funds/ insurance	60%	70%
Percentage of national emergency medical care costs paid out of pocket	20%	10%
Is there a prehospital system?	Yes	Yes
Is there a national emergency phone number?	Yes	Yes
Are there medical control protocols for pre-hospital care in the country?	Yes	Yes
Are there national laws or regulations regarding emergency medical care?	No	Yes

European Region

	Austria	Cyprus	Georgia	Germany	Greece	Hungary	Iceland	Ireland
Number of EM Professional Societies	1	0	2	1	1	1	1	1
Is EM a recognized specialty?	No	No	Yes	No	Yes	Yes	Yes	Yes
Estimated number of residency-trained EM physicians	0	0	50	2	0	166	20	100
Percent of EDs with >1 residency trained EM-physician	0%	0%	1-20%	0%	0%	61-81%	81-100%	81-100%
Number of EM residency programs	0	0	1	0	0	2	1	1
Estimated number of EM resident physicians currently in training	0	0	50	0	0	166	14	52
Is there a required board certification exam for EM after residency training?	No	No	No	No	No	Yes	Yes	Yes
Are medical student rotations with residency-trained EM specialists available in the country?	No	No	No	No	No	Yes	Yes	Yes
Are there any non-residency training programs for emergency care providers?	No	No	Yes	No	Yes	Yes	500No	No
Are there nationwide emergency care guidelines/protocols?	Yes	No	No	No	No	Yes	No	Yes
Percentage of national emergency medical care costs paid by private health insurance	--	0%	100%	10%	20%	10%	20%	20%
Percentage of national emergency medical care costs paid by government healthcare funds/ insurance	--	40%	0%	90%	70%	70%	40%	40%
Percentage of national emergency medical care costs paid out of pocket		60%	0%	0%	10%	10%	40%	40%
Is there a prehospital system?	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Is there a national emergency phone number?	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Are there medical control protocols for pre-hospital care in the country?	Yes	No	No	Yes	Yes	Yes	Yes	Yes
Are there national laws or regulations regarding emergency medical care?	No	No	No	Yes	No	Yes	No	Yes

European Region (Continued)

	Italy	Netherlands	Norway	Poland	Russian Federation	Turkey	Ukraine
Number of EM Professional Societies	1	1	1	2	1	2	1
Is EM a recognized specialty?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Estimated number of residency-trained EM physicians	550	400	4	1016	150	2,600	1,000
Percent of EDs with >1 residency trained EM-physician	1-20%	61-80%	1-20%	21-40%	81-100%	41-60%	1-20%
Number of EM residency programs	33	30	13	45	2	87	12
Estimated number of EM resident physicians currently in training	500	400	13	450	100	1,500	150
Is there a required board certification exam for EM after residency training?	No	No	No	Yes	Yes	No	Yes
Are medical student rotations with residency-trained EM specialists available in the country?	No	Yes	No	No	No	Yes	Yes
Are there any non-residency training programs for emergency care providers?	No	No	No	No	Yes	No	Yes
Are there nationwide emergency care guidelines/protocols?	No	Yes	No	Yes	Yes	No	Yes
Percentage of national emergency medical care costs paid by private health insurance	0%	20%	0%	0%	0%	10%	10%
Percentage of national emergency medical care costs paid by government healthcare funds/ insurance	100%	80%	100%	100%	100%	80%	90%
Percentage of national emergency medical care costs paid out of pocket	0%	0%	0%	0%	0%	10%	0%
Is there a prehospital system?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is there a national emergency phone number?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Are there medical control protocols for pre-hospital care in the country?	No	Yes	Yes	Yes	Yes	Yes	Yes
Are there national laws or regulations regarding emergency medical care?	No	Yes	Yes	Yes	Yes	Yes	Yes

Western Pacific Region

	Australia	Cambodia	China	Japan	Laos	New Zealand	Taiwan	Vietnam
Number of EM Professional Societies	2	3	2	2	1	1	0	2
Is EM a recognized specialty?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Estimated number of residency-trained EM physicians		600	0	5017	5	25	0	30
Percent of EDs with >1 residency trained EM-physician		1-20%	0	1-20%	1-20%	61-80%	0	1-20%
Number of EM residency programs		84	0	554	5	1	1	1
Estimated number of EM resident physicians currently in training		200	0	80	121	20	17	20
Is there a required board certification exam for EM after residency training?	No	Yes	No	Yes	Yes	Yes	No	Yes
Are medical student rotations with residency-trained EM specialists available in the country?	No	Yes	No	Yes	Yes	n	No	Yes
Are there any non-residency training programs for emergency care providers?	Yes	Yes	Yes	No	Yes	Yes	No	Yes
Are there nationwide emergency care guidelines/protocols?	No	No	No	No	Yes	Yes	No	No
Percentage of national emergency medical care costs paid by private health insurance	10%	20%	10%	50%	10%	10%	0%	10%
Percentage of national emergency medical care costs paid by government healthcare funds/ insurance	80%	60%	80%	40%	80%	80%	80%	40%
Percentage of national emergency medical care costs paid out of pocket	10%	20%	10%	10%	10%	10%	0.2	50%
Is there a prehospital system?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is there a national emergency phone number?	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Are there medical control protocols for pre-hospital care in the country?	No	Yes	No	Yes	Yes	Yes	No	No
Are there national laws or regulations regarding emergency medical care?	No	No	No	Yes	Yes	Yes	No	No

Individual Country Reports in Alphabetical Order

[View table of contents for country page numbers](#)

Argentina

LEADERSHIP TEAM

- *Liaison(s):* Gaston A. Costa
- *Lead Country Report Author:* Gaston A. Costa
- *Contributing Author(s):* James Cusick

List of Professional EM Societies (3)

- Sociedad Argentina de Emergencias (SAE)
<https://www.sae-emergencias.org.ar/>
- Sociedad Argentina de Patología de Urgencia y Emergentología (SAPUE)
<http://www.sapue.com.ar/>
- Sociedad Científica de Emergentología Argentina (SCEA)
http://www.asociacionamap.org.ar/capacitacion/1216_capacitacion-taller-de-practicas-basicas-de-emergentologia-2019 and
http://www.femargentina.org/noticia_37.html

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? Yes

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

Emergency medicine has been a specialty since May 2010. There are emergency med residencies around the country, most of them in Buenos Aires Providence. The Argentine Emergency Med Society is a member of IFEM. Every year the Emergency Med Society participates in the National Emergency Medicine Congress. Emergency medicine specialization is recognized with the SAE, as well as the Sociedad Argentina de Patología de Urgencia y Emergentología (SAPUE), UBA University of Buenos Aires, Colegios Médicos Provinciales. There are different emergency med academic programs (both short and long term options).

What were the latest developments in emergency medicine in the country (last update 2018)?

- National Emergency Medicine Congress in 2018 by Sociedad Argentina de Emergencias (SAE).
- Emergency medicine academic programs at SAE, Sociedad Argentina de Patología de Urgencia y Emergentología (SAPUE), and University of Buenos Aires Emergency Medicine Program.
- Visiting EM residents from multiple hospitals in New York for elective EM rotation at Dr. Cosme Argerich General Hospital in Buenos Aires.
- Virtual emergency medicine programs.
- Collaboration of faculties, speakers and professors from the U.S. (from ACEP, American Academy of Emergency Medicine, and others) for local conferences, courses, workshops, and meetings.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

- Open more EM residency programs.
- Develop fellowships for emergency physicians.
- Develop the country's prehospital care system.
- Increase knowledge exchange by organizing and attending more international conferences and courses with visiting professors and faculty instructors.
- Increase support and endorsement from ACEP for educational activities.
- Develop national EM protocols.
- Develop free training resources.

What are some specific clinical and academic faculty development needs in the country?

- More resources
- Equipment
- Open importation
- Investments
- Networking
- Open teaching opportunities at universities and professional exchanges opportunities.

What is the biggest threat to the specialty of emergency medicine in the country?

- Low physician salaries
- Economy
- Closed programs
- Low enthusiasm in the development of EM residencies
- No postgraduate specializations programs.

What specific needs can ACEP help with?

- Endorsement of conferences.
- Bring faculty.
- Virtual platform.
- More educational materials in Spanish.
- Rotation opportunities in the U.S.
- Teaching skills development.

EM WORKFORCE

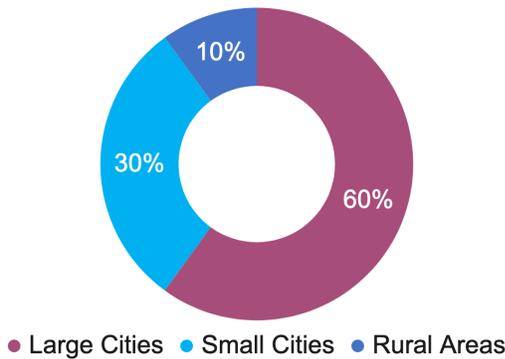
Estimated percent of EDs with at least one residency trained EM-physician? 21-40%

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? Yes

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



EM TRAINING

Estimated number of residency-trained EM physicians in the country? 250

Estimated number of EM resident physicians currently in training? 40

List of EM Residencies (35)

Partial list:

- Hospital Ángel C. Padilla (Provincia de Tucuman).
- Hospital Austral.
- Hospital Churrucá-Visca.
- Hospital Fundación Favaloro.
- Hospital Integrado Región Sanitaria VI.
- Hospital Interzonal General Agudos Dr. Luis A Guemes.
- Hospital Interzonal General Agudos Dr. Pedro Fiorito.
- Hospital Interzonal General Agudos Evita.
- Hospital Interzonal General de Agudos General San Martin.
- Hospital Italiano.
- Hospital Militar Campo de Mayo.
- Hospital Municipal de Agudos Dr. Leónidas Lucero.
- Hospital Municipal de Chivilcoy.
- Hospital Municipal Eva Perón.
- Hospital Municipal Leónidas Lucero – Bahía Blanca – Argentina.
- Hospital Posadas.
- Hospital Privado (Provincia de Córdoba).
- Hospital Provincial Dr. Eduardo Castro Rendón (Provincia de Neuquen).
- Hospital Velez, Universidad de Buenos Aires.
- Hospital Zonal General Agudos Abraham Piñeyro – Área B.
- Hospital Zonal General Agudos Dr. Paroissien.
- Hospital Zonal General de Agudos Gonzalez Catan Km. 32 Simplemente Evita.
- Hospital Zonal General de Agudos Héroes de Malvinas.
- Sanatorio Guemes.
- Swiss Medical / Clínica Olivos.

Other postgraduate EM training programs:

- Curso Superior de Posgrado en Emergentología
- Escuela de Salud Pública y Ambiente: Curso en Medicina de Urgencias, Emergencias y Desastres
- Sociedad Argentina Emergencias Carrera Especialista.

EM Fellowship programs: Ultrasound

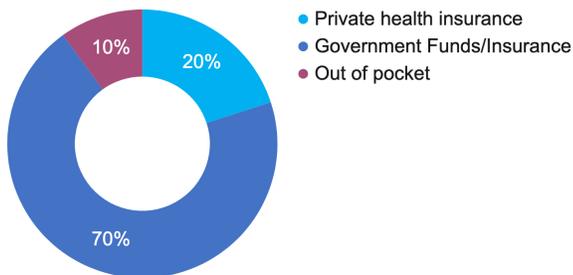
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✗ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✗ Dislocation reduction | ✗ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- X Abdominal surgery (eg appendectomy)
- X Burr hole craniotomy
- X Cardiac catheterization
- X C-section
- X GI endoscopy
- X Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? No

Medically assisted transport provided by:

- X Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

Ministry of Health, other national governmental agency, hospitals, private organizations

What is the pre-hospital service used for?

- ✓ Scene to hospital
- X Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, Nurses, Emergency medical technician (EMT), Paramedics (in some regions).

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? No

Are there peer-reviewed EM journals based in the country? Yes

List of peer-reviewed EM journals in the country.

Patología de Urgencia, published by SAPUE

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership
- Short courses
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Language classes.
- Research.
- Short courses.
- Teaching opportunities.

INTERESTING ONLINE EM RESOURCES

- <http://emergentologiafiorito.blogspot.com/>
- <http://sistematicas.emergentologia.net/visualizador.php?id=34>
- <http://www.simplementeevita.com.ar/servicio-de-emergentologia/>
- <https://es-la.facebook.com/pages/category/Education/Residencias-de-Emergentologia-Argentina-493297544198199/>

REFERENCES

- <https://www.buenosaires.gob.ar/salud>
- <https://www.gba.gob.ar/saludprovincia>
- <https://www.ama-med.org.ar/>
- <https://www.argentina.gob.ar/salud/dinesa>
- <https://www.buenosaires.gob.ar/salud/same>
- <https://www.argentina.gob.ar/salud/epidemiologia>
- <https://www.sae-emergencias.org.ar/>
- www.sapue.com.ar
- www.samct.org.ar
- www.sati.org.ar
- <http://www.sam.org.ar/>

Australia

LEADERSHIP TEAM

- *Lead Ambassador:* (Steven) Lee Fineberg
- *Lead Country Report Author:* (Steven) Lee Fineberg

List of Professional EM Societies (1)

- Australasian College for Emergency Medicine (ACEM); <https://acem.org.au/>

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? Yes

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? Yes

History of EM in the country:
see ACEM report

What were the latest developments in emergency medicine in the country (last update 2018)?
see ACEM report

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?
see ACEM report

What specific needs can ACEP help with?

- Promotion and facilitation of International Emergency Medicine clinical exchange.
- Collaboration and endorsement with DevelopingEM.com on future events.

EM WORKFORCE

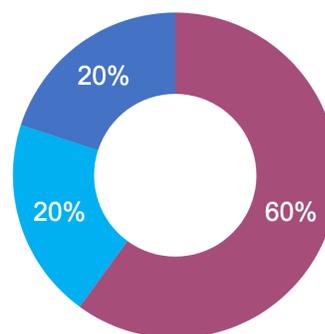
Estimated percent of EDs with at least one residency trained EM-physician? 21-40%

Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? Yes;
Diploma of EM through the Australasian College for Emergency Medicine.

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



• Large Cities • Small Cities • Rural Areas

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 2652

Estimated number of EM resident physicians currently in training? 2527

List of EM Residencies (138)

- see ACEM report

EM Fellowship programs:

- Emergency medical services (EMS)
- Pediatric EM
- Sports medicine
- Toxicology
- Ultrasound

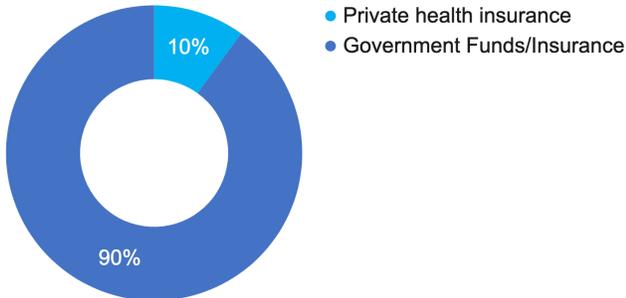
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- ✗ Abdominal surgery (eg appendectomy)
- ✗ Burr hole craniotomy
- ✗ Cardiac catheterization
- ✗ C-section
- ✗ GI endoscopy
- ✗ Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✗ Private air transport

Under what authority is pre-hospital care?

Ministry of Health

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Paramedics

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM public health research
- EM clinical research
- EM Basic science research

Are there peer-reviewed EM journals based in the country?

Yes;

- EMA Journal
(<https://acem.org.au/Content-Sources/About/Publications/EMA-Journal>)
- Emergency Medicine Australasia
(<https://onlinelibrary.wiley.com/journal/17426723>)
- Australian Journal of Emergency Management
(<https://ajem.infoservices.com.au/>)
- Australasian Emergency Nursing Journal
(<https://www.journals.elsevier.com/australasian-emergency-nursing-journal>)

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.
 - Clinical rotations with direct patient care.
 - Research.
 - Short courses.
 - Teaching opportunities
 - IEM fellowship programs/placement
- Contact DevelopingEM.com

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Research.
- Short courses.

INTERESTING ONLINE EM RESOURCES

- <https://lifeinthefastlane.com/>
- <https://lifeinthefastlane.com/resources/podcasts/>

REFERENCES

- https://acem.org.au/getmedia/89835888-28f4-4f41-8e17-05d9f06a8671/ACE_AR2018_Year-in-Review_Fu
||

Austria

LEADERSHIP TEAM

- *Lead Ambassador:* **Bradley Hubbard**
- *Lead Country Report Author:* **Bradley Hubbard**
- *Contributing Author(s):* **Anton Laggner, Philip Eisenburge**

List of Professional EM Societies (1)

- Austrian Association of Emergency Medicine (AAEM); <https://www.aaem.at/>

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? No

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? Yes

History of EM in the country:

Emergency medicine care is delivered in Austrian ERs primarily by EMTs (70-90%) and doctors (10-30%) trained in internal medicine, anesthesiology, pulmonology and critical care or by general practitioners with additional training in prehospital care. The Austrian Association of Emergency Medicine (AAEM) continues to work toward the recognition of emergency medicine as a recognized medical specialty and actively collaborates with the European Society for Emergency Medicine (EUSEM).

What were the latest developments in emergency medicine in the country (last update 2018)?

There has been no change from prior years. Other medical specialties still oppose the creation of emergency medicine as a specialty. There is a limited national medical budget and the creation of a new specialty could mean less medical budget for the other specialties.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Overall supervision of medical specialties is managed by the Austrian Medical Chamber (Österreichische Ärztekammer). Other medical specialties are reluctant to add an additional specialty because of a fixed national medical budget which could result in decreased funding for the other specialties.

What is the biggest threat to the specialty of emergency medicine in the country?

Lack of cooperation from other medical specialties due to the limited medical budgets.

What specific needs can ACEP help with?

- Continue to work toward the recognition of emergency medicine in Austria.
- Public awareness of emergency medicine continues to grow.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 0%

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? No

Are medical student rotations with residency-trained EM specialists available in the country? No

EM TRAINING

Estimated number of residency-trained EM physicians in the country? None

Estimated number of EM resident physicians currently in training? None

List of EM Residencies: None

EM Fellowship programs: None

Skills within the scope of practice of a residency-trained emergency physician in the country:

The existing physicians who work in Austrian emergency rooms are not residency trained in emergency medicine but may perform many of these procedures based upon their specialty training

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

Specialty procedures are performed by physicians with expertise in that specialty

PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- X Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- X Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

- Local government
- Private organizations
- Hospitals

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

- Physicians
- Emergency Medical Technicians (EMT)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM public health research
- EM clinical research
- EM Basic science research

Are there peer-reviewed EM journals based in the country?

No, but there is close collaboration with peer-reviewed journals from Germany

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership

What opportunities are there in the U.S. for students, residents, or faculty from the country? None

INTERESTING ONLINE EM RESOURCES

- <https://www.aaem.at>

REFERENCES

- Personal communication with Dr. Laggner

Belize

LEADERSHIP TEAM

- *Lead Ambassador:* Mark Bruce
- *Deputy Ambassador:* Joy Mackey
- *Lead Country Report Author:* Joy Mackey

List of Professional EM Societies: None

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? No

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

Belize is an upper middle-income country in Central America that is home to approximately 375,000 inhabitants bridging both Caribbean and Central American cultures. Belize, due to its size, has no medical school or residency programs. There are no residency-trained emergency medicine specialists in country, and most physicians that practice in country do so directly out of medical school with very little formal post-graduate training and variable on-the-ground training. Nursing and other ancillary staff have similar varied backgrounds.

Belize has already demonstrated commitment to improving emergency care. Since 2012, a partnership to strengthen emergency care in Belize through the Medical College of Wisconsin (MCW) with significant training partners including Baylor College of Medicine (BCM), SUNY-Stony Brook and UC Davis have provided post-graduate short courses on key emergency medicine topics to a core group of ED physicians and nurses at KHMHA. Since 2015, BCM has also conducted independent pediatric emergency medicine training at KHMHA and instituted nationwide train-the-trainer based curriculum including the WHO Emergency Triage Assessment and Treatment (ETAT) with supplemental curricula relevant for use in Latin America developed by BCM/Texas Children's Hospital to improve outcomes for pediatric patients. Over 200 healthcare providers have completed the course, which is now self-sustainable with over 20 local ETAT trainers who are rolling-out ETAT nationwide. BCM has also partnered with the MOH to implement the WHO Basic Emergency Care (BEC) course by creating four regional training teams whose goal is to train every emergency and primary care provider in their region in BEC by the end of 2020. BCM has also

completed the first-ever epidemiological assessment of trauma and introduced modified trauma forms to prompt the ABCDE approach and facilitate the creation of a trauma registry, HIV screening guidelines, and introduced sepsis screening tools to improve emergency care at KHMHA.

What were the latest developments in emergency medicine in the country (last update 2018)?

The latest developments in 2018 include working towards specialist recognition with the medical board for those physicians who have been part of the core Medical College of Wisconsin (MCW) training group, nationwide rollout of WHO's Emergency Triage Assessment and Treatment (ETAT), partnering with Ministry of Health to implement the WHO's Basic Emergency Care (BEC) course, and the introduction of sepsis guidelines at Karl Heusner Memorial Hospital Authority (KHMHA). In addition, one of the core group of physicians at KHMHA completed an EMS fellowship at MCW in June 2018.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Emergency medicine is still early in development in Belize and has many hurdles to overcome. However, there is enthusiasm for the development of emergency medicine in the country, and there are many opportunities for further development. Challenges include lack of an in-country medical school and residency program, lack of residency trained EM physicians practicing in Belize, as well as a nationwide physician shortage. Opportunities for growth include:

- 1) Development of a certification examination and recognition of non-residency trained emergency physicians.
- 2) Development of an EM residency program.
- 3) Continued development of EM training for non-specialty trained providers, as well as emergency medicine research partnerships.
- 4) Development of an in-country medical school.

What is the biggest threat to the specialty of emergency medicine in the country?

Lack of training

What specific needs can ACEP help with?

- Clinical and educational resources.
- Supporting existing ongoing efforts to develop EM, such as the nationwide Basic Emergency Care rollout.
- Scholarships for in-country physicians to travel to ACEP Scientific Assembly.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 0%

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? Yes;

Postgraduate short courses on key emergency medicine topics from partners including the Medical College of Wisconsin, Baylor College of Medicine/Texas Children's Hospital, SUNY-Stony Brook and UC Davis.

Are medical student rotations with residency-trained EM specialists available in the country? No

EM TRAINING

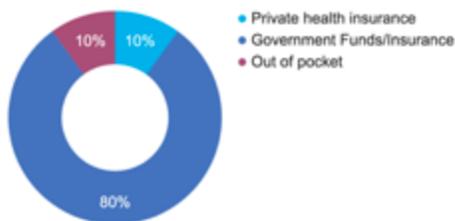
Estimated number of residency-trained EM physicians in the country? None

Estimated number of EM resident physicians currently in training? None

List of EM Residencies: None

EM Fellowship programs:None

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? No

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✗ Government ground ambulances
- ✓ Private ground ambulances
- ✗ Government air transport

- ✓ Private air transport

Under what authority is pre-hospital care?

- Ministry of Health
- Private Organizations

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✗ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

- Paramedics
- Emergency Medical Technician (EMT)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM public health research
- EM clinical research
- EM education based research

Are there peer-reviewed EM journals based in the country?

No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership
- Clinical rotation with direct patient care
- Research
- Short courses
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership
- Research
- Short courses

REFERENCES

- Reports from the Ministry of Health.
- Speaking with head of ED at KHMHA as well as other regional directors.

Bolivia

LEADERSHIP TEAM

- *Lead Ambassador:* Autumn Brogan
- *Lead Country Report Author:* Autumn Brogan

List of Professional EM Societies: None

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? No

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

Emergency medicine is just beginning. La Paz has started its first fellowship in emergency medicine. It is unclear the exact amount of individuals in the program at this time, but <10. There are only 2-3 physicians who are emergency physicians in the country. Emergency medicine is run by surgeons who triage patients to appropriate services in larger cities. The senior medical students in their 6th year of training (known as interns) often do much of the evaluation and care of the patients. In smaller facilities, nurses provide much of the care. There is currently no midlevel provider path for healthcare in the country,

Hospitals in larger cities are sometimes specialized by pediatrics, OB, infectious disease, etc. but may contain multiple specialties as well. There are both public and private hospitals. There is a system of governmental hospitals providing care to patients at free or reduced cost but the availability of medications and equipment can vary as funding is often lacking.

What were the latest developments in emergency medicine in the country (last update 2018)?

Currently, there are no national emergency medicine organizations in the country. This is an area that we are focusing on and developing in addition to developing a women in medicine organization. We are working with a couple of hospitals and health care systems in Cochabamba as well as networking with La Paz and Santa Cruz physicians to try to help support paths by which hospitals may gain governmental approval for emergency medicine residency

programs. This involves setting up research channels in emergency medicine. There are also U.S. led support systems to help establish the first poison control center in Bolivia. We have established ongoing mentorship, online learning resources, including a monthly Skype lecture series, and faculty development programs in the last year with San Simon Hospital, Universidad del Valle in Cochabamba, and the Bolivian non-profit organization Mano-a-Mano that provides care to over 150 clinics throughout Bolivia.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Hospital systems need to publish research in the field of EM to gain credibility in the specialty. Once an institution produces several publications, the government can consider its ability to create an emergency medicine residency program.

What are some specific clinical and academic faculty development needs in the country?

- Research
- Mentorship
- Collaboration between sites

We are currently establishing a national organization of physicians interested in emergency medicine which should help this effort.

What is the biggest threat to the specialty of emergency medicine in the country?

Lack of acceptance by other specialties serves as the biggest threat and the general lack of medical resources throughout the health system.

What specific needs can ACEP help with?

- Endorsement of conferences.
- Scholarships for learners.
- Support of the new emergency medicine physician interest group.
- Free access to educational resources in Spanish.
- Consultation on how to establish an emergency medicine residency program.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 0%

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? Yes;
Programs for general practitioners

Are medical student rotations with residency-trained EM specialists available in the country? No

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 1

Estimated number of EM resident physicians currently in training? 2

List of EM Residencies (1)

- La Paz, Bolivia

EM Fellowship programs:

- Critical care.
- Pediatric EM.

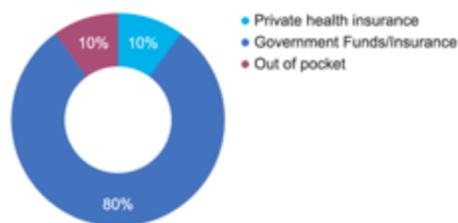
Skills within the scope of practice of a residency-trained emergency physician in the country:

It is unclear the exact procedures that will be learned at this point, as this is a new residency program.

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

Unclear at this time.

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? No

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✗ Government ground ambulances
- ✓ Private ground ambulances
- ✗ Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

Private organizations and hospitals

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

- Physicians, Nurses
- Paramedics
- Emergency Medical technician (EMT)
- Personnel without medical training

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country?

No, EM literature tends to be in other specialties such as critical care

Are there peer-reviewed EM journals based in the country?

No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership
- Clinical rotation with direct patient care
- Research
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership
- Clinical rotation with direct patient care
- Research
- Short courses
- Teaching opportunities

Botswana

LEADERSHIP TEAM

- *Lead Ambassador:* Andrew Kestler
- *Liaison(s):* Karabo Thokwane
- *Lead Country Report Author:* Karabo Mathudi Thokwane

List of Professional EM Societies: None

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? Yes

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? Yes

History of EM in the country:

The practice of Emergency medicine is quite new in Botswana. It started off in the private sector with the introduction of emergency medical services in the 1992. The government EMS started in 2010 with a pilot project in Gaborone and has since rolled out to 9 areas in Botswana. Prior to introduction of organized EMS, Botswana did have ambulance services. Public hospitals have ambulances that they use to transport patients between facilities. When there are emergencies on scene, nurses based on a rotation schedule will respond to these out of hospital incidences. These are people who are not trained in emergency medicine. Most of the EMS providers are located in the urban and peri urban areas. Therefore, where there is no formal EMS, the practices continue. The first emergency medicine speciality training started in 2011, and the first group graduated in 2018 and there are currently 3 qualified emergency physicians.

What were the latest developments in emergency medicine in the country (last update 2018)?

The first emergency medicine specialists, who also happen to be locals, completed their education. Two work for the University of Botswana and one is in the private sector.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Challenges:

The overall understanding of the practice of emergency medicine is still limited. There are also limited resources, and lack of technical assistance.

Opportunities for growth:

Botswana finally has its own emergency physicians and they are the only ones in the country. They can build capacity for EM, strengthen EMS systems, and be advocates for the development of emergency care and emergency medicine training.

What are some specific clinical and academic faculty development needs in the country?

- Building capacity for the EM program
- Introduction of an EM nursing subspecialty
- Bedside teaching
- EM staff.

What is the biggest threat to the specialty of emergency medicine in the country?

The public sector is unable to retain EM practitioners and the public sector provides more than 80% of care to the citizens.

What specific needs can ACEP help with?

- Consultative services.
- Technical assistance.
- Clinical resources.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 1-20%

Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? Yes

- Paramedic training
- EMT training

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians

100% of residency-trained EM specialists practice in large cities.

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 3

Estimated number of EM resident physicians currently in training? 4

List of EM Residencies (1)

- Master of Medicine in Emergency Medicine, University of Botswana School of Medicine.

EM Fellowship programs: None

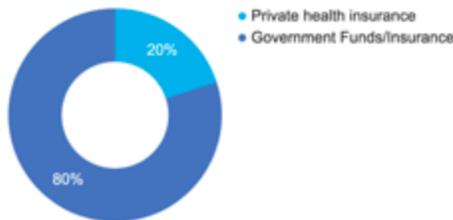
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- X Abdominal surgery (eg appendectomy)
- X Burr hole craniotomy
- X Cardiac catheterization
- X C-section
- X GI endoscopy
- X Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? No

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✓ Private air transport

The government outsources air ambulances for patients.

Under what authority is pre-hospital care?

Ministry of Health

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- X Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

- Nurses
- Paramedics
- Emergency Medical Technician (EMT)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country?

Yes;

- EM clinical research

Are there peer-reviewed EM journals based in the country?

No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership
- Clinical rotation with direct patient care
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership
- Research
- Short courses
- Teaching opportunities

Brazil

LEADERSHIP TEAM

- *Lead Ambassador:* Ross Tannenbaum
- *Liaison(s):* Anna Paula Freitas
- *Deputy Ambassador:* Carlos Torres
- *Lead Country Report Author:* Ross Tannenbaum
- *Contributing Author(s):* James Salway

List of Professional EM Societies (1)

- ABRAMEDE (Associação Brasileira de Medicina de Urgência e Emergência); <https://abramede.com.br/>

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? Yes

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? Yes

History of EM in the country:

Until quite recently emergency medicine as a specialty in Brazil did not exist. The first EM residency training program started in 1996 in Porto Alegre, the next 8 years later 2008 in Fortaleza. For an additional 8 years, 2016 there were no new programs. Between 2013 and 2015 emergency medicine became recognized as a specialty in Brazil, leading to explosive growth in EM residency programs, from 2 programs in 2015, to 12 programs in 2018, to 24 programs in 2019. Conferences in emergency medicine developed and executed by emergency physicians have also rapidly grown in numbers and sophistication including the notable biannual ABRAMEDE COBRAEM (Congress of Emergency Medicine).

What were the latest developments in emergency medicine in the country (last update 2018)?

- Rapid growth in emergency medicine training programs with 22 new programs becoming operational in the last 4 years.
- First qualifying exam equivalent to board certification examination.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Brazil is currently undergoing rapid growth in the number of emergency medicine programs. This presents a challenge to ensure there is curriculum uniformity among the various programs. The first board certification examination in EM was given in 2018. The examination needs to be further developed. The board certification exam needs to be promoted and recognized as an official pathway for non-residency trained emergency physicians with years of EM experience (the majority of practicing EM physicians today in Brazil) to become certified in EM.

What are some specific clinical and academic faculty development needs in the country?

Continued training and recruitment of qualified faculty.

What is the biggest threat to the specialty of emergency medicine in the country?

- Uncontrolled growth of emergency medicine residency training programs, leading to poor quality of residency training.
- Disfranchisement of non-residency trained physicians who have significant experience practicing emergency medicine leading to disruption of the political base needed to continue development of the specialty.

What specific needs can ACEP help with?

Link Associação Brasileira de Medicina de Urgência e Emergência membership with discounted and packaged ACEP membership.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 1-20%

Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? Yes;

Non-ABRAMEDE sponsored programs for a certificate in EM.

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



EM TRAINING

Estimated number of residency-trained EM physicians in the country? 150

Estimated number of EM resident physicians currently in training? 150

List of EM Residencies (24)

- Campo Grande, Mato Grosso do Sul.
- Escola de Saúde Pública do Ceará, Fortaleza, Ceará.
- Florianópolis, Santa Catarina.
- Hospital Alemão Oswaldo Cruz, São Paulo, São Paulo.
- Hospital da Cruz Vermelha Brasileira, Curitiba, Paraná.
- Hospital das Clínicas da Faculdade de Medicina de Ribeirão Preto da Universidade de São Paulo, Ribeirão Preto, São Paulo.
- Hospital das Clínicas da Faculdade de Medicina da Universidade de São Paulo, São Paulo, São Paulo.
- Hospital das Clínicas da Universidade Federal de Minas Gerais, Belo Horizonte, Minas Gerais.
- Hospital das Clínicas, Porto Alegre, Rio Grande do Sul
- Hospital de Pronto Socorro de Porto Alegre, Porto Alegre, Rio Grande do Sul
- Hospital Nossa Senhora da Conceição, Porto Alegre, Rio Grande do Sul (EM/IM program).
- Hospital Quanta D'Or, Rio de Janeiro, Rio de Janeiro.
- Hospital Santa Marcelina, São Paulo, São Paulo.
- Hospital São Lucas da PUCRS, Porto Alegre, Rio Grande do Sul.
- Indaiatuba, São Paulo.
- Montes Claros, Minas Gerais.
- MULTIVIX, Espírito Santo.
- Salvador, Bahia.
- Santa Casa de Misericórdia de Barretos, Barretos, São Paulo.
- Secretaria da Saúde, Distrito Federal.
- Universidade Estadual de Campinas (Unicamp), Campinas, São Paulo.
- Universidade Estadual do Oeste do Paraná (Unioeste), Cascavel, Paraná.
- Universidade Federal de Santa Maria, Santa Maria, Rio Grande do Sul.

- Universidade Federal de São Paulo, São Paulo, São Paulo.

EM Fellowship programs: None

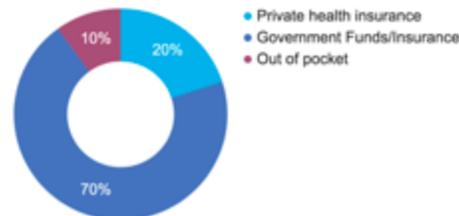
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- ✗ Abdominal surgery (eg appendectomy)
- ✗ Burr hole craniotomy
- ✗ Cardiac catheterization
- ✗ C-section
- ✗ GI endoscopy
- ✗ Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

Ministry of Health

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✗ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

- Physicians
- Nurses

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country?

No; fragmented, not organized by emergency medicine political body ABRAMEDE or by EM residency programs themselves.

Are there peer-reviewed EM journals based in the country?

No peer-reviewed EM journals; however, interestingly, there are several Brazilian EM textbooks.

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership
- Short courses
- Teaching opportunities
- Working knowledge of Portuguese is generally needed for any observership.

