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Trainee-led collaborative research: the future present

The European Vascular Research Collaborative

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The development and rapid adoption of surgical research collaboratives threatens the existence of the classical research establishment\(^1\), this phenomenon is a catalyst for a new research landscape. Increasing financial and logistical challenges as well as novel diseases mean the current structure must be adapted\(^2,3\). We need organisations that can mobilise and adapt extremely quickly during turbulent times, as exemplified by the GlobalSurg\(^4\) group during the COVID-19 pandemic\(^5,6\). This group have provided the vast majority of surgical evidence in terms of clinical outcomes as well as service delivery during the pandemic – without whom we as a community would be left practising in the dark. Their ability to engage ‘atypical’ researchers (trainees and students) has meant a vast increase in numbers of surgical patients being recruited into research. These ‘atypical’ researchers are the future of the surgical community, allowing them to participate and engage in research during their formative years will surely produce more senior clinicians who are willing to promote research in their organisation and to the patients they treat.

Many populations are underrepresented in surgical research and continue to suffer worse outcomes \(^7-9\). Even in high income countries diseases that are more common in deprived communities are often studied in healthier populations\(^10\), questioning the applicability to the majority of patients who suffer with these illnesses\(^11\). Research collaborative groups have a broader reach by involving diverse populations and more unstructured health-care organisations (i.e. low- and middle-income countries), providing the possibility to include these disadvantaged groups and provide evidence that is directly applicable to them\(^12,13\).

Treatment of rare (prevalence \(<1/2000\)) conditions is based on low quality evidence with limited funding to advance such knowledge \(<10\%\) of the US NIH budget\(^14\)). Research collaboratives can have an important role in advancing the knowledge here, by uniting large diverse populations, and at a relatively reduced cost (voluntary participants with low overhead costs)\(^15\). Therefore, the next step in the evolution of medical (and surgical) knowledge is to validate existing interventions in historically understudied populations, such as women and certain ethnical groups, and also to study rare disease entities.
Most countries now have surgical collaboratives representing their national surgical community (iTSURG, Irish Surgical Research Collaborative, Dutch Surgical Research Group, Scandinavian surgical outcomes research group) or national specialty specific collaborations (VERN, Dutch Liver Collaborative Group, BURST, INTEGRATE). What is needed now are overarching organisations connecting these established networks to facilitate international surgical research, spreading research activity that has been conceptualised, designed and funded in one country. In general surgery, the GlobalSurg Collaborative (which is large and funded nationally by the National Institute of Health Research (NIHR)) has been doing this successfully for some time (numerous high impact publications) and there is also now a trainee led group, EuroSurg, following suit. This trailblazing example has inspired a new organisation (who are about to start their first continent wide study) the European Vascular Research Collaborative (EVRC), who will attempt to foster trans-continental relationships and become the hub of research collaborative activity in vascular surgery across Europe and abroad. Successful Research Collaboratives will, as well as adding to the knowledge base, recruit and facilitate training of more surgical researