

Building research capacity in ICU patient recovery research: an experience in establishing an early career researcher ICU international collaborative network

International collaboration network for early career intensive care (ICU) researchers from University of Edinburgh, University of Dundee and Griffith University was first started in 2010 in Edinburgh, Scotland in the form of a summer school. This was followed by a second workshop which was hosted by Griffith University, Gold Coast, Queensland, Australia. In 2013, the third workshop was held in Finland hosted by University of Turku. The topic of the first workshop was recovering from critical illness and what kind of challenges ICU survivors and their families could encounter. In Australia, participants of the workshop focused on the rehabilitation of intensive care survivors. The special aim of the third workshop was improving the quality of intensive care and, of course, strengthen the opportunities for early career ICU researchers to further improve their research skills and develop their understanding of international collaborative research. Collaboration among workshop participants continues and plans for the next meeting are set. This international network has opened up exciting collaborative research opportunities for early career ICU researchers. With good connections and international network we are able to share our ideas and build a stronger base for the multi-professional ICU research.

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Introduction

There has been a significant increase in international collaboration volume between 1996–2000 and 2001–2005 including all countries (Adams, Gurney, & Marshall, 2007). International research collaborations in science, technology, and medicine is gaining increasing attention worldwide attributed to the obvious benefits such as raising awareness in given area globally; gathering international data and increase the generalisation of research methodology; sharing lessons learned; and enhance research and training (Boekholt, Edler, Cunningham, & Flanagan, 2009). In their review on international collaborations policies, Boekholt et al (Boekholt et al., 2009) summarized that around the world, there are many or-

organisations that have formal structures or policies to facilitate international collaboration. The contributing factors of the impact and outcome of research collaborations internationally highly depended on funding opportunities and involving countries research policy. In health care, one of the key triggers for international collaboration and funding is to address global issues such as infectious diseases.

Besides low cost communication methods such as Skype and the Internet, international collaborations require significant resources for collaborative activities allowing for face to face meetings, workshops, and training. Often funding bodies target the established and international acclaimed researchers. Funding for early career researchers (ECR) to collaborate internationally is very limited, and collaborations with other international ECRs are even more limited. International collaborative initiatives are important for nursing discipline as an emerging profession in international ICU research and education.

In this paper, we would like to share our experience of the establishment of an international Intensive Care (ICU) ECR researcher network, and the subsequent three workshops held in Scotland, Australia, and Finland.

History and summary of the workshops

At the beginning of our journey was a funding call from the Economic and Social Science Research Council (ESRC) in the United Kingdom which specifically called for ECRs to apply to their 'International Network and Trainings Opportunity activity' funding call. It was mandatory for this funding call that the applicants were (1) international and (2) led by ECRs with (3) senior researchers as mentors. Such funding calls are rare opportunities in the landscape of research funding. Fortunately this coincided with the formation of an NMAHP (Nursing, Midwifery and Allied Health Professionals) intensive care (ICU) research group at the University of Edinburgh. Kean, who had visited Griffith University, Australia, as part of her post-doc the previous year and was already in discussions with Huby, Reader at the University of Edinburgh at the time, in developing the Australian link further led this successful funding call as part of the emerging ICU NMAHP research group. Senior researchers from Edinburgh included Huby (Reader), Prof Blackett-Milburn and Prof Walsh as well as Rattray (Reader) from the University of Dundee. International co-applications included Lin (ECR) and Prof Chaboyer and Prof Aitken from Griffith University, Australia.

The focus of the summer school was on the organisation and building of an international network of interdisciplinary ECRs with the aim of contributing and developing interdisciplinary research into the care and recovery of critically ill patients following intensive care treatment. We specifically aimed at:

- Developing an international network of PhD students, post-doctoral and ECRs researching the impact of critical illness on patients and families at different stages of recovery.
- Enabling summer school participants' networking with established senior academics in the fields of ICU and social science research.
- Providing research training by reflecting and critically

analysing different methodological approaches in ICU research.

- Identifying existing gaps in ICU research and explore international and multidisciplinary collaboration opportunities in ICU research.
- Scoping and integrating international and multidisciplinary ICU research and benefiting from synergy effects by building a critical mass of expertise in ICU and social science research.
- And, facilitating and developing joint grant proposals.

This first event was held in Edinburgh, UK, 6–8 September 2010 and had 33 participants from 10 different countries. In informal discussions throughout the event and at our final evaluation session it became evident that participants wanted a follow-on event. Providing a forum that allowed ECRs to network and access experienced researchers in the field whilst also having an educational input through master classes. The educational element was seen as essential in developing knowledge and insights in an area where patients experience internationally very similar problems in and post-ICU (such as delirium, muscle weakness and so on).