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership

REFERENCES

2018 Meetings:

- Drs. Ana Paula Freitas Residency Director HPS Porto Alegre, RGS
- Dr. Daniello Pedrollo Residency Director HCPA Porto Alegre
- Dr. Camilla Barcelo Residency Director Hospital of the Conception EM PA
- Dr. Paulo Schmitz, ED Medical Director Moinhos de Vento Hospital Porto Alegre
- Dr. Frederico Arnaud, Residency Director Fortaleza and President ABRAMEDE
- Drs Marcio Rodriquez and Bianca Bertuzzi, attending EM physicians HCPA PA
- ... as well as many other practicing emergency physicians and attendings.

Cambodia

LEADERSHIP TEAM

- *Lead Ambassador:* Donna Venezia
- *Deputy Ambassador:* Peter Acker
- *Lead Country Report Author:* Donna Venezia

List of Professional EM Societies: None

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? Yes

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? Yes

History of EM in the country:

The country has just developed pre-hospital EM care for large cities only. In a recent visit to a few government hospitals, it appears though, after speaking to staff, that this has not yet been actualized. Most ERs are staffed with general, non-residency trained doctors. In rural areas only health clinics without any doctor exist. Many ERs are relatively empty while large numbers of patients wait in general clinic waiting areas. For most, there is no true triage until they have seen a clinic doctor. A guard at the gate may be the one telling the patient which building to go to based on the symptoms they have. Some sites combine their general/follow up clinics with more acute patients in their ER.

What were the latest developments in emergency medicine in the country (last update 2018)?

Development of a pre-hospital system, particularly for the increasing numbers of trauma victims, is still a work in progress. As of now, ambulances primarily transfer patients from a lower level of care to a higher level of care once the patient reaches the first clinic/hospital on their own.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

The dual language medical system (one in French and one in English) limits equal opportunity for all medical school graduates. The government medical school teaches in French and the others (some just recently opened) teach in English. At one time, the medical school qualifying test for the limited residency spots was only in French. However, students say there has been a significant change in the past 3-4 years, and the qualifying exam now has many more

questions in English. Many more training programs are still needed for an adequate supply of EM specialists. A pre-hospital system is crucial for any true emergency care system. However, funding for pre-hospital care is a problem. Since most patients pay out of pocket, it is unlikely anyone would want to spend limited resources on an ambulance ride, knowing they might not be able to pay for the care they need once in the hospital.

What are some specific clinical and academic faculty development needs in the country?

Because the country lost a significant portion of their medical providers during the Khmer Rouge period, there are few clinically trained medical teachers available for the newer medical graduates. Medical students are well versed in book knowledge, but bedside teaching is limited. Until just recently, med students graduated with almost no clinical experience. Three to four years ago, med school protocols changed requiring the last two years of an 8 year program to encompass general clinical training in a hospital or some other medical facility. If selected for specialty training, i.e. gastroenterologist, those last 2-3 years are only in the specialty (no general internship first). Bedside teaching for new trainees and development of formal assessment of procedural/clinical abilities is still very much needed. Because older graduates were not able to get this training, many may benefit from this type of training too.

What is the biggest threat to the specialty of emergency medicine in the country?

- Problems in developing a true pre-hospital system need to be addressed and managed.
- EM is a combined specialty with critical care and anesthesiology, 4 year curriculum, with anesthesiology was the primary focus. EM needs to be a true specialty on its own to help develop EM further.

What specific needs can ACEP help with? All.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 1-20%

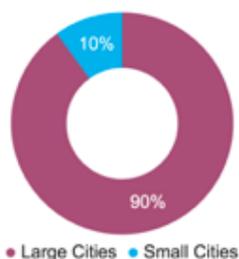
Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? Yes;

Basic EM training program for general practitioners without previous residency training after medical school.

Are medical student rotations with residency-trained EM specialists available in the country? No

Geographic Distribution of EM Physicians



EM TRAINING

Estimated number of residency-trained EM physicians in the country? 100

Estimated number of EM resident physicians currently in training? 8

List of EM Residencies (1)

- Combined Anesthesiology/Critical Care/EM program, Calmette Hospital, Phnom Penh.

EM Fellowship programs: None

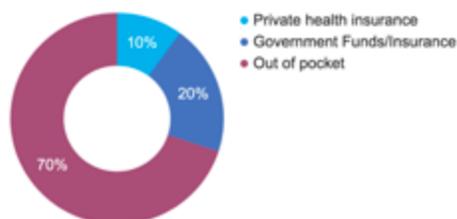
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- X Abdominal surgery (eg appendectomy)
- X Burr hole craniotomy
- X Cardiac catheterization
- X C-section
- X GI endoscopy
- X Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? No

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

Ministry of Health

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

- Physicians
- Nurses

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM public health research
- EM clinical research

Are there peer-reviewed EM journals based in the country?

No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership
- Research
- Short courses
- Teaching opportunities

REFERENCES

- Dr Cornelia Haener.
- Dr Kosal Chen.
- Dr Meng Chhouy.
- Dr Bounchan Youttiroung.

Cameroon

LEADERSHIP TEAM

- *Lead Ambassador:* Michael R. Gartner
- *Lead Country Report Author:* Michael R. Gartner

List of Professional EM Societies (1)

- The African Federation of Emergency Medicine;
<https://afem.africa/>

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? No

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

In the 1990's Yaoundé citizens and politicians witnessed a fatal fuel fireball blast, which sparked the immediate development, but short-lived existence, of a 2-year emergency medicine program. Hospital based emergency care is sometimes delivered in Emergency Centers, however nationwide the hospital ward (after the admission process) is where most care is initiated. The few hospital based ground ambulance services have nurses capable of providing oxygen and fluids during transfer between hospitals. Pre-hospital ground ambulances are sparse, expensive, and often with limited staff and equipment. Aero medical transport is sometimes available though the onboard attendant may have limited training and experience. For these reasons, each community is often left to manage their ill and injured, while seeking transportation to the hospital by private car, motorcycle or taxi.

Senior medical students and young general practitioners with some specialty backup often provide first line acute care in larger public, urban and teaching centers. In the rural setting, nurses, physician assistants and physicians often serve as acute care providers. Cameroon's population of 19 million people is almost equally divided between rural and urban settings yet physicians are disproportionately working in urban settings.

Per capita health care spending is far greater in urban settings and yet some of the greatest needs are in rural areas. The physician to citizen ratio is alarmingly low and the paucity of medical residency graduates will not be able to fill this gap. Nursing numbers are stronger and if given additional training and responsibility they could be a

valuable front line provider to the masses. First aid education to citizens could be a low cost, high yield endeavor.

What were the latest developments in emergency medicine in the country (last update 2018)?

None known.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Barriers include anything that distracts us from patient centered care and collegial education. A mission document could help us maintain focus.

Competition for the country's limited resources is a hurdle, which could be reduced with research and education grants.

What are some specific clinical and academic faculty development needs in the country?

Since Cameroon's emergency medicine development is in its infancy the opportunities are endless. However, when weighing these opportunities skillful EM physician educators will be foundational. Both visiting and African health care administrators, operational officers, financial officers, experts in logistics and security could fill important supporting roles.

What is the biggest threat to the specialty of emergency medicine in the country?

- Push back from surgical programs seeking similar resources.
- Corruption and mishandling of money is common.

What specific needs can ACEP help with?

- Grants and grant-writing workshops for the purpose of research and education.

EM WORKFORCE

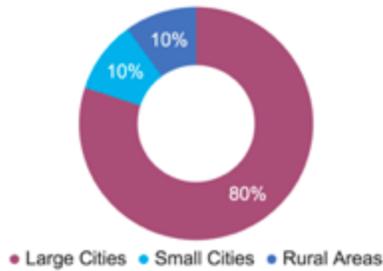
Estimated percent of EDs with at least one residency trained EM-physician? 1-20%

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? Yes

Are medical student rotations with residency-trained EM specialists available in the country? No

Geographic Distribution of EM Physicians



EM TRAINING

Estimated number of residency-trained EM physicians in the country? 1

Estimated number of EM resident physicians currently in training? None

List of EM Residencies: None

EM Fellowship programs: None

EMERGENCY CARE FUNDING

80% of national emergency medical care is paid out of pocket

PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? No

Are there medical control protocols for prehospital care in the country? No

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

- Local government
- Private organizations

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

- Nurses

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM clinical research

Are there peer-reviewed EM journals based in the country? No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical rotation with direct patient care
- Research
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical rotation with direct patient care
- Research
- Teaching opportunities

REFERENCES

- Cameroonian-borne and South African emergency medicine-trained Dr. Bonaventure Hollong.
- Report of meeting with Cameroon's Ministry of Health.

Canada

LEADERSHIP TEAM

- *Lead Ambassador:* Mark Bruce
- *Lead Country Report Author:* Mark Bruce

List of Professional EM Societies (1)

- Canadian Association of Emergency Physicians;
<https://caep.ca/>

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? Yes

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? Yes

History of EM in the country:

Emergency medicine is a well established specialty that is 40 years old, with parallel development with the emergency medicine specialty in the USA. Although there are variations from province to province, there is open access to emergency departments. Insurance coverage is only province-specific. There are 2 pathways for emergency medicine in Canada. One is provided by the Royal College, which is a 5 year residency training program, designed to equip physicians to practice in large urban and academic institutions. The second with a 1 year of EM training following completion of a 2 year family medicine residency (CCFP-EM), designed to equip physicians to practice in more suburban and rural environments. There is blending of the tracks in actual practice.

What were the latest developments in emergency medicine in the country (last update 2018)?

- Canadian Association of Emergency Physicians (CAEP) sponsored international outings.
- Enhancement of post graduate educational offerings (skill labs and focused training).

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth? Challenges: Struggling primary care, human resource shortages (predicted shortage of EPs by 2020 = 1000), soaring healthcare costs, aging demographic, and long wait times. Opportunities: Innovation within a limited budget, federal election in 2019, competency based medical education.

What are some specific clinical and academic faculty development needs in the country?

Competency based medical education, point of care ultrasound, continuing professional development.

What is the biggest threat to the specialty of emergency medicine in the country?

Healthcare costs

What specific needs can ACEP help with?

- Collaboration with national organization.
- Find synergies between organizations.
- Support of international organizations.

EM WORKFORCE

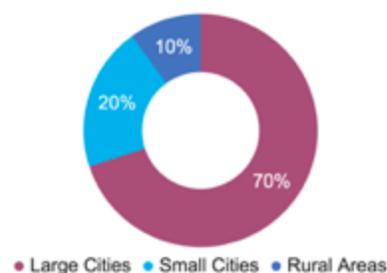
Estimated percent of EDs with at least one residency trained EM-physician? 61-80%

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? Yes; PA and NP programs

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



EM TRAINING

Estimated number of residency-trained EM physicians in the country? 3000

Estimated number of EM resident physicians currently in training? 420

List of EM Residencies (31)

- 14 Fellow of the Royal College of Physicians of Canada EM programs
- 17 Canadian College of Family Physicians – Emergency Medicine certificate sites.

EM Fellowship programs: Yes

- Critical care.
- Emergency medical services (EMS).
- Pediatric EM.
- Sports medicine.
- Ultrasound.

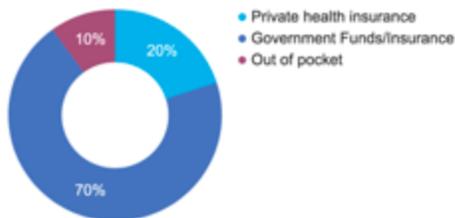
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- ✗ Abdominal surgery (eg appendectomy)
- ✓ Burr hole craniotomy
- ✗ Cardiac catheterization
- ✗ C-section
- ✗ GI endoscopy
- ✗ Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✗ Private ground ambulances
- ✓ Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

- Ministry of Health
- Hospitals
- Private organizations

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

- Physicians
- Nurses
- Paramedics

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM public health research
- EM clinical research
- EM Basic science research

Are there peer-reviewed EM journals based in the country?

Yes: Canadian Journal of EM

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership
- Clinical rotation with direct patient care
- Research
- Short courses
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership
- Clinical rotation with direct patient care
- Research
- Short courses
- Teaching opportunities

INTERESTING ONLINE EM RESOURCES

- Canadian Journal of Emergency Medicine

REFERENCES

- CAEP website.
- CIHI data.

China

LEADERSHIP TEAM

- *Lead Ambassador:* Li Jia
- *Lead Country Report Author:* Li Jia

List of Professional EM Societies (1)

- Chinese College of Emergency Medicine

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? Yes

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

EM started around 1980s. Chinese Association of Emergency Medicine was established in 1986. EM in China encompasses three main areas: pre-hospital medicine, emergency medicine, and critical care medicine. The most popular model of EM care in urban China is based on a multi-specialist approach.

What were the latest developments in emergency medicine in the country (last update 2018)?

- Standardization of EM training and certification.
- Evidence and protocol-based EM care.
- Inter-facility collaborations.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Inadequate financial support, lack of standardization of residency training and limited continuing medical education are the biggest challenges.

What are some specific clinical and academic faculty development needs in the country?

No single authoritative EM reference has been produced.

What is the biggest threat to the specialty of emergency medicine in the country?

Lack of funding, support and violence against medical staff in ED.

What specific needs can ACEP help with?

- Endorsement of conferences.
- Clinical resources.
- Educational resources.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 0%

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers?

Yes; Programs for general practitioners.

Are medical student rotations with residency-trained EM specialists available in the country? No

EM TRAINING

Estimated number of residency-trained EM physicians in the country? None

Estimated number of EM resident physicians currently in training? None

List of EM Residencies: None

*EM Fellowship programs:*None

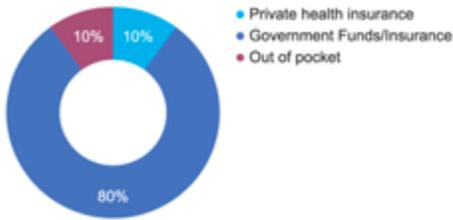
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- X Abdominal surgery (eg appendectomy)
- X Burr hole craniotomy
- X Cardiac catheterization
- X C-section
- X GI endoscopy
- X Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? No

Medically assisted transport provided by:

- X Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- X Private air transport

Under what authority is pre-hospital care?

Local government

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- X Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

- Physicians
- Nurses
- Paramedics
- Emergency Medical Technicians (EMT)
- Personnel without medical training

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM public health research
- EM clinical research
- EM Basic science research

Are there peer-reviewed EM journals based in the country?

Yes: Chinese Journal of Emergency Medicine

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Language classes
- Clinical observership
- Clinical rotation with direct patient care
- Research
- Short courses
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Language classes
- Clinical observership
- Clinical rotation with direct patient care
- Research
- Short courses
- Teaching opportunities

Colombia

LEADERSHIP TEAM

- *Lead Ambassador:* Christian Arbelaez
- *Liaison(s):* Eliezer Cohen
- *Deputy Ambassador:* Camilo Gutierrez, Andrés Patiño
- *Lead Country Report Author:* Andrés Patiño

List of Professional EM Societies (1)

- Asociación Colombiana de Especialistas en Medicina de Urgencias y Emergencias (ACEM); <https://www.acemcolombia.com/>

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? Yes

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

Colombia has been among the first countries to create and consolidate Emergency Medicine as a specialty in Latin America. The history of the development in chronological order is as follows:

- In 1996, CES University created the first residency program in Medellin; it is a 3-year program
- In 2001, The University of Rosario (Universidad del Rosario) founded the only 4-year residency program in the country
- In 2004, the University of Antioquia in Medellin, the first public university to offer the specialty of EM and is a 3-year program
- In 2005, the CES University decided to open a branch of the EM residency program in Cali, another major city, in conjunction with Fundación Valle del Lili; the branch in Cali closed in 2013
- In 2005, the Colombian Ministry of Social Protection recognized Emergency Medicine as a specialty; a major step for the specialty
- In 2008, Universidad Javeriana and FUCS University started residency programs in Bogota, both 3 years in length
- In 2013, Universidad de Caldas, in Manizales started a 3 year residency
- In 2014, Universidad ICESI and Fundación Valle del Lili started a 3 year residency
- The Asociación Colombiana de Especialistas de Emergencias (ACEM) stands currently as the most organized and recognized EM organization in the country with over

100 members. It has achieved full IFEM membership and has been involved with ACEP since 2007 and in ICEM since 2008.

- In 2010, the 1st ACEM Congress was held, and in 2012, the 2nd ACEM Congress was held in Bogota. After a period of stagnation, in 2017, the 3rd ACEM Congress was held in Medellin, with more than 300 attendees.
- After several years of stagnation, ACEM held elections and elected a new board of directors, board members from Bogota, Medellin and Manizales

What were the latest developments in emergency medicine in the country (last update 2018)?

June 2018:

- ICEM 2018, Mexico City.
- ACEP Ambassadors met with Colombian EM leaders and ACEM president.
- ACEP Ambassadors and ACEM members involved in the Spanish translation of BEC.
- Ambassadors facilitated meeting of ACEM president with Developing EM Conference organizers to discuss possible conference in Cartagena.

July 2018:

- Ambassadors visited emergency programs in Bogota and Medellin and met with faculty and residents from Bogota, Medellin, Cali and Manizales.
- BEC Implementation Pilot with medical schools.
- BEC in response to Venezuelan migration crisis: USAID grant application.
- Fulbright Project: Barriers to emergency care for ex-combatants in Colombia.
- Toolbox for the evaluation of the impact of armed conflict on the education of health professionals.

Dec 2018:

- ACEM Website is functional again and accepting membership fees.
- National law dictating residency training should be free.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

There needs to be a standing national EM Conference.

ACEM members need to become more organized so they can advocate for their patients and better working conditions.

The law dictating that residency training must be free of cost will create challenges for residency program financing since most are private and the new law does not provide funds to pay for training.

What are some specific clinical and academic faculty development needs in the country?

There is a need for organization and better bargaining power to improve working conditions. Faculty interested in research need international partners and access to research funding opportunities.

What is the biggest threat to the specialty of emergency medicine in the country?

Lack of organization and the local and national level.

What specific needs can ACEP help with?

- Continue connecting Asociación Colombiana de Especialistas en Medicina de Urgencias y Emergencias with resources as it becomes more organized and improves its programming.
- Connect Colombian faculty with research collaborators in the U.S.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 1-20%

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? No

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



EM TRAINING

Estimated number of residency-trained EM physicians in the country? 300

Estimated number of EM resident physicians currently in training? 200

List of EM Residencies (8)

- Fundación Universitaria de Ciencias de la Salud.
- Universidad CES.
- Universidad de Antioquia.
- Universidad de Caldas.

- Universidad del Rosario.
- Universidad ICESI.
- Universidad Javeriana, Bogotá.
- Universidad Javeriana, Cali.

EM Fellowship programs: None

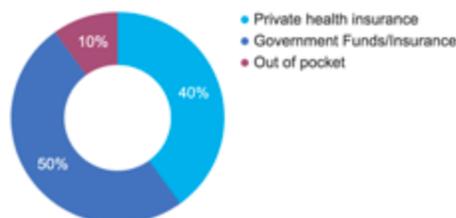
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- ✗ Abdominal surgery (eg appendectomy)
- ✗ Burr hole craniotomy
- ✗ Cardiac catheterization
- ✗ C-section
- ✗ GI endoscopy
- ✗ Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? No

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

Ministry of Health

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

- Physicians
- Paramedics
- Emergency medical technician (EMT)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM public health research

Are there peer-reviewed EM journals based in the country?

Yes

List of peer-reviewed EM journals in the country.

Urgentia (www.urgentiajournal.com);

Perspectivas en Urgencias, published by ACEM

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Language classes
- Clinical observership
- Clinical rotation with direct patient care
- Research
- Short courses
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Language classes
- Clinical observership
- Clinical rotation with direct patient care
- Research
- Short courses
- Teaching opportunities

INTERESTING ONLINE EM RESOURCES

- <https://www.acemcolombia.com/>

Costa Rica

LEADERSHIP TEAM

- *Lead Ambassador:* Camilo Gutierrez
- *Liaison(s):* Manrique Umana
- *Lead Country Report Author:* Manrique Umana, Camilo Gutierrez

List of Professional EM Societies (1)

- Asociación Costarricense de Emergenciólogos (ASOCOME)

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? Yes

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

Before the 1990s, emergency medicine (EM) care in Costa Rica didn't work as a system and was very disorganized. This prompted several institutions like the Costa Rican Social Security System (CCSS), the Ministry of Health, University of Costa Rica, the National College of Physicians, the National Insurance Institute, the local Red Cross, and Project HOPE to get together and develop a coordinated system involving both the prehospital and in-hospital care of patients requiring emergency care.

This initiative involved creating an EM service central (911) to coordinate among institutions, organizing transportation and training of EM technicians for the prehospital setting, and starting an EM residency program to train physicians on how to provide the best care for patients in the Emergency Department.

The program of physician training in the specialty of emergency medicine was developed during 1993 and it involved two phases: a faculty preparation course and the residency itself. The preparation of faculty members was undertaken with US emergency faculty physician residing in the host country to assist in the development of a curriculum suitable for the needs of the region. Twenty-one faculty members were prepared to teach the residency curriculum in what is known as the "grandfather generation".

After that, a selection process for prospective applicants to the residency program was done and the first residents began training in 1994. They graduated as emergency medicine specialists from the 3-year training program in 1997 and the same process has been going on for more than 20 years now. Even though there were very few training spots in the first years, the increasing need for EM trained physicians all around the country has pushed recently for great improvement in this regard. By 2018, more than one hundred EM physicians have completed training in Costa Rica.

What were the latest developments in emergency medicine in the country (last update 2018)?

Highlights of the current state of EM as a specialty in Costa Rica include:

- A robust and long-standing EM training program that continues to train EM physicians every year.
- An established medical society which gathers most EM physicians from around the country and it serves the key role to represent both EM clinicians and patients' best interests regarding emergency department care and management. Is because of this that EM is seen now as a critically important specialty among our Social Security System.
- Costa Rica has joined and is actively involved in many international EM groups and collaborations such as FLAME, the recently formed Federation of Latin American EM Societies.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

There's a need to make EM more attractive for general physicians. We need to get more spots for EM training. There needs to be a working group looking at ED overcrowding. We need better EM staffing in rural areas. We need better facilities and more equipment to make EM more resolute, and increased access to medications critical for our practice.

What are some specific clinical and academic faculty development needs in the country?

Scheduling needs to be fixed to avoid long shifts. There needs to be protected time for teaching. Incorporate an EM course in every Medical School curriculum. We need access to simulation as part of EM training and to start thinking about a board exam in the near future. Lastly, a working group looking at EM wellness.

What is the biggest threat to the specialty of emergency medicine in the country?

- Burnout and migration to other specialties are a big threat.
- Lack of sense of belonging to our EM society.
- New residency training programs who might not have minimal quality standards.

What specific needs can ACEP help with?

- Endorsement for our annual conference.
- Facilitate access for educational resources.
- Build a platform within site to promote EM physician communication.
- Promote local research involvement.
- Serve as a facilitator for exchange programs.

EM WORKFORCE

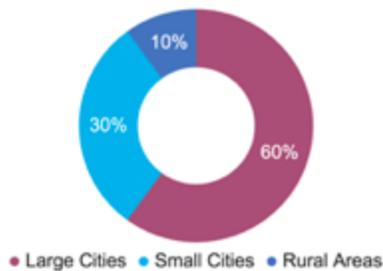
Estimated percent of EDs with at least one residency trained EM-physician? 61-80%

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? No

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



EM TRAINING

Estimated number of residency-trained EM physicians in the country? 110

Estimated number of EM resident physicians currently in training? 21

- List of EM Residencies (1)*
- University of Costa Rica Postgraduate Studies System.

EM Fellowship programs: None

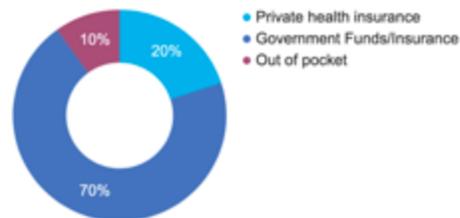
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- ✗ Abdominal surgery (eg appendectomy)
- ✗ Burr hole craniotomy
- ✗ Cardiac catheterization
- ✗ C-section
- ✗ GI endoscopy
- ✗ Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- X Lay people / bystanders
- ✓ Government ground ambulances
- X Private ground ambulances
- X Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

Ministry of Health

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

- Paramedics
- Emergency Medical Technicians (EMT)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? No

Are there peer-reviewed EM journals based in the country?
No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Language classes
- Clinical observership
- Clinical rotation with direct patient care
- Short courses
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership
- Short courses

INTERESTING ONLINE EM RESOURCES

- www.ViaMedEM.com
- Twitter: @CostaRicanEM

REFERENCES

- http://www.sep.ucr.ac.cr/images/MEDICINA/Despleg/Despl_Esp_Emergencia.pdf
- [https://www.annemergmed.com/article/S0196-0644\(99\)70108-3/abstract](https://www.annemergmed.com/article/S0196-0644(99)70108-3/abstract)

Cyprus

LEADERSHIP TEAM

- *Lead Ambassador:* Fotini Manizate
- *Contributing Author(s):* Fotini Manizate

List of Professional EM Societies: None

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? No

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

There is currently no organized emergency medical care in Cyprus. There are emergency departments in all big hospitals, whether private or public. These departments are staffed by non-emergency trained physicians however (typically either internal medicine trained or non-board certified/residency trained physicians). There is no official triage system such as the ESI system, therefore patients are treated first come first served or at the discretion of the physician staffing the ED. There are currently no rules governing the emergency care provided in Cyprus mainly due to the lack of a national emergency medicine foundation to issue guidelines. Physicians are of course able to keep abreast on current guidelines but without any government guidelines or re-credentialing rules for practicing. In addition, no prehospital care exists. The ambulance crew consists of a driver of the ambulance for home to hospital transfers and a physician escorting the patient for hospital to hospital transfers as necessary.

What were the latest developments in emergency medicine in the country (last update 2018)?

Steps were made in 2018 to create a fellowship in order to transfer physicians to the USA for 3-month intervals in an American College of Graduate Medical Education (ACGME) accredited academic setting. Here, fellows would be trained in pre-hospital procedures, triage/emergency severity index (ESI), current guidelines and protocols, and ultrasound sonography skills. Fellows would attend weekly conferences and also attend shifts in the ED shadowing a board-certified emergency medicine physician. A private philanthropic group was contacted that showed interest in funding the cause, pending approval from the Ministry of Health (MOH). A meeting with the MOH was subsequently held. Unfortunately, the fellowship was postponed due to a

national shortage of emergency department physicians in the country and already poor staffing of EDs in hospitals. Further discussions were made in order to create a national conference in Cyprus with local and international speakers and such efforts are still underway.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Challenges:

The first medical school in Cyprus was established in 2011. Without official training in the country it is hard to maintain continuous medical education. In addition, there is shortage of EM trained physicians and public funds in order to train physicians currently based in Cyprus, in EM practices. Furthermore, there is a lack of understanding of Emergency Medicine and its benefits.

Opportunities:

First and foremost, we need to organize a conference in Cyprus, where physicians receive training and education from academic faculty and physicians trained in countries where emergency medicine is a recognized specialty. This would increase awareness and understanding as to why emergency medicine training is so important. Secondly, to help improve emergency services and care on the island, we can send physicians from Cyprus to foreign countries for formal training in emergency medicine.

What are some specific clinical and academic faculty development needs in the country?

There are no Continuing medical education funds allowing physicians to travel abroad for continuous training. Since there are no conferences held in Cyprus, this makes continuing education difficult. There are also no Advanced cardiovascular life support/advanced trauma life support/pediatric advanced life support or other official courses mandated in the country. National or international conferences on the island are needed.

What is the biggest threat to the specialty of emergency medicine in the country?

- The biggest threat is that there is no official training required for a doctor to staff the emergency department.
- No official courses mandated to guide these physicians on best practices.
- There is also no official emergency medicine residency on the island.

What specific needs can ACEP help with?

- Endorsing conferences.
- Providing funds or sponsors to aid organizing a national conference.
- Hosting an international conference in Cyprus.

- Provide ACLS/ATLS/PALS instructors to the island.
- Personnel to train RNs or physicians in Emergency Severity Index triage.
- Facilitate meetings with the medical schools in order to assist in and endorse the creation of emergency medicine as a specialty/residency in the island.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 0%

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? No

Are medical student rotations with residency-trained EM specialists available in the country? No

EM TRAINING

Estimated number of residency-trained EM physicians in the country? None

Estimated number of EM resident physicians currently in training? None

List of EM Residencies: None

EM Fellowship programs: None

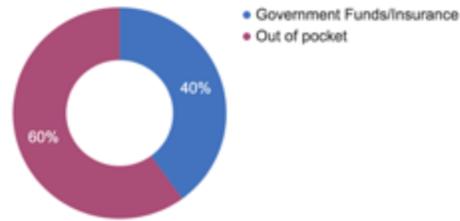
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
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| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- X Abdominal surgery (eg appendectomy)
- X Burr hole craniotomy
- X Cardiac catheterization
- X C-section
- X GI endoscopy
- X Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? No

Medically assisted transport provided by:

- X Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- X Government air transport
- X Private air transport

Under what authority is pre-hospital care?

Ministry of Health

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- X Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

- Physicians
- Personnel without medical training

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? No

Are there peer-reviewed EM journals in the country? No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership
- Clinical rotation with direct patient care
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Short courses

Dominican Republic

LEADERSHIP TEAM

- *Lead Ambassador:* Amado Alejandro
- *Lead Country Report Author:* Amado Alejandro
- *Contributing Author(s):* Laura Sosa

List of Professional EM Societies (1)

- Sociedad Dominicana de Emergenciología (SODOEM)

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? Yes

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

- 1995- First EMS/ paramedic class graduates at the Hospital Dario Contreras
- 1996 the first professional prehospital care society was founded, the Dominican Society of Prehospital Medicine, the SDMPH sponsored the first official International Trauma Life Support Chapter (ITLS/BTLS)
- 2000 the first EM residency is created at the Hospital Dario Contreras, the only trauma hospital in Santo Domingo
- 2007 Healthcare Reform is implemented making emergency care mandatory (Law 42-01)
- 2005, the Emergency Medicine Interest Groups are promoted at Dominican Universities, currently there are 4 EMIGs in DR.
- 2008, the Dominican Society of Emergency Medicine (@SODOEM) creates its charter and gets recognized by the Dominican Medical College
- 2007 Sub specialty courses start at local universities with US collaborations. Toxicology, ED Administration, Trauma, Ultrasound
- 2009 the first full Academic Department of Emergency Medicine and Critical Care is created at the Hospital General Plaza de la Salud and UNIBE
- 2010- Fundacion Carolina Spain grants training for 30 physicians to complete the University of Barcelona Masters in Emergency and Critical Care
- 2010- and MOU is signed between the US DOD and the HGPS allowing trauma and US education
- 2010, Emergency physicians are recognized for Critical Care Fellowship training

- 2012, an MOU is signed between the University of Barcelona and UNPHU for access to the UB Masters in Emergency and Critical Care
- 2014- The National 911 System becomes operational
- 2016- The first Pediatric Emergency Medicine Fellowship is launched at the Hospital Robert Reid
- 2016 the COSMOS Simulated Hospital is opened at the Universidad Nacional Pedro Henriquez Urena
- 2019- the Project TraumaRD.org Vision2020 is launched, where the framework for a National Trauma System will be developed with collaboration from multiple agencies and organizations
- 2019- the Diploma in Emergency Department Management is launched at UNPHU

What were the latest developments in emergency medicine in the country (last update 2018)?

- Strengthening of the professional society, Sociedad Dominicana de Emergenciología (SODOEM) with participation in international forums and organizations.
- Development of the TraumaRD.org Vision 2020 program to create the basis of a National Trauma System Integration of Universidad Autónoma de Santo Domingo (UASD) (1st University in the Americas) to the Emergency Medicine Interest Group (EMIG) network.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

We need proper compensation for emergency care, board certification/ standardization for emergency physicians and development of an EM Journal.

What are some specific clinical and academic faculty development needs in the country?

Education, administration and political action.

What is the biggest threat to the specialty of emergency medicine in the country?

Lack of job security and proper compensation.

What specific needs can ACEP help with?

- Endorsement of conferences.
- Faculty development.
- Continuing Medical Education.
- Clinical guidelines and protocols.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 1-20%

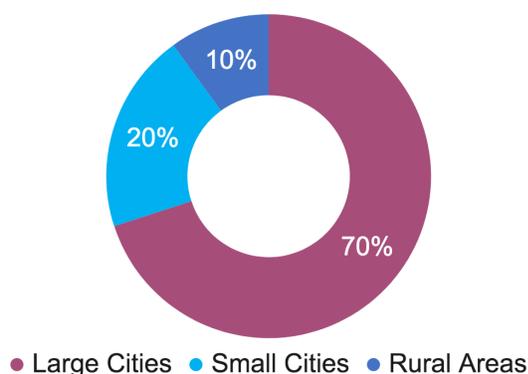
Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? Yes;

Programs include a Master's and several certificate diplomas.

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



EM TRAINING

Estimated number of residency-trained EM physicians in the country? 244

Estimated number of EM resident physicians currently in training? 344

List of EM Residencies (9)

- Clinica Union Medica.
- Hospital Antonio Musa.
- Hospital Dario Contreras.
- Hospital General Plaza de la Salud.
- Hospital Jose Maria Cabral y Baez.
- Hospital Juan Bosch.
- Hospital Ricardo Limardo.
- Hospital Salvador B Gautier.
- Universidad Catolica Nordestana.

EM Fellowship programs:

- Critical care.
- Pediatric EM.

Skills within the scope of practice of a residency-trained emergency physician in the country:

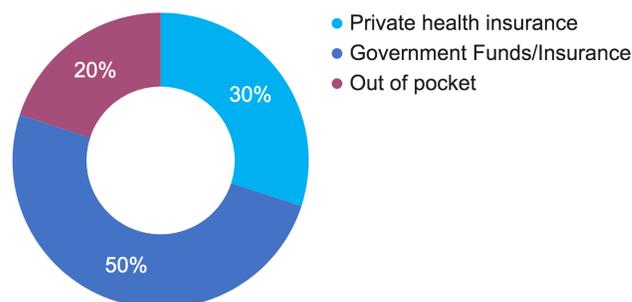
- ✓ Cardiac pacing
- ✓ Central venous access
- ✓ Chest tube
- ✓ Cricothyrotomy
- ✓ Dislocation reduction
- ✓ Intubation
- ✓ Lumbar puncture
- ✓ Pericardiocentesis
- ✓ Procedural sedation
- ✓ Vaginal delivery

✓ ED bedside ultrasound

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- ✗ Abdominal surgery (eg appendectomy)
- ✗ Burr hole craniotomy
- ✗ Cardiac catheterization
- ✗ C-section
- ✗ GI endoscopy
- ✗ Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✗ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✗ Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

Other national governmental agency

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✗ Hospital to hospital (interfacility)
- ✗ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, Nurses

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM public health research
- EM clinical research

Are there peer-reviewed EM journals based in the country?

No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Language classes
- Clinical observership.
- Clinical rotations with direct patient care.
- Research.
- Short courses.
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Clinical rotation with direct patient care.
- Language classes.
- Research.
- Short courses.
- Teaching opportunities.

