

The Establishment of the Irish Trainee Emergency Research Network (ITERN)

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Introduction

It is well understood that research is a core part of Emergency Medicine (EM) training and the continuous professional development (CPD) of all doctors. Through a solid grounding in research, EM doctors can both contribute to, and remain up to date with, evidence-based practice¹. Research involvement during training is likely to promote future research engagement as consultants, and professional medical bodies view research as an important component of maintaining professional competence². However, time constraints, a lack of expertise in research methods and constant movement of trainees between sites can make it difficult to undertake high quality research during training^{1,3}. Additionally, if research is undertaken in single centres, it can result in studies with limited patient numbers, lack of generalisability and the introduction of biases^{1,4}. In Ireland, it is generally accepted that most specialities require a higher degree or certainly evidence of involvement and experience in research projects to progress into advanced specialty training. For some however, it may be perceived as a means to an end, with some not truly benefitting from it, or maintaining an active meaningful research interest into their consultant career¹.

To overcome these obstacles in the UK and Ireland, multiple trainee research groups have been established which consist of groups of trainees with an interest in research. These groups are led primarily by other trainees, with guidance provided by consultants and relevant training bodies^{3,4}. These collaborations allow for multi-site research, larger study numbers, shorter data collection periods, more generalizable studies and aim to improve patient care¹. It gives trainees an accessible way to become involved in research providing the infrastructure for trainees to turn local small audits into national multi-site research projects⁵. From an Irish perspective, the Irish Surgical Research Collaborative published a prospective cohort study in 2019 on perioperative fluid management, which managed to enrol 94 patients from 17 sites over 3 weeks⁶. This study provided a national service evaluation, and the data was largely collated by trainees, under the supervision of surgical consultants.

This is proof of the success and benefit of an Irish specialty research group, addressing a knowledge gap through a robust methodology; similar projects have been successfully completed by research groups in the UK over the last decade ⁷. In 2018 the Trainee Emergency Research Network (TERN) was established to improve access for research opportunities and to demystify the process of clinical research in the UK. To date this group has completed a 22 site service evaluation, the HED-1 study (Headache in the Emergency Department); co-ordinated the UK HEAD study, an international collaboration in 7 UK sites, which collected data on the epidemiology of headache and finally the TIREED study (Trainee-led evaluation of the need for inter-shift recovery among emergency department doctors in the United Kingdom and Ireland), a 112 site ED study collecting over 4500 responses.

To address the lack of a similar collaboration in EM in Ireland, we have created the Irish Trainee Emergency Research Network (ITERN). We aim to promote and facilitate collaborative, trainee-led research within EM in Ireland, and to drive research projects that could potentially change practice for emergency departments (EDs) in Ireland. The purpose of this paper is to describe the inception of ITERN, present our current projects, and discuss plans for future collaborative research.

Methods

The purpose of ITERN is to provide a central platform for research co-ordination that can be easily accessed by EM trainees in Ireland. At the beginning, a network committee was established consisting of a network lead, project coordinator, a social media coordinator and a supervising consultant. Trainees were invited to bring project ideas to the committee, which were screened, and a suitable project was selected. The committee then works to help with the delivery of the project nationally. The individual roles of the network are explained below. The network is supported by TERN UK through shared resources, collaborative projects and financial grants. The network is also supported by the IAEM Research and Academic Committee providing governance and oversight for research projects to date.

Network Lead

The network lead is responsible for the overall running of the research network. This person also assists with the delivery of the individual projects but primarily concentrates on the acquisition of new projects, recruitment and liaising with the Irish Association of Emergency Medicine (IAEM) to benefit from the collective Emergency Medicine research expertise and experience, maximise the value and impact of the research and facilitate the performance of the research in EDs in Ireland.

Project Coordinator

This individual is a member of the ITERN committee and is responsible for communication and coordination between sites, providing project updates and facilitating troubleshooting if issues are encountered in an individual site. This person will liaise with the project lead on a regular basis to ensure successful completion of the study.

Project Lead

This is the EM clinician that has brought the project to the network, will have formulated a study protocol and have gained local consultant approval for the study design. This individual should have obtained ethical approval for the study. Following completion of the project, the project lead will collate and analyse the data and begin the submission process for peer-reviewed publication. ITERN can provide statistical support for projects should this be required by the study lead.

