

# La Ricerca in Medicina d'Urgenza

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ISTITUTO DI RICERCA  
FARMACOLOGICA  
FARMACI E FARMACI

# Riflessioni critica' E-Covid

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- Tempi lunghissimi per l'approvazione del comitato etico
- Scheda raccolta dati molto articolata e complessa (compilazione parziale)
- Partecipazione di centri piccoli (rappresentativi situazione italiana?)

# Da un blog di medicina d'urgenza

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*“I am not sure that any research should be performed in emergency department settings, and I suspect that many grant review study sections feel the same way. Patients come to the ED with an acute problem and they need clinical care, not research protocols and consent forms.”*

These words of caution came recently from one of my non-emergency medicine research advisors, and they shocked me

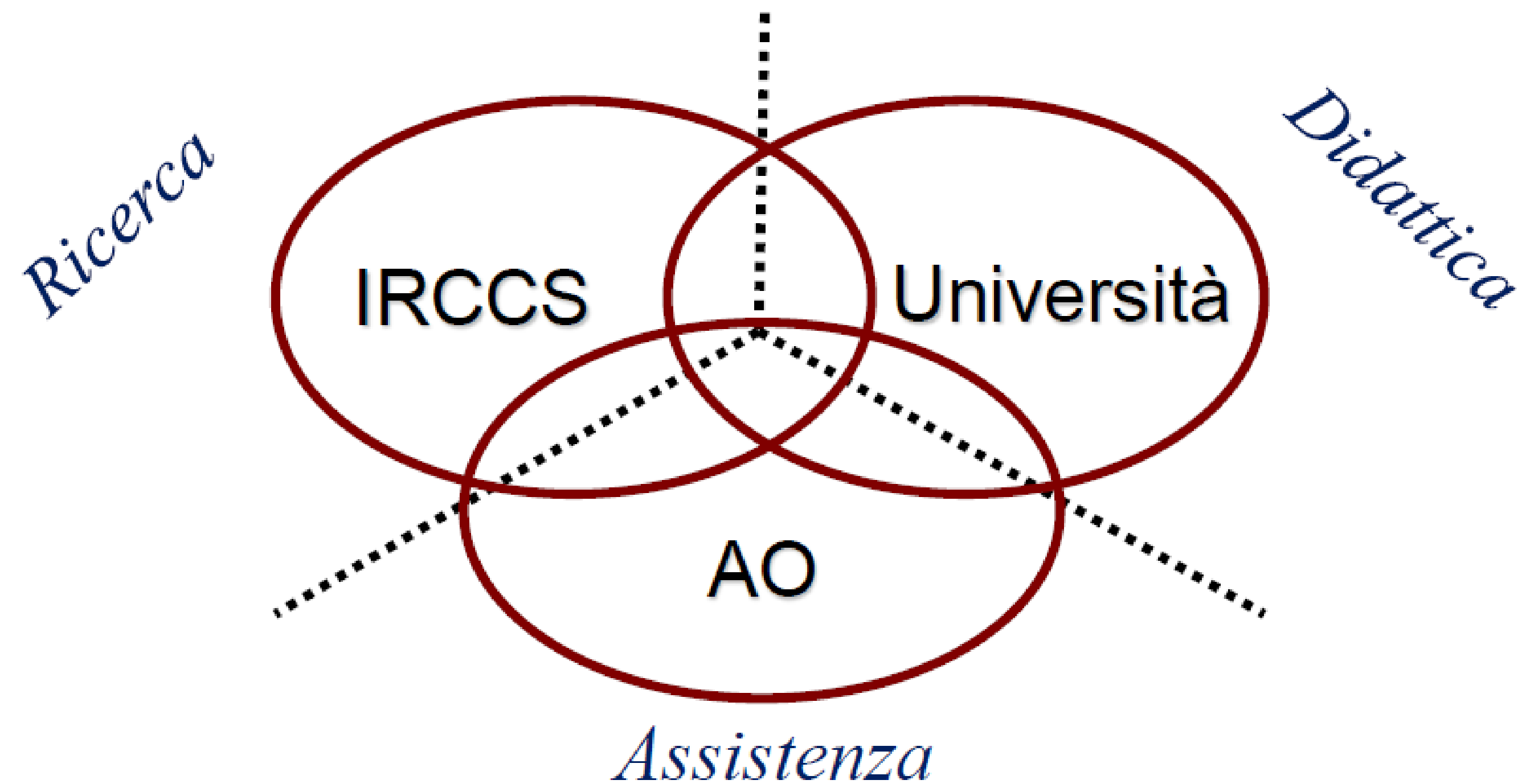
# Punti chiave

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- Perche' fare ricerca in Medicina d'Urgenza/PS
- Criticità in PS
- Situazione internazionale
- Possibili strategie

## Perche' fare ricerca in PS



l'integrazione della ricerca nei percorsi di cura

# Aspetti positivi della ricerca clinica in PS

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## *Positivi per la ricerca:*

- Grande mole di dati su molteplici aspetti clinici e organizzativi
- Gestione delle patologie nella fase iperacuta

## *Positivi per i pazienti/personale*

- Migliora l'outcome dei pazienti
- Favorisce l'aggiornamento dei sanitari
- Riduce il rischio di burn-out del personale

RESEARCH ARTICLE

# Research Activity and the Association with Mortality

Baris A. Ozdemir<sup>1\*</sup>, Alan Karthikesalingam<sup>1</sup>, Sidhartha Sinha<sup>1</sup>, Jan D. Poloniecki<sup>1</sup>, Robert J. Hinchliffe<sup>1</sup>, Matt M. Thompson<sup>1</sup>, Jonathan D. Gower<sup>2</sup>, Annette Boaz<sup>3</sup>, Peter J. E. Holt<sup>1</sup>

## Introduction

The aims of this study were to describe the key features of acute NHS Trusts with different levels of research activity and to investigate associations between research activity and clinical outcomes.