INTERESTING ONLINE EM RESOURCES

- www.Facebook.com/sodoemrd
- Twitter: @sodoemRD
- www.Saludgerencia.blogspot.com
- www.TraumaRD.org

REFERENCES

- <https://www.resumendesalud.net/46-emergenciologia/14480-uasd-tiene-nuevo-grupo-de-emergencias-medicas>
- <https://www.resumendesalud.net/79-ortopedia-y-traumatologia/13971-destacado-emergencilogos-presenta-propuesta-en-trauma>

Ecuador

LEADERSHIP TEAM

- *Lead Ambassador:* Andrés Patiño
- *Liaison(s):* Augusto Maldonado
- *Deputy Ambassador:* Alexis Kearney
- *Lead Country Report Author:* Andrés Patiño

List of Professional EM Societies (1)

- Sociedad Ecuatoriana de Medicina de Emergencias y Desastres (SEMED)
<https://semed-ec.com/>

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? Yes

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? Yes

History of EM in the country:

The history of the Emergency Medicine Specialty in Ecuador spans 3 decades. Physicians with interest in Emergency Medicine created the Ecuadorian Society of Emergency Medicine and Disasters in 1987, which is active to this day. In 1989, Hospital Carlos Andrade Marín graduated the first Emergency Medicine Specialist in the country in 1993. Also in 1993, the Health Ministry, with help and advice from the Pan-American Health Organization, recognized the need for training physicians able to manage clinical situations derived from disasters, trauma and emergent situations and created the first residency program for “Emergency Medicine and Disasters,” at Universidad Central, in Quito. Currently, there are two residency programs in the country, both in Quito. The specialty has gained recognition in Quito among other medical specialties, patients, medical students, and hospital administrators. However, the specialty has been slow to expand outside of Quito, and very few residency-trained EM physicians practice in the rest of the country. The uptake of residency-trained EM physicians has also been slow in private hospitals. Therefore, most emergency care in the country is still provided by general practitioners without residency training or residency-trained physicians from other specialties. Prehospital care was initially provided by volunteers from institutions such as the Ecuadorian Red Cross, the Scout Movement, and Civil Defense. In 1998, Red Cross created a more formalized system, and over the years the government took a greater role in the EMS. The national

emergency line, called ECU911, was created for the city of Quito in the late 90s, and the Health Ministry started taking over EMS gradually. In 2011, ECU911 line was extended to the whole country.

What were the latest developments in emergency medicine in the country (last update 2018)?

Dr. Maldonado, ACEP Liaison, and Dr. Patiño, ACEP Ambassador, were invited to participate in the Ecuadorian Society of Emergency Medicine and Disasters in Ambato in December of 2018. Drs. Maldonado and Patiño were also invited to the society’s business meeting during which the board agreed to make the recruitment of new members a priority. The board also agreed to do away with the requisite of a “substantial research project” for new members. The ambassador team visited hospitals in Ambato and Quito and met with multiple leaders in emergency medicine in the country. Planning was started for an emergency medicine leadership conference with international speakers in Quito in the Fall.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

There are large disparities in resources between the private and public healthcare sectors as well as between urban and rural areas. Shortages in medical supplies, long wait-times, and crowding are common. More efficient coordinated responses to time-sensitive pathologies such as STEMI, stroke and trauma are needed at the hospital, regional, and national levels. For example, stroke patients very rarely receive thrombolysis in the country due to delays in presentation, evaluation, and transfer, as well as lack of efficient stroke management systems and resources in hospitals. One important opportunity for improving emergency care conditions in the country is empowering and collaborating with Ecuadorian Emergency Physicians to take on leadership roles in healthcare leadership, quality improvement, education and research, so they can address the most pressing needs of their patients and their specialty.

What are some specific clinical and academic faculty development needs in the country?

There is great interest in research among emergency medicine faculty. However, the academic productivity is low. Faculty have a heavy clinical and teaching load and have little or no protected time for research. There is also a lack of research technical skills as well as role models and mentors in research that leads to peer-reviewed journal publications. All residents are required to conduct one research project during residency, but most projects are small and go unpublished. International mentorship and collaboration in research could be beneficial. Many Ecuadorian faculty would be interested in international exchanges and collaborations, which could help spark

innovation in education, quality improvement, and leadership in emergency medicine.

What is the biggest threat to the specialty of emergency medicine in the country?

- Lack of recognition of emergency medicine as a critical component of the healthcare system, especially outside of Quito. Certificate programs in emergency medicine are also a threat as they are being perceived as equivalent to residency training, though they have very little training in direct patient care, are shorter and of much lower quality than residency training.
- Reimbursement is also a barrier to growth since in the current system private hospitals benefit financially from having emergency care providers consult subspecialties for care that could be provided more efficiently by emergency physicians.

What specific needs can ACEP help with?

- Endorsement of local conferences.
- Connecting Ecuadorian Emergency physicians with colleagues in the U.S. for clinical, leadership, research and educational exchanges.

EM WORKFORCE

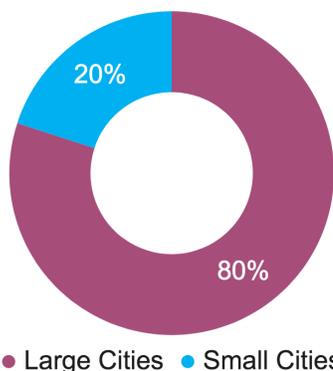
Estimated percent of EDs with at least one residency trained EM-physician? 1-20%

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? Yes; Certificate and other classroom/simulation courses for general and EM physicians; of various lengths and may not include supervised clinical practice.

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



EM TRAINING

Estimated number of residency-trained EM physicians in the country? 200

Estimated number of EM resident physicians currently in training? 110

- List of EM Residencies (2)*
- Postgrado Pontificia Universidad Católica del Ecuador.
 - Postgrado Universidad Central del Ecuador.

EM Fellowship programs: None

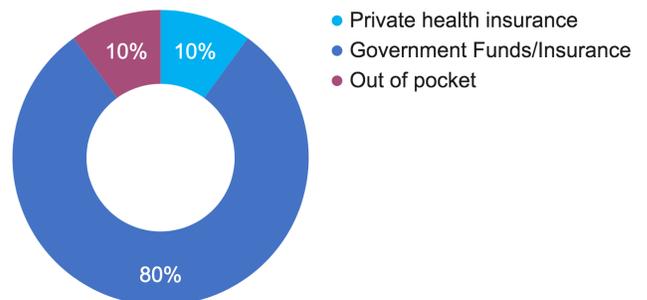
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- X Abdominal surgery (eg appendectomy)
- X Burr hole craniotomy
- X Cardiac catheterization
- X C-section
- X GI endoscopy
- X Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

Ministry of Health, hospitals, private organization

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, Paramedics, Emergency medical technician (EMT)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM public health research

Are there peer-reviewed EM journals based in the country?

No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Language classes
- Clinical observership.
- Clinical rotations with direct patient care.
- Research.
- Short courses.
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Language classes.
- Research.
- Short courses.

INTERESTING ONLINE EM RESOURCES

- www.worldemergencymedicine.org/ecuador

REFERENCES

- *Conversations with residents, emergency physicians and other medical specialists.*
- *Published resources.*

Egypt

LEADERSHIP TEAM

- *Lead Ambassador:* Jon Mark Hirshon
- *Lead Country Report Author:* Jon Mark Hirshon
- *Contributing Author(s):* Wesam Ibrahim & Walid Hammad

List of Professional EM Societies (3)

- Egyptian Society of EM (EgSEM)
- Egyptian Trauma Society (EgT)
- Egyptian Resuscitation Counsel (ERC)

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? Yes

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? Yes

History of EM in the country:

The Egyptian Board of Emergency Medicine was established in 2001-2002 as a clinical degree awarded by the Ministry of Health and Population through an Egyptian Fellowship Training program (equivalent to a US based residency program) granting a professional and not an academic degree. It has played an important role in broadcasting the specialty among physicians. The clinical training started as three year training program, but was subsequently turned into a four year program for trainees registered in 2010 onward. Its scientific committee is headed by Prof. Dr. Hussein Sabry. (Of note, Egyptian specialty boards are more like clinical specialty training with formal governmental recognition upon completion. An alternate mechanism, and generally more prestigious within Egypt, for training in emergency medicine is to complete a university based training program resulting in a masters or doctorate in emergency medicine. There are currently six Egyptian universities that have formal emergency medicine programs:

- 1) Alexandria University started its master program in 1978-1979 and doctorate in 2012.
- 2) Suez Canal University started its master program in 2004 and doctorate in 2006.
- 3) Tanta University started its master program in 2009 and doctorate in 2013
- 4) Mansoura University started its master in 2012 with no doctorate degree yet.
- 5) Menoufia University started both master and doctorate in 2013.

6) Al-Azhar University, both masters and doctorate starting in 2019

Concerning academic placement post-residency and promotion, three Egyptian universities have independent Departments of Emergency Medicine:

- 1) Suez Canal has the first independent Department of Emergency Medicine in Egypt, established in 200, with the first assistant lecturer "specialist" in 2004 and the first lecturer "consultant" in March 2011. The first assistant professor in emergency medicine earned this degree in August 2016. It is the only Emergency Medicine department in Egypt with two assistant professors. Suez Canal University started medical student teaching programs for the 4th and 6th year medical students for the first time in 2012 and organized four Emergency Medicine Conferences in Egypt.
- 2) Alexandria University, although with the first training program started in 1978, established their Department of Emergency Medicine in 2006. They subsequently developed the first career staff in 2007, the first assistant lecturer in 2010 and first lecturer in 2017.
- 3) Tanta University's Department of Emergency Medicine was established in 2011 along with their first assistant lecturer in 2011

Of note, Mansoura University, started an early training program in 1993 but without academic certificates or promotion. Their formal academic program started in 2012 and they are approved to have a separate Department of Emergency Medicine. Menuofya University is still a unit of the General Surgery Department, though they had their first assistant lecturer in 2016.

What were the latest developments in emergency medicine in the country (last update 2018)?

Please see above for history and recent developments.

Other areas of growth include:

- In 2010, the British Royal College of Emergency Medicine accepted Egypt as one of the accredited centers to the Member of the College of Emergency Medicine (MCEM) part A exam and the first exam was held in June 2010.
- The Egyptian Society of Emergency Medicine was established in 2012, led by Prof. Dr. Hussein Sabry. It has held an annual conference since 2012. In 2013, it became a member of African Federation of Emergency Medicine and is currently in process to be a full member of the International Federation of Emergency Medicine.
- The Egyptian Resuscitation Council was established in 2001 in collaboration with the European Resuscitation Council. It has held a number of various successful life support/trauma care courses and is headed by Prof. Dr. Gamal Abbas.
- The Egyptian Trauma Society was established in 2015 with its first conference in the same year and it is headed by Prof. Dr. Adel Abdel Aziz, Consultant of Emergency Medicine in the UK.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Although emergency departments are relatively better staffed with emergency medicine trained physicians than they were in the past, the scope of emergency medicine practice is inconsistent between hospitals. Lack of emergency department operational/ management science typically renders emergency departments at variance with international standards/benchmarks from developed countries. Emergency physician training can be improved by increasing supervision and developing standard practice guidelines. Emigration of trained emergency physicians seeking rewarding employment opportunities to the Gulf region remains an unsolved issue. Additionally, there remains a lack of awareness of emergency medicine among well-established specialties.

What are some specific clinical and academic faculty development needs in the country?

Specific areas of potential growth include: Continue to help create centers of excellence and training locations with mentors from the US to help train physicians and nurses in emergency care. Help train physicians and nurses to serve as mentors and trainers. Work on improving emergency department designs, guidelines, and policies. Create a committee for emergency medicine where emergency physicians monitor and improve the training and exams created by universities. Hold regional conferences to enhance emergency medicine in Egypt and the region of the Middle East. More clinical training and conference attendance. Clear curriculum and rules among other specialties.

What is the biggest threat to the specialty of emergency medicine in the country?

Lack of awareness and low salaries in comparison with other nearby countries.

What specific needs can ACEP help with?

- Help scholars to attend conferences.
- Clinical shadowing.
- Access websites.
- Online training.

EM WORKFORCE

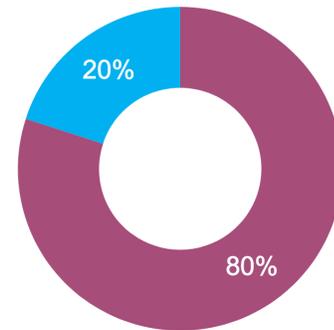
Estimated percent of EDs with at least one residency trained EM-physician? 1-20%

Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? No

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



● Large Cities ● Small Cities

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 405

Estimated number of EM resident physicians currently in training? 405

List of EM Residencies (2)

There are two different ways to obtain training in emergency medicine in Egypt. One is through the Ministry of Health's Egyptian Board of Emergency Medicine, and the other is through academic programs:

- Al-Azhar University (Master's, Doctorate).
- Alexandria University (Master's, Doctorate).
- Mansoura University (Master's only).
- Menoufia University (Master's, Doctorate).
- Suez Canal University (Master's, Doctorate).
- Tanta University (Master's, Doctorate).

EM Fellowship programs: None

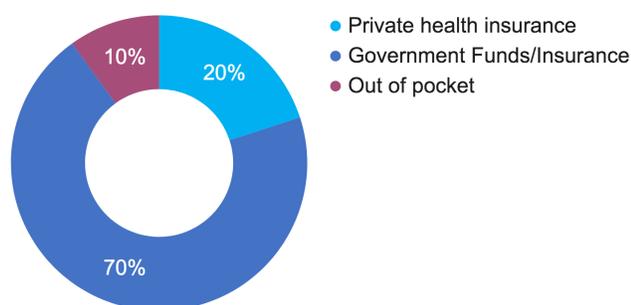
Skills within the scope of practice of a residency-trained emergency physician in the country: a number of these procedures are learned in training, but are rarely done in practice as the specialist consults do them

- | | |
|-------------------------|-----------------------|
| ✗ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✗ Pericardiocentesis |
| ✗ Cricothyrotomy | ✓ Procedural sedation |
| ✗ Dislocation reduction | ✗ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- X Abdominal surgery (eg appendectomy)
- X Burr hole craniotomy
- X Cardiac catheterization
- X C-section
- X GI endoscopy
- X Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

Ministry of Health

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, Nurses, Paramedics, Emergency medical technician (EMT), Personnel without medical training

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM public health research
- EM clinical research
- EM Basic science research

Are there peer-reviewed EM journals based in the country?

No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Language classes
- Clinical observership.
- Clinical rotations with direct patient care.
- Research.
- Short courses.
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Language classes.
- Research.
- Short courses.
- Teaching opportunities.

INTERESTING ONLINE EM RESOURCES

- <https://www.facebook.com/SonoschoolEgypt/>

REFERENCES

- Hammad, W et al, Egypt: 2014 Field Report, EPI, Issue 13.
- Montaser, T, Emergency medicine in Egypt: Current situation and future prospects, AfJEM, 2013 Volume 3, Issue 4, Supplement, Pages S20–S21.
- Ibrahim, W and Mowafi, H. Emergency Medicine as a separate specialty in the Egyptian Universities, published poster ICEM April 2016.
- Official Websites.
- Conferences brochures.
- Universities record.

El Salvador

LEADERSHIP TEAM

- *Lead Ambassador:* Eric Cioe Pena
- *Liaison(s):* Carlos Orellana-Jimenez
- *Lead Country Report Author:* Eric Cioe Pena

List of Professional EM Societies (1)

- Asociacion Salvadoreña de Emergencias;
<https://asaemergencias.org/>

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? No

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

Emergency Care in El Salvador is in its Infancy, there is still limited training, no specialty recognition but an active association working to change that.

What were the latest developments in emergency medicine in the country (last update 2018)?

Another successful Asociación Salvadoreña de Emergencias (ASAE) conference on sepsis and a 2019 conference on trauma.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

National recognition and residency training program support.

What are some specific clinical and academic faculty development needs in the country?

Ultrasound courses and basic emergency care.

What is the biggest threat to the specialty of emergency medicine in the country?

Inaction by government actors.

What specific needs can ACEP help with?

Additional leverage and support lobbying the Ministry of Health of El Salvador.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 1-20%

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? Yes;

EM rotation for Emergency care fellows, residents and medical students in IM, surgery and OB/GYN.

Are medical student rotations with residency-trained EM specialists available in the country? No

Geographic Distribution of EM Physicians

100% of residency-trained EM specialists practice in large cities.

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 2

Estimated number of EM resident physicians currently in training? None

List of EM Residencies: None

EM Fellowship programs: None

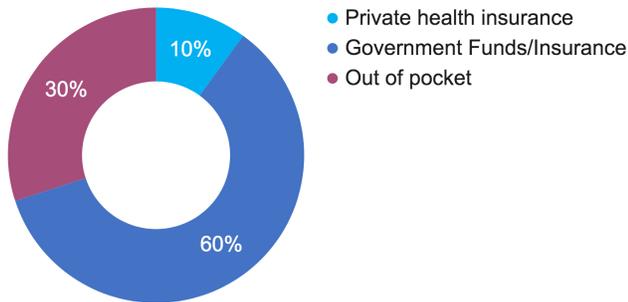
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- X Abdominal surgery (eg appendectomy)
- X Burr hole craniotomy
- X Cardiac catheterization
- X C-section
- X GI endoscopy
- X Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? No

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

Ministry of Health

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✗ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, Nurses, Personnel without medical training

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? No

Are there peer-reviewed EM journals based in the country? No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.
- Research.
- Short courses.
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Clinical rotation with direct patient care.
- Research.
- Short courses.
- Teaching opportunities.

Ethiopia

LEADERSHIP TEAM

- *Lead Ambassador:* Getaw Worku Hassen
- *Lead Country Report Author:* Getaw Worku Hassen

List of Professional EM Societies (1)

- Emergency Medicine Professionals (ESEP)

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? Yes

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

Emergency Medicine is a recognized entity and a residency program has been established in Black Lion Hospital, part of the Medical school in the capital city Addis Ababa, Ethiopia. The first class graduated 2010 and now other hospitals have started residency programs in EM. In addition, more recently former residents have started taking advanced courses/fellowships in critical care.

What were the latest developments in emergency medicine in the country (last update 2018)?

There are two EM residency programs in the capital city. The residency program started with 5 residents and over the years it grew to 15-20. Another EM residency program is at St. Paul Millennium Hospital- Addis Ababa Burn Emergency and Trauma (AaBET) Hospital. This is a relatively new program that started 3 years ago with a total of 50 residents. Some of the faculty have now started critical care fellowships abroad and in Addis Ababa.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Lack of medication, equipment and inadequately trained EM staff.

What specific needs can ACEP help with?

- Capacity building.
- Support resources for education and teaching residents.

EM WORKFORCE

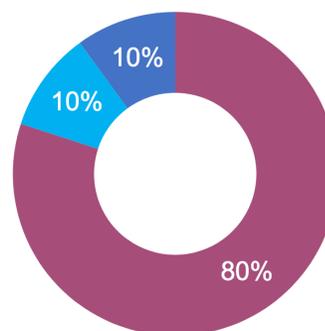
Estimated percent of EDs with at least one residency trained EM-physician? 1-20%

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? Yes

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



- Large Cities
- Small Cities
- Rural Areas

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 100

Estimated number of EM resident physicians currently in training? 60

List of EM Residencies (2)

- St. Paul Millennium Medical College - Addis Ababa Burn Emergency and Trauma (AaBET) Hospital.
- Tikur Anbesa (Black Lion) Specialized Hospital - Addis Ababa University.

EM Fellowship programs:

- Critical care.

Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✗ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- Abdominal surgery (eg appendectomy)
- Burr hole craniotomy
- Cardiac catheterization
- C-section
- GI endoscopy
- Surgical fixation of fractures

EMERGENCY CARE FUNDING

30% of national emergency medical care costs paid by government healthcare funds/ government insurance.

PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? No

Medically assisted transport provided by:

- Lay people / bystanders
- Government ground ambulances
- Private ground ambulances
- Government air transport
- Private air transport

Under what authority is pre-hospital care?

Private organization

What is the pre-hospital service used for?

- Scene to hospital
- Hospital to hospital (interfacility)
- Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Emergency medical technician (EMT)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM public health research
- EM clinical research
- EM Basic science research

Are there peer-reviewed EM journals based in the country?

No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.
- Clinical rotations with direct patient care.
- Research.
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country? None

European Society for Emergency Medicine (EUSEM)

LEADERSHIP TEAM

- *Lead Ambassador:* Terrence Mulligan
- *Lead Country Report Author:* Terrence Mulligan

List of Professional EM Societies (5+)

- European Society for Emergency Medicine;
<https://eusem.org/>

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? Yes

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? Yes

History of EM in the country:

Europe encompasses not only fifty or more different languages and cultures, but also a similar number of different systems of health care and medical practice. Each country has different medical traditions, different systems of professional registration and differing lists of medical specialties. This latter problem has been addressed in part by the European Union and, in particular, by the Department or Directorate-General which deals with the Internal Market and which includes the mutual recognition of diplomas and other free movement issues. The relevant EU Directive for medical qualifications is known as the 'Doctors' Directive' and was first issued as 1993/16/EC, but most recently updated as 2006/100/EC.

The Directive requires that the period of training for Emergency Medicine should be a minimum of five years and many EU countries have now recognized Emergency Medicine as a primary specialty with these training requirements. Emergency Medicine also exists in several countries as a supra-specialty. See complete list of EM as primary specialty and number of training years per country here. Several of the remaining EU countries are making significant progress towards recognition of the specialty, but it can be a slow and arduous journey! Nonetheless, there has been a very significant increase in the recognition of Emergency Medicine as a primary specialty in Europe during

the last decade and this is in line with the rest of the world where there is similar growth in recognition of the specialty.

What were the latest developments in emergency medicine in the country (last update 2018)?

EU-wide recognition of EM as a specialty, EU board exam in EM, academy of EuSEM, fellowship of EuSEM, EU registry, EU curriculum.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Resistance from other specialties to accept EM as a specialty, lack of advocacy of EM and EPs, lack of funding

What are some specific clinical and academic faculty development needs in the country?

Faculty development in multiple clinical and non-clinical sub specialties, EM legislating, policy, financing and public health.

What is the biggest threat to the specialty of emergency medicine in the country?

- Resistance from other specialties.
- Lack of advocacy of EM and EM physicians.

What specific needs can ACEP help with?

- Faculty development in multiple clinical and non-clinical subspecialties.
- EM legislation.
- Policy.
- Financing.
- Public health.
- Society to society level collaborations in EU.
- Wide quality improvement.
- Registries.
- Curriculum dissemination.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 1-20%

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? Yes

Varies by country.

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Under what authority is pre-hospital care?

Varies by country

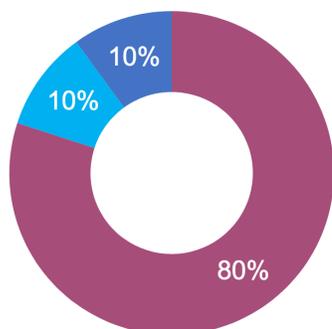
What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✗ Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, Nurses, Paramedics, Emergency medical technician (EMT), Personnel without medical training, Varies by country.

Geographic Distribution of EM Physicians



● Large Cities ● Small Cities ● Rural Areas

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 10,000

Estimated number of EM resident physicians currently in training? 10,000

List of EM Residencies

- Varies by Country

EM Fellowship programs:

Varies by country

Skills within the scope of practice of a residency-trained emergency physician in the country:

Varies by country

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

Varies by country

PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

Varies by country

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM public health research
- EM clinical research
- EM Basic science research

Are there peer-reviewed EM journals based in the country?

Yes; Multiple in EU, UK, Spain, Turkey, Poland : European JEM

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.
- Clinical rotations with direct patient care.
- Research.
- Short courses.
- Teaching opportunities

Varies by country

What opportunities are there in the U.S. for students, residents, or faculty from the country?

Varies by country

REFERENCES

- <https://eusem.org/>
- Living and working in the country for 20 years.

Georgia

LEADERSHIP TEAM

- *Lead Ambassador:* Terrence Mulligan
- *Lead Country Report Author:* Terrence Mulligan
- *Contributing Author(s):* Nino Butskhrikidze

List of Professional EM Societies (2)

- Georgian Emergency Medicine Physician Association (GEMPA) <http://gempa.ge>

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? Yes

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

EM in Georgia is 8 yrs old. First EM residency-6 yrs ago, supported in part by Emory University. GEMPA - Georgian EM Physicians Association is 6 yrs old, and the first EM conference was held in 2016

What were the latest developments in emergency medicine in the country (last update 2018)?

Need for national EM, ED quality improvement, increasing EM residency, increasing EM/EP workforce.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

ED quality improvement, workforce expansion.

What are some specific clinical and academic faculty development needs in the country?

Need Emergency department quality improvement and workforce expansion.

What is the biggest threat to the specialty of emergency medicine in the country?

- Lack of funds.
- Private ownership of all national emergency departments and hospitals.

What specific needs can ACEP help with?

- ED quality improvement.
- Workforce expansion.

EM WORKFORCE

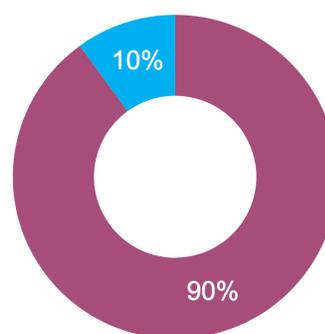
Estimated percent of EDs with at least one residency trained EM-physician? 1-20%

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? Yes

Are medical student rotations with residency-trained EM specialists available in the country? No

Geographic Distribution of EM Physicians



● Large Cities ● Small Cities

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 50

Estimated number of EM resident physicians currently in training? 50

List of EM Residencies (1)

- Tbilisi State Medical University.

EM Fellowship programs:

None

Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✗ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✗ Pericardiocentesis |
| ✓ Cricothyrotomy | ✗ Procedural sedation |
| ✓ Dislocation reduction | ✗ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- X Abdominal surgery (eg appendectomy)
- X Burr hole craniotomy
- X Cardiac catheterization
- X C-section
- X GI endoscopy
- X Surgical fixation of fractures

EMERGENCY CARE FUNDING

100% of national emergency medical care costs paid by private health insurance.

PREHOSPITAL CARE

Is there a prehospital care system? No

Is there a national emergency phone number system? No

Are there medical control protocols for prehospital care in the country? No

Medically assisted transport provided by:

There is no pre-hospital system in the country.

Under what authority is pre-hospital care?

There is no pre-hospital system in the country.

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- X Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, Emergency medical technician (EMT)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM clinical research
- EM systems
- Quality improvement

Are there peer-reviewed EM journals based in the country?

No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.
- Clinical rotations with direct patient care.
- Research.

- Short courses.
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Clinical rotation with direct patient care.
- Research.
- Short courses.
- Teaching opportunities.

REFERENCES

- <http://GEMPA.ge>

Germany

LEADERSHIP TEAM

- *Lead Ambassador:* Kristi L. Koenig
- *Liaison(s):* Thomas Fleischmann
- *Lead Country Report Author:* Kristi L. Koenig
- *Contributing Author(s):* Thomas Fleischmann

List of Professional EM Societies (1)

- DGINA, German Society for Interdisciplinary Acute Care and Emergency Medicine

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? No

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

In the past, Germany put much effort and resources in developing prehospital emergency services, but neglected hospital-based emergency care completely. In the hospitals, emergency care was provided in many different medical and surgical departments within the hospital, often independent from each other. Emergency care was and still is mostly provided by very junior doctors, often without supervision. The traditional medical specialties put a lot of effort in obstructing any development of a specialty of emergency medicine. Following this, and despite intense efforts of some doctors including the author of this report, there is still no specialty and no residencies in emergency medicine in Germany.

Over the last ten years the number of emergency visits to the hospitals more than doubled, whilst at the same time the number of nurses was reduced due to budget restraints. The number of junior doctors and rooms stay nearly the same. This led to massive crowding, long waiting hours, variable care, and very hard feelings by patients, relatives, nurses and doctors. Due to a public and media outcry in the near past several politicians turned their attention to the emergency care misery in Germany, and started to establish regulations of hospital based emergency care for the first time in this country. Every change and every regulation of emergency care now comes from political decision makers, and is battled by the traditional specialties and hospital associations in return.

The political decision makers stated that they want a system of emergency departments, similar to EDs in the USA. Following this a law was passed in 2018, which demanded minimum standards for hospital emergency care. The hospitals, which want to participate in emergency care, are to be sorted in one of three categories: basic, advanced, comprehensive emergency care. These hospitals will get additional annual fee, but there is no guarantee at all that this money will ever reach the EDs. Due to resistance of the traditional specialties, there is still neither a specialty nor residency in emergency medicine in Germany. But in the wake of the emergency care legislation a supraspecialty in acute care and emergency medicine had to be created. This shall consist of two years of training in an ED, after completion of a residency in another specialty. It is expected that this supraspecialty may be adopted by the federal Medical Chambers in Germany over the next few years.

Some politicians feel that these changes regarding emergency care are not enough. The Federal Minister of health announced a new law regarding emergency care which shall exceed all former regulations by far. This legal proposition shall be disclosed in summer 2019. In summary, the legislative changes in hospital based emergency care over the last two years in Germany exceeded by far all changes of the last two decades. Life in the EDs in Germany has not improved yet, but there is hope, finally.

What were the latest developments in emergency medicine in the country (last update 2018)?

The development of fellowship training programs for emergency medicine graduates. These programs include an ultrasound fellowship and an administrative fellowship, both of which will have their first graduates this year (2019).

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Challenges include resistance to change among the traditional specialties and hospital associations, as well as budget restraints. Opportunities include legislation.

What are some specific clinical and academic faculty development needs in the country?

Academic emergency medicine has to be established.

What specific needs can ACEP help with?

At this very early stage, none can be identified.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 0%

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? No

Are medical student rotations with residency-trained EM specialists available in the country? No

EM TRAINING

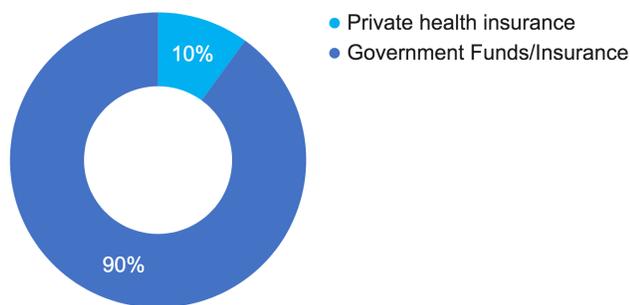
Estimated number of residency-trained EM physicians in the country? 2

Estimated number of EM resident physicians currently in training? None

List of EM Residencies: None

EM Fellowship programs: None

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- Lay people / bystanders
- Government ground ambulances
- Private ground ambulances
- Government air transport
- Private air transport

Under what authority is pre-hospital care?

Local government

What is the pre-hospital service used for?

- Scene to hospital
- Hospital to hospital (interfacility)

- Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, Paramedics, Emergency medical technician (EMT)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM public health research
- EM clinical research
- EM Basic science research

Are there peer-reviewed EM journals based in the country?

Yes, Notfall+Rettungsmedizin

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.
- Teaching opportunities

INTERESTING ONLINE EM RESOURCES

- www.dgina.de

Greece

LEADERSHIP TEAM

- *Lead Ambassador:* Michael S. Radeos
- *Lead Country Report Author:* Michael S. Radeos
- *Contributing Author(s):* Panos Agouridakis

List of Professional EM Societies (1)

- Hellenic Society for Emergency Medicine;
www.hesem.gr

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? Yes

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

Prior to September 2018 there was no specialty of Emergency Medicine in Greece. Emergency medicine in Greece was similar to what we had in the United States in the late 60s and early 70s: There were large hospitals with emergency departments that were staffed by various specialists. Despite the creation of multiple emergency medicine specialties in Europe during the 1990s and early 2000s, Greece still had no specialty. However there were physicians who were interested in organizing the emergency departments much like what had happened in the United States and what was happening in other parts of Europe. When I first arrived in Greece as their ACEP Lead Ambassador, I sought out a physician who seemed to be interested in developing emergency medicine in Greece. This physician was Dr. Helen Askitopoulou, a Professor of Anesthesiology at the University of Crete at Heraklion and Director of the Emergency Department. She subsequently hired an intensivist named Panos Agouridakis to direct the emergency department and bring it up to modern standards. Dr. Agouridakis began assembling a group of physicians who were also interested in emergency medicine. When I met Dr. Askitopoulou and Dr. Agouridakis, I asked them what I could do to help them in improving emergency medicine in Greece. They suggested that I create an exchange program. This program would bring attending physicians to the United States to learn about the US version of EM, so returned to the United States seeking funding for such a Fellowship. I was very fortunate to find the Stavros Niarchos Foundation and submitted a proposal with the assistance of my hospital at that time: New York Hospital Queens.

The Stavros Niarchos Foundation financially supported a 3 month Fellowship for the Greek physicians. They generously funded the program and after 5 years of training fellows in this program most have returned to Greece to continue working in the emergency department and helping to advance the cause for a specialty of emergency medicine. Over the years that I have been involved with my Greek colleagues, we collaborated in creating annual conferences in Greece to teach and promote and lobby for the creation of a specialty. This included visiting the Ministry of Health and working to convince the Minister of the importance of Emergency Medicine, especially in light of the severe economic crisis in Greece.

With the critical mass of emergency physicians that completed the Niarchos Foundation Fellowship, the educational conferences in various cities in Athens in helping and meeting with government officials, our efforts finally succeeded with the recognition of a supra-specialty of emergency medicine Greece in September 2018. This momentous event was celebrated at the Fourth Pan-Hellenic Conference in emergency medicine in Athens. The conference was sponsored by the American Heart Association and supported by the Stavros Niarchos Foundation.

What were the latest developments in emergency medicine in the country (last update 2018)?

The future of emergency medicine in Greece is now bright. There are two major training centers designated for the training of the first emergency physicians. The physicians trained there will then become the teachers of the fellows in the specialty with the eventual creation of residency in emergency medicine. While Greece is still mired in difficult economic times the situation seems to be slowly improving with distal treatment of the emergency medicine specialty.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Building a critical mass of capable trainers in EM.

What are some specific clinical and academic faculty development needs in the country?

The Greek Ministry of Health has opened up hundreds of slots for EM attendings who will become the core of the new supra-specialty.

What is the biggest threat to the specialty of emergency medicine in the country?

Economic crisis

What specific needs can ACEP help with?

- Availability of educational materials, web-based especially.

- Co-sponsoring of new training initiatives at the two main centers at Heraklion and Athens.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? None

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? Yes
Development of programming is ongoing.

Are medical student rotations with residency-trained EM specialists available in the country? No

EM TRAINING

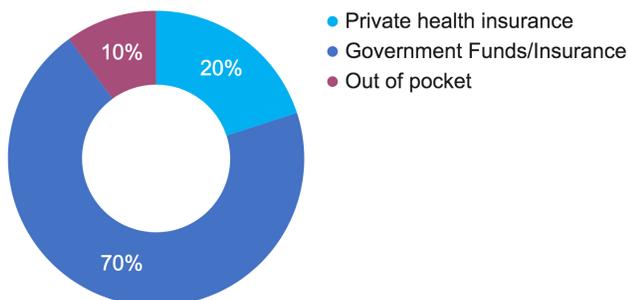
Estimated number of residency-trained EM physicians in the country? None

Estimated number of EM resident physicians currently in training? None

*List of EM Residencies:*None

*EM Fellowship programs:*None

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✗ Lay people / bystanders
- ✓ Government ground ambulances
- ✗ Private ground ambulances

- ✓ Government air transport
- ✗ Private air transport

Under what authority is pre-hospital care?