Site Lead

This is an EM trainee that has volunteered to participate in a study and collect data in their ED. They should inform the local research and ethics committee and EM consultants to ensure the study complies with local guidelines. They should then disseminate the study methodology to their department and begin data collection. Following the completion of data collection, this individual will be able to analyse the local data when compared to the overall numbers, and potentially implement change and quality improvement in their own ED.

Authorship

Clear authorship policies are of vital importance when undertaking collaborative research^{1, 4}. Publications by research networks to date have incorporated a group authorship model, whereby all contributing collaborators are included in the article text and searchable via Medline^{8, 9}. This model of authorship is based on recommendations made by the International Committee of Medical Journal Editors¹⁰.

Work to Date

There are two projects currently being facilitated by ITERN, and it is anticipated that they will be submitted for peer review publication in the future. ITERN has successfully recruited site leads for each of these projects and disseminated through the network to Irish EDs.

The first project is the National Emergency Resuscitation Airway Audit (NERAA) which aims to prospectively analyse current RSI and intubation practices in Irish EDs. We have 15 sites recruited and data collection is ongoing. This project is in conjunction with the establishment of an Emergency Medicine Airway Registry Audit (EMARI) and it is hoped that NERAA will provide initial data for the registry and gain feedback from site leads regarding the usability of the data collection tool.

The second project is the Covid-19 Emergency Response Assessment (CERA) and is being performed in collaboration with our colleagues in TERN in the UK. This study aims to understand the psychological impact of the Covid-19 pandemic on doctors, during the acceleration, peak and deceleration of the COVID-19 pandemic wave. This will be conducted via 3 surveys, the first of which has been disseminated in March 2020 via ITERN. There were over 500 responses to the survey in just over a week. This study has been performed in conjunction with the College of Anaesthesiology Ireland (CAI).

Future Plans

NERAA has been led primarily by members of ITERN to allow the network launch and CERA has allowed us to further “test” the network and demonstrate its feasibility as a vector for multi-site data collection. It is anticipated these two studies will increase visibility of ITERN amongst EM trainees and result in an increase in engagement in future projects. The current ITERN committee have set a robust and achievable plan for growth over the coming years. This focuses on increasing the size of the central ITERN committee through the transitioning of site leads into committee roles. It aims to empower data collectors to take up site lead roles and encourage trainees who become consultants to become ITERN supervisors.

Summary

The Irish Trainee Emergency Research Network has been established by trainees, for the development of research opportunities for EM trainees in Ireland and to produce practice changing research. We hope that this network provides the platform for trainees to become engaged in research practices and that ITERN can support, guide and drive the development of evidence-based practice amongst EM trainees in Ireland.



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References:

1. Dowswell G, Bartlett DC, Futaba K, Whisker L, Pinkney TD, West Midlands Research Collaborative BUK. How to set up and manage a trainee-led research collaborative. BMC Med Educ. 2014;14:94.
2. Irish Medical Council. Professional Competence Guidelines for Doctors. 2011.

3. Jelley B, Long S, Butler J, Hewitt J, WeGeN. Cohort profile: the Welsh Geriatric Registrar-Led Research Network (WeGeN): rationale, design and description. *BMJ Open*. 2017;7(2):e013031.
4. Bosanquet DC, Vascular, Endovascular Research Network C. How to Engage in Trainee-led Multicentre Collaborative Vascular Research: The Vascular and Endovascular Research Network (VERN). *Eur J Vasc Endovasc Surg*. 2016;52(3):392.
5. Widlak MM, Siau K. Young GI angle: How to set up a successful gastroenterology trainee research network - tips for trainees. *United European Gastroenterol J*. 2019;7(7):982-4.
6. Irish Surgical Research C. PERioperative Fluid Management in Elective Colectomy (PERFECT)-a national prospective cohort study. *Ir J Med Sci*. 2019;188(4):1363-71.
7. Jamjoom AA, Phan PN, Hutchinson PJ, Koliaas AG. Surgical trainee research collaboratives in the UK: an observational study of research activity and publication productivity. *BMJ Open*. 2016;6(2):e010374.
8. *British Medical Journal*. Authorship & contributorship. 2018 [Available from: <https://www.bmj.com/about-bmj/resources-authors/article-submission/authorship-contributorship> [27/03/2020]].
9. National Library of Medicine. Study Collaborators Included in MEDLINE®/PubMed. 2008.
10. International Committee of Medical Journal Editors. Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals. 2018.