## Results

Low mortality Trusts received greater levels of funding and recruited more patients adjusted for size of Trust ( $n = 35$ , 2,349 £/bed [95% CI 1,855–2,843], 5.9 patients/bed [2.7–9.0]) than Trusts with expected ( $n = 63$ , 1,110 £/bed, [864–1,357]  $p < 0.0001$ , 2.6 patients/bed [1.7–3.5]  $p < 0.0169$ ) or, high ( $n = 42$ , 930 £/bed [683–1,177]  $p = 0.0001$ , 1.8 patients/bed [1.4–2.1]  $p < 0.0005$ ) mortality rates. The most research active Trusts were those with more doctors, nurses, critical care beds, operating theatres and, made greater use of radiology. Multifactorial analysis demonstrated better survival in the top funding and patient recruitment tertiles (lowest vs. highest (odds ratio & 95% CI: funding 1.050 [1.033–1.068]  $p < 0.0001$ , recruitment 1.069 [1.052–1.086]  $p < 0.0001$ ), middle vs. highest (funding 1.040 [1.024–1.055]  $p < 0.0001$ , recruitment 1.085 [1.070–1.100]  $p < 0.0001$ ).

## Conclusions

Research active Trusts appear to have key differences in composition than less research active Trusts. Research active Trusts had lower risk-adjusted mortality for acute admissions, which persisted after adjustment for staffing and other structural factors.

## Engagement in research: an innovative three-stage review of the benefits for health-care performance

*S Hanney, A Boaz, T Jones and B Soper*

**Conclusions:** Drawing on the focused and wider reviews, it is suggested that when clinicians and health-care organisations engage in research there is the likelihood of a positive impact on health-care performance. Organisations that have deliberately integrated the research function into organisational structures demonstrate how research engagement can, among other factors, contribute to improved health-care performance. Further explorations are required of research networks and schemes to promote the engagement of clinicians and managers in research. Detailed observational research focusing on research engagement within organisations would build up an understanding of mechanisms.