Ministry of Health

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM public health research
- EM clinical research

Are there peer-reviewed EM journals based in the country?

No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.

INTERESTING ONLINE EM RESOURCES

- www.hesem.gr

Guatemala

LEADERSHIP TEAM

- *Lead Ambassador:* Anthony Dean
- *Deputy Ambassador:* George Skarbek-Borowski
- *Lead Country Report Author:* Anthony Dean
- *Contributing Author(s):* Daniel Ridelman

List of Professional EM Societies (2)

- Asociación Guatemalteca de Medicina de Emergencia (AGME)
 - Asociación Guatemalteca de Medicina de Urgencias y Emergencia (AGMUE)
- <https://www.agme.org.gt/>

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? Yes

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

In 2012, after several "Jornadas" starting in 2006, Dr. A J Dean from the Department of EM at the University of Pennsylvania, approached the authorities of the University of San Carlos de Guatemala (USAC) to determine interest in the development of EM in Guatemala. A retreat held in 2013 generated a great deal of enthusiasm. With the positive response, Dr. Dean applied for a Fulbright scholarship to be able to assist in program management and resident education for the first resident class. Despite these "best laid plans", at the start of the new year of 2017, there was no residency and no resident class and no formal approval of the Master's Degree.

During the latter part of 2016 Dr. Daniel Ridelman joined the project. Dr. Ridelman is an Associate Director of the Global Health program at Wayne State University and Guatemalan who graduated from USAC. During 2017, the first Congress of EM in Guatemala was successfully held in April, with sold-out registration, and an international faculty from Canada, USA, Costa Rica, Guatemala, Chile and Argentina. The Congress reinforced ties with international pioneers in EM in LA.

The Asociación Guatemalteca de Medicina de Emergencia (AGME) was established with a website (www.agme.org.gt). Every university with a Medical School was approached to

support the Maestría Degree needed for a full-fledged specialty Residency program. After the rebuff from the Ministry of Health due to alternative priorities, the IGSS system signaled its willingness to provide a site for the residency, in no small part due to the efforts of a member of the BOD, Dr. Conrado Rivera Lara, who continues to be an unwavering source of support for the project. The IGSS hospital system was reviewed and a primary site finally chosen at Hospital Juan José Arévalo Bermejo in Zone 6. This general hospital which does not have extensive in-house specialty services was felt to be an ideal site for the training of emergency physicians with expertise in the care of undifferentiated emergencies, stabilization of the critically ill, and appropriate use of referral and transfer when indicated.

Disclaimer: The following synopsis is based on the perspectives of a team that has been involved in the development of EM over the past 7 years. It is possible that there are groups of whose activities we are unaware, or that we have inaccurately characterized the contributions of individuals and institutions in the past.

What were the latest developments in emergency medicine in the country (last update 2018)?

In 2018 EM was approved as a specialty eligible for a Maestría. Two hospitals volunteered to be the initial residency training sites. There has been continued development of the website, www.agme.gt.org, including translation into Spanish key documents, guidelines, position statements, articles and topics relating to EM. The site is widely accessed throughout Latin America. An unsuccessful application was made to International Federation for Emergency Medicine (IFEM) to have Guatemala as a trial site for "Foundations of EM" program into Spanish. In 2018-19, the team was joined by Drs. Kai Hsiao, Sara Crager and Ryan Ernst. The latter two are the directors of the Fellowship in Medical Education and Innovation at University of California – Los Angeles (UCLA). No information is available concerning the progress of the residency program at General San Juan de Dios Hospital.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

All resources in the public and Social Security hospitals are limited. There is frequent disruption of medical supplies, funding (to both institutions and healthcare providers), and medications. These problems are frequently accepted as part of the historical and cultural norm. Even if these problems were resolved, emergency care would still be a great challenge in the context of extremely low per capita expenditures on healthcare spending in both absolute and relative (to the national GDP) terms. Poor roads and communication in a country with rugged terrain and 50% of

the population living in extreme poverty compounds these challenges.

Another impediment is a culture that favors competition (often internecine) over collaboration. This impulse leads to effort squandered on rivalry rather than shared use of precious resources and the development of a united front against forces that oppose the growth of emergency medicine.

What are some specific clinical and academic faculty development needs in the country?

Clinical trainers for both bedside and classroom teaching. Educational structure and pedagogy in Guatemala is still very traditional with limited knowledge or awareness of modern training techniques or educational resources. Education specialists are needed to assist in advancing educational techniques and practices for EM trainees.

What is the biggest threat to the specialty of emergency medicine in the country?

- Directions shift in policies, initiatives, and specific projects, with changes of governmental and institutional leadership at local, regional and national levels and results in lack of coherent pursuit of initiatives.
- Healthcare providers are poorly paid in the public hospitals and Social Security system. Hence, hospital-based practice of EM faces financial insecurity, and economically unattractive for.

What specific needs can ACEP help with?

- Endorsement of conferences.
- Clinical resources: Access to ACEP guidelines and policies in Spanish.
- Educational and scientific resources: Online access to Annals and Clinical Decisions, PEER books, ACEP Now, podcasts.
- Heavily discounted access to Scientific Assembly.
- Heavily discounted access to conferences, courses, and other educational resources such as the Leadership, Advocacy, Research, and Admin courses.
- Resident rate for ACEP international membership.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 0%

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? Yes

Are medical student rotations with residency-trained EM specialists available in the country? No

EM TRAINING

Estimated number of residency-trained EM physicians in the country? None

Estimated number of EM resident physicians currently in training? 11

List of EM Residencies (2)

- Hospital Juan José Arévalo Bermejo IGSS Zona 6, Guatemala City.
- Hospital General San Juan de Dios, Guatemala City.

EM Fellowship programs:

- Pediatric EM is evolving, but as a de facto subspecialty of pediatrics.

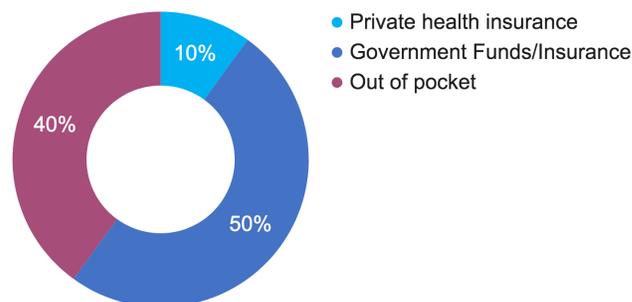
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- ✗ Abdominal surgery (eg appendectomy)
- ✗ Burr hole craniotomy
- ✗ Cardiac catheterization
- ✗ C-section
- ✗ GI endoscopy
- ✗ Surgical fixation of fractures

EMERGENCY CARE FUNDING



Generally cost prohibitive for Guatemalan trainees.

PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

Ministry of Health, private organization, social security system

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, Paramedics, Emergency medical technician (EMT), Personnel without medical training

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? No

Are there peer-reviewed EM journals based in the country?

No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Language classes
- Clinical observership.
- Research.
- Short courses.
- Teaching opportunities

US residents could do non-hands on role-modelling to the current 1st year class. There would be no formal supervision of the N American residents in most places. Faculty would be very welcome with or without US residents in tow.

What opportunities are there in the U.S. for students, residents, or faculty from the country?

INTERESTING ONLINE EM RESOURCES

- www.agme.org.gt
- www.emsguatemala.com

Guyana

LEADERSHIP TEAM

- *Lead Ambassador:* Jamie Cirbus
- *Liaison(s):* Lacey Menkin Smith
- *Lead Country Report Author:* Jamie Cirbus
- *Contributing Author(s):* Zulfikar Bux

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? Yes

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? Yes

History of EM in the country:

Prior to 2010, Emergency Medicine was provided in departments of Accident and Emergency by General Medical Officers with no specialty training in the larger hospitals and as part of general outpatient care in the smaller ones. From 2002, faculty from the Vanderbilt University Department of Emergency medicine started visiting the Georgetown Public Hospital Corporation (GPHC) regularly, the only tertiary care referral hospital and developed an ongoing collaboration. In Guyana, EM residency training launched on 1 October 2010 as the first degree granting (Masters) specialty training in the country. Its first resident, Dr. Zulfikar Bux graduated in November 2013. He later became the first director of the newly established Department of Accident and Emergency and the Georgetown Public Hospital. He is also medical director of the National EMS system.

There are now 2 - 3 residents in each class with graduates expected each year. Vanderbilt continues to be the main partner but many other institutions are involved including the University of West Indies Trinidad campus, Faculty from the University of Florida, Gainesville, Medical University of South Carolina, and the University of Arizona, among others. Emergency medicine education is also spreading to the regional public hospitals as the residents rotate there as well though progress still lags behind GPHC. In 2017, the Residency Director role was handed off from the inaugural PD Dr. Nicolas Forget to a graduate of the program, Dr. Zelda Luke. The specialty of EM is recognized in terms of training but there is no specialist board certification for any specialty in Guyana.

What were the latest developments in emergency medicine in the country (last update 2018)?

The development of fellowship training programs for emergency medicine graduates. These programs include an ultrasound fellowship and an administrative fellowship, both of which will have their first graduates this year.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Funding, attracting physicians to the emergency medicine residency training program, keeping trained physicians practicing in the country, physician burnout, spreading EM trained doctors to other facilities throughout the country.

What are some specific clinical and academic faculty development needs in the country?

Development of more fellowship training opportunities, research support, better physician wellness support, improved teaching and supervising of residents by program graduates.

What specific needs can ACEP help with?

- Scholarships for residents/grads to be able to attend conferences.
- Increased access to online teaching sources.
- Equipment of all kinds.
- Up to date textbooks.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 1-20%

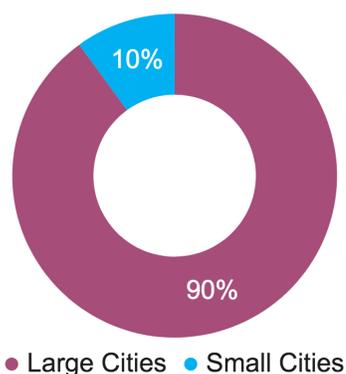
Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? Yes;

General Medical Officers work in the Accident and Emergency Department.

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



EM TRAINING

Estimated number of residency-trained EM physicians in the country? 12

Estimated number of EM resident physicians currently in training? 7

List of EM Residencies (1)

- Georgetown Public Hospital Corporation (GPHC), University of Guyana, Georgetown.

EM Fellowship programs:

- Administrative.
- Ultrasound.

Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- ✗ Abdominal surgery (eg appendectomy)
- ✗ Burr hole craniotomy
- ✗ Cardiac catheterization
- ✗ C-section
- ✗ GI endoscopy
- ✗ Surgical fixation of fractures

PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes
Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✗ Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

Other national governmental agency

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✗ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Emergency medical technician (EMT)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM public health research
- EM clinical research

Are there peer-reviewed EM journals based in the country?

No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Short courses.

ACKNOWLEDGEMENTS

- Dr. Nicolas Forget, Dr. Zulfikar Bux, Dr. Zelda Luke, Dr. Tracey Bovell.

Honduras

LEADERSHIP TEAM

- *Lead Ambassador:* Ashley Bean
- *Liaison(s):* Rosa Tercero
- *Deputy Ambassador:* Jeff Nelson
- *Lead Country Report Author:* Ashley Bean

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? No

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

Honduras is one of the poorest countries in the western hemisphere with over 60% of the population living in poverty. It also has one of the highest homicide rates in the world. Communicable diseases, including measles, rubella, malaria, dengue, chikungunya and Zika are present in significantly higher numbers than in the US. According to the WHO, non-communicable diseases (NCDs) account for over 60% of deaths. Care for chronic diseases such as diabetes mellitus and hypertension is limited, worsening the complications of these diseases. In addition, there is an increase in maternal-fetal complications. Only 60% of births are attended by skilled professionals of differing training levels and experience in rural, poor areas. There is some good news over the last decade. There has been a decrease in maternal-fetal mortality as well as a sharp decline in the number of cases of reported malaria. Communicable, maternal, perinatal and nutritional conditions now account for 23% of deaths and injuries for 16%. For comparison, WHO data reveals that in the United States NCDs account for 88% of deaths; communicable, maternal, perinatal and nutritional conditions account for 6% of deaths. In addition, there has been a decline in the homicide rates in the past few years.

There is no formal practice of emergency medicine in Honduras. Medical care varies greatly within the country, especially outside of Tegucigalpa and San Pedro Sula. Even within larger cities, medical resources are extremely limited. Medical care is provided by a fragmented system of government and private clinics supplemented by NGOs. There are 30 government hospitals subdivided into 8 National Hospitals, 6 Regional Hospitals, and 16 Area Hospitals. This amounts to a total of 4,676 hospital beds across the nation, a ratio of 0.5 beds/ 1000 people, which

has worsened from 2012 data (0.7 beds/ 1000 people). In rural areas, government clinics, staffed by general practitioners, nurses or health-care promoters, are under-funded and suffer from a chronic shortage of medicines and supplies. Furthermore, they are understaffed. There is a striking difference between equipment and staffing in private hospitals which cater to patients with private insurance or means to pay (at most 10% of the population) and that of public hospitals. For the few patients who have health insurance or the ability to pay, medical care is a closer approximation to that available in more developed countries. Public hospitals have an incredible lack of resources. Often, patients will have to share ward beds due to overcrowding.

In rural areas, health centers are often staffed by medical students in their last year of school during their year of community service. After this obligation is fulfilled, they frequently leave the small communities. Therefore, there is a high turnover of the medical staff.

What were the latest developments in emergency medicine in the country (last update 2018)?

In August 2016, under the National Emergency System (SNE) Law, "911" became the reference number to any type of emergency of the Honduran population. A branch of the SNE is the Medical Emergency Unit (UME) which deals specifically with medical- related emergencies. This unit has 52 ambulances distributed among the 7 major cities in Honduras, however most are in Tegucigalpa and San Pedro Sula. First responders in UME are trained in Basic Life Support (BLS). This has improved pre-hospital care and transport; hospital notification of patients in transport is not established yet. CENTOX (Toxicology Information Center of Honduras) started functioning in October 2017. It is the first toxicology center in the country and provides assistance to physicians and the Honduran population. Two major medical schools (Universidad Católica de Honduras, UNICAH and Universidad Tecnológica Centroamericana, UNITEC) in the country have acknowledged the importance of pre-hospital care and designed a program to formally help train Technicians in Medical Urgencies.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

The barriers to the development of emergency medicine include low expenditure on health care and lack of infrastructure. Basic needs, such as access to clean water, are lacking in much of Honduras. In a group discussion, town leaders representing 45,000 people stated that the number one barrier to health was a lack of clean water. Secondary concerns were a lack of consistent access to medicine, limited imaging equipment and deficient laboratory availability necessitating that patients be transferred often

long distances to other facilities. Approximately 40% of the population lacks access to basic health care; this percentage is much higher in rural areas. Furthermore, there is a lack of public understanding of emergency medicine, as well as how development of the specialty could improve healthcare and lead to potential cost savings. If the need for the specialty is not clearly understood, it is difficult to establish a plan of action to move towards its development.

What are some specific clinical and academic faculty development needs in the country?

The most pressing needs for emergency medicine include the education of practitioners, improvement in access to emergency care and belief in the importance of emergency health care by politicians and members of the health ministry. There must be more investment from government and health care leadership in order to provide cost-effective and quality health care.

What is the biggest threat to the specialty of emergency medicine in the country?

- Fragmented medical system with general practitioners of differing training and experience delivering emergency and primary care, with limited resources.
- Violence, drug trafficking, poverty, malnutrition and a lack of sanitation and infrastructure that make the delivery of effective emergency care easier.

What specific needs can ACEP help with?

- Training of Honduran physicians in emergency medicine.
- Establishing and developing a residency program in EM.
- Standardizing pre-hospital care and establishing communication between pre-hospital and hospital settings.
- Training physicians assigned to rural areas on how to provide emergency care in a limited resource setting.
- Making more readily available pre-hospital care and transport across the country rather than only in urban areas.
- Re-designing emergency departments and logistics in major government-run hospitals will address 85-90% of the population's emergencies.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 0%

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? Yes

Development of a formal course in EM for general practitioners and medical students is ongoing at the Universidad Católica de Honduras.

Are medical student rotations with residency-trained EM specialists available in the country? No

EM TRAINING

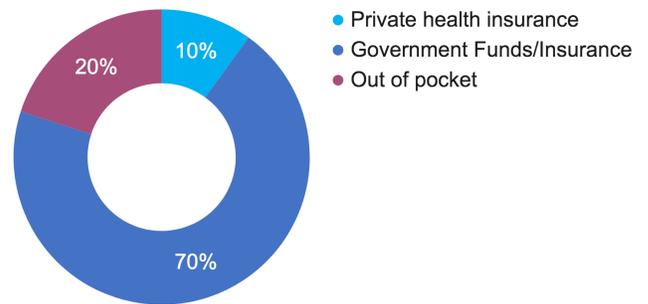
Estimated number of residency-trained EM physicians in the country? 2

Estimated number of EM resident physicians currently in training? None

List of EM Residencies: None

EM Fellowship programs: None

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? No

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✗ Private ground ambulances
- ✓ Government air transport
- ✗ Private air transport

Under what authority is pre-hospital care?

Ministry of Health, Permanent Contingency Commission of Honduras (COPECO)

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Paramedics, Emergency medical technician (EMT), Personnel without medical training

EM RESEARCH AND PUBLICATIONS

Are there peer-reviewed EM journals based in the country?

No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Language classes
- There is an established connection as well with one of the major medical schools in the country (UNICAH) to develop and guide a formal course in emergency medicine designed for general practitioners and senior medical students.

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Language classes.

REFERENCES

- Rosa Tercero.
- <https://www.who.int/countries/hnd/en/>
- <https://www.cia.gov/library/publications/the-world-factbook/geos/ho.html>
- <https://travel.state.gov/content/travel/en/international-travel/International-Travel-Country-Information-Pages/Honduras.html>

Hungary

LEADERSHIP TEAM

- *Lead Ambassador:* Alexander Matolcsy
- *Lead Country Report Author:* Alexander Matolcsy

List of Professional EM Societies (1)

- The Hungarian Society of Emergency Medicine

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? Yes

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? Yes

History of EM in the country: First Voluntary ambulance service was established in 1867 in Budapest (BOME) by physicians and other supporters. The National Ambulance was established in 1948, directed centrally from Budapest with affiliate bases in the larger cities. Prehospital care was based on the "Stay and play" approach. In 1956, the first Ambulance Hospital was established and used as a central emergency hospital for all kinds of emergencies. Physicians working in the system were called oxylogist (oxys-quick, acute, logos-science). The National Ambulance Service is a government funded organization with a few thousand workers, directed by the CEO, Dr. Gabor Csato. There are numerous stations countywide to cover a call-to-scene time of under 15 mins in more than 90% of the cases. The first intrahospital emergency ward was established in 1978 in Szolnok, followed by the one in Nyiregyhaza (1982), then in Szekesfehervar (1992). From the early 2000s a large number of purpose-built EDs were constructed and now there are several units with different levels of care, i.e. basic (level 1), intermediate (level 2) and highest (level 3). The large centers are generally university-affiliated units with one funded and run by the Hungarian Army. There are four university departments, the biggest in Pecs and Szeged.

What were the latest developments in emergency medicine in the country (last update 2018)? The latest development in Hungary is the standardization of emergency medicine and the integration of emergency medicine in multiple levels of healthcare. The Ministry of Health of Hungary has a college of specialties in all medical disciplines and in the last few years the College of Specialties established one related to emergency medicine.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

As in other Eastern European countries, physician migration is a hot topic. Underfunding and long working hours leading to burnout are also problems. The situation may improve with increased funding, compensation and correct positioning of the young specialty.

What are some specific clinical and academic faculty development needs in the country?

More funding for research, more protected teaching time and less workload with more physicians.

What is the biggest threat to the specialty of emergency medicine in the country?

The health budget is underfunded, and there are struggles with illegal money given to the physicians. Emergency physicians therefore demand larger, transparent salaries, which can hardly meet the amount of state funding at present.

What specific needs can ACEP help with?

- Sending delegates to conferences to share experiences.
- Helping academic work by supporting publications, by research cooperation, students and teacher exchange.
- Making emergency textbooks and journals available for the trainees and the specialists.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 61-80%

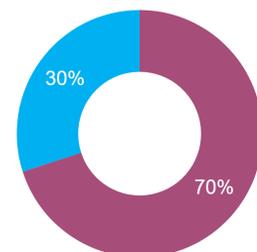
Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? Yes;

Program for Emergency Advance Practice Nursing (introduced in 2018).

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



● Large Cities ● Small Cities

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 166

Estimated number of EM resident physicians currently in training? 166

List of EM Residencies (2)

EM Fellowship programs:

- Toxicology.
- Ultrasound.

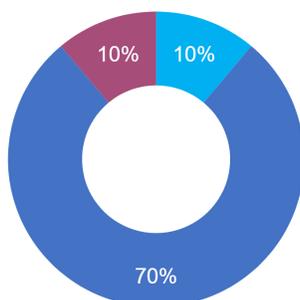
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- X Abdominal surgery (eg appendectomy)
- X Burr hole craniotomy
- X Cardiac catheterization
- X C-section
- X GI endoscopy
- X Surgical fixation of fractures

EMERGENCY CARE FUNDING



- Private health insurance
- Government Funds/Insurance
- Out of pocket

PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport

Under what authority is pre-hospital care?

Ministry of Health

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, Paramedics, Emergency medical technician (EMT)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM public health research
- EM clinical research
- EM Basic science research

Are there peer-reviewed EM journals based in the country?

No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.
- Research
- Teaching opportunities.

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Teaching opportunities.

INTERESTING ONLINE EM RESOURCES

- <https://www.facebook.com/msoetke>

REFERENCES

- National Society of Emergency Medicine of Hungary.

Iceland

LEADERSHIP TEAM

- *Lead Ambassador:* Hjalti Mar Bjornsson
- *Lead Country Report Author:* Hjalti Mar Bjornsson

List of Professional EM Societies (1)

- Icelandic Society for Emergency Medicine

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? Yes

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

Iceland was the first Nordic country to recognize EM as an independent specialty in 1992. Since then, there has been a steady growth in the number of EM trained doctors and the EM model has now been completely adopted in the only full service hospital in the country. For further info on EM in Iceland, see:

<https://sjtrem.biomedcentral.com/articles/10.1186/s13049-017-0467-9>

What were the latest developments in emergency medicine in the country (last update 2018)?

The further structuring and development of an EM residency.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

A need for more EM-trained doctors.

What are some specific clinical and academic faculty development needs in the country?

More time for teaching and research.

What is the biggest threat to the specialty of emergency medicine in the country?

Shortage of hospital beds resulting in significant boarding of patients in the ED waiting for admission.

What specific needs can ACEP help with?

- The Icelandic EM training program will rely on doing a part of the EM training abroad.

- As residency training spots in EM in the U.S. are limited, if a pathway for doing shortened EM clinical rotations in the U.S. for 6-12 months could be created, this would greatly facilitate EM training.

EM WORKFORCE

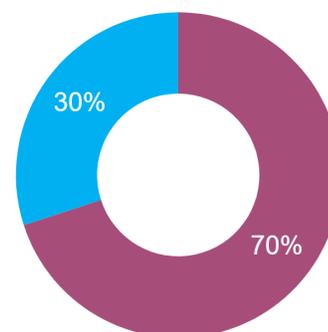
Estimated percent of EDs with at least one residency trained EM-physician? 81-100%

Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? No

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



● Large Cities ● Small Cities

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 20

Estimated number of EM resident physicians currently in training? 14

List of EM Residencies (1)

- Landspítali, University Hospital.

EM Fellowship programs: None

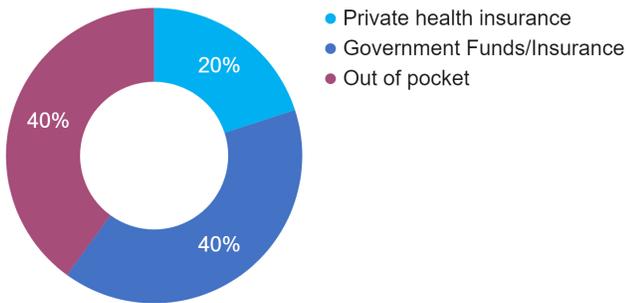
Skills within the scope of practice of a residency-trained emergency physician in the country:

- ✓ Cardiac pacing
- ✓ Central venous access
- ✓ Chest tube
- ✓ Cricothyrotomy
- ✓ Dislocation reduction
- ✓ ED bedside ultrasound
- ✓ Intubation
- ✓ Lumbar puncture
- ✓ Pericardiocentesis
- ✓ Procedural sedation
- ✓ Vaginal delivery

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- ✗ Abdominal surgery (eg appendectomy)
- ✗ Burr hole craniotomy
- ✗ Cardiac catheterization
- ✗ C-section
- ✗ GI endoscopy
- ✗ Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

Ministry of Health, private organization

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✗ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Paramedics, Emergency medical technician (EMT)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM public health research
- EM clinical research

Are there peer-reviewed EM journals based in the country?

No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.
- Clinical rotation with direct patient care.
- Research
- Teaching opportunities.

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Clinical rotation with direct patient care.
- Research.
- Short courses.
- Teaching opportunities.

India

LEADERSHIP TEAM

- *Lead Ambassador:* Lingappa S. Amernath
- *Deputy Ambassadors:* Kumar Alagappan, Arun Nandi
- *Lead Country Report Author:* Lingappa S. Amernath

List of Professional EM Societies (3)

- Society of Emergency Medicine of India (SEMI) <https://www.semi.org.in/>
- Global Academy of Emergency Medicine (GAEM)
- INDUS EM <http://www.indusem.org/>

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? Yes

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

Need of the hour is continued development and availability of emergency care in India. With a population of 1.3 billion people, still there is insufficient availability of trained emergency medicine departments across the country. The vision to develop and create emergency care started in 1999 with formation of Society of Emergency Medicine of India (SEMI) which has played a major role in developing and creating EM residency programs, collaborated with American Academy for Emergency Medicine in India (AAEMI) in organizing an annual scientific conference since 1999, which is attended by international faculty and delegates.

EMCON is organized every year where the Emergency Physicians all across the country and EM physicians from USA, UK, Australia, Singapore, Middle East and neighbouring countries of India meet. The gradual increase in the local faculty has led to the decrease of international faculty in those conferences. The Indian EMS special interest group has also created 108 EMS systems all across the country similar to 911 except few states.

AAEMI was formed to promote EM in India in February of 2001. In July 2009 Medical council of India approved EM as the 29th Speciality. National Board started the 3 year DNB program in 2013. They have 3 year EM residency Post

graduate programs (Emergency medicine) in different states but limited in number due to need for faculty and lack of interest in Government medical colleges. They also started 3 year EM training programs approved by National Board of Examinations (DNB).

Currently there is a vast interest in developing Pediatric EM programs and courses in India. Special interest groups meet annually to conduct their conference along with 5 centers having pediatric EM fellowship programs. Other Organizations like Global Academy of Emergency Medicine (GAEM), INDO-US, ACEP, IFEM have contributed to the growth of EM in India. Currently India is one of the Full members of IFEM.

What were the latest developments in emergency medicine in the country (last update 2018)?

Emergency medical services (EMS) has picked up pace. The Emergency Management and Research Institute (EMRI) which created the phone number '108' for easy access to EMS vehicles, has become one of the biggest EMS systems in the world. They used to deliver 450 babies in the back of the ambulance per day! They have made initiatives to bring that number down. Also, ultrasound programs/POCUS have become more popular. The pediatric EM special interest group has been meeting and recently conducted the 8th annual National annual conference of Pediatric Emergency Medicine (NAPEM) conference in April 2019. There has been more focus on developing administrative skills in EM faculty as well as recruitment of EM faculty. EM nursing and paramedic focus has also increased. Air ambulances and the use of electronic medical records in the ED have also been introduced. The U.S. University Hospital collaborations have promoted research, faculty developments, postgraduate training programs and exchange programs. There is also an interest in developing hematology-oncology fellowship programs in EM.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

One challenge is internal politics among different EM groups with different missions. For example, the public sector, private sector and government agencies all have varying interests and goals. There needs to be better coordination among these groups to promote EM in India.

What are some specific clinical and academic faculty development needs in the country?

There is a need for assistance with research development of standardized protocols and policies all across the country and faculty development.

What is the biggest threat to the specialty of emergency medicine in the country?

- Lack of unbiased government oversight.
- Implementation of national-level policies and protocols.
- Declining number of accredited EM training programs due to insufficient residency programs.

What specific needs can ACEP help with?

- Endorsement of conferences.
- Clinical resources.
- Assistance with setting up residency training programs with U.S. university teaching programs.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 1-20%

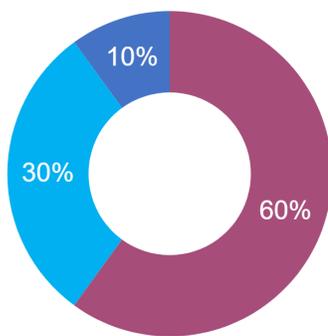
Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? Yes;

Training programs are being considered for rural EM physicians and non-EM physicians, but are limited at this time.

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



- Large Cities
- Small Cities
- Rural Areas

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 600

Estimated number of EM resident physicians currently in training? 200

List of EM Residencies (84)

EM Fellowship programs:

- Critical care.
- Emergency medical services (EMS).
- Pediatric EM.

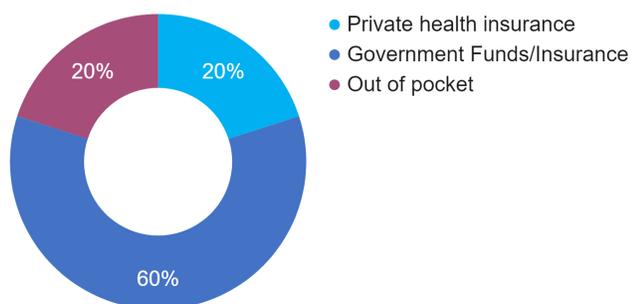
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✗ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- ✓ Abdominal surgery (eg appendectomy)
- ✗ Burr hole craniotomy
- ✗ Cardiac catheterization
- ✗ C-section
- ✗ GI endoscopy
- ✗ Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

Local government, private organization, hospitals

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✗ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, Paramedics, Emergency medical technician (EMT), Personnel without medical training, Varies depending on the EMS system and location.

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM clinical research

Are there peer-reviewed EM journals based in the country?

Yes:

National Journal of Emergency Medicine, peer reviewed quarterly, also available online.

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.
- Clinical rotation with direct patient care.
- Research.
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Clinical rotation with direct patient care.
- Research.
- Short courses.

INTERESTING ONLINE EM RESOURCES

- <https://coreem.net/blog/random-foamed/em-in-india/>

REFERENCES

- <http://www.acem2019delhi.com/>
- <http://natboard.edu.in/index.php?s=Emergency%20medicine>
- <http://www.semi.org.in/>
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6326640/>

Ireland

LEADERSHIP TEAM

- *Lead Country Report Author:* M Ashraf Butt
- *Contributing Author(s):* Fergal Hicky

List of Professional EM Societies (1)

- Irish Association for Emergency Medicine
<http://www.iaem.ie/>

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? Yes

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? Yes

History of EM in the country:

The structure and practice of EM in Ireland has, until the last decade, closely paralleled that of the United Kingdom. The establishment of the National Health Service (NHS) in 1948 was followed during the 1950s by the realisation that the hospital "Casualty" Department was often the portal of entry for the sickest and most seriously injured patients into the hospital. The 1960s saw the appointment of the first Casualty Surgeons; the title reflecting the fact that the nature of the emergency treatment delivered then was predominantly of a surgical nature.

Developments in bedside ultrasound techniques, organ support, thrombolysis, reperfusion therapy, the management of sepsis, pre-hospital care systems, trauma management and the increasing survival and return to the community of patients with multiple complex medical conditions has meant that the emergency management of medical conditions now forms a major part of the practice of modern EM.

Specialty training in EM is overseen by the Irish Committee for Emergency Medicine Training (ICEMT) under the governance of the Royal College of Surgeons in Ireland (RCSI) with representation from the Royal College of Physicians of Ireland (RCPI). The London-based Royal College of Emergency Medicine, of which the National Board for Ireland is one of four national boards, provides guidance on best practice and service delivery in EM and directs the postgraduate examinations for doctors training to become EM specialists.

What were the latest developments in emergency medicine in the country (last update 2018)?

- Strategy document from Irish Association for Emergency Medicine (IAEM).
- Trauma system development.
- Annual scientific meetings.
- Reconfiguration of emergency services.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Challenges include crowding and lack of infrastructure.

What specific needs can ACEP help with?

Endorsement of conferences.

EM WORKFORCE

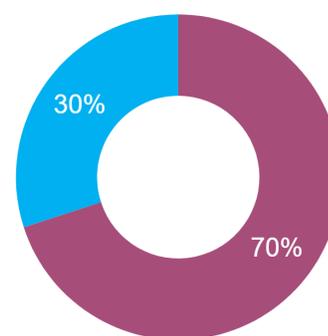
Estimated percent of EDs with at least one residency trained EM-physician? 81-100%

Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? No

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



● Large Cities ● Small Cities

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 100

Estimated number of EM resident physicians currently in training? 52

List of EM Residencies (1)

- Irish Committee on Emergency Medicine Training (ICEMT).

EM Fellowship programs:

- Pediatric EM.
- Sports medicine.
- Ultrasound.

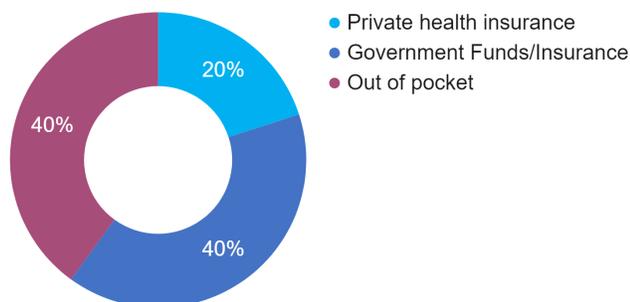
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- X Abdominal surgery (eg appendectomy)
- X Burr hole craniotomy
- X Cardiac catheterization
- X C-section
- X GI endoscopy
- X Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- X Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- X Private air transport

Under what authority is pre-hospital care?

National Ambulance Service

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Paramedics

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM clinical research
- EM Basic science research

Are there peer-reviewed EM journals based in the country?

Yes;

Emergency Medicine Journal (EMJ)

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.
- Short courses.

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.

INTERESTING ONLINE EM RESOURCES

- <http://feeds.bmj.com/emj/podcasts>

Italy

LEADERSHIP TEAM

- *Lead Ambassador:* Alexandra Asrow
- *Lead Country Report Author:* Alexandra Asrow

List of Professional EM Societies (1)

- Societa' Italiana Medicina D'emergenza Urgenz (SIMEU); <https://www.simeu.it/w/>

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? Yes

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country: Emergency Medicine was recognized as a specialty in 2008. Prior to this, EDs were universally staffed by physicians with training in other specialties, or no residency training, and patients were triaged mostly to specialists. This has been changing with the advent of the specialty. After a slow start, it is starting to gain more popularity in the last few years, and the number of medical students applying to EM residency programs has been growing tremendously. However, the numbers of EM specialists are still grossly inadequate to cover the multitude of open slots for EM physicians around the country as they develop and modernize the EM system. Italy, like many other countries, is experiencing a healthcare crisis, with an aging population, a financially stretched national ministry of health, and inadequate resources to treat the increasing demands, especially in the ED. With healthcare, GME, and large universities which host EM residencies being such well established institutions, there has been difficulty in adapting training and practice at the speed of the rapidly increasing need. Hopefully, with the increasing focus on this growing problem, funding and slots for EM training and leadership positions will increase, and EM will continue to develop, evolve, and become a robust, well recognized, and well respected specialty.