Therefore, the second Summer school followed and was organised by our Australian collaborators under the lead of Frances Lin from Griffith University, Australia. The second workshop was funded and hosted by Griffith University in 2011. The timing of the workshop was carefully chosen so it was linked to the Asia Pacific Intensive Care Congress 2011 in Brisbane, Australia. Most of the senior mentors and some ECRs from the first workshop attended the conference in Brisbane. The two-day workshop was held two days after the conference. About 30 ECRs from four countries (Australia, Scotland, Sweden, and Finland) attended the second workshop. The focus of this workshop was on mixed methods training, and expending and consolidating the international ECR network. This workshop not only provided opportunity for a number of researchers to meet and discuss collaborative research plans, but also identified potential ECRs, Heljä Lundgrén-Laine and Marita Ritmala-Castrén to lead the third workshop.

The third workshop was held in autumnal Turku, 4–6 September 2013. This time we had 30 participants from four countries; Australia, UK, Sweden and Finland. In September, some of our participants were also able to recover from their jet lag and combined two meetings, World Critical Care Congress in Durban, South Africa and the 3rd ICU workshop here in Ultima Thule. The programme of this workshop focused on the introduction of advanced methodological approaches addressing different areas of ICU care, for example, how to choose study designs and how to design and implement surveys. In addition, possibilities and experiences related to international collaboration and research were discussed. Altogether eight workshop abstracts were submitted and during the workshop participants had a chance to present their own study designs during free paper sessions to more experienced ICU researchers for feedback. One of the main targets of this workshop was in identifying possible research topics for the international network, resulting in a number of concrete plans. Successful workshops always include networking activities and in this case participants had the opportunity to visit the new ICU in Turku University Hospital. A reception was held

for participants at Turku City hall which included an interesting history session. Participants also had the opportunity, and enjoyed, visiting a Finland sauna and some refreshing swimming at the Finnish Archipelago Sea.

The following table 1 summarises the three workshops.

Our experience of this collaboration and discussions

From the three workshops, we thought the following strategies are important for the ECR international collaborations. First, membership of the network was consolidated and clearly defined. We used a website (NING website to manage communications for the first workshop), and LinkedIn after the second and third workshop. Membership of these sites must be the ECRs and mentors who have participated the workshops. This defines the ownership of the community, and also provide a convenience, easy and economical way for communication. Second, although online communications helps with communications, face to face meetings are necessary means for the members to meet and discuss potential projects. Third, funding for the workshop is important so senior mentors and organisers can attend the workshop. When funding is limited, organisers must find creative ways to bring the participants and speakers together, such as the second workshop. Linking the workshop with an international intensive care conference is a way to save funding (some speakers and participants were already attending the conference). Next, the theme and objectives of each workshop must be mapped to achieve positive outcomes. For example, the third workshop had a clear aim for encouraging international collaborations, and the program designed to make it possible. Lastly and most importantly, a stable membership, including the ECRs and their mentors, is crucial for continued success.

Conclusion

The ECR international network has provided opportunity for the ECRs to be trained, to grow (some has completed PhD through the process and are now mentor other junior ECRs), and to collaborate. Factors including membership of the ECR network, funding, and themes and objectives for the workshops must be considered. It is hoped that this collaborative network will provide opportunity for future collaborative international research in intensive care, and provide an example for ECRs to collaborate early on in their research career.

Acknowledgements

The 3rd ICU workshop were financially supported by the Finnish Society of Intensive Care Medicine, the Federation of Finnish Learned Societies, the Turku University Foundation, and the Hospital District of South-West Finland.

Special thanks to the Finnish Society of Intensive Care Medicine and our Finnish team: Helena Leino-Kilpi, Sanna Salanterä, Anna Axelin, Riitta Danielsson-Ojala, Eriikka Siirala, Laura-Maria Murtola, Marita Ritmala-Castrén and to our Turku University Hospital ICU staff. □

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Table 1.

Workshop number/ details of workshop	1 st workshop	2 nd workshop	3 rd workshop
Location	Edinburgh, Scotland	Gold Coast, Australia	Turku, Åbo, Finland
Host institution	University of Edinburgh	Griffith University	University of Turku
Collaborative institutions	Griffith University, University of Dundee,	University of Edinburgh, University of Dundee, University of Gothenburg.	University of Edinburgh, Griffith University, University of Dundee
Organisers	PI: Susanne Kean. Grant no: RES-810-21-0023	Frances Lin	Heljä Lundgren-Laine et al.
Funding source	Economic and Social Science research Council	Griffith University	Finnish Society of Intensive Care Medicine, Federation of Finnish Learned Societies, Turku University Foundation, Hospital District of South-West Finland
Number of participants	33 (10 countries)	28	30 (4 countries)
Theme of the workshop	Development and consolidation of interdisciplinary social science research into the care and rehabilitation of critically ill patients following ICU treatment. Focus: interdisciplinary	Training on mixed methods	Improving the quality of intensive care
Outcome of the workshops	Establishing network & international collaborations	Consolidating and expanding International ECR network and collaborations	Improve research skills and develop understanding of international collaborative research