1. Absorptive capacity: this is most relevant for wider adoption of research in institutions:

Changes in the structure of institutions – improvements in infrastructure

- Attributes of the setting in which care is delivered, such as accommodation, equipment and personnel, which are brought in to perform research-related activities and may remain in place after the research is completed, for example in the UK the capital spend on the Biomedical Research Centres which resulted in new co-located research and clinical facilities

Changes in human capital

- Training/updating staff through research engagement leading to the acquisition and use of new skills, other gains in knowledge and changes in attitudes towards research and research findings
- Enhancement of group and individual behaviour including:
  - more rapid uptake of new treatments and greater likelihood of following clinical guidelines
  - improved collaboration, establishment of expert teams, etc.

2. Improvements in the processes of care related to conducting a specific trial

- A more rigorous process of defining the standard of care for patients irrespective of their inclusion in the trial
- More close monitoring and support
- Early access to novel technologies

3. Organisational mechanisms within health-care systems

- For example, in the VA, where the whole organisation uses research to improve health care in various and integrated ways, including conducting research to address known issues in the health-care system, allowing physicians time to conduct research and thus being an attractive organisation to work for, conducting research to identify best performance targets to set, using research in QI, etc.

4. Collaborative approaches between organisations, teams and individuals as a mechanism

- Linkage and exchange that improves the relevance of research and policy-makers'/managers'/clinicians' willingness to use it
- Academic Health Science Centres, teaching/research hospitals
- Research networks as an increasingly important mechanism

5. Action research and participatory research as mechanisms that improve relevance, understanding of research and willingness to use research

# Best research for best health: a new national health research strategy

Timothy W Evans

Clinical Medicine Vol 6 No 5 September/October 2006

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## Resuscitating clinical research in the United Kingdom

John Bell on behalf of the working group of Academy of Medical Sciences

Clinical research in Britain is in decline. A new report from the Academy of Medical Sciences sets out the action urgently needed to revitalise it

**BMJ** VOLUME 327 1 NOVEMBER 2003 [bmj.com](http://bmj.com)

# Criticita' in PS

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Perche' viene fatta cosi' poca ricerca in PS

*“TIME!” you are shouting at the screen,*

*“PRESSURE!” as you hang your head in despair,*

*“I DON'T KNOW HOW” you sigh exasperated.*

Perche' viene fatta cosi' poca ricerca in PS

- Poco tempo/sovraccollamento DEA
- Poca formazione volta alla ricerca (metodologia)
- Scarso riconoscimento dell'importanza della ME (difficolta' reperimento fondi per la ricerca)

# Clinical research in emergency medicine: putting it together

**A M T Good, P Driscoll**

*Emerg Med J* 2002;**19**:242–246

The emergency medicine environment is highly pressurised, immediate, emotional, and often overburdened. Time for research is therefore at particular risk of interruption, where there is time at all. Ethical issues abound<sup>2</sup> particularly relating to informed consent. Staff rotate making it extremely difficult to see a project through in one setting. There is also the perceived and, in some cases, real need to have research publications as a rite of passage to promotion to clinical posts. The temptation is to go for the quick and

## **Impedimenti alla ricerca clinica in ED (2002)**

- **Training insufficiente**
- **Tempo insufficiente**
- **Fondi insufficienti**

**Alto rischio di studi “veloci” di scarsa qualità’**

# Situazione internazionale

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Rispetto alle altre specialistiche la parte di ricerca e' molto limitata anche se esistono organizzazioni, oltre alle societa' scientifiche che puntano sullo sviluppo della ricerca