What were the latest developments in emergency medicine in the country (last update 2018)? There has been increasing focus on the many open positions for EM physicians in hospitals around the country, and the legislature has begun exploring possibilities to remedy this. Additional residencies have been opening each year. A year-round month-long exchange program for Italian EM residents to train in Chicago was established. Here, residents participate in

clinical observation and residency didactics/simulation. In return, multiple American EM physicians have organized visiting lecturer sessions in Italy.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth? Currently one of the largest challenges facing EM is the lack of consensus on the specialty's identity and scope of the practice. EM is practiced differently region to region and hospital to hospital. There is no standardization of residency training, no specific curriculum, and no board exam specific to Italy. There are a limited number of EM trained physicians with a wide variety of training, which in many cases perpetuates the irregularity of the breadth and quality of training among future residents. Financial limitations are a large barrier to developing and improving residency training and emergency departments in general. For example, massive hospital-wide bed shortages in hospitals across the country lead to huge overcrowding issues and further stress on thinly stretched, low-resourced emergency departments. These limitations contribute to a common lack of respect for the specialty by other specialists, leading to additional challenges to patient care.

What are some specific clinical and academic faculty development needs in the country? The largest need at this time is training the trainer. Most attending faculty are not EM trained, their scope and comfort level with various topics in EM varies widely. With time and additional EM graduates this will improve however, very slowly. Development of standardized curriculum and exams is being worked on however, there is a lack of a strong network between residency programs such as council of residency directors in the US which makes this quite difficult. There are few places with expertise in simulation, procedural skills and other core components necessary for a well-rounded EM physician. Funding is a large barrier to this.

What is the biggest threat to the specialty of emergency medicine in the country?

- Lack of funding, lack of standardization, and lack of respect from other specialists. There is still a common misconception that any physician can work in the ED, and a great lack of appreciation of the value of emergency medicine.
- Compensation for EM physicians is poor, and a detriment to drawing people towards the specialty.

What specific needs can ACEP help with?

- Helping residencies develop standardization of training curricula.
- Endorsement of training programs and conferences.
- Funding for such programs.

- Provision of support in terms of resources, demonstration, and promotion of the value of emergency medicine to key institutions and individuals.

EM WORKFORCE

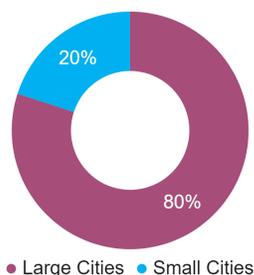
Estimated percent of EDs with at least one residency trained EM-physician? 1-20%

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? No

Are medical student rotations with residency-trained EM specialists available in the country? No

Geographic Distribution of EM Physicians



EM TRAINING

Estimated number of residency-trained EM physicians in the country? 550

Estimated number of EM resident physicians currently in training? 500

List of EM Residencies (33)

EM Fellowship programs: None

Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✗ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- ✗ Abdominal surgery (eg appendectomy)
- ✗ Burr hole craniotomy
- ✗ Cardiac catheterization
- ✗ C-section
- ✗ GI endoscopy

- ✗ Surgical fixation of fractures

EMERGENCY CARE FUNDING

100% of national emergency medical care costs are paid by government healthcare funds/ government insurance.

PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? No

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

Ministry of Health, hospitals

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, Nurses, Paramedics, Emergency medical technician (EMT), Personnel without medical training

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country?

- EM public health research
- EM clinical research

Are there peer-reviewed EM journals based in the country?

Yes; *Italian Journal of Emergency Medicine*

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.
- Research.
- Short courses.
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.

ACKNOWLEDGEMENTS

Thanks to contacts within the national organization, at universities, and residents.

Japan

LEADERSHIP TEAM

- *Lead Ambassador:* Seikei Hibino
- *Deputy Ambassador:* Taku Taira
- *Lead Country Report Author:* Seikei Hibino

List of Professional EM Societies (2)

- Japanese Association for Acute Medicine;
<https://www.jaam.jp/english/english-top.html>
- Japanese Society for Emergency Medicine;
<https://jsem.me/english.html>

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? Yes

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

Emergency Medicine began in Japan in the early 1960's when automobile accidents became rampant as the country has re-developed from the second world war. The idea was to centralize the most injured or sick at their designated Tertiary Emergency Center where Multi Specialty Model of Emergency Medicine staffing has been established. The main focus was Multi-trauma and Critical Care. However, US model Single Specialty Model staffing has been recognized to compliment their system in the late 1990's, as their aging population grows. Seemingly trivial conditions turned out to be serious injuries or illnesses, which was well recognized in the elderly. In 2004, they added "ER Committee" in their main EM organization: Japanese Association for Acute Medicine.

What were the latest developments in emergency medicine in the country (last update 2018)?

Campaign of promoting emergency medicine in Japan led by the Japanese Association for Acute Medicine after implementation of a new postgraduate training program that started 2017.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

One of the major challenges is getting cooperation from specialists. Timely consultation may not be readily available in some institutions and may compromise the quality of

medical care. Sustained efforts to improve cooperation at some institutions have culminated in win-win situations for emergency physicians and specialists, as has been the case in the US. Another challenge is the shortage of emergency physicians. Historically, few institutions have established the culture of shift work. Emergency physicians cover acute care inpatient patients as well as ED patients. They work long hours and few feel this work is sustainable long term. Growth in the number of new emergency physicians has been slow.

What are some specific clinical and academic faculty development needs in the country?

It takes decades to achieve culture change but this has been happening slowly but surely. They have also started the Faculty Development Program.

What is the biggest threat to the specialty of emergency medicine in the country? None.

What specific needs can ACEP help with?

- Educational resources that focus on Faculty Development as in the Director's Academy.
- Endorsement of conferences.

EM WORKFORCE

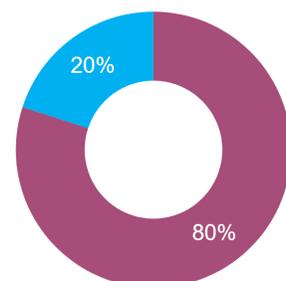
Estimated percent of EDs with at least one residency trained EM-physician? 1-20%

Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? No

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



● Large Cities ● Small Cities

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 5017

Estimated number of EM resident physicians currently in training? 80

List of EM Residencies (544)

Trainees at 554 facilities are eligible to sit for board certification exams; however, not all of these programs have a residency program. Programs with US-style residency programs include:

- Fukui University Hospital.
- Okinawa Chubu Hospital.
- Shonan Kamakura Hospital.
- Tokyo Bay Medical Center.

EM Fellowship programs:

- Acute care surgery
- Critical care
- Emergency medical services (EMS)
- Interventional radiology
- Neurosurgery
- Orthopedics
- Toxicology

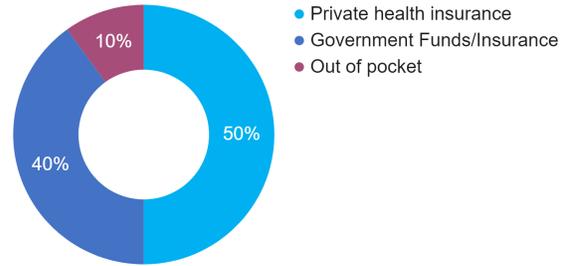
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✗ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- ✓ Abdominal surgery (e.g. appendectomy)
- ✓ Burr hole craniotomy
- ✗ Cardiac catheterization
- ✗ C-section
- ✓ GI endoscopy
- ✓ Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✗ Lay people / bystanders
- ✓ Government ground ambulances
- ✗ Private ground ambulances
- ✓ Government air transport
- ✗ Private air transport

Under what authority is pre-hospital care?

Local government, hospitals

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✗ Hospital to hospital (interfacility)
- ✗ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, Paramedics, Emergency medical technician (EMT)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country?

Yes:

- EM public health research
- EM clinical research
- EM Basic science research

Are there peer-reviewed EM journals based in the country?

Yes:

- *Journal of Japanese Association for Acute Medicine* (in Japanese)
- *Acute Medicine and Surgery* (in English)

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Research.

INTERESTING ONLINE EM RESOURCES

- https://www.ijstage.jst.go.jp/article/jjaam/18/9/18_9_644/article/-char/en

REFERENCES

- Dr. Shingo Hori, former Chair of Emergency Medicine at Keio University.
- Dr. Takeshi Shimazu, Professor of Emergency Medicine and Critical Care Medicine at Osaka University.

Jordan (Hashemite Kingdom of Jordan)

LEADERSHIP TEAM

- *Lead Ambassador:* David Callaway
- *Lead Country Report Author:* David Callaway
- *Contributing Author(s):* Liqaa Raffee

List of Professional EM Societies (1)

- Jordanian Emergency Medicine Society (JEMS)

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? Yes

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? Yes

History of EM in the country:

The Hashemite Kingdom of Jordan (HKJ) has a well-developed healthcare system composed of a variety of public and private stakeholders. In 1989, an eight-year professional pathway for emergency medicine was developed for Family Medicine physicians. This program is based out of the King Hussein Medical Center and has laid the framework for future Emergency Medicine specialty development.

Every major hospital in Jordan has a functioning Emergency Department. However, the departments continue to largely be staffed by generalists without specialty training in Emergency Medicine. As a result, there are areas for improvement in the care of patients presenting with urgent or emergent medical and traumatic conditions. HKJ has a strong medical education system and generally high standards of care. There is clear variation across Private, Public, University and Military health systems. There also remain gaps in terms of quality assurance, quality improvement, and systems development.

In 2015, Carolinas Medical Center initiated an exchange program and sent two senior physicians to Jordan to conduct a gap analysis, work with individual departments and advise on the development of a National Society. Dr. Vivek Tayal worked closely with Drs. Liqaa Raffee and Emad Abu-Yaqeen to develop policies and procedures for a specialized medical society. In 2016, the Jordanian Emergency Medicine Society (JEMS) became operational.

What were the latest developments in emergency medicine in the country (last update 2018)?

In 2018, the Jordan University of Science and Technology (JUST) residency program sent a senior EM resident to perform a clinical observership rotation at Carolinas Medical Center (CMC) in Charlotte, NC. The Jordanian Emergency Medicine Society (JEMS) community had collaboration with Emirate Society of Emergency Medicine (ESEM) and we shared our logo in their conference. Dr. Raffee and EM residents Dr. Belal Al Rashdan had an abstract accepted for the ESEM conference JEMS now also has an active collaboration with the Emergency Medicine Physicians Association of Turkey (EPAT) and also shared the logo with them for their EM conference in Antalya. Dr. Raffee collaborated with the Egyptian Society for EM and in concert with CMC will help to organize an EM conference in 2020.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

The main current challenges to improving emergency care are development and expansion of training programs, expansion of faculty and broadening of research support.

What are some specific clinical and academic faculty development needs in the country?

Leadership and departmental development training, ultrasound and development of quality assurance: code sepsis, STEMI etc.

What is the biggest threat to the specialty of emergency medicine in the country?

The EM residents worry about their future when they finalize their training program and their financial income when they become specialists.

What specific needs can ACEP help with?

- Endorsement of conferences.
- Provision of scholarships for Jordanian EM doctors.
- Provision of structured development resources.

EM WORKFORCE

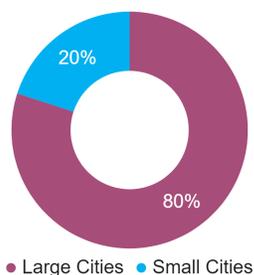
Estimated percent of EDs with at least one residency trained EM-physician? 1-20%

Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? Yes: programs for general practitioners or IM specialists working in the ED.

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



EM TRAINING

Estimated number of residency-trained EM physicians in the country? 5

Estimated number of EM resident physicians currently in training? 121

List of EM Residencies (5)

- 2 high specialty programs (University program)
- 1 at the Ministry of Health
- 1 at the Royal Medical Services
- 1 in the private sector (Islamic Hospital)

EM Fellowship programs: None

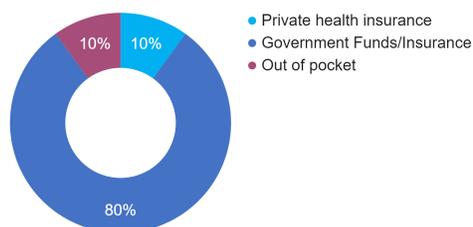
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✗ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- ✗ Abdominal surgery (eg appendectomy)
- ✗ Burr hole craniotomy
- ✗ Cardiac catheterization
- ✗ C-section
- ✗ GI endoscopy
- ✗ Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✗ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✗ Government air transport
- ✗ Private air transport

Under what authority is pre-hospital care?

National Civil Defense

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✗ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Paramedics, Emergency medical technician (EMT)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM public health research
- EM clinical research
- EM Basic science research

Are there peer-reviewed EM journals based in the country?

No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.
- Clinical rotation with direct patient care.
- Research.

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Short courses.
- Teaching opportunities.

Kenya

LEADERSHIP TEAM

- *Lead Ambassador:* Greg Bell
- *Lead Country Report Author:* Greg Bell
- *Contributing Author(s):* Grace Wanjiku

List of Professional EM Societies (0)

The following organizations are not professional EM societies but are engaged in emergency care:

- Emergency Medicine Kenya Foundation;
<https://www.emergencymedicinakenya.org/emkf/>
- Kenya Council of Emergency Medical Technicians (KCEMT);
<http://www.kcemt.co.ke/index.php/about-us>

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? Yes

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

There is a high demand for quality pre-hospital care in Kenya. However, we lack a national policy to govern pre-hospital care and to regulate training, certification and credentialing for EMS providers. This gap is currently being filled by private ambulance and hospital based ambulance services. As a result, significant heterogeneity and confusion exists when it comes to training standards and service provision. This contributes to suboptimal care. However, the Kenyan government officially launched the first- ever emergency care policy in June 2019. This provides a framework for the harmonization of EMS activity in the country.

What were the latest developments in emergency medicine in the country (last update 2018)?

The big things in the last year to two are the national health policies mentioned above. The first is the Health Policy Act of 2017 to improve access to emergency services for everyone. The second, Project 47, is mentioned below in the faculty development section. Project 47 is a nationwide project that seeks to assess the status of emergency care in county and sub-county hospitals in all the 47 counties in Kenya. It also entails providing specific EM training to the

healthcare workers currently working in the emergency centers.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

An increasing number of patients with acute disease currently present to emergency departments across Kenya. Similar to other parts of the continent, this is due largely to road traffic injuries as well as the rising incidence of non-communicable diseases, mental illness and other trauma. The leading causes of injury in Kenya include road traffic crashes (42%), especially with the rising number of motorcycles. Assaults (25%) and falls (19%) are also on the rise. Kenya is also significantly impacted by disasters, terrorism and natural incidents.

Among Kenyan county hospitals, only 46% have adequate facilities and protocols to properly handle trauma and other emergencies. About 31% do not have a triaging system and 21% do not have working X-ray machines. Another concern for growth of the specialty is the lack of healthcare workers (less than 25% of those needed) and financing, as funding dedicated to government facilities are not directly allocated to emergency care.

What are some specific clinical and academic faculty development needs in the country?

Emergency medicine was only recognized as a medical specialty by the Kenya Medical Practitioners and Dentists Board in 2017. Currently, most of the emergency departments (EDs) in the country are run by clinical officers and junior medical officers with no specific training in emergency medicine. These were the findings of an observational study conducted across 15 major public ED's across the country. A key recommendation from the study was a need for specific emergency medicine training of clinical officers and doctors working in ED on the rational use of investigations and management of acute and urgent illness and injury. This need is currently being met through Project 47 that is currently being undertaken through the Emergency Medicine Kenya Foundation (EMKF). We provide training in basic emergency care principles through a 5-day course: The Emergency Care Course (TECC) designed by EMKF. We also provide training in triage, EKG interpretation and Point of care Ultrasound.

What is the biggest threat to the specialty of emergency medicine in the country?

- Delay in government recognition for the need for and to strengthen emergency medicine.
- Public health care infrastructure in the country has been weakened in favor of private, profit making health care facilities.

What specific needs can ACEP help with?

- Open source educational material.
- Live stream ACEP conference.
- Provide free or low cost access to providers in Kenya and other low- and middle-income countries who cannot attend due to cost considerations and difficulty obtaining visas.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 0%

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? Yes;

Non-residency training programs at Aga Khan University and Kijabi Hospital; other international exchange programs.

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians

100% of national emergency medical care costs are paid by government healthcare funds/ government insurance.

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 2

Estimated number of EM resident physicians currently in training? 14

List of EM Residencies (1)

- Kijabe Hospital (EM diploma).
- Maseno University, Kisumu (combined EM and Family Medicine residency).
- University of Nairobi / Kenyatta National Hospital/ Kijabe Hospital (Pediatric Emergency and Critical Care Fellowship).
- University of South Africa (Diploma in Emergency Care).

EM Fellowship programs:

- Pediatric EM.

Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- X Abdominal surgery (eg appendectomy)
- X Burr hole craniotomy
- X Cardiac catheterization
- X C-section
- X GI endoscopy
- X Surgical fixation of fractures

EMERGENCY CARE FUNDING

60% of national emergency medical care costs are paid out of pocket.

PREHOSPITAL CARE

Is there a prehospital care system? No

Is there a national emergency phone number system? No

Are there medical control protocols for prehospital care in the country? No

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- X Government ground ambulances
- ✓ Private ground ambulances
- X Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

Private Organization, hospitals

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- X Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Nurses, Emergency medical technician (EMT)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM public health research
- EM clinical research

Are there peer-reviewed EM journals based in the country?

No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Research.
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical rotation with direct patient care.
- Research.
- Short courses.

INTERESTING ONLINE EM RESOURCES

- <https://www.emergencymedicin kenya.org/>

REFERENCES

- Benjamin Wachira, Asst Prof at Aga Khan Univ Hospital in Nairobi, Kenya.
- <https://www.emergencymedicin kenya.org/>

Kuwait

LEADERSHIP TEAM

- *Lead Ambassador:* Anwar Al-Awadhi
- *Lead Country Report Author:* Anwar Al-Awadhi

List of Professional EM Societies (1)

- Kuwait Emergency Medicine

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? Yes

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? Yes

History of EM in the country:

Emergency Medicine was founded in the country back in the late 1980s where the Emergency Medicine Departments were staffed by internists, surgeons & intensivists. In 2011, Emergency Medicine as a recognized specialty was founded & launched through the Kuwait Board of Emergency Medicine (KBEM) under the Kuwait Institute for Medical Specialization (KIMS). Emergency Medical Services (EMS) has been founded in the late 1960s started with EMTs, then paramedics throughout the years staffing ground ambulances, under the Emergency Medical Services Department (EMSD), and in the last decade, the EMSD has introduced Helicopter Emergency Medical Service & MEDEVAC. Currently, the Ministry of Health is adapting the National Trauma System through the establishment of Level 1 Trauma Centers.

What were the latest developments in emergency medicine in the country (last update 2018)?

- The proposition to introduce EM fellowship programs with international affiliations.
- Working to introduce and incorporate a cutting-edge simulation center.
- Providing workshops, training, and educational courses in toxicology, trauma, intensive care, wilderness medicine, marine emergency medical services, urban search/rescue, tactical EM and others.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

We would benefit from collaboration with international EM programs in order to better incorporate evidence based medicine and best practices in EM.

What are some specific clinical and academic faculty development needs in the country?

Adopting the international Accreditation Council for Graduate Medical Education (ACGME)/Accreditation Council for Continuing Medical Education (ACCME) guidelines for training, education, accreditation and credentialing.

What is the biggest threat to the specialty of emergency medicine in the country?

The challenges to meet international standards in adopting ACGME/ACCME programs and their guidelines.

What specific needs can ACEP help with?

Provide international training and education platforms to meet the ACGME /ACCME requirements for international EM programs (similar to the U.S - EM program's requirements for ABEM – ABMS).

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 61-80%

Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? Yes: programs for general surgeons, internists, intensivists and cardiologists.

Are medical student rotations with residency-trained EM specialists available in the country? No

Geographic Distribution of EM Physicians

100% of residency-trained EM specialists are practicing in large cities.

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 25

Estimated number of EM resident physicians currently in training? 20

List of EM Residencies (1)

- Kuwait Board of Emergency Medicine (KBEM).

EM Fellowship programs: None

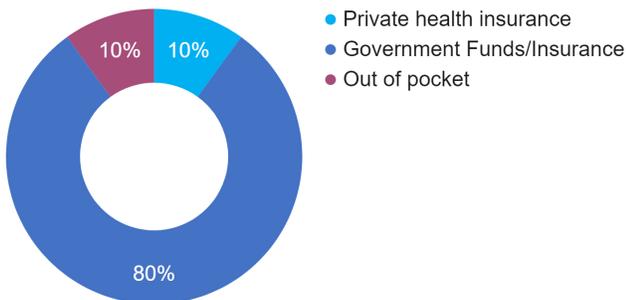
Skills within the scope of practice of a residency-trained emergency physician in the country:

- ✓ Cardiac pacing
- ✓ Central venous access
- ✓ Chest tube
- ✓ Cricothyrotomy
- ✓ Dislocation reduction
- ✓ ED bedside ultrasound
- ✓ Intubation
- ✓ Lumbar puncture
- ✓ Pericardiocentesis
- ✓ Procedural sedation
- ✓ Vaginal delivery

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- ✗ Abdominal surgery (eg appendectomy)
- ✗ Burr hole craniotomy
- ✗ Cardiac catheterization
- ✗ C-section
- ✗ GI endoscopy
- ✗ Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

Ministry of Health, private organization

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Paramedics, Emergency medical technician (EMT)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EMS through EM.

Are there peer-reviewed EM journals based in the country?

No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Research.
- Short courses.
- Teaching opportunities

In the past, such clinical rotations were active, however, the programs may be re-activated if there is international support from EM programs globally.

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Clinical rotation with direct patient care (if licensed).
- Language classes.
- Research.
- Short courses.
- Teaching opportunities.

REFERENCES

- Kuwait Institute for Medical Specializations.
- Ministry of Health.

Lao People's Democratic Republic

LEADERSHIP TEAM

- *Lead Ambassador:* Kristiana Kaufmann
- *Lead Country Report Author:* Kristiana Kaufmann

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? Yes

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

- 1975-2016 - Emergency departments run with Anesthesia, Internal Medicine, Surgery and Pediatrics physicians.
- 2016 – Collaboration between the Ministry of Health (MOH), University of Health Sciences and Health Frontiers to begin Lao EM Residency.
- 2016– Health Frontiers supports the first EM Coordinator, Dr. Celine Jacobs.
- 2016 - One year EM program run by the MOH.
- 2017 – First class of 3-year EM residents selected.
- 2018 – First Lao EM National Conference.

What were the latest developments in emergency medicine in the country (last update 2018)?

- First Lao EM National Conference.
- Second class of EM residents started the 3-year program.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

The most prominent challenge for the new Lao EM residency program is the lack of residency trained EM faculty for bedside teaching. The residency is supported by the NGO Health Frontiers, which provides a foreign EM trained physician to coordinate teaching and visiting faculty and residents. However, the foreign assistance is a bridge. The lack of Lao EM trained faculty is the largest barrier to the training of Lao EM residents. Limited English language proficiency is a significant barrier to accessing medical resources. We include English language lessons for residents. We are also looking into Thai language resources as the Lao and Thai languages are similar.

What are some specific clinical and academic faculty development needs in the country?

The largest need for faculty development would be EM specific training for current EM physicians including daily bedside teaching with the residents, faculty and short courses.

What is the biggest threat to the specialty of emergency medicine in the country?

Lack of Lao trained EM trained specialists.

What specific needs can ACEP help with?

- Financial support for faculty and resident development.
- Scholarships for residents and faculty to attend regional and international EM conferences.
- Financial support and endorsement of national and local EM conferences.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 0%

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? No

Are medical student rotations with residency-trained EM specialists available in the country? No

EM TRAINING

Estimated number of residency-trained EM physicians in the country? None

Estimated number of EM resident physicians currently in training? 17

List of EM Residencies (1)

- University of Health Sciences Lao Emergency Medicine Residency, Vientiane.

EM Fellowship programs: None

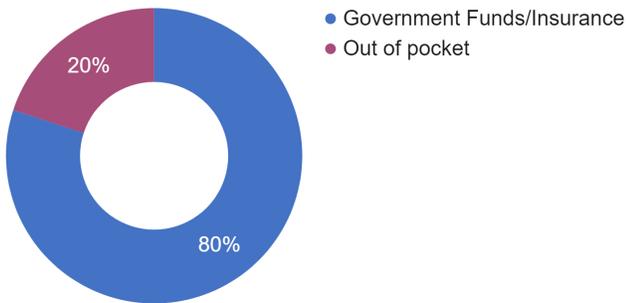
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✗ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✗ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- X Abdominal surgery (eg appendectomy)
- X Burr hole craniotomy
- X Cardiac catheterization
- X C-section
- X GI endoscopy
- X Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? No

Are there medical control protocols for prehospital care in the country? No

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- X Government air transport
- X Private air transport

Under what authority is pre-hospital care?

Ministry of Health, other national governmental agency, private organization

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Emergency medical technician (EMT), Personnel with Medical first responder (MFR) training

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country?

- No EM related research being conducted
- EM Resident research in process

Are there peer-reviewed EM journals based in the country?

No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Language classes
- Clinical observership.
- Short courses.
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Teaching opportunities.

INTERESTING ONLINE EM RESOURCES

- <https://www.epijournal.com/home/2019/1/17/emergency-medicine-takes-shape-in-laos>
- www.healthfrontiers.org
- <https://www.facebook.com/EmermedKKU>

ACKNOWLEDGMENTS

- Dr. Celine Jacobs, EM Residency Coordinator.
- Dr. Khamsay Detleuxay, EM Residency Director.

Lebanon

LEADERSHIP TEAM

- *Lead Ambassador:* Josyann Abisaab
- *Lead Country Report Author:* Josyann Abisaab

List of Professional EM Societies (2)

- Lebanese Society of Emergency Medicine
- Lebanese Academy of Emergency Medicine

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? Yes

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

Over the last decade, important historical milestones were achieved in the advancement of emergency medicine as a field across Lebanon. In 2003, a core group of Lebanese practicing emergency physicians established the Lebanese Society of Emergency Medicine (LSEM) to promote such a service and improve the delivery of emergency medical care across the country. In 2005, LSEM led by faculty from the American University of Beirut (AUB) secured the addition of emergency medicine as one of the specialties that the National Social Security Fund (NNSF) recognizes. More recently, and after nearly seven years of lobbying through the support of the Lebanese Order of Physicians (LOP), the American University of Beirut (AUB), and community leaders succeeded in securing the right of Emergency Department patients to be cared for by emergency specialists who can best serve their needs.

What were the latest developments in emergency medicine in the country (last update 2018)?

The Department of Emergency Medicine at American University of Beirut Medical Center (AUBMC) has seen growth and recruitment in core faculty who are American board-certified emergency medicine specialists. With 43 beds, three trauma bays, extensive monitoring capacity, available bedside ultrasonography, dedicated imaging room, advanced airway equipment and real-time electronic tracking capacity, the AUBMC ED is equipped to handle the most critical cases. A toxicology service covered by medical toxicologists with access to advanced testing and therapeutic resources has been added. The Pediatrics

Emergency Medicine Service sees over 10,000 patients annually and is staffed by 24-hour attending level care under the directorship of an American Board of Emergency Medicine certified pediatric emergency medicine specialist. Educational programs for residents have continued to expand including simulation and increased research opportunities and grants for faculty and residents.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

One of the main hurdles is the economic and political turmoil in Lebanon. Attempts at health care system improvement have been met with multiple deep-seated structural problems. EM is a relatively newly established specialty with an overlap between the services provided by physicians of other specialties and those provided by the EM physician. This often causes competition and protectionism. Lebanese patients face significant hurdles in accessing primary care due to a highly privatized and specialized primary health care system as well as poor health insurance coverage. Such barriers also translate into challenges accessing emergency care. Data and references regarding emergency health care are rare. Opportunities for growth include an implementation of a centralized data collection system or national electronic healthcare record, developing metrics for emergency care research, and improved funding and training.

What specific needs can ACEP help with?

- Establishing a health research agenda.
- Systematic review of emergency medicine clinical practice guidelines.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 1-20%

Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? Yes;

Programs for physicians, residents, medical students and clinical staff through the Lebanese European Academy for Emergency Medicine in partnership with Saint George Hospital University Medical Center.

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians

80% of residency-trained EM specialists are practicing in large cities.

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 30

Estimated number of EM resident physicians currently in training? 20

List of EM Residencies (1)

- American University of Beirut Medical Center.

EM Fellowship programs: None

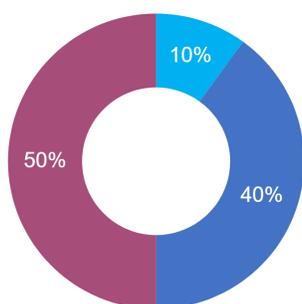
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| X Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| X Chest tube | ✓ Pericardiocentesis |
| X Cricothyrotomy | X Procedural sedation |
| ✓ Dislocation reduction | X Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- X Abdominal surgery (eg appendectomy)
- X Burr hole craniotomy
- X Cardiac catheterization
- X C-section
- X GI endoscopy
- X Surgical fixation of fractures

EMERGENCY CARE FUNDING



- Private health insurance
- Government Funds/Insurance
- Out of pocket

PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? No

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✓ Private air transport
- ✓ Lebanese Red Cross volunteers

Under what authority is pre-hospital care?

Private organizations

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM public health research
- EM clinical research

Are there peer-reviewed EM journals based in the country?

No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Language classes.
- Clinical observership.
- Research.
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Clinical rotation with direct patient care.
- Research.

REFERENCES

- J. Bayram, Emergency medicine in Lebanon: Overview and prospect. *Journal of Emergency Medicine* 32(2):217-22 · March 2007.
- A. Mufarrij, R. Bakhti, N. Batley, P. Doueihy, Public knowledge of emergency medicine in Beirut, Lebanon, *BMC Emergency Medicine* 18(1) · December 2018.

Libya

LEADERSHIP TEAM

- *Lead Ambassador:* J. Stephen Bohan
- *Lead Country Report Author:* Hajer Aljahmi

List of Professional EM Societies (1)

- Libyan Emergency Medicine Association

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? Yes

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

Emergency medicine in Libya was founded in 2010, and the first class of residents graduated in 2015.

What were the latest developments in emergency medicine in the country (last update 2018)?

The second class of EM residents graduated in 2018.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Challenges include lack of resources, continuous violence, and lack of security and safety measures which has led to staff shortages and loss of some health centers which were targeted by war and violence. Libya also lacks funding to compensate for the damage and the loss.

Opportunities include a great need for this service within a rich country with a small population. There are no alternative options, and the number of newly graduated doctors increased every year.

What are some specific clinical and academic faculty development needs in the country?

Research, quality control, leadership and workshops.

What is the biggest threat to the specialty of emergency medicine in the country?

Physicians are leaving the country because of poor training, unsafe workplaces and low salaries and limited supplies.

What specific needs can ACEP help with?

- Online education and lecturing.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 1-20%

Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? Yes

Are medical student rotations with residency-trained EM specialists available in the country? No

Geographic Distribution of EM Physicians

100% of residency-trained EM specialists practice in large cities.

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 20

Estimated number of EM resident physicians currently in training? 400

List of EM Residencies (10)

EM Fellowship programs: None

Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- X Abdominal surgery (eg appendectomy)
- X Burr hole craniotomy
- X Cardiac catheterization
- X C-section
- X GI endoscopy
- X Surgical fixation of fractures

EMERGENCY CARE FUNDING

100% of national emergency medical care costs are paid by government healthcare funds/ government insurance.

PREHOSPITAL CARE

Is there a prehospital care system? No

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? No

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

Ministry of Health, National Civil Defense, other national governmental agency, hospitals

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✗ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, Nurses, Emergency medical technician (EMT)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? No

Are there peer-reviewed EM journals based in the country? No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Teaching opportunities
- War medicine and trauma training

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Research.
- Short courses.

Madagascar

LEADERSHIP TEAM

- *Lead Ambassador:* Georges Ramalanjaona
- *Lead Country Report Author:* Georges Ramalanjaona

List of Professional EM Societies (1)

- Malagasy EM Society

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? Yes

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

In Spring of 2000, dean of the Faculty of Medicine of the University of Antananarivo and the CEO of the University Hospital were invited to speak at the ACEP Scientific assembly in Boston about the current status of EM in the island and in July 2000, our ACEP Ambassador was invited to speak about the implementation of EM in Madagascar. In July 2003, the University of Antananarivo announced the opening of a combined EM/Anesthesiology Residency Program and the Ministry of Health approved the organization of the first Professional Society of EM. In July 2005, the University of Antananarivo graduated its first promotion of EM Physicians and both the Faculty of Medicine at the University of Antananarivo and University of Mahajanga appointed our ACEP Ambassador as the first Visiting Professor in EM.

What were the latest developments in emergency medicine in the country (last update 2018)?

The Ministry of Higher Education and Ministry of Health has established 6 Faculty of Medicine at the capitol of each former 6 Provinces of the island with the goal of developing an academic department within each Faculty of Medicine. The National Pre-Hospital System adopted the use of international CPR guidelines.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Finding funding and other resources for research and faculty development is a major challenge to developing EM in Madagascar. Other challenges include establishing academic departments for the six faculty of Medicine (currently only three have academic departments) and establishing a

uniform prehospital system for an island of 25 million people.

What are some specific clinical and academic faculty development needs in the country?

Train and Develop a cadre of Academicians talented and competent in the clinical, administrative and research fields. to teach at the 6 Faculties of Medicine within the next 3-5 years. There is also a need for cooperation from regional and international organizations to increase research and teaching opportunities.

What is the biggest threat to the specialty of emergency medicine in the country?

Lack of an effective leadership group at the provincial and national levels to represent the interest of EM among other specialties and within the Ministry of Health.

What specific needs can ACEP help with?

- Make full scholarships available for Leaders to attend ACEP Scientific Assembly.
- Sponsorship of National Conferences (speakers, program).
- Make educational and clinical resources available.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 1-20%

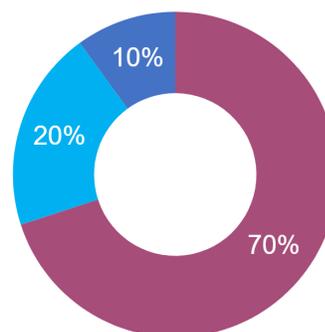
Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? Yes;

2-year training program for selected general practitioners at the University of Antananarivo.

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



- Large Cities
- Small Cities
- Rural Areas

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 120

Estimated number of EM resident physicians currently in training? 120

List of EM Residencies (3)

- University of Antananarivo Faculty of Medicine.
- University of Mahajanga Faculty of Medicine.
- University of Tamatave Faculty of Medicine.