# American College of Emergency Physicians

## Section of Emergency Medicine Research

### Operational Guidelines



3	<b>Objectives</b>	
	In addition to the general objectives of the College as set forth in the Bylaws, the objectives of this section shall be to:	
	3.1	Promote the development of the specialty of emergency medicine across the world and to enable physicians who have a special interest or expertise in research to meet for the purpose of initiation, discussion, and development of activities intended to further research in emergency medicine.
	3.2	Promote collegiality and cooperation among the physicians who practice emergency medicine research, including:
		3.2.1 providing a forum for communication among researchers within the College, and to encourage that communication
		3.2.2 promoting collaboration among researchers in emergency medicine and related fields to advance the specialty
	3.3	Provide an opportunity for physicians interested in emergency medicine research to meet, interact, and network.
	3.4	Develop and present educational programs on the many facets of emergency medicine research, including:
		3.4.1 stimulating and encouraging quality research in emergency medicine
		3.4.2 promoting education relating to research methodology
	3.5	Prepare and distribute an interesting, educational, and informative newsletter for members of the section.
	3.6	Serve as a resource to the College president, Board of Directors, College committees, and ACEP members relating to emergency medicine research, including:
		3.6.1 serving as a resource regarding research training programs in emergency medicine
	3.7	Coordinate activities with other organizations involved in emergency medicine research at the invitation of the President and/or Board of Directors.
	3.8	Advance and publicize legislative issues related to emergency medicine research.
	3.9	Provide a pathway for professional leadership development within the organization.

**ACEP**

- **Promuovere la cooperazione tra medici interessati alla ricerca**
- **Promuovere la formazione volta alla ricerca**
- **Favorire la cooperazione con altre organizzazioni**



ORIGINAL RESEARCH

Open Access

# Research capacity of Australian and New Zealand emergency medicine departments



AUSTRALASIAN

Katie Walker<sup>1,2\*</sup> , Shijie Ian Tan<sup>1,3,4</sup> , Daniel Fatovich<sup>5,6</sup> , Gina Watkins<sup>7,8</sup> , Melanie Stephenson<sup>1,2,9</sup> , Joseph Ting<sup>10,11,12</sup>, Richard Whittome<sup>13</sup>, Wei Wang<sup>14,15</sup> , Jonathan Knott<sup>16,17</sup> and on behalf of the ACEM Clinical Trials Network

## Background

There are over nine million emergency department attendances per annum in Australia and New Zealand [1–3]. Often, current clinical practice is not based upon robust evidence. As we evaluate treatment options, particularly

for critically ill patients, we discover many current established therapies have limited efficacy [4, 5]. Multicentre randomised studies have recently been published on core topics such as fluids in sepsis, bronchiolitis management, latrodectism and pneumothorax recommending fundamental changes to patient management [6–11].

To undertake robust studies that properly answer questions about emergency therapies, large multicentre randomised clinical trials are needed. These enrol large numbers of patients, from diverse clinical settings, into well-designed and funded trials. Many patient conditions are identified sporadically in low numbers across hospital networks that vary in patient population and resourcing. Important trials increasingly require adequate funding and resources, skilled investigators and high-functioning clinical trial networks, capable of large-scale project design and delivery [12, 13].

- Grande mole di pazienti/dati
- Gestione patologie acute su poche evidenze
- Favorire grandi studi multicentrici che coinvolgano diversi setting





# Advancing research in the exciting field of emergency medicine

*Shu-Ling Chong<sup>1</sup>*, MRCPCH, MPH, *Marcus Eng Hock Ong<sup>2,3</sup>*, MMed, MPH

Being the portal of entry to each of our tertiary hospitals and institutions, EDs represent the capability and tenacity of modern day medicine. As such, patients coming to our EDs deserve the best care we can deliver. As emergency physicians, we believe that quality emergency medical care should be “*evidence-based, integrated, adaptable and efficient*”.<sup>(13)</sup> Integrated care in the practice of emergency medicine must be fuelled by strong collaboration with other specialties and disciplines. Our dream of delivering quality care can only be realised within a culture that treasures and supports ED research as part of the greater mission for patients’ good.

**Singapore**

**Il nostro sogno di fornire assistenza di alta qualità può essere realizzato solo all’interno di una cultura che supporti la ricerca in ME come parte integrante della missione di realizzare il bene del paziente**

# EUSEM Research Network



Durante il congresso del 2019 a Praga e' stato lanciato l'EUSEM Research Network

## Obiettivi

- Sviluppare progetti di ricerca osservazionali in ME in Europa
- Sviluppare clinical trials correlati alla ME
- Stabilire alleanze con altre organizzazioni della ME internazionali con l'obiettivo di sviluppare un ricerca «globale»
- Portare avanti la formazione in ricerca scientifica in ME
- Promuovere lo scambio tra studenti e ricercatori
- Richiedere sovvenzioni per ricerca a livello europeo



## **RECENT ACTIVITIES**

For 2020 the Research Network has agreed to carry out 2 Projects.