EM Fellowship programs:

- Critical care

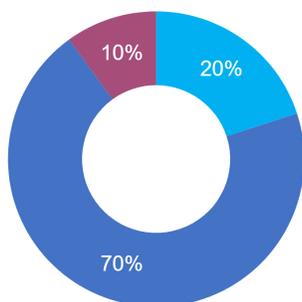
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✗ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✗ Pericardiocentesis |
| ✗ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- ✗ Abdominal surgery (eg appendectomy)
- ✗ Burr hole craniotomy
- ✗ Cardiac catheterization
- ✓ C-section
- ✗ GI endoscopy
- ✗ Surgical fixation of fractures

EMERGENCY CARE FUNDING



- Private health insurance
- Government Funds/Insurance
- Out of pocket

PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? No

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✗ Private air transport

Under what authority is pre-hospital care?

Ministry of Health, hospitals, private organization, hospitals

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, Paramedics, Emergency medical technician (EMT), Personnel without medical training

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes

Are there peer-reviewed EM journals based in the country? No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Language classes
- Clinical observership.
- Clinical rotations with direct patient care.
- Research.
- Short courses.

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Conferences.
- Research.
- Short courses.

INTERESTING ONLINE EM RESOURCES

- Georges Ramalanjaona publications in Annals of Emergency Medicine and Prehospital journals.

REFERENCES

- Deans of Faculty of Medicine.
- University of Antananarivo database publications.

Malawi

LEADERSHIP TEAM

- *Lead Ambassador:* Heather Machen
- *Liaison(s):* Mulinda Nyirenda
- *Lead Country Report Author:* Heather Machen

Professional EM Societies (0)

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? Yes

Are there national laws or regulations regarding emergency medical care? Yes

History of EM in the country:

As in many countries emergency care was previously provided by individuals trained in other specialties with emergency medicine recently beginning to develop as a new specialty.

What were the latest developments in emergency medicine in the country (last update 2018)?

Development of emergency medicine training program at Queen Elizabeth Central Hospital.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Challenges include limited financial support for a residency program within the training institutions and undefined leadership for the national emergency care system within the health ministry. Increased manpower is needed for local EM physicians to handle the workload required to build services and offer educational programs. There are also limited funding opportunities for local research efforts.

What are some specific clinical and academic faculty development needs in the country?

Expertise and mentorship to guide the development of the emergency medical system. Funding opportunities and collaboration for research. Establishment of emergency medicine faculty.

What is the biggest threat to the specialty of emergency medicine in the country?

The greatest challenge comes from other services that want to retain ownership of areas that are typically under the purview of emergency medicine.

What specific needs can ACEP help with?

- Endorsement of conferences.
- Clinical resources
- Educational resources.
- Clinical work and training.
- Consultative services.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 1-20%

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? Yes;

Clinical modules in EM offered for physician assistants as well as residents in IM, surgery and other specialties.

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians

100% of residency-trained EM specialists practicing in large cities

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 50

Estimated number of EM resident physicians currently in training? 2

List of EM Residencies (1)

- Queen Elizabeth Central Hospital.

EM Fellowship programs: None

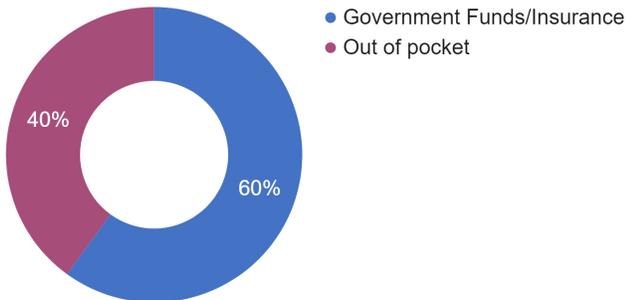
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- X Abdominal surgery (eg appendectomy)
- X Burr hole craniotomy
- X Cardiac catheterization
- ✓ C-section
- X GI endoscopy
- X Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? No

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

Ministry of Health, hospitals, private organization

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- X Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Nurses, Emergency medical technician (EMT), Personnel without medical training

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes

Are there peer-reviewed EM journals based in the country? No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.
- Clinical rotations with direct patient care.
- Research.
- Short courses.
- Teaching opportunities
- Guidelines and policy development
- Mentorship program

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Clinical rotation with direct patient care.
- Guidelines and policy development.
- Research.
- Short courses.
- Teaching opportunities.

INTERESTING ONLINE EM RESOURCES

- <http://www.mmj.mw/?p=8097>

Mexico

LEADERSHIP TEAM

- *Lead Ambassador:* Haywood Hall
- *Liaison(s):* Jesica Valeria Bravo-Gutierrez
- *Lead Country Report Author:* Jesica Valeria Bravo-Gutierrez

List of Professional EM Societies (2)

- Sociedad Mexicana de Medicina de Emergencia; <https://www.smme-ac.com/>
- Asociación de Medicina de Urgencias y Desastres de México; <https://amudem.org>

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? Yes

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

1985's earthquake gave the space to realize EM, was needed. The first EM residency training program was opened in 1986. In 1987 the SMME was established. Now we have 72 EM residency training programs. In 2018 we hosted ICEM2018, watershed for the development and evolution in EM in Latin America.

What were the latest developments in emergency medicine in the country (last update 2018)?

- International Conference for Emergency Medicine (ICEM) 2018 hosted in Mexico City.
- Developed agreement for external international rotations for the EM training program.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Challenges include the political and economic situation in the country. However, EM as a specialty is strong in Mexico and we have people willing to keep on supporting the development and evolution of EM.

What are some specific clinical and academic faculty development needs in the country?

We need more support for research and to reach places far from large cities.

What is the biggest threat to the specialty of emergency medicine in the country?

The lack of preparation, resources, medicine and low physician salaries.

What specific needs can ACEP help with?

- Endorsements.
- Special conference fees.
- Educational resources.
- Rotations.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 61-80%

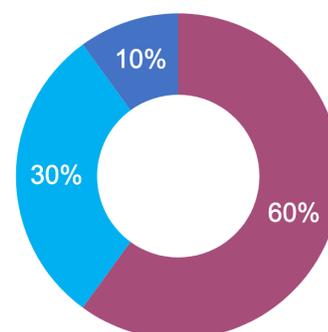
Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? Yes;

Short and midterm courses.

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



● Large Cities ● Small Cities ● Rural Areas

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 6000

Estimated number of EM resident physicians currently in training? 900

EM Residencies (72)

EM Fellowship programs:

- Critical care.
- Pediatric EM.
- Toxicology.

- Ultrasound.

Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- ✗ Abdominal surgery (eg appendectomy)
- ✗ Burr hole craniotomy
- ✗ Cardiac catheterization
- ✗ C-section
- ✗ GI endoscopy
- ✗ Surgical fixation of fractures

EMERGENCY CARE FUNDING

100% of national emergency medical care costs paid by private health insurance.

PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✗ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

Ministry of Health, hospitals, private organization

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, Nurses, Paramedics, Emergency medical technician (EMT)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes

Are there peer-reviewed EM journals based in the country? Yes

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.
- Research.
- Short courses.

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Research.
- Short courses.

INTERESTING ONLINE EM RESOURCES

Twitter:

@smmeac
@amudem

Mozambique

LEADERSHIP TEAM

- *Deputy Ambassador:* Kevin M. Lunney
- *Lead Country Report Author:* Kevin M. Lunney

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? Yes

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? Yes

History of EM in the country:

Fledgeling specialist program. 6 current residents and three attendings inducted into the college. Residency is government funded and supported by PLEDGE Health.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Challenges include development of an emergency department model compatible with current care practices and resources, and recruitment of further residents for the training program.

What are some specific clinical and academic faculty development needs in the country?

Increased exposure to emergency medical systems, patient flow and resuscitation.

What is the biggest threat to the specialty of emergency medicine in the country?

Lack of specialists to lobby for and steer the direction of the emergency medical care within the country.

What specific needs can ACEP help with?

- Clinical resources.
- Educational resources.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 0%

Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? Yes;

Short and midterm courses

Are medical student rotations with residency-trained EM specialists available in the country? No

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 2

Estimated number of EM resident physicians currently in training? 6

List of EM Residencies (1)

- Maputo Central Hospital/Ministry of Health.

EM Fellowship programs: None

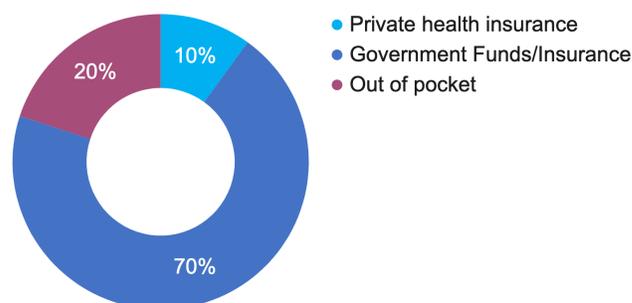
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- X Abdominal surgery (eg appendectomy)
- X Burr hole craniotomy
- X Cardiac catheterization
- X C-section
- X GI endoscopy
- X Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? No

Is there a national emergency phone number system? No

Are there medical control protocols for prehospital care in the country? No

Medically assisted transport provided by:

- Lay people / bystanders
- Government ground ambulances
- Private ground ambulances
- Government air transport
- Private air transport

Under what authority is pre-hospital care?

Ministry of Health

What is the pre-hospital service used for?

- Scene to hospital
- Hospital to hospital (interfacility)
- Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Personnel without medical training

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes

Are there peer-reviewed EM journals based in the country?
No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.
- Research.
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Research.
- Short courses.

Netherlands

LEADERSHIP TEAM

- *Lead Ambassador:* Terrence Mulligan
- *Lead Country Report Author:* Terrence Mulligan

List of Professional EM Societies (1)

- Nederlandse Vereniging van Spoedeisende Hulp Artsen; NVSHA.nl

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? Yes

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? Yes

History of EM in the country:

EM started in the Netherlands in 2002 with the first community based EM residencies. The NVSHA started in 2004, with EM residency accrediting bodies formed that year as well. EM was recognized as a mid level specialty in 2008. There are approximately 30 EM residencies now with 400 graduates and approximately 400 residents. More info is available at NVSHA.nl website

What were the latest developments in emergency medicine in the country (last update 2018)?

Nederlandse Vereniging van Spoedeisende Hulp Artsen (NVSHA) won the bid for International Federation for Emergency Medicine (IFEM) 2023 global EM conference. NVSHA is also constructing a national EM registry, and is moving from a 3-year curriculum to a 5-year curriculum.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Challenges include development of an emergency department model compatible with current care practices and resources, and recruitment of further residents for the training program.

What are some specific clinical and academic faculty development needs in the country?

See above.

What is the biggest threat to the specialty of emergency medicine in the country?

Control by other specialties.

What specific needs can ACEP help with?

- Society to society level collaborations to Ministry of Health, health legislators, insurers.

EM WORKFORCE

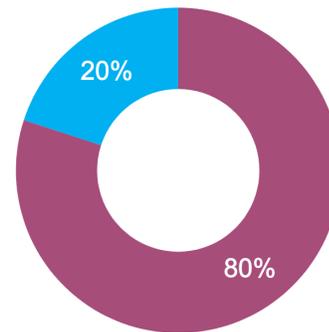
Estimated percent of EDs with at least one residency trained EM-physician? 61-80%

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? No

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



● Large Cities ● Small Cities

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 400

Estimated number of EM resident physicians currently in training? 400

EM Residencies (30)

EM Fellowship programs:

- Administrative.
- Critical care.
- Trauma.
- Ultrasound.

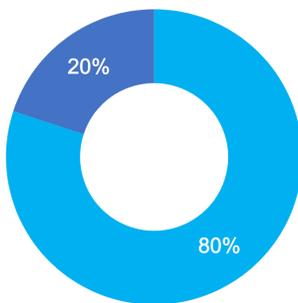
Skills within the scope of practice of a residency-trained emergency physician in the country:

- ✓ Cardiac pacing
- ✓ Central venous access
- ✓ Chest tube
- ✓ Cricothyrotomy
- ✓ Dislocation reduction
- ✓ ED bedside ultrasound
- ✓ Intubation
- ✓ Lumbar puncture
- ✓ Pericardiocentesis
- ✓ Procedural sedation
- ✓ Vaginal delivery

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- ✗ Abdominal surgery (eg appendectomy)
- ✗ Burr hole craniotomy
- ✗ Cardiac catheterization
- ✗ C-section
- ✗ GI endoscopy
- ✗ Surgical fixation of fractures

EMERGENCY CARE FUNDING



- Private health insurance
- Government Funds/Insurance

PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

Ministry of Health, other national governmental agency, hospitals, private organizations

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, Nurses, Paramedics

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes

Are there peer-reviewed EM journals based in the country? No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.
- Clinical rotations with direct patient care.
- Research.
- Short courses.
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Clinical rotation with direct patient care.
- Research.
- Short courses.
- Teaching opportunities.

REFERENCES

- NVSHA.nl

New Zealand

LEADERSHIP TEAM

- *Deputy Ambassador:* Michael Connelly & Greg Larkin
- *Lead Country Report Author:* Michael Connelly

List of Professional EM Societies (1)

- Australasian College of Emergency Medicine (ACEM); www.acem.org.au

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? Yes

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? Yes

History of EM in the country:

Though there were predecessor organizations in the 1970's, ACEM was established until 1983. They first began publishing their journal in 1990 and ACEM was a founding member, along with ACEP, of IFEM. In 1993, emergency medicine was first recognized as an independent specialty in Australasia.

What were the latest developments in emergency medicine in the country (last update 2018)?

There is now increasing use of lytics in the field for ST-elevation myocardial infarctions (STEMIs). These patients will often then be flown directly to a cardiac center. There is increasing use of endovascular clot retrieval in the setting of acute stroke. There is an efficient use of emergency medical services (EMS) to initially assess patients at hospitals and then quickly transfer eligible patients to Auckland for this procedure. There is potential for 1 check high-sensitivity troponin as a method for ruling out acute coronary syndrome (ACS) in certain cases.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

There is a shortage of staff to fill EM positions and a large number of emergency physicians still need to be recruited from outside the country. It is a constant challenge to get admitted patients moved out of the ED and into the rest of the hospital. Opportunities include improved efficiency within the ED and increased recognition that an assessment by an EP is enough to justify an admission. There are increasing numbers of New Zealanders enrolling in EM

training programs which gives them more opportunity to fully staff the EDs with locally trained physicians.

What are some specific clinical and academic faculty development needs in the country?

Overall the training in NZ is robust. There is an increasing movement of bringing physicians from all specialties (including EM) into managerial or administrative roles. These physicians would benefit from specialized training in these aspects.

What is the biggest threat to the specialty of emergency medicine in the country?

The use of the ED as a type of short stay ward. The Ministry of Health is recognizing the importance of efficient disposition of patients and has a target to move patients through the ED within 6 hours. This often results in patients being moved to short stay within the ED and then using the ED as an observation admission, bypassing the patient's need to be referred to a specific service.

What specific needs can ACEP help with?

- Large-scale research projects across Australasia and the U.S.
- Increased respect from other accepting services and radiology so that emergency medicine physician decisions are accepted without needing support from another service.

EM WORKFORCE

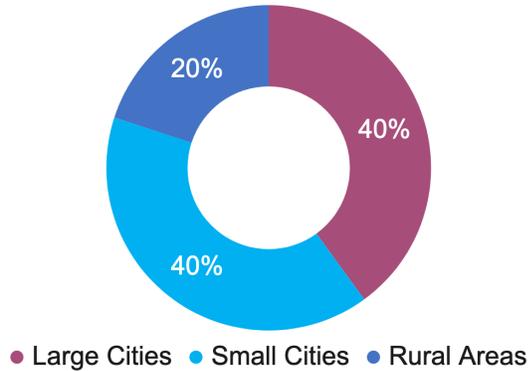
Estimated percent of EDs with at least one residency trained EM-physician? 61-80%

Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? Yes; NPs and Certified Nurse Specialists (CNS).

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



EM TRAINING

Estimated number of residency-trained EM physicians in the country? 300

Estimated number of EM resident physicians currently in training? 90

EM Residencies (17)

EM Fellowship programs:

- Critical care.
- Emergency medical services (EMS).
- Pediatric EM.
- Ultrasound.

Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- ✗ Abdominal surgery (eg appendectomy)
- ✗ Burr hole craniotomy
- ✗ Cardiac catheterization
- ✗ C-section
- ✗ GI endoscopy
- ✗ Surgical fixation of fractures

EMERGENCY CARE FUNDING

100% of EM care costs paid by government funds.

PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✗ Government air transport
- ✗ Private air transport

Under what authority is pre-hospital care?

Ministry of Health, private organizations

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, Nurses, Paramedics (EMT)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes

Are there peer-reviewed EM journals based in the country? Yes

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.
- Research.

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Clinical rotation with direct patient care.
- Research.

REFERENCES

- www.acem.org.au

Nicaragua

LEADERSHIP TEAM

- *Lead Ambassador:* **Breena Taira**
- *Resident Representative:* **Elizabeth Davlantes**
- *Lead Country Report Author:* **Héctor Enrique Real Poveda**
- *Contributing Author(s):* **Héctor Real & Aislinn Black**

List of Professional EM Societies (1)

- Asociación Nicaraguense de Medicina de Emergencias (ANME)

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? Yes

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

Emergency Medicine is a rising specialty in Nicaragua started in 1995, but in 2016 2 of the public programs were closed (because politics and financial issues, replied the Ministry of Health), However there's 1 private hospital that provides the program. Even though the specialty is recognized by the authorities is not well known by the population even by other physicians. So as ANME we work spreading the word of EM through the country in order to make them realize how important emergency care is for the country and the responsibility that EM has in social and health care aspects.

What were the latest developments in emergency medicine in the country (last update 2018)?

In February 2018, the country's first Initial Assessment in Trauma International Congress was developed in collaboration with Project SEMILLA (Strengthening Emergency Medicine Investing in Learners in Latin America) and the Ministry of Health.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Barriers include social and political conflict within the country. The Ministry of Health and the government don't prioritize EM or emergency care services. They don't have a plan for emergency medicine. There is also a lack of emergency medicine related education in Nicaraguan medical schools. Another barrier is long shift times (generally 32 hours, or 24 hours on weekends and holidays).

What are some specific clinical and academic faculty development needs in the country?

Development of more procedure skills beyond intubation, chest tube placement and central line access. Ultrasound training is needed as well as CT scan image interpretation courses. There is also a need for development of research in the EM field using our own population in order to generate our own statistics and develop our own protocols based on these results. We need more EM physicians training EM residents and students.

What is the biggest threat to the specialty of emergency medicine in the country?

Lack for interest in EM by the national authorities and poor administrative management. Burnout from stress of EM work in crowded emergency rooms with limited resources. Lack of time to work on research and educational programs. Lack of promotion for EM physicians.

What specific needs can ACEP help with?

- Organize conferences to talk about EM inviting the national and local authorities.
- Training in Ultrasound skills.
- Sharing experience how EM developed in the U.S.
- Consultative services.
- How to develop EM protocols.
- Providing educational resources.

EM WORKFORCE

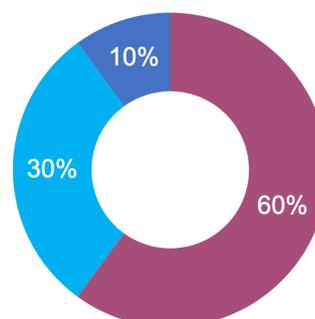
Estimated percent of EDs with at least one residency trained EM-physician? 21-40%

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? No

Are medical student rotations with residency-trained EM specialists available in the country? No

Geographic Distribution of EM Physicians



● Large Cities ● Small Cities ● Rural Areas

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 200

Estimated number of EM resident physicians currently in training? 10

List of EM Residencies (1)

- Hospital Bautista EM program.

EM Fellowship programs: None

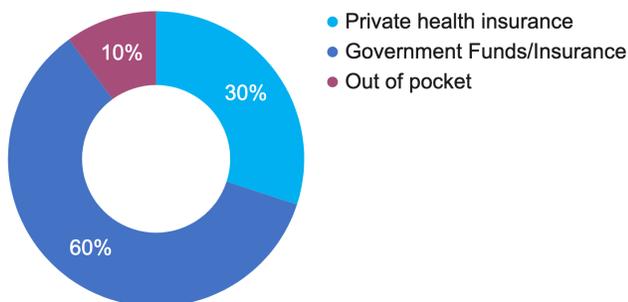
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|---|--|
| <input type="checkbox"/> Cardiac pacing | <input checked="" type="checkbox"/> Intubation |
| <input checked="" type="checkbox"/> Central venous access | <input checked="" type="checkbox"/> Lumbar puncture |
| <input checked="" type="checkbox"/> Chest tube | <input type="checkbox"/> Pericardiocentesis |
| <input checked="" type="checkbox"/> Cricothyrotomy | <input type="checkbox"/> Procedural sedation |
| <input checked="" type="checkbox"/> Dislocation reduction | <input checked="" type="checkbox"/> Vaginal delivery |
| <input type="checkbox"/> ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- Abdominal surgery (eg appendectomy)
- Burr hole craniotomy
- Cardiac catheterization
- C-section
- GI endoscopy
- Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? No

Medically assisted transport provided by:

- Lay people / bystanders
- Government ground ambulances
- Private ground ambulances
- Government air transport
- Private air transport

Under what authority is pre-hospital care?

Ministry of Health, Red Cross

What is the pre-hospital service used for?

- Scene to hospital
- Hospital to hospital (interfacility)
- Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Emergency medical technician (EMT)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? No

Are there peer-reviewed EM journals based in the country? No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Language classes
- Clinical observership.
- Clinical rotations with direct patient care.
- Research.

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Clinical rotation with direct patient care.
- Language classes.
- Research.
- Short courses.
- Teaching opportunities.

INTERESTING ONLINE EM RESOURCES

- Facebook: ANME nicaragua
- Twitter: @anme_nicaragua

Norway

LEADERSHIP TEAM

- *Lead Ambassador:* Gayle Galletta
- *Resident Representative:* Tu Carol Nguyen
- *Lead Country Report Author:* Gayle Galletta
- *Contributing Author(s):* Gayle Galletta

List of Professional EM Societies (1)

- Norwegian Society for Emergency Medicine

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? Yes

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

Emergency Medicine is in its infancy in Norway. Norway has a universal healthcare system. Each citizen or resident is assigned a primary care physician. If a person is sick or injured, they are seen by their PCP during regular office hours, or after hours by the urgent care center (legevakt) associated with the PCP's office. Patients who require admission are sent to the regional hospital either by car or ambulance. Alternatively, patients who are seriously ill or injured may call 113 for an ambulance. Critically ill and injured patients are managed by anesthesiologists. Other patients are triaged by nurses and then treated by interns or residents from a specific service (IM, surgery, neurology, psych, peds, OB/gyn). Obviously, problems and delays in treatment can arise when a patient is triaged to the wrong service; it is not until after the patients arrive on the inpatient ward that they are evaluated by an attending physician (and not overnight).

- 2010: The Norwegian Society for Emergency Medicine (NORSEM) was founded with the goal of improving emergency medicine knowledge and emergency care. Yearly conferences were held from 2011-2016.
- April 2013: Akershus University Hospital (with the largest emergency department in Norway) was the first hospital to staff the ED 24/7 with dedicated attending physicians (three of whom were American board-certified EPs). Politicians were invited to see this model and it was featured on a national documentary on the Norwegian healthcare system. However, this concept was so controversial among the

internal medicine physicians that it was shut down within one year, despite improved patient care.

- 2013-present: Several other hospitals develop emergency departments, but these are primarily internal medicine based and not staffed by attendings at night.
- October 2013: the newly elected leaders of government made it a goal to establish Emergency Medicine as its own specialty.
- January 9, 2017: the Minister of Health declared Emergency Medicine as the newest independent specialty in Norway. Later in 2017, a temporary specialist committee was formed to create a National curriculum and specialty requirements based on the European Society for Emergency Medicine (EuSEM) curriculum.
- January 2018: NORSEM became a full member of IFEM.
- March 1, 2019: The Directorate of Health began accepting applications for both training programs and specialists.

What were the latest developments in emergency medicine in the country (last update 2018)?

- January 2018: Norwegian Society for Emergency Medicine (NORSEM) became a full member of International Federation for Emergency Medicine (IFEM).
- March 1, 2019: The Directorate of Health began accepting applications for both training programs and specialists. Approvals are not expected until at least summer 2019.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Now that EM has been recognized as its own specialty, the greatest challenge lies in defining the specialty in a country that does not entirely understand the scope of practice of an EM physician. The specialty committee is predominantly composed of internal medicine physicians who view the specialty primarily as acute internal medicine. The other specialists do not want to give up control of their procedures (intubations, procedural sedation, trauma, etc). Anesthesiologists will sometimes refer to themselves as emergency physicians. Legevakt (urgent care) is also not included in the new emergency medicine specialty.

What are some specific clinical and academic faculty development needs in the country?

The greatest need is indeed that of providing an example for emergency physicians. It is virtually impossible for physicians from overseas to shadow in US emergency departments.

What is the biggest threat to the specialty of emergency medicine in the country?

The definition of the scope of practice of emergency medicine by internal medicine physicians who lack practical experience in the field.

What specific needs can ACEP help with?

- Endorsement of the core curriculum of emergency medicine.
- Easing restrictions regarding observing in U.S. emergency departments.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 1-20%

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? No

Are medical student rotations with residency-trained EM specialists available in the country? No

Geographic Distribution of EM Physicians

100% of residency-trained EM specialists practicing in large cities.

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 4

Estimated number of EM resident physicians currently in training? 13

EM Residencies (13)

EM Fellowship programs: None

Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- X Abdominal surgery (eg appendectomy)
- X Burr hole craniotomy
- X Cardiac catheterization
- X C-section
- X GI endoscopy
- X Surgical fixation of fractures

EMERGENCY CARE FUNDING

100% of EM care costs paid by government funds/Insurance.

PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

Ministry of Health

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- X Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, Paramedics

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? No

Are there peer-reviewed EM journals based in the country?

No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Short courses.

INTERESTING ONLINE EM RESOURCES

- www.norsem.org

Oman

LEADERSHIP TEAM

- *Lead Ambassador:* Terrence Mulligan
- *Lead Country Report Author:* Terrence Mulligan

List of Professional EM Societies (1)

- Oman society of EM (OSEM);
<http://www.omanemergency.org/>

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? Yes

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? Yes

History of EM in the country:
<http://www.omanemergency.org/>

What were the latest developments in emergency medicine in the country (last update 2018)?

Oman has a well-functioning emergency medical services (EMS) and a growing strong EM program. Latest efforts are in establishing a national trauma system and attempts to address the huge motor vehicle collision (MVC) burden.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Challenges include the need to expand the EM workforce, establishing national priorities in EM care, and increased funding.

What are some specific clinical and academic faculty development needs in the country?

Faculty development, clinical and non-clinical subspecialties, consulting on national funding, the establishment of a national trauma system, a registry and injury prevention program.

What is the biggest threat to the specialty of emergency medicine in the country?

Lack of funding and national medical priorities.

What specific needs can ACEP help with?

- See above.

EM WORKFORCE

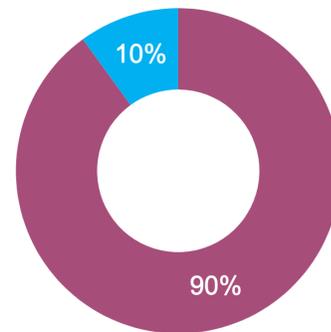
Estimated percent of EDs with at least one residency trained EM-physician? 21-40%

Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? No

Are medical student rotations with residency-trained EM specialists available in the country? No

Geographic Distribution of EM Physicians



● Large Cities ● Small Cities

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 100

Estimated number of EM resident physicians currently in training? 100

EM Residencies (10)

EM Fellowship programs: None

Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- X Abdominal surgery (eg appendectomy)
- X Burr hole craniotomy
- X Cardiac catheterization
- X C-section
- X GI endoscopy
- X Surgical fixation of fractures

EMERGENCY CARE FUNDING

100% of EM care costs paid by government funds.

PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- X Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

Ministry of Health, National Civil Defense

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- X Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Paramedics, Emergency medical technician (EMT)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes

Are there peer-reviewed EM journals based in the country?

No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.
- Clinical rotations with direct patient care.
- Research.
- Short courses.
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Clinical rotation with direct patient care.
- Research.
- Short courses.
- Teaching opportunities.

INTERESTING ONLINE EM RESOURCES

- <http://www.omanemergency.org/>

REFERENCES

- <http://www.omanemergency.org/>

Pakistan

LEADERSHIP TEAM

- *Lead Ambassador:* **Barbra Villona**
- *Liaison(s):* **Ghazanfar Saleem & Asad Mian**
- *Lead Country Report Author:* **Barbra Villona**

List of Professional EM Societies (1)

- Pakistan Society of Emergency Medicine;
<https://www.psem.com.pk>

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? Yes

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

- 2004: Punjab established Province-wide Rescue 1122 project which now encompasses a universal number (1122) and a prehospital system which includes an EMT training program.
- 2010: Aga Khan University Karachi started the nation's first EM residency program.
- 2011: The College of Physicians and Surgeons of Pakistan (CPSP) recognized Emergency Medicine as a specialty.
- 2012 and 2013: Aga Khan University Hospital in Karachi and Shifa International Hospital in Islamabad each started EM fellowship training programs.
- Feb 2018: the Pakistan Society of Emergency Medicine was formed and later that year published its first volume of the *South Asian Journal of Emergency Medicine*.

What were the latest developments in emergency medicine in the country (last update 2018)?

In February 2018, the Pakistan Society of Emergency Medicine was formed and later that year published its first volume of the *South Asian Journal of Emergency Medicine*.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

One challenge is that emergency care is undervalued by the government, hospital administrators and other medical specialties. Most EDs are staffed by non-emergency physicians who are underpaid and poorly regarded. The Pakistan Society of EM hopes to change that. Healthcare is only provided in either private or public settings.

Public/private partnerships, for example the ChildLife Foundation, could enrich the services available. Untrained ambulance attendants are another challenge. Punjab is the exception and could serve as a model. There is also no referral network among hospitals. Developing such a network would improve patient and physician experience. With only seven EM residencies serving 220 million people, there are only a handful of emergency physicians available in urban areas, and none are in rural areas. One solution is to develop an Acute Care Certificate course for GPs. To maximize the reach of such courses, online resources could be created. Developing training programs for advanced practice providers (APP), and expanding the roles of Lady Health Visitors and community health workers could also fill this gap.

What are some specific clinical and academic faculty development needs in the country?

Faculty development needs are myriad. EM is a new specialty in Pakistan and most EM residents are being trained by Internal Medicine Physicians with a passion for emergency care. Any training that would augment their confidence and aptitude at ED procedural skills and the emergency mindset would be welcome. Specific topics noted include CV/personal statement writing, ensuring gender parity in the workplace, leadership skills, ED management/metrics, curriculum development, and career longevity/resilience strategies.

What is the biggest threat to the specialty of emergency medicine in the country?

Lack of respect, poor pay, few training opportunities and lack of political recognition impeding the progress of EM have contributed to the flight of trained emergency physicians to the UK or US.

What specific needs can ACEP help with?

- Rather than endorsing just occasional conferences, ACEP could endorse seminars and short courses. Such endorsement would lend a seal of approval and increase the reach of these educational efforts within Pakistan.
- Advocate for educational opportunities in the U.S. for Pakistani doctors. These could range from increasing the number of scholarships for Scientific Assembly attendance to observerships and other clinical training programs.
- Support efforts for low- and middle-income countries to develop low-cost creative solutions to common problems by sponsoring or endorsing EM Hackathons and by supporting incubation of selected innovations"

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 1-20%

Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? Yes;
12-month certificate program in EM at The Indus Hospital (Karachi) for non-resident IM and surgery physicians, with weekly educational sessions on core EM topics and supervised clinical work in the ED.

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians

100% of residency-trained EM specialists practicing in large cities.

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 50

Estimated number of EM resident physicians currently in training? 50

List of EM Residencies (7)

- Aga Khan University Hospital Karachi.
- Indus Hospital.
- Jinnah PostGraduate Medical Center.
- Lady Reading Hospital.
- Liaquat National Hospital.
- Mayo Hospital.
- Shifa Hospital Islamabad.

EM Fellowship programs:

- Pediatric EM.

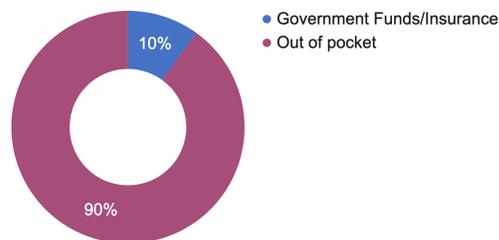
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- X Abdominal surgery (eg appendectomy)
- X Burr hole craniotomy
- X Cardiac catheterization
- X C-section
- X GI endoscopy
- X Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? No

Is there a national emergency phone number system? No

Are there medical control protocols for prehospital care in the country? No

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- X Government ground ambulances
- ✓ Private ground ambulances
- X Government air transport
- X Private air transport

Under what authority is pre-hospital care?

Private Organization, provincial government (only in Punjab)

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- X Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Paramedics, Emergency medical technician (EMT), Personnel without medical training

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes

Are there peer-reviewed EM journals in the country? Yes

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical rotations with direct patient care.

REFERENCES

- www.sajem.org
- Publications by Junaid Razzak.

Panama

LEADERSHIP TEAM

- *Liaison(s):* Ricardo Hughes
- *Lead Country Report Author:* Ricardo Hughes

List of Professional EM Societies (1)

- Asociación Panameña de Medicina de Emergencias (ASPAME)

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? Yes

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

Started the program in 2003 with a high level hospital with 3 specialties from Mexico and Costa Rica (all Panamanians), after time (2018) another program started in the trauma center with medical rotation in different hospitals. In 2008 we have some other sub specialties physicians like Pediatricians, EMS, Ultrasound, but we do not have those programs in Panama yet. Those doctors came from external programs. We have EM specialties in high level positions in order to change rules and to become a better system.

What were the latest developments in emergency medicine in the country (last update 2018)?

- 2018: New EM residency program.
- 2019: Ambulances regulation, implementation of automated external defibrillator (AED) law.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

There is a need to make EM protocols, guidelines, and documents outlining the rights and responsibilities of EM physicians.

What are some specific clinical and academic faculty development needs in the country?

Prehospital Care and trauma.

What is the biggest threat to the specialty of emergency medicine in the country?

Medical Emergencies

What specific needs can ACEP help with?

- Resident rotation in U.S.

EM WORKFORCE

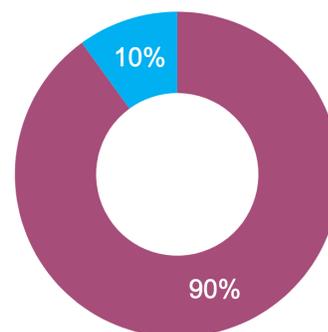
Estimated percent of EDs with at least one residency trained EM-physician? 1-20%

Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? Yes; EMTs and paramedics.

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



● Large Cities ● Small Cities

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 38

Estimated number of EM resident physicians currently in training? 15

List of EM Residencies (2)

- Metropolitan Hospital.
- Sant Thomas Hospital.

EM Fellowship programs: None

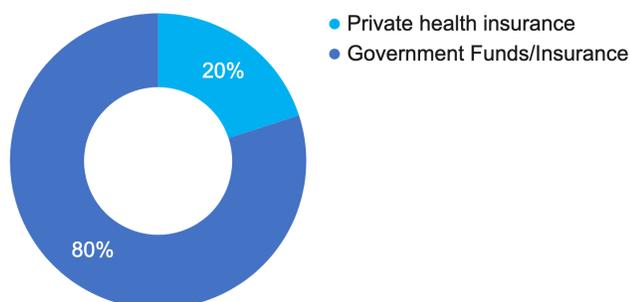
Skills within the scope of practice of a residency-trained emergency physician in the country:

- ✓ Cardiac pacing
- ✓ Central venous access
- ✓ Chest tube
- ✓ Cricothyrotomy
- ✓ Dislocation reduction
- ✓ ED bedside ultrasound
- ✓ Intubation
- ✓ Lumbar puncture
- ✓ Pericardiocentesis
- ✓ Procedural sedation
- ✓ Vaginal delivery

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- ✗ Abdominal surgery (eg appendectomy)
- ✗ Burr hole craniotomy
- ✗ Cardiac catheterization
- ✗ C-section
- ✗ GI endoscopy
- ✗ Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✗ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✗ Private air transport

Under what authority is pre-hospital care?

Ministry of Health, other national governmental agency

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✗ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Paramedics, Emergency medical technician (EMT)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes

Are there peer-reviewed EM journals in the country? No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.
- Clinical rotations with direct patient care.

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Research.
- Short courses.

REFERENCES

- Ministerio de Salud.
- ASPAME president interview.

Paraguay

LEADERSHIP TEAM

- *Lead Ambassador:* Elizabeth DeVos
- *Lead Country Report Author:* Elizabeth DeVos

List of Professional EM Societies (1)

- Sociedad Paraguaya de Emergencias Médicas;

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? Yes

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country: Prior to national programs, family medicine 1 year EM fellowship at Centro Medico Bautista; CMB also sponsored private paramedic training prior to national program development and AHA classes

- 2010: Pediatric EM fellowship was created, two year program after completing three years of pediatrics residency at the Pediatric Children's Hospital of Acosta Ñu.
- 2011: Pediatric EM Fellowship was created, 2 years program after completing three years of pediatrics in the Hospital de Clínicas of the National University
- 2012: PEM is recognized as a specialty and certified
- 2014: 2 EM residencies are created in the country, 4 Years of duration, 30 students currently. In the National Hospital of Itaguá and in the Social Welfare Institute.
- 2015: postgraduate in Medical Emergentology, organized by the Faculty of Medical Sciences of the National University of Asunción (FCM UNA) with a duration of 23 months, and a workload of 1,740 hours clock distributed in 10 modules.
- Creation of the Paraguayan Emergency Society Medicas
- 2018: First congress of Emergentología organized by the Paraguayan Society of Emergencias Medicas"

What were the latest developments in emergency medicine in the country (last update 2018)?

First congress of Emergentología organized by the Paraguayan Society of Emergencias Medicas.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth? As noted by the society presidents, "Greater advocacy is needed with national health authorities. The biggest challenge is to transform

access to care in Emergency Departments in the country (DEP). There is a lot of opportunity for growth."

What are some specific clinical and academic faculty development needs in the country? Rotations/classes in the following disciplines: trauma, toxicology, ultrasound and images. Management and leadership courses.

What is the biggest threat to the specialty of emergency medicine in the country?

- Lack of political momentum
- Weakness of the health network
- Limited quality professional training

What specific needs can ACEP help with?

- Endorsement of conferences.
- Clinical resources.
- Educational resources.
- Consultative services.

EM WORKFORCE

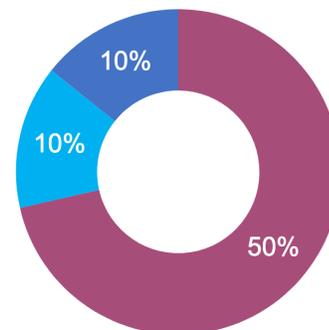
Estimated percent of EDs with at least one residency trained EM-physician? 1-20%

Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? Yes; 23-month postgraduate training in Medical Emergentology through the Faculty of Medical Sciences of the National University of Asunción.

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



- Large Cities
- Small Cities
- Rural Areas

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 25

Estimated number of EM resident physicians currently in training? 30

List of EM Residencies (2)

- Hospital Nacional de Itaugua.
- Instituto de Previsión Social.

EM Fellowship programs:

- Pediatric EM.

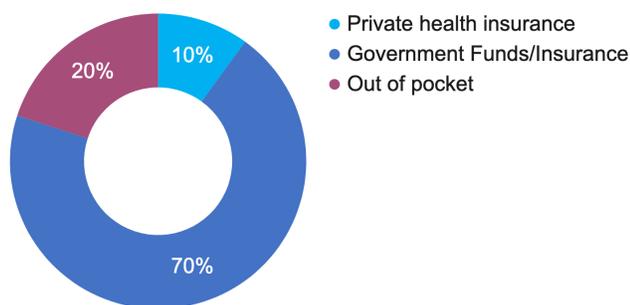
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✗ Pericardiocentesis |
| ✗ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✗ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- ✗ Abdominal surgery (eg appendectomy)
- ✗ Burr hole craniotomy
- ✗ Cardiac catheterization
- ✗ C-section
- ✗ GI endoscopy
- ✗ Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? No

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✗ Government air transport
- ✗ Private air transport

Under what authority is pre-hospital care?

Ministry of Health, private organization

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, Paramedics, Personnel without medical training

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes

Are there peer-reviewed EM journals based in the country?

No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical rotations with direct patient care.
- Research.
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.

INTERESTING ONLINE EM RESOURCES

- <http://spem.org.py>
- <https://www.facebook.com/spem.py/>
- <http://www.conarem.ins.gov.py>

REFERENCES

- Key informants Chrithian Doldan, Viviana Pavlichich, their discussions with current residents and fellows.
- <https://www.facebook.com/spem.py/>

Peru

LEADERSHIP TEAM

- Lead Country Report Author: Robert Inga

List of Professional EM Societies (1)

- Peruvian Society of Emergency Medicine and Disasters (SPMED)

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? Yes

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

Emergency medicine training program was created in 1993 at the Universidad Nacional Mayor de San Marcos (UNMSM), in 1999 the specialty was inscribed into the Peruvian Medical College, in 2004 an organized national emergency medical system was presented to the Ministry of Health, this plan included a unify emergency system and an standardized educational curriculum, currently there are approximately 20 emergency medicine training programs in the whole country, the number of emergency physicians in Peru has increased every year, emergency doctors work in big cities mostly and despite there is much to do yet, the specialty has gain acknowledgment.

What were the latest developments in emergency medicine in the country (last update 2018)?

Development of the first Point of Care Ultrasound fellowship for emergency physicians.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Challenges include lack of organization and low resources. Opportunities include a health system that needs more emergency physicians every year, and improved technology.

What are some specific clinical and academic faculty development needs in the country?

Challenges include lack of organization and low resources. Opportunities include a health system that needs more emergency physicians every year, and improved technology.

What specific needs can ACEP help with?

- Educational resources.
- Clinical resources.
- Conferences.

EM WORKFORCE

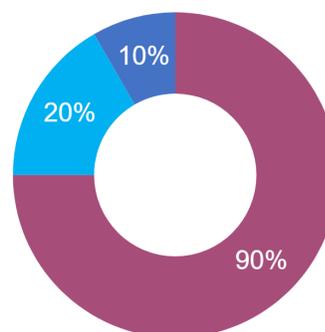
Estimated percent of EDs with at least one residency trained EM-physician? 21-40%

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? No

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



- Large Cities
- Small Cities
- Rural Areas

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 70

Estimated number of EM resident physicians currently in training? 80

List of EM Residencies (20)

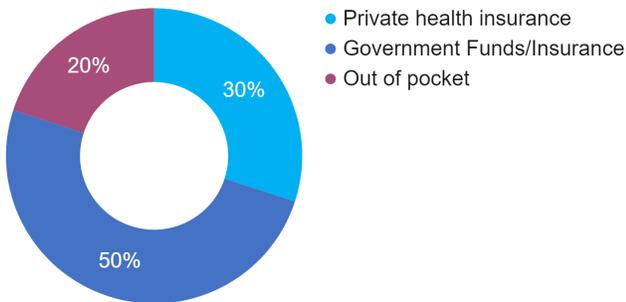
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✗ Dislocation reduction | ✗ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- Abdominal surgery (eg appendectomy)
- Burr hole craniotomy
- Cardiac catheterization
- C-section
- GI endoscopy
- Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? No

Are there medical control protocols for prehospital care in the country? No

Medically assisted transport provided by:

- Lay people / bystanders
- Government ground ambulances
- Private ground ambulances
- Government air transport
- Private air transport

Under what authority is pre-hospital care?

Ministry of Health

What is the pre-hospital service used for?

- Scene to hospital
- Hospital to hospital (interfacility)
- Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, Nurses

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? No
Are there peer-reviewed EM journals based in the country? No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Language classes
- Clinical observership.
- Clinical rotations with direct patient care.
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Short courses.

Poland

LEADERSHIP TEAM

- **Deputy Ambassador:** Terrence Mulligan & Nicole Tyczynska née Piela
- **Lead Country Report Author:** Terrence Mulligan
- **Contributing Author(s):** Prof Juliusz Jakubaszko

List of Professional EM Societies (2)

- Polish Society For Emergency Medicine; <http://www.medycynaratunkowa.wroc.pl/>
- Porozumienie Lekarzy Medycyny Ratunkowej (Emergency Physicians Association)

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? Yes

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? Yes

History of EM in the country:

EM is a specialty for 20 years this year, with 30+ years of EM development and 27 annual conferences, with 5 biannual tribal conferences since. Polish EM is among the best developed in all Central or Eastern Europe. See: <http://www.medycynaratunkowa.wroc.pl/>

What were the latest developments in emergency medicine in the country (last update 2018)?

Based on information from the Polish Organization for Post-Graduate Education and Accreditation, there are 160 accredited hospitals which can train emergency medicine specialists. The website for post-graduate medical education splits programs into those that have adopted a new “modular” or “rotational” form of training in accordance with European Union standards and those which have not yet transitioned to this new model. Most programs have the current, recommended “modular” or rotation-based EM training. <https://www.cmkp.edu.pl/>

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Emergency Medicine is not recognizable among patients, physicians of other specialties and medical students. The specialty has very little esteem. Recruiting young physicians for the future of the specialty is key and difficult as the current opinion of many young students and physicians is

that emergency departments are understaffed, and emergency physicians are overworked and underpaid. There are more desirable specialties that allow physicians to open private practices outside of the hospital.

What are some specific clinical and academic faculty development needs in the country?

Building quality and esteem: Simulation training, including debriefing and feedback. Training for educators in public speaking, building a talk/presentation.

What is the biggest threat to the specialty of emergency medicine in the country?

Withdrawal of government recognition of EM as a specialty, privatization of the EM system, workforce issues of EM faculty, under-production of faculty.

What specific needs can ACEP help with?

- Popularization of specialty.
- Education for better quality.

EM WORKFORCE

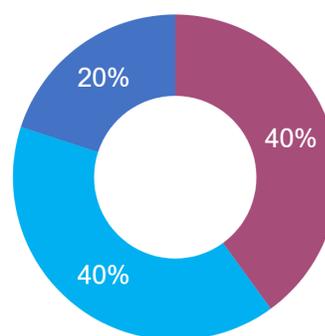
Estimated percent of EDs with at least one residency trained EM-physician? 21-40%

Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? No

Are medical student rotations with residency-trained EM specialists available in the country? No

Geographic Distribution of EM Physicians



- Large Cities
- Small Cities
- Rural Areas

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 1,016

Estimated number of EM resident physicians currently in training? 450

List of EM Residencies (45)

Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- ✗ Abdominal surgery (eg appendectomy)
- ✗ Burr hole craniotomy
- ✗ Cardiac catheterization
- ✗ C-section
- ✗ GI endoscopy
- ✗ Surgical fixation of fractures

EMERGENCY CARE FUNDING

100% of national emergency medical care costs paid by government healthcare funds/ government insurance.

PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✗ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✗ Private air transport

Under what authority is pre-hospital care?

Ministry of Health, private organization, hospitals

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✗ Hospital to hospital (interfacility)
- ✗ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, Nurses, Paramedics, Emergency medical technician (EMT)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes

Are there peer-reviewed EM journals based in the country? Yes

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Language classes
- Clinical observership.
- Clinical rotations with direct patient care.
- Research.
- Short courses.
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Clinical rotation with direct patient care.
- Research.
- Short courses.
- Teaching opportunities.

REFERENCES

- http://www.medycynaratunkowa.wroc.pl/english/index.php?option=com_aicontactsafe&sTask=captcha&task=newCaptcha&pf=
- Medline

Russian Federation

LEADERSHIP TEAM

- *Lead Ambassador:* Anthony Rodigin
- *Lead Country Report Author:* Anthony Rodigin
- *Contributing Author(s):* Sutter Delta Medical Center and Svetlana Reznikova

List of Professional EM Societies (1)

- Russian Emergency Care Society

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? Yes

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? Yes

History of EM in the country:

EMS from the late 19th century, similar to Vienna/Europe. Ambulance receiving hospitals from 1940s. Hospital small "receiving bays" or "ambulance bays" since same years into 2000s, no EDs. Hospital specialization. EMS Franco-German into 2000s. "Emergency Care" a recognized EMS-physician or EMS-NP (feldsher) specialty since the early 1980s. 2000s until now: phasing out of physicians from EMS in favor of NP-only system, reduction of EMS crew types. Modern pilot EDs. 2010 until now: <20 EDs in select large cities. Existing "residencies" previously focused on pre-hospital work only now transitioning to begin to train for ED work. Very slow. Only 1 "full" residency in St. Petersburg along Western models. Current EMS physician cadre slowly re-certified via additional courses for ED work, however very few places in the country, mainly capital cities. "Emergency care" (not "emergency medicine" if translated) a prior pre-hospital recognized specialty, 2010 expanded to include and allow hospital (i.e. ED-based work). No civilian EMS paramedicine (sometimes the word is used erroneously for disaster or para-military rescue-medics or community volunteers). Professional society, publications, guidelines and research exist and ongoing. Immediate future likely close to French model as in MDs combining pre-hospital ICU-type crew and hospital ED work. Two-year residencies are currently planned immediately, with longer term plans eventually along an accepted European (EuSEM) model.

What were the latest developments in emergency medicine in the country (last update 2018)?

Multiple conferences, further research into the cost of EDs, medical benefits of EDs. Debates regarding the best way to fund emergency medical services (EMS) and emergency care (currently government funded but insurance-based). Some advocate to return to the directly government-paid Union of Soviet Socialist Republics (USSR) type funding model.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Emergency Medicine is not recognizable among patients, physicians of other specialties and medical students. The specialty has very little esteem. Recruiting young physicians for the future of the specialty is key and difficult as the current opinion of many young students and physicians is that emergency departments are understaffed, and emergency physicians are overworked and underpaid. There are more desirable specialties that allow physicians to open private practices outside of the hospital.

What are some specific clinical and academic faculty development needs in the country?

The language barrier remains the most critical practical issue as well as large scale politics.

What is the biggest threat to the specialty of emergency medicine in the country?

Lack of understanding of need and benefit by society and the medical community at large.

What specific needs can ACEP help with?

- Very subtle preliminary contacts.
- Visits by senior and established educators and faculty.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 81-100%

Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? Yes;

EMS work internships for new graduates.

Are medical student rotations with residency-trained EM specialists available in the country? No

Geographic Distribution of EM Physicians

100% of national emergency medical care costs are paid by government healthcare funds/ government insurance.

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 150

Estimated number of EM resident physicians currently in training? 100

List of EM Residencies (2)

- Mechnikov Medical University
- Pavlov State University, St. Petersburg

Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- ✗ Abdominal surgery (eg appendectomy)
- ✗ Burr hole craniotomy
- ✗ Cardiac catheterization
- ✗ C-section
- ✗ GI endoscopy
- ✗ Surgical fixation of fractures

EMERGENCY CARE FUNDING

100% of residency-trained EM specialists are practicing in large cities.

PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✗ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✗ Private air transport

Under what authority is pre-hospital care?

Local government, with Ministry of Health general oversight/constraints

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, Nurses, EMS nurse practitioners (Feldshers)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes

Are there peer-reviewed EM journals based in the country?

Yes;

Emergency Medical Care (emergencyrus.ru)

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Research.
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Language classes.
- Research.

INTERESTING ONLINE EM RESOURCES

- www.neotlmed.ru

Rwanda

LEADERSHIP TEAM

- *Lead Ambassador:* Adam C. Levine
- *Resident Representative:* Cara Taubman
- *Lead Country Report Author:* Adam C. Levine

List of Professional EM Societies (1)

- Rwanda Emergency Care Association;
<https://www.recaonline.org/>

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? Yes

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? Yes

History of EM in the country:

Emergency Medicine in Rwanda is still very much in its infancy. All major urban referral hospitals and most of the rural district hospitals have some form of emergency ward or room, but they are staffed by general practitioners and nurses without specific acute or trauma care training. In addition, a pre-hospital care system, SAMU, has been in existence since 2009, though it operates mostly within the capital Kigali, and the ambulances are staffed by nurses without specific EMT or paramedic training. Ambulances outside of Kigali are generally operated under the district hospitals and often in disrepair, and missing essential medications and equipment.

To increase Rwanda's capacity to respond to its acute care needs, in 2012 the Rwanda Ministry of Health (MoH) and the Columbia University Systems Improvement of District Hospital and Regional Training in Emergency Care (sidHARTE) program (www.sidharte.org), in collaboration with the University of Rwanda College of Medicine and Health Sciences (UR/CMHS), developed a Post-graduate Diploma (PGD) course in Emergency and Critical Care Medicine (ECCM). The first cohort of eight PGD/ECCM trainees successfully completed their training requirements in July 2015.

Also in 2012, the Rwandan Government launched its Human Resources for Health (HRH) program (<http://www.hrhconsortium.moh.gov.rw/>), with the goal of increasing the number of trained health managers, nurses, dentists, and physician specialists across a wide range of

specialties. With funding through the Rwanda HRH program and in collaboration with the MOH and the UR/CMHS, Brown University (later joined by Columbia University) developed and launched a four-year Masters in Medicine (MMed) in Emergency Medicine, which is the equivalent of an Emergency Medicine residency program in the United States. The PGD/ECCM was recognized by the UR/CMHS as equivalent to the first year of the four-year MMed, allowing PGD/ECCM students to exit with a Diploma after one year or continue on to obtaining a Masters in Medicine (MMed) in Emergency Medicine. It is expected that these new training programs will create emergency care providers and speed the development of Emergency Medicine in Rwanda over the coming decades to serve all Rwandese, both urban and rural.

In addition, the Rwanda Emergency Care Association was formally launched in 2015 as an advocate for Emergency Care in Rwanda, and has successfully hosted multiple national conferences over the years.

What were the latest developments in emergency medicine in the country (last update 2018)?

In 2018, the Emergency Medicine Med Program graduated its first class of 6 Rwandan emergency physicians who are now staffing the four major national referral hospitals. In addition, in 2018 the Rwanda Emergency Care Association (RECA) hosted the African Conference on Emergency Medicine in Kigali, Rwanda.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

The most significant barrier is limited human resources, especially physicians and nurses trained and available to work in emergency care, as well as the lack of trained technicians or paramedics to work in the pre-hospital arena. In addition, as a low-income country, Rwanda faces significant financial resource constraints in terms of expanding the availability of emergency drugs, supplies and equipment at government hospitals across the country. Finally, institutional cultural changes are required to recognize the value of emergency care, and to configure services and resources accordingly to provide care both for the immediate reception of a critically ill or injured patient, as well as their continued care until discharge or transfer.

What specific needs can ACEP help with?

- Faculty development for the newly graduated Emergency Physicians in the country, including support for research and attending conferences and training programs.
- Facilitate faculty volunteers to assist the current Rwandan faculty in managing the Emergency Medicine Program at the University Teaching Hospital - Kigali.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 1-20%

Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? Yes;
Post-graduate Diploma course in Emergency and Critical Care Medicine.

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians

100% of residency-trained EM specialists are practicing in large cities.

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 6

Estimated number of EM resident physicians currently in training? 20

List of EM Residencies (1)

- University Teaching Hospital, Kigali

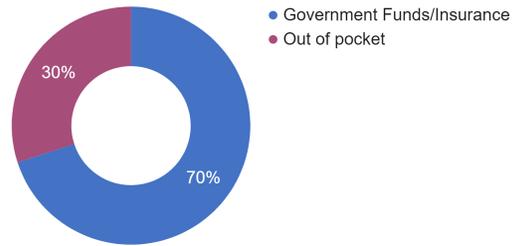
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| X Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- X Abdominal surgery (eg appendectomy)
- X Burr hole craniotomy
- X Cardiac catheterization
- X C-section
- X GI endoscopy
- X Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- X Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

Ministry of Health

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- X Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Nurses

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM public health research
- EM clinical research

Are there peer-reviewed EM journals based in the country?

No

EXCHANGE OPPORTUNITIES

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.

Taiwan

LEADERSHIP TEAM

- *Lead Ambassador:* Kristi L Koenig
- *Lead Country Report Author:* Kristi L Koenig

List of Professional EM Societies (1)

- Taiwan Society of Emergency Medicine

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? Yes

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

Founded in 1994, by about 200 physicians sharing a commitment to improve the quality of emergency medical care in Taiwan, the Taiwan Society of Emergency Medicine (TSEM) is the largest and official national medical specialty organization representing emergency physicians. TSEM is dedicated to improving emergency medical care of acutely ill and injured patients in hospital and pre-hospital environments by research and education in the specialty.

In cooperation with the Department of Health, TSEM plays an important role in the development and improvement of emergency medical care systems in Taiwan. TSEM has also actively participated in the coordination of medical care in several national disasters such as the Chi-Chi earthquake in 1999, the SARS outbreak in 2003, and Typhoon Morak in 2009. In 1997, emergency medicine was recognized as the 23rd medical specialty by the Ministry of Health. Since then, TSEM has been officially responsible for the development and monitoring of emergency medicine residency programs. The society also provides in-depth continuing professional education for physicians, nurses and ancillary emergency health care practitioners and supports academic research in the specialty. Through these efforts, TSEM expects to improve the quality of emergency care in Taiwan.

What were the latest developments in emergency medicine in the country (last update 2018)?

There is a national EM training program in Taiwan. The Ministry of Health has the authority to identify which hospitals are qualified, and the capacity of training hospitals. For example, there are 44 hospitals qualified for EM training in the whole country. The total capacity is 116 every year.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Overcrowding in emergency rooms is quite common and jeopardizes the quality of medical care and patient safety. It also increases the risks and workloads of ER doctors and nurses. Many emergency physicians choose early retirement from EM simply because of too heavy workload.

What are some specific clinical and academic faculty development needs in the country?

In teaching hospitals the majority of EM doctors are required to perform research (clinical or basic science) to get a faculty position.

What is the biggest threat to the specialty of emergency medicine in the country?

Long term career management of the EM physicians, especially their working style as they advance in age.

What specific needs can ACEP help with?

- Endorsement of conferences.
- Clinical resources.
- Educational resources.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 61-80%

Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? No

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians

100% of residency-trained EM specialists are practicing in large cities.

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 2,000

Estimated number of EM resident physicians currently in training? 116

List of EM Residencies (44)

- Single program provided by 44 hospitals.

EM Fellowship programs:

- Critical care
- Emergency medical services (EMS)
- Toxicology
- Ultrasound

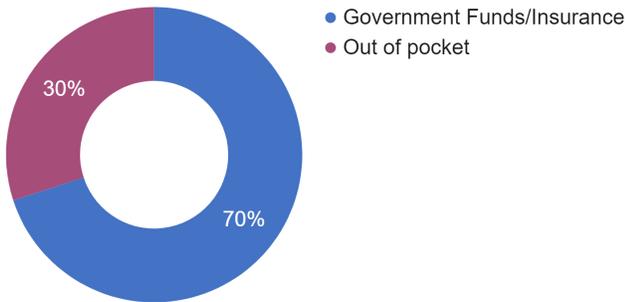
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✗ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✗ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- ✗ Abdominal surgery (eg appendectomy)
- ✗ Burr hole craniotomy
- ✗ Cardiac catheterization
- ✗ C-section
- ✗ GI endoscopy
- ✗ Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✗ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✗ Private air transport

Under what authority is pre-hospital care?

Ministry of Health, (In Taiwan, most of the EMTs are from Dept. of Fire, but supervised by MOH)

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✗ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Emergency medical technician (EMT)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM public health research
- EM clinical research
- EM Basic science research

Are there peer-reviewed EM journals based in the country?

Yes; Journal of Acute Medicine (JACME)

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.
- Research.
- Short courses.
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Research.
- Short courses.
- Teaching opportunities.

INTERESTING ONLINE EM RESOURCES

- <https://www.sem.org.tw/>

ACKNOWLEDGEMENTS

- Dr. Fuh-Yuan Shih, National Taiwan University.

Tanzania

LEADERSHIP TEAM

- *Lead Ambassador:* Andi Tenner
- *Lead Country Report Author:* Andi Tenner
- *Contributing Author(s):* Upendo George

List of Professional EM Societies (1)

- Emergency Medicine Association of Tanzania;
<http://www.emat.or.tz/>

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? Yes

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? Yes

History of EM in the country:

Up until 2010, most hospitals in Tanzania had “emergency centres” that were staffed by rotating hospital workers with no formal training in emergency care. In 2010, Muhimbili National Hospital (MNH) started the first emergency medicine residency after the recognition of emergency medicine as a specialty by the Ministry of Health. By 2011, these residents had started the first emergency medical professional society in Tanzania, the Emergency Medicine Association of Tanzania. Additionally, a dedicated emergency and critical care nursing training program was developed at the same time.

Currently Muhimbili National Hospital’s Emergency Medicine Department offers 24 hour staffing coverage by emergency medicine specialists (many who were graduates of the MNH residency program. Additionally, hospitals in regions hoping to develop emergency care have sent physicians to be trained in the residency program, and the first group of graduates have now dispersed across the country to start formalizing emergency care in hospitals outside of Dar Es Salaam. With regards to training, all medical students at Muhimbili University for Health and Allied Sciences rotate through the emergency department to gain experience in emergency care.

What were the latest developments in emergency medicine in the country (last update 2018)?

The Ministry of Health has required that by 2020 tertiary and national level hospitals are required to have EM specialists. At the regional level EM specialists are desired.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Government funding for healthcare is always challenging in low-resource settings.

What are some specific clinical and academic faculty development needs in the country?

Mentorship in emergency department management, mentorship and support for ED admin, further development of linkages with surrounding countries who are also developing emergency medicine and support for strengthening the emergency care systems at more remote locations.

What is the biggest threat to the specialty of emergency medicine in the country?

Resource challenges and the multiple demands on the local EM specialists time as they work to grow the specialty.

What specific needs can ACEP help with?

- Endorsement of conferences.
- Support for research.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 21-40%

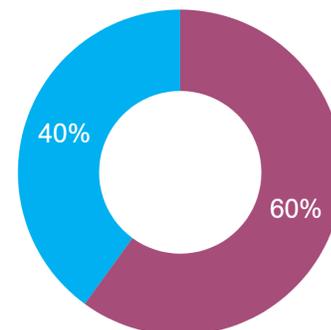
Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? Yes;

Program for nurses in EM and critical care; WHO Basic Emergency Care Course.

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



● Large Cities ● Small Cities

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 40

Estimated number of EM resident physicians currently in training? 30

List of EM Residencies (1)

- Muhimbili National Hospital

EM Fellowship programs: None

Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- ✗ Abdominal surgery (eg appendectomy)
- ✗ Burr hole craniotomy
- ✗ Cardiac catheterization
- ✗ C-section
- ✗ GI endoscopy
- ✗ Surgical fixation of fractures

PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? No

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

Ministry of Health

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, Nurses, Paramedics

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM public health research
- EM clinical research

Are there peer-reviewed EM journals based in the country?

No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.
- Research.
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Research.

Thailand

LEADERSHIP TEAM

- *Lead Ambassador:* Pholaphat Charlie Inboriboon
- *Deputy Ambassador:* Wirachin Ying Hoonpongsimanont
- *Lead Country Report Author:* Pholaphat Charlie Inboriboon
- *Contributing Author(s):* Khuansiri Narajeenron

List of Professional EM Societies (2)

- Thai College of Emergency Physicians
- Thai Association for Emergency Medicine

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? Yes

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? Yes

History of EM in the country:

<https://acep.org/how-we-serve/sections/international-emergency-medicine-old/news/spring-2017/the-history-of-emergency-medicine-in-thailand/>

What were the latest developments in emergency medicine in the country (last update 2018)?

The EM programs have adopted the World Federation of Emergency Medicine's competency based medical education guidelines and have developed milestones and EPA for training. Plans are also in place to have the Thai College of Emergency Physicians retitled as the Royal Thai College of Emergency Physicians after the ascension of the new King of Thailand.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Funding and the number of faculty at each program is the major barrier.

What are some specific clinical and academic faculty development needs in the country?

Emergency medicine research funding.

What is the biggest threat to the specialty of emergency medicine in the country?

The relatively low pay of academic physicians, many must moonlight.

What specific needs can ACEP help with?

- ACEP SA video series.
- Discounted costs for residency programs to get open access.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 81-100%

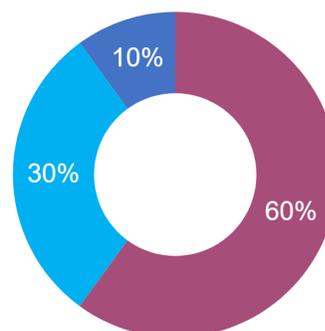
Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? Yes;

Program for Emergency Nurse Practitioners, although scope of training is closer to that of emergency nurse certification in the US, rather than that of NPs.

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



- Large Cities
- Small Cities
- Rural Areas

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 800

Estimated number of EM resident physicians currently in training? 300

List of EM Residencies (18)

EM Fellowship programs:

None

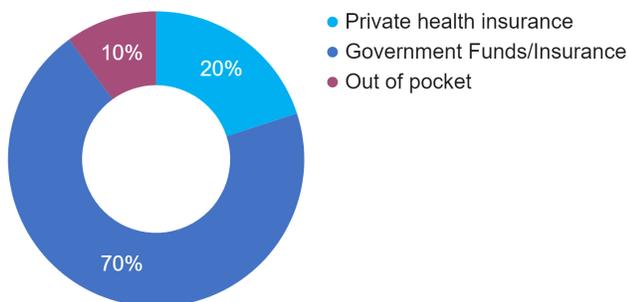
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✗ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- ✗ Abdominal surgery (eg appendectomy)
- ✗ Burr hole craniotomy
- ✗ Cardiac catheterization
- ✗ C-section
- ✗ GI endoscopy
- ✗ Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✓ Hospital Based EMS systems
- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

Ministry of Health, other national governmental agency, private organization, hospitals

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✗ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, Nurses, Paramedics, Emergency medical technician (EMT)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM public health research
- EM clinical research
- EM Basic science research

Are there peer-reviewed EM journals based in the country?

No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.
- Short courses.
- Teaching opportunities
- Potentially research depending on the project

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Research.
- Short courses.
- Teaching opportunities.

REFERENCES

- <https://www.facebook.com/EmermedKKU>

Trinidad and Tobago

LEADERSHIP TEAM

- Resident Representative: **Jonathan Meadows**
- Lead Country Report Author: **Jonathan Meadows**
- Contributing Author(s): **Joseph Ramdhanie**

List of Professional EM Societies (1)

- The Trinidad and Tobago Emergency Medicine Association (TTEMA); <https://www.ttema.org/>

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? Yes

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? Yes

History of EM in the country:

There are four historic emergency medicine groups that helped with emergency medicine in Trinidad and Tobago: first was the Jamaica Emergency Medicine Association (JEMA), Caribbean Emergency Medicine Association (Barbados), Jamaica Emergency Medicine Association (TEMA), and Bahamas Emergency Medicine Association (BEMA). Dr. Ian Sammy is credited with spearheading the growth of emergency medicine in Trinidad and Tobago with national and international academic coordination efforts. The University of the West Indies has become a unifying organization for emergency medicine in the region, given that lectures are all members of their respective national emergency medicine association. While emergency medicine has grown, currently emergency medicine in academia has no full time professor and is under the Department of clinical surgical sciences. Trinidad and Tobago Association of Emergency Physicians (TTAEP) was formed into TTEMA. TTEMA has completed their first annual conference.

What were the latest developments in emergency medicine in the country (last update 2018)?

- Trinidad and Tobago Emergency Medicine Association (TTEMA) will be merging with several organizations to create a regional emergency medicine association to optimize and coordinate resources and professional development, representing emergency medicine practitioners.
- This is in line with completed efforts that unified national qualifying examination standards into one regional board certification exam.

- There are future opportunities for growth, such as academic, research, and subspecialty opportunism (i.e. toxicology, critical care, emergency medical services).

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

The political government administration changes every five years, decreasing continuity in Ministry of Health policies, possibly contributing to unstable administrative policies and funding streams. The greatest challenge is high resource utilization per capita and limited taxation per capita to fund the resources used in accident and emergency care. There is also suboptimal senior staffing at the district level. EM attending physicians serve as consultants who are on-call 24-7, in addition to their administrative and clinical duties. Overcrowding and delays in care from social situational issues are also problems. Staffing shortages are a concern, especially at the inpatient level, where junior level physicians are performing senior level duties.

What are some specific clinical and academic faculty development needs in the country?

There is only one UWI associate professor in EM, a full-time professor at UWI in emergency medicine is needed to spearhead a department of Emergency Medicine. Dr. Joanne Paul runs the only pediatric EM in the Caribbean at Eric Williams Medical Sciences Complex.

What is the biggest threat to the specialty of emergency medicine in the country?

Low resources of all types (human, physical, financial, etc.) are the largest threat combined.

What specific needs can ACEP help with?

- Assistance is needed at the regional hospital level.
- Physician advocates in emergency medicine are looking for networking and visibility for Trinidad.
- A formal ACEP Ambassador to Trinidad and Tobago is needed.
- A USA-based ACEP physician with expertise in educational curriculum and research development is specifically needed.
- Furthermore, EM Physician advocates hope to exchange course resources with ACEP and Trinidad and Tobago Emergency Medicine Association to continue to elevate the quality of education of emergency medicine of both countries.
- Dual exchange trainee exchange program for out of country experiences for both parties.

EM WORKFORCE

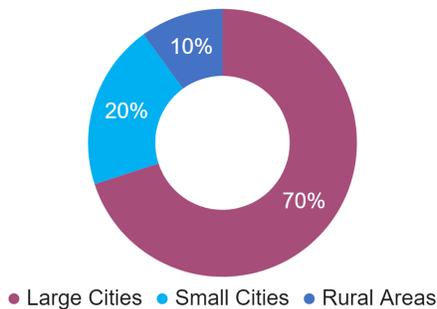
Estimated percent of EDs with at least one residency trained EM-physician? 81-100%

Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? Yes;
Program for emergency nursing.