### **1) Risk stratification of patients with suspected COVID-19 presenting to the ED (EuroCOV).**

It is a retrospective multicentre observational study of patients with suspected COVID-19 upon ED arrival of European hospitals.

Study period: between March 09 and April 08 2020.

The protocol and the Case Report Form are ready.

### **2) European Geriatric Emergency Departments Registry Study (EGERS).**

The study is scheduled on 7 consecutive days in Autumn 2020.

## **2 progetti**

- **Stratificazione del rischio in pazienti con sospetto Covid 19 che si presentano in PS (EuroCOV)**
- **European Geriatric Emergency Department Registry Study (EGERS)**





## PUNTO DE VISTA

**Investigación multidisciplinar en el ámbito de urgencias***Multidisciplinary research in emergency medicine*

A pesar de los obstáculos mencionados, el SU puede ofrecer un valor añadido en la investigación clínica por la gran diversidad de la patología aguda y por la posibilidad de investigar todos los días, a cada hora y no solamente durante el llamado "horario oficial" de las plantas de hospital<sup>2</sup>. Con estos aspectos en mente, en 2010 un grupo de investigadores clínicos internacionales con un enfoque exclusivo en medicina de urgencias, fundó el Equipo para la Investigación Global en Situaciones Agudas (GREAT, del inglés Global Research on Acute Conditions Team). Los objetivos de GREAT como organización académica de investigación (OAI), son los siguientes:

- Desarrollar actividades de investigación y publicaciones científicas relacionadas con situaciones clínicas agudas empleando los enfoques de la medicina traslacional.
- Establecer alianzas con organizaciones nacionales e internacionales con el objetivo de formar grupos de investigación especializados en la continuidad asistencial de la atención a las enfermedades cuando se presentan en fase aguda.

**GREAT  
Spagna**

- **Analizzare le pubblicazioni scientifiche sulle patologie acute implementando l'applicazione in ME**
- **Stabilire “alleanze” con organizzazioni nazionali/internazionali per realizzare gruppi di ricerca specializzati sulla continuità assistenziale**
- **Realizzare studi clinici osservazionali e sperimentali su situazioni cliniche acute**



**TERN  
UK**



**Il Trainee Emergency Research Network (TERN), fondato dal Royal College of Emergency Medicine (RCEM) (2018), e' una iniziativa che ha come obiettivo di demitizzare la ricerca e diffonderla tra I medici della Medicina d'Emergenza**

*Aumentare l'accesso alle opportunita' di ricerca*

TERN was designed to improve access to research opportunities for trainees and allow them the chance to participate meaningfully in research activity, even if they're not doing an 'academic' badged post. The model of network research results in more sites engaging in research and so provides more opportunities for trainees to get involved in research. This is one of the primary aims of TERN.

*Demitizzare la ricerca clinica*

By improving exposure to research and making it a part of our everyday practice, we want to quash the notion that research is purely for tertiary centres and professors. We want to centre it in our departments.

*Generare progetti di ricerca pragmatici guidati dalla clinica*

We want our studies to be pragmatic, applicable to many different sites. By using network research and large numbers of sites we can produce studies that recruit the right numbers of patients in a way that is compatible with working in a busy ED.

*Formare I medici in training*

We want to develop the research skills & provide training for our clinicians. Through practical experience, training, and providing educational material, we want to make the world of research more accessible.