Are medical student rotations with residency-trained EM specialists available in the country? Yes

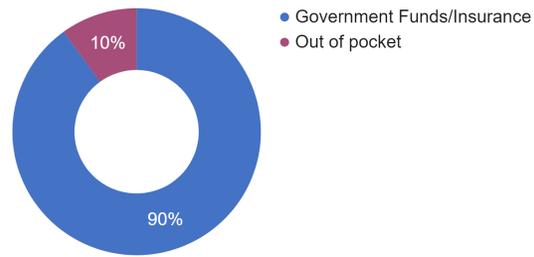
Geographic Distribution of EM Physicians



The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- X Abdominal surgery (eg appendectomy)
- X Burr hole craniotomy
- X Cardiac catheterization
- ✓ C-section
- ✓ ENT Scopes
- ✓ Tenecteplase for MI
- ✓ Catheterization
- X GI endoscopy
- X Surgical fixation of fractures

EMERGENCY CARE FUNDING



EM TRAINING

Estimated number of residency-trained EM physicians in the country? 41

Estimated number of EM resident physicians currently in training? 20

List of EM Residencies (1)

- University of West Indies, St Augustine, Trinidad

EM Fellowship programs: None

Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|------------------------------------|
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | ✓ Long bone fracture stabilization |
| ✓ Intubation | ✓ Tendon Repairs |
| ✓ Lumbar Puncture | ✓ Incision and drainage |
| ✓ Pericardiocentesis | |

PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- X Lay people / bystanders
- ✓ Government ground ambulances
- X Private ground ambulances
- ✓ Government air transport
- X Private air transport

Under what authority is pre-hospital care?

Ministry of Health, Contracted to the Global Medical Response of Trinidad and Tobago (GMRTT), and regional health authorities; see <https://health.gov.tt/>

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- X Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, Nurses, Paramedics, Emergency medical technician (EMT)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- West Indian Medical Journal
(<https://www.mona.uwi.edu/fms/wimj/category/keywords/trinidad-and-tobago>)
- Caribbean Medical Journal
(<http://caribbeanmedicaljournal.org/>)

Are there peer-reviewed EM journals based in the country?

No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.
- Clinical rotations with direct patient care.
- Research.
- Short courses.
- Teaching opportunities

TTEMA are considering developing an exchange program within the international community through UWI. Preliminary discussions are ongoing with the UWI Dean and TTEMA leadership.

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Clinical rotation with direct patient care.
- Research.
- Short courses.
- Teaching opportunities.

INTERESTING ONLINE EM RESOURCES

- <http://www.ttema.org/>
- <https://twitter.com/TTEmergMed>
- https://www.facebook.com/Trinidad-and-Tobago-Emergency-Medical-Service-Association-112687842103095/?ref=py_c&eid=ARAYkLiA5mbB2xFTxY3yqBWzT0pxlv6pDoSsFd7Z15xtqw-kn-SKRuJ0zJZQ9sJsgM4JOssNySPoGAIS

Turkey

LEADERSHIP TEAM

- *Lead Ambassador:* **Wael Hakmeh**
- *Liaison(s):* **Wael Hakmeh**
- *Deputy Ambassador:* **Selim Suner**
- *Lead Country Report Author:* **Selim Suner**

List of Professional EM Societies (2)

- Emergency Medicine Association of Turkey;
<http://www.atuder.org.tr/en/>
- Emergency Physicians Association

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? Yes

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

Turkey is one of the first countries that adopted Emergency Medicine as a specialty in Europe. The history of the development in chronological order is as follows:

- 1990, government and university leaders held meetings to improve the emergency medical care systems.
- 1993, EM was declared to be an independent specialty as a 3-year program by the Ministry of Health.
- 1993, the first EM residency training program: Izmir Dokuz Eylul University.
- 1993, Paramedic training programs : 2-year associate level program after high school.
- 1994, the first group of residents started training in EM; 2 at Dokuz Eylul University and 1 at Firat University.
- 1994, MoH adopted a national emergency number, 112.
- 1995, Emergency Medicine Association of Turkey (EMAT) was established.
- 1996, First aid and emergency care technician (EMT-Basic level) training started in trade high schools under MoH.
- 1997, the First Emergency Medicine Symposium was organized in Izmir by EMAT.
- 1998, the first EM resident graduated.
- 1999, Emergency Physicians Association was established.
- 2000, Regulations on Emergency Medical Services was enacted.
- 2000, the Guidelines for the Emergency Medicine Residency Training was published by EMAT. The number of

residency trained EM specialists was 20, academic departments was 14.

- 2001, the first issue of Turkish Journal of Emergency Medicine was published by EMAT.
- 2001, the first International Congress (The First Multinational Middle Eastern Conference on Emergency Medicine) was organized in Istanbul.
- 2002, the length of EM residency training was revised to 5 years.
- 2004, EMAT's Turkish Board of Emergency Medicine submitted an application to the Turkish Board of Medicine (TBM) and was approved.
- 2006, Training and Research Hospitals of the MoH started residency training programs.
- 2007, the Guidelines for the EM Residency Training was revised by Turkish Board of Emergency Medicine.
- 2009, Regulation on the Rules and Procedures of the Emergency Department Practice was enacted.
- 2009, Regulation on Specialization Education in Medicine and Dentistry enacted.
- 2010, MoH's Executive Committee of Medical Specialties constituted a Committee of Curriculum Development and Standardization for Emergency Medicine. Program Requirements, Core Content and Clinical Competencies were implemented.
- 2011, MoH revised the length of EM training to 4 years.
- 2016, MoH's Executive Committee of Medical Specialties accredited current residency training programs (84 programs) for 5 years.
- 2017, "EM Specialty Training Curriculum and Standards v.2.3" was developed.
- 2018, Regulation on the Rules and Procedures of the ED Practice in Healthcare Facilities was amended by MoH.
- 2018, the first National Board Exam was held by the Turkish Board of Emergency Medicine.

What were the latest developments in emergency medicine in the country (last update 2018)?

Administration of written board examination and development of oral boards.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Challenges include overcrowding and violence against health care personnel in EDs. Inadequate health insurance policies and misunderstanding of the process of emergency medicine by the public are some of the causes of overcrowding. There are also not enough faculty members at training program. Standards stipulate that two faculty members are sufficient for each program, however given the large number of residents in each program, this leads to inadequate supervision. Board examination is not required for EM physicians to progress in academic careers. CME is not required in Turkey for any specialty. No fellowship

training programs have been approved by the Ministry of Health, and clinical research opportunities are insufficient.

What are some specific clinical and academic faculty development needs in the country?

There is still a lack of faculty members in some EM residency training hospitals which make standardized training and supervision and evaluation of residents difficult. Residents need more time for research, simulation and other educational endeavors but have clinical duties which are not limited by duty hours. Clinical centers and academic positions are not growing in pace with EM subspecialty areas.

What is the biggest threat to the specialty of emergency medicine in the country?

Government oversight (politicized) and control without sufficient input from EM physicians.

What specific needs can ACEP help with?

- Collaboration among associations is essential.
- Supporting educational materials.
- Funding residents and EM specialists for conferences.
- Face to face or online meetings between international committees of both sides.
- Emerging research projects can improve relations.

EM WORKFORCE

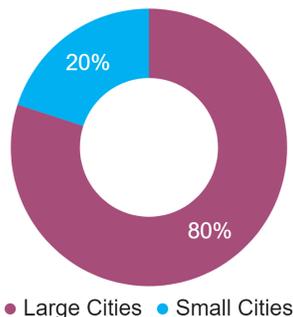
Estimated percent of EDs with at least one residency trained EM-physician? 41-60%

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? No

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



EM TRAINING

Estimated number of residency-trained EM physicians in the country? 2600

Estimated number of EM resident physicians currently in training? 1500

List of EM Residencies (87)

EM Fellowship programs: None

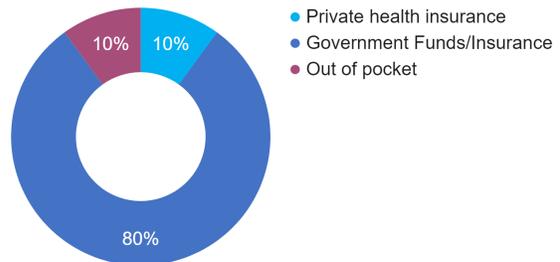
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- X Abdominal surgery (eg appendectomy)
- X Burr hole craniotomy
- X Cardiac catheterization
- X C-section
- X GI endoscopy
- X Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- X Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- X Private air transport

Under what authority is pre-hospital care?

Ministry of Health

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- X Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, Paramedics, Emergency medical technician (EMT)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM public health research
- EM clinical research
- EM Basic science research

Are there peer-reviewed EM journals based in the country?

Yes;

- Turkish Journal of Emergency Medicine,
- Anatolian Journal of Emergency Medicine,
- Turkish Journal of Trauma and Emergency Surgery,
- Eurasian Journal of Emergency Medicine

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.
- Research.
- Short courses.
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Language classes.
- Research.
- Short courses.
- Teaching opportunities.

INTERESTING ONLINE EM RESOURCES

- <https://www.acilci.net/>
- <https://www.mobil-ed.net/>

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- Bresnahan KA, Fowler J: Emergency medical care in Turkey: Current status and future directions. Ann Emerg Med September 1995;26:357-36.
- Cevik AA, Rodoplu U, Holliman CJ. Update on the development of emergency medicine as a specialty in Turkey. Eur J Emerg Med. 2001 Jun;8(2):123-9.
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- Idil, H., Kilic, T. Y., & Yesilaras, M. Description of non-urgent patients in the emergency department. Turkish Journal of Emergency Medicine 2018;18(3);124.
- Sabak, M., et al. Workplace Violence in Emergency Departments in Turkey: A National Survey. Annals of Emergency Medicine 2018;72:4.
- Oztok, B., Icme, F., Kavakli, H. S., Gunaydin, G. P., Sener, A., & Celik, G. K. Evaluation of Violence Against Emergency Physicians in Turkey. Headache, 2018;55:13-3.
- Cetin, Murat, et al. A Critical Appraisal of Emergency Medicine Specialty Training and Resignation among Residents in Emergency Medicine in Turkey. Emergency Medicine International, 2019.

Ukraine

LEADERSHIP TEAM

- *Lead Ambassador:* Brian R McMurray
- *Liaison(s):* Vitaliy Krylyuk
- *Lead Country Report Author:* Brian R McMurray

List of Professional EM Societies (1)

- Ukraine Resuscitation Organization;
www.urc.org.ua

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? Yes

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? Yes

History of EM in the country:

Emergency Medical Care in Ukraine began in Ukraine just over 100 years ago, with patients brought to the Hospital from home or scene by horse-drawn ambulances, and often by the Fire Department. In the Soviet era, the model evolved which some refer to as the "Franco-Germanic" model, wherein the EM experienced, later, more recent decades EM trained doctor, rode on the ambulance. Interestingly, only about 20% of today's ambulance runs result in the patient being brought back to the Hospital. Most patients are assessed, and if felt stable, there is a robust ability for the EM ambulance crew to get a FP or Primary care doctor to see the patient, if needed, the next day.

Today, there are a few evolutionary changes underway, which will, over the next decade or so, transform Ukraine EM.

1. Larger cities are starting to create at their designated Emergency and Trauma Hospitals, a physician-staffed Emergency Department.
2. New education is beginning to train the existing ambulance based PA's and NP's (called "felchers"), who currently ride along with EM trained physicians on the higher acuity ambulances, in a model of training like our Paramedic programs, with authority to do things heretofore only done by EM doctors and gradually, the EM doctors will increasingly be hospital-based in a traditional Western ED.
3. Accordingly, their current and future EM trained physicians will be trained to function in a hospital-based ED and will do more procedures than they currently do on the ambulance, such as LP's, central lines, etc.

4. Simulation training, and adoption of western certifications such as BLS, PALS, NRP, ITLS, ATLS are rapidly being developed and integrated, with Dr. Krylyuk and his colleagues leading the way on this MOH mandated transition. Their version of Paramedics and all EM physicians will have the training. Only the highest acuity ambulances will in the future have a physician on board, as this training progresses nation-wide and the numbers trained this way allows.

What were the latest developments in emergency medicine in the country (last update 2018)?

This is answered in the previous section outlining the history of EM and what is now underway in Ukraine.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

The biggest challenge is the lack of a reliable revenue stream given the current model of medical financing by the central government, which is a holdover from the Soviet era. Furthermore, there is significant corruption related to things like equipment procurement and approval, financing of equipment acquisition by hospitals, and medical equipment and supplies in general. The government has not been financially able to afford the "free medical care for all" that espoused in their constitution. Therefore, the revenue stream to supply ambulances, crews, EM doctors, "felchers," medicines, equipment and supplies is unreliable. The best EM ambulances, crews, and emergency and trauma hospitals are financially dependent on private corporate donations. For example, digital angio suites and the best EM cardiology ambulance care are only available if local businesses financially support them, as opposed to being provided for by the government.

What are some specific clinical and academic faculty development needs in the country?

Having some of our EM Faculty and EM leaders rotate there and vice versa is the key. Largely, their EM Faculty will not have the financial resources to participate in such a way in the USA. So realistically, it would be most feasible to have our EM Faculty and Leaders spend time there lecturing, working along-side their EM Faculty, on ambulances and with their new Paramedic training programs. Though ideally knowing Ukrainian or in some regions of Ukraine, knowing Russian would be helpful but a translator physician could be hired for a quite affordable amount there.

What is the biggest threat to the specialty of emergency medicine in the country?

Financial constraints on physician salaries hence not an attractive specialty to enter.

What specific needs can ACEP help with?

- ACEP physicians joining in trips to collaborate in Ukraine.
- Educational resources such as texts donated by ACEP.
- Expanding the financing of Ukraine EM specialists.
- Leaders to come to ACEP Scientific Assembly.

EM WORKFORCE

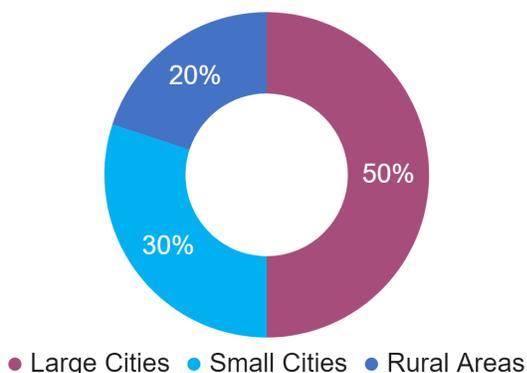
Estimated percent of EDs with at least one residency trained EM-physician? 1-20%

Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? Yes

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



EM TRAINING

Estimated number of residency-trained EM physicians in the country? 1,000

Estimated number of EM resident physicians currently in training? 150

List of EM Residencies (12)

All medical universities have a residency program.

- Dnipro.
- Kharkiv.
- Kyiv.
- Lutsk.
- Lviv.
- Odessa.
- Ternopil.
- Vinnitsa.

EM Fellowship programs: None

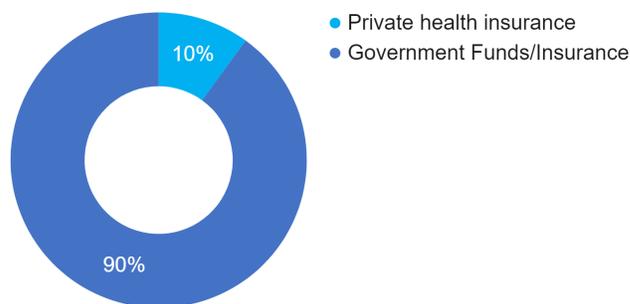
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| X Cardiac pacing | ✓ Intubation |
| X Central venous access | X Lumbar puncture |
| ✓ Chest tube | X Pericardiocentesis |
| ✓ Cricothyrotomy | X Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| X ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- X Abdominal surgery (eg appendectomy)
- X Burr hole craniotomy
- X Cardiac catheterization
- X C-section
- X GI endoscopy
- X Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- X Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

Ministry of Health

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, EMS nurse practitioners (Feldshers)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM public health research
- EM clinical research
- EM Basic science research

Are there peer-reviewed EM journals based in the country?

Yes;

Emergency Medicine out of Kharkiv, Ukraine
(emergency.zaslavsky.com.ua)

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.
- Teaching opportunities

The above opportunities can be coordinated through Dr. Krylyuk, and I can assist as well....but the participant would need to know Ukrainian, or possibly Russian, rather fluently

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Teaching opportunities.

INTERESTING ONLINE EM RESOURCES

- www.ukrainemedicalmission.com

REFERENCES

- Many EM leaders and Faculty throughout Ukraine, including ACEP Liaison, Dr. Vitaliy Krylyuk, Chair of the Cathedra of Pre Hospital and Disaster Medicine Education in Kyiv, Ukraine.
- Working with Acting Ukraine MOH, Dr. Ulana Suprun and her Staff Physicians in Kyiv, many of whom are bilingual.

United Arab Emirates

LEADERSHIP TEAM

- *Lead Ambassador:* Jason Pierce
- *Lead Country Report Author:* Bob Corder

List of Professional EM Societies (1)

- Emirates Society of Emergency Medicine

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? Yes

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

The UAE is comprised of 7 Emirates and is geographically located on the Arabian Peninsula, bordered by Oman to the East, Saudi Arabia to the West and South, and the Arabian Gulf to the North. The UAE became an independent country in 1971. The 7 Emirates include Abu Dhabi, Dubai, Ras Al Khaimah, Ajman, Sharja, Fujairah and Umm Al Quwain. Recent census data show the UAE has approximately 5.3 million people. The population is ~20% Emirati and ~80% Expatriate.

The UAE's historical reliance on an expatriate healthcare workforce, combined with immature medical education and training programs have led to a diverse and varied healthcare system. What began in the 1970's as Accident and Emergency Departments limited to triage level care, has developed into Emergency Departments with processes and systems similar to western ED models. Previously disjointed pre-hospital emergency medical services and systems are now being coordinated and developed by the National Ambulance Company. Healthcare oversight is provided in Abu Dhabi by the Health Authority of Abu Dhabi (HAAD), in Dubai by the Dubai Healthcare Authority and the other 5 Emirates by the UAE Ministry of Health.

The UAE currently has five Emergency Medicine residency training programs. The first was at the Rashid Hospital Trauma Center in Dubai. The other four programs are in the Emirate of Abu Dhabi: Tawam Hospital in Al Ain, Sheikh Khalifa Medical City (SKMC) in Abu Dhabi, Mafraq Hospital and the Zayed Military Hospital, both in the city of Abu Dhabi. Training programs are either 4 or 5 years in length, and are approved and accredited by the Arab Board. The

programs at Tawam Hospital and SKMC were reviewed by the ACGME-I and accreditation was awarded July 2013. ACGME-I accreditation will ensure residents at these programs will have the same rigorous training and oversight as those programs ACGME accredits in the US. EM residency programs in the UAE were initially restricted to Emirati nationals, but are now open to physicians from other countries.

What were the latest developments in emergency medicine in the country (last update 2018)?

EM in the UAE continues to grow at a fast rate, with graduating EM residents taking leadership roles in EDs throughout the UAE and with various government organizations. Emirates Society of Emergency Medicine (ESEM) 2018 was another success, with final planning for ESEM 2019 ongoing. There is continued improvement with integrated EMS processes and care standards. Protocolled care for stroke and acute myocardial infarction has shown gains in care and outcomes.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

As a young and expanding specialty, every aspect of emergency care in the UAE is under regular scrutiny. Comprehensive support from several parts of the UAE government and educational system continue to fuel opportunities and growth. Emergency care policy-making, as well as administrative, leadership, and subspecialty training, education, and awareness all are areas of interest and need.

What are some specific clinical and academic faculty development needs in the country?

Academic partnerships between UAE teaching programs and those in countries with developed EM. Improving reimbursement to recruit/hire/retain residency trained and boarded emergency physicians EM trained nurses and other EM ancillary staff.

What is the biggest threat to the specialty of emergency medicine in the country?

No specific threat, however, maintaining qualified staff and educators in a time of regional unrest could potentially become a variable to contend with.

What specific needs can ACEP help with?

- Clinical and educational resources.
- Consultative services.
- Endorsement of conferences.

EM WORKFORCE

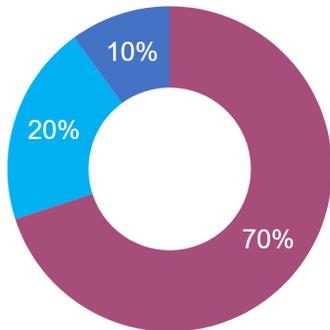
Estimated percent of EDs with at least one residency trained EM-physician? 21-40%

Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? No

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



● Large Cities ● Small Cities ● Rural Areas

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 100

Estimated number of EM resident physicians currently in training? 100

List of EM Residencies (5)

- Mafraq Hospital, Abu Dhabi.
- Rashid Hospital Center, Dubai.
- Sheik Kalifa Medical City, Abu Dhabi.
- Tawam Hospital, Al Ain.
- Zayed Military Hospital, Abu Dhabi.

EM Fellowship programs: None

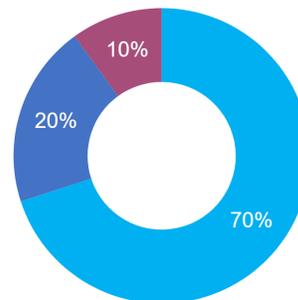
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- ✗ Abdominal surgery (eg appendectomy)
- ✗ Burr hole craniotomy
- ✗ Cardiac catheterization
- ✗ C-section
- ✗ GI endoscopy
- ✗ Surgical fixation of fractures

EMERGENCY CARE FUNDING



● Private health insurance
● Government Funds/Insurance
● Out of pocket

PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

Other national governmental agency, private organization, hospitals, national police

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✗ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Paramedics, Emergency medical technician (EMT)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM public health research
- EM clinical research

Are there peer-reviewed EM journals based in the country?

No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.
- Short courses.
- Teaching opportunities

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership.
- Language classes.
- Research.
- Short courses.

INTERESTING ONLINE EM RESOURCES

- Facebook: Emirates Society of Emergency Medicine Home
- International Journal of Emergency Medicine volume 7, Article number: 4 (2014)
- www.esem.ae

ACKNOWLEDGEMENTS

- Dr. Thiagaren Jaiganesh.
- Dr. Ayesha Al Ameri.
- Dr. Saleh Fares.

United States of America

LEADERSHIP TEAM

- Lead Country Report Author: **Jeff Chen**

List of Professional EM Societies (5)

- American College of Emergency Physicians (ACEP) <https://www.acep.org/>
- American Academy of Emergency Medicine (AAEM); <https://www.aaem.org/>
- American College of Osteopathic Emergency Physicians (ACOEP); <https://acoep.org/>
- Society of Academic Emergency Medicine (SAEM); www.saem.org
- National Association of EMS Physicians (NAEMSP); <https://naemsp.org/>

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical specialty? Yes

Are there national laws or regulations regarding emergency medical care? Yes

Are there nationwide emergency care guidelines or protocols? Yes

History of EM in the country:

- 1968: ACEP founded
- 1969: ACEP's first Scientific Assembly
- 1970: First emergency medicine residency program established in Cincinnati
- 1972: First issue of the Journal of the American College of Emergency Physicians (JACEP), the precursor of Annals of Emergency Medicine
- 1973: Congress enacts Emergency Medical Services Systems forming 911 emergency services
- 1979: Emergency Medicine named 23rd medical specialty by the American Board of Medical Specialties
- 1980: First emergency medicine physicians certified by ABEM
- 1986: EMTALA was enacted by Congress in 1986 as part of the Consolidated Omnibus Budget Reconciliation Act (COBRA) of 1985 (42 U.S.C. §1395dd).
- 1990: ACEP publishes the first Clinical Policy: Management of Chest Pain
- 1992: ABEM approves the first two Subspecialty Certifications: Medical Toxicology and Sports Medicine

- 1997: ACEP passes historical resolution requiring members to have board certification in emergency medicine or have completed an emergency medicine residency program
- 2006: ACEP releases first report card on the State of Emergency Medicine

What were the latest developments in emergency medicine in the country (last update 2018)?

In 2018 ACEP celebrated its 50th anniversary.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

The United States is where emergency medicine was born as a specialty. Much of the development of emergency care systems has happened here over decades. However, there remains an older generation of doctors who view the specialty as inferior as before. Moreover, there are many challenges in funding emergency care, as well as overutilization of the emergency department for nonurgent care.

EM WORKFORCE

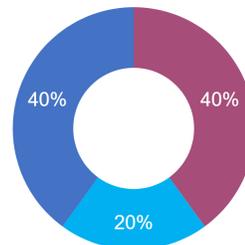
Estimated percent of EDs with at least one residency trained EM-physician? 81-100?

Is there a required board certification exam for EM after residency training? Yes

Are there any non-residency training programs for emergency care providers? Yes; PAs and NPs.

Are medical student rotations with residency-trained EM specialists available in the country? Yes

Geographic Distribution of EM Physicians



● Large Cities ● Small Cities ● Rural Areas

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 35,856

Estimated number of EM resident physicians currently in training? 1,894

List of EM Residencies

- A list of EM residency programs can be found here: https://member.saem.org/SAEMIMIS/SAEM_Directories/ResidencyMap/SAEM_Directories/P/ResidencyMap.aspx

EM Fellowship programs:

- Administrative.
- Critical care.
- Emergency medical services (EMS).
- Informatics.
- Pediatric EM.
- Sports medicine.
- Toxicology.
- Ultrasound.

<https://www.acgme.org/Specialties/Overview/pfcatid/7/Emergency-Medicine>

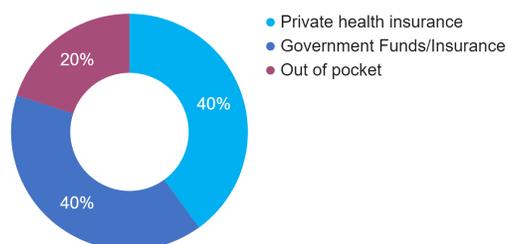
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|-------------------------|-----------------------|
| ✓ Cardiac pacing | ✓ Intubation |
| ✓ Central venous access | ✓ Lumbar puncture |
| ✓ Chest tube | ✓ Pericardiocentesis |
| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- X Abdominal surgery (eg appendectomy)
- X Burr hole craniotomy
- X Cardiac catheterization
- X C-section
- X GI endoscopy
- X Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- ✓ Lay people / bystanders
- ✓ Government ground ambulances
- ✓ Private ground ambulances
- ✓ Government air transport
- ✓ Private air transport

Under what authority is pre-hospital care?

Ministry of Health, other national governmental agency, hospitals, private organization

What is the pre-hospital service used for?

- ✓ Scene to hospital
- ✓ Hospital to hospital (interfacility)
- ✓ Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, Nurses, Paramedics, Emergency medical technician (EMT)

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM public health research
- EM clinical research
- EM Basic science research

Are there peer-reviewed EM journals based in the country? Yes;

- Annals of Emergency Medicine,
- The American Journal of Emergency Medicine,
- Academic Emergency Medicine,
- Western Journal of Emergency Medicine,
- Pediatric Emergency Care.

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Language classes
- Clinical observership.
- Clinical rotations with direct patient care.
- Research.
- Short courses.
- Teaching opportunities

INTERESTING ONLINE EM RESOURCES

- <https://www.acep.org/who-we-are/50Years>

Vietnam

LEADERSHIP TEAM

- *Lead Ambassador:* Heather Crane
- *Liaison(s):* Son Do
- *Lead Country Report Author:* Heather Crane
- *Contributing Author(s):* Craig Cooley

List of Professional EM Societies (1)

- Vietnamese Society of Emergency Medicine

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? Yes

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

Emergency Medicine is at the beginnings of its development in Vietnam. There is still no national formal curriculum for medical school or training for residency. There is a 2 year EM residency training program with curriculum and teaching materials modeled after US/Australian resources in EM at Hue University of Medicine and Pharmacy in Hue, Vietnam which began in the fall of 2010. The Vietnamese Society of Emergency Medicine (VSEM) was formed in April 2012 with representatives from all regions of Vietnam. It is now a maturing governing body, taking ownership of the EM conferences and development of EM curriculum and the specialty in Vietnam. Conferences moved from more local training courses in the early 2000s to more national conferences starting in 2009. There is still work to be done with respect to a national curriculum for medical school and residency and training for already practicing physicians who work in emergency departments around the country. Goals over the next few years would be to focus on high level recognition of the specialty and central government support of it.

EMS has existed for several years (at least) and is referred to 115 (the emergency access number). It has traditionally been staffed with physician, nurse, and untrained driver teams. There is a growing movement to transition to a paramedic model, but as of today, there are no formal programs. In general, public perception tends to reduce 115 use due to views that the ambulance does not provide useful medical care. Although there are some written protocols in the country, the response capability of 115 is

highly variable throughout the country. In some areas, particularly in Ho Chi Minh City, private/hospital based ambulances are utilized more often, although little coordination. In addition, overall, there is little coordination with fire and/or police services, each of which have a different emergency access number, a true prehospital emergency system does not exist.

What were the latest developments in emergency medicine in the country (last update 2018)?

There is a national EM conference each year which is growing. The Vietnamese Society of Emergency Medicine (VSEM) continues to develop itself and its strategies.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Challenges include lack of cohesive commitment to emergency medicine on a national level, lack of formal government funding for emergency medicine residency and lack of formal medical school curriculum for emergency medicine.

What are some specific clinical and academic faculty development needs in the country?

There needs to be modeling for emergency medicine leaders in Vietnam as to how to present the specialty to national leaders, how to gain funding for residency and medical student teaching, how to create a formal curriculum and how to create national guidelines for emergency physicians to streamline the development of the specialty.

What is the biggest threat to the specialty of emergency medicine in the country?

- Lack of commitment throughout the country to the specialty. Difficulty establishing a livable wage for emergency medicine (most physicians supplement their income by having private clinics).
- The one residency is not nationally supported.

What specific needs can ACEP help with?

- Endorsement of conferences.
- Presence of ACEP leader interested in working in Vietnam to help move specialty forward at national level.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 1-20%

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? No

Are medical student rotations with residency-trained EM specialists available in the country? No

EM TRAINING

Estimated number of residency-trained EM physicians in the country? 10

Estimated number of EM resident physicians currently in training? 10

- List of EM Residencies (1)*
- Hue University of Medicine and Pharmacy, Hue

EM Fellowship programs: None

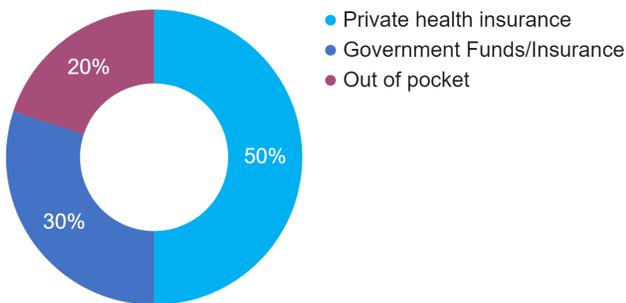
Skills within the scope of practice of a residency-trained emergency physician in the country:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Cardiac pacing | <input checked="" type="checkbox"/> Intubation |
| <input checked="" type="checkbox"/> Central venous access | <input checked="" type="checkbox"/> Lumbar puncture |
| <input checked="" type="checkbox"/> Chest tube | <input checked="" type="checkbox"/> Pericardiocentesis |
| <input checked="" type="checkbox"/> Cricothyrotomy | <input checked="" type="checkbox"/> Procedural sedation |
| <input checked="" type="checkbox"/> Dislocation reduction | <input checked="" type="checkbox"/> Vaginal delivery |
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The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- Abdominal surgery (eg appendectomy)
- Burr hole craniotomy
- Cardiac catheterization
- C-section
- GI endoscopy
- Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? Yes

Are there medical control protocols for prehospital care in the country? Yes

Medically assisted transport provided by:

- Lay people / bystanders
- Government ground ambulances
- Private ground ambulances
- Government air transport
- Private air transport

Under what authority is pre-hospital care?

Local government, private organization, hospitals. '115' officially falls under the Department of Health which has less influence than the Ministry of Health.

What is the pre-hospital service used for?

- Scene to hospital
- Hospital to hospital (interfacility)
- Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Physicians, Nurses, Personnel without medical training

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes;

- EM clinical research

Are there peer-reviewed EM journals based in the country?

No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical rotations with direct patient care.

Zimbabwe

LEADERSHIP TEAM

- *Lead Ambassador:* Monalisa Muchatuta
- *Deputy Ambassador:* Kevin Lunney
- *Lead Country Report Author:* Kevin Lunney

HISTORY AND CURRENT CHALLENGES IN EM

Is EM a recognized medical speciality? No

Are there national laws or regulations regarding emergency medical care? No

Are there nationwide emergency care guidelines or protocols? No

History of EM in the country:

Emergency care is dominated by private enterprise. There are "casualty" departments in most hospitals which are staffed by recent grad generalists for the most part.

What were the latest developments in emergency medicine in the country (last update 2018)?

Educational conference in August 2018. Limited system wide-development.

What are the current challenges or barriers to improving emergency care in the country? What are some of the opportunities for growth?

Limited focus on EM development due to recent economic and political difficulties.

What are some specific clinical and academic faculty development needs in the country?

Basic emergency care, triage and systems development.

What is the biggest threat to the specialty of emergency medicine in the country?

Economic instability.

What specific needs can ACEP help with?

- Clinical resources.
- Consultative services.

EM WORKFORCE

Estimated percent of EDs with at least one residency trained EM-physician? 0%

Is there a required board certification exam for EM after residency training? No

Are there any non-residency training programs for emergency care providers? No

Are medical student rotations with residency-trained EM specialists available in the country? No

EM TRAINING

Estimated number of residency-trained EM physicians in the country? None

Estimated number of EM resident physicians currently in training? None

List of EM Residencies: None

EM Fellowship programs: None

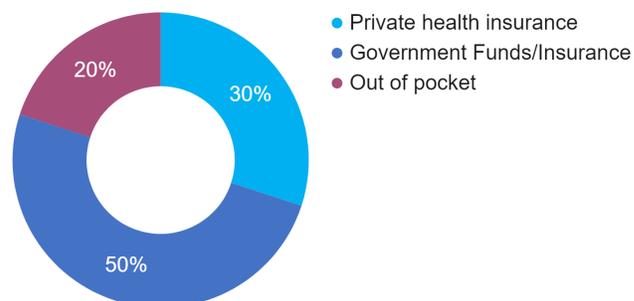
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| ✓ Cricothyrotomy | ✓ Procedural sedation |
| ✓ Dislocation reduction | ✓ Vaginal delivery |
| ✓ ED bedside ultrasound | |

The scope of practice of EM physicians varies across countries. Do residency-trained physicians in the country perform any of the procedures below?

- X Abdominal surgery (eg appendectomy)
- X Burr hole craniotomy
- X Cardiac catheterization
- X C-section
- X GI endoscopy
- X Surgical fixation of fractures

EMERGENCY CARE FUNDING



PREHOSPITAL CARE

Is there a prehospital care system? Yes

Is there a national emergency phone number system? No

Are there medical control protocols for prehospital care in the country? No

Medically assisted transport provided by:

- Lay people / bystanders
- Government ground ambulances
- Private ground ambulances
- Government air transport
- Private air transport

Under what authority is pre-hospital care?

Ministry of health and private organizations

What is the pre-hospital service used for?

- Scene to hospital
- Hospital to hospital (interfacility)
- Evaluation and treatment at home (no transfer)

Who cares for patients while in an ambulance?

Emergency medical technician (EMT).

EM RESEARCH AND PUBLICATIONS

Is emergency medicine-related research for publication in peer-reviewed journals being conducted in the country? Yes

Are there peer-reviewed EM journals based in the country?
No

EXCHANGE OPPORTUNITIES

What opportunities are there in the country for U.S. students, residents, or faculty?

- Clinical observership.
- Clinical rotations with direct patient care.
- Research.

What opportunities are there in the U.S. for students, residents, or faculty from the country?

- Clinical observership
- Research
- Short courses

INTERESTING ONLINE EM RESOURCES

- <https://twitter.com/EmZimbabwe>