# Fenice

Gruppo Italiano Per la Ricerca Clinica In Medicina d'Urgenza



**Fenice è un gruppo collaborativo di ricerca indipendente in Medicina d'Urgenza. L'obiettivo del gruppo è di migliorare la qualità delle cure prestate in questo ambito assistenziale attraverso la realizzazione di progetti di ricerca scientifica.**

# Strategie per favorire il successo della ricerca in ED

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- Importanza del training
- Consapevolezza del proprio ruolo centrale nella gestione di molte patologie acute
- Importanza del supporto della società scientifica della propria specialità
- Tutoraggio (mentorship)





# Research Pioneers in Emergency Medicine—Reflections on Their Paths to Success and Advice to Aspiring Researchers: A Qualitative Study

Wendy C. Coates, MD\*; Lalena M. Yarris, MD, MCR; Samuel O. Clarke, MD, MAS;  
Daniel Runde, MD, MME; Jacqueline Kurth, MD; Emilie Fowlkes, MD, MME; Jaime Jordan, MD

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Theme	Representative Quotes
Value of training	<p>“The advanced research degree...taught me how to think scientifically and how to analyze data. It allowed me to learn how to formulate questions, identify the data required to answer those questions, analyze data, and present analyses [effectively]. Those skills translate well across a wide variety of scientific disciplines, including medical education research.”</p> <p>“An important feature of an advanced degree...is that it gives you credibility that is completely independent of your actual expertise. People just assume that if you have a PhD, you must be a real card-carrying scientist, even before they have any evidence to suggest that’s true. It gives you a credibility that’s helpful when you’re joining a research team or trying to contribute to a research effort.”</p> <p>“[The training] taught me how to formulate a really good question that could be answered and gave me insight into when to let go of a bad idea.... I gained a network, and how to establish networks in the [emergency medicine] research community.”</p>
Underdog mentality	<p>“The real barrier was us.... [W]e thought we were special,...nobody appreciated us,...and that we weren’t on a level playing field. In retrospect, what was wrong is we never knocked on the right doors and kept saying the NIH isn’t fair to [emergency medicine]; there is no [emergency medicine] institute.”</p> <p>“People asked unimportant questions. And by unimportant, I don’t mean they were unimportant to a practicing emergency physician, but they didn’t resonate beyond [that] narrow group.”</p> <p>“[Emergency medicine] researchers really didn’t have a strong enough academic background or track record to qualify for a lot of the big grants and we felt it was a symptom of a young specialty. People who were getting a lot of grant funding in the early days of [emergency medicine] research usually had collaborations with more established disciplines of medicine.”</p>
Importance of specialty organization support	<p>“The professional organizations, in particular SAEM and ACEP, developed curriculum[s] in their annual meetings to talk about basic research concepts and about...how to establish networks with established investigators even outside of [emergency medicine], as well as networks with federal funding agencies. Early on, I think the leadership understood what was needed in terms of the educational effort.”</p> <p>“We made a big push in the late 1990s to have SAEM dedicate substantial funds to the SAEM research foundation to fund seed grants, grants for career development for people who wanted to get advanced research training.”</p> <p>“The Institute of Medicine [National Academy of Medicine] convened its committees in the early 2000s on the future of emergency care in the United States health system; they were very much interested in a report on research for [emergency medicine] and what the barriers were... [I]t became clear that the lack of any type of institute for [emergency medicine] was a potential barrier, and eventually there became an office within the NIH for [emergency medicine] research.”</p>
Mentorship	<p>“One of the most important things was to find the proper mentor.... [M]ost of us had to go outside of our departments. It was hard to get advice about whom to approach because people we worked with had not had this experience.”</p> <p>“[Mentors] allowed me to present my research in a very early stage at an SAEM national meeting in 1986 and to be the lead author on publications that came out. They were very encouraging. I think they were obviously very influential in me pursuing an academic career and then one that involves research.”</p> <p>“The next step I had to learn to be a really impactful researcher was to put your ego to the side and partner with somebody else who is equally impactful.... [G]reat stuff doesn’t usually come from a singular mind.”</p> <p>“I think the theme is that people were willing to be generous with their time, efforts, and connections in supporting me along the way.”</p>

- Ottenere la raccolta dati dagli applicativi
- Favorire lo scambio tra i vari centri
- Favorire scambi con altri specialisti per ricerche condivise
- Supportare i clinici nel disegno di studi osservazionali/sperimentali
- Supportare i clinici nella produzione di articoli scientifici di buon livello

*Grazie per l'attenzione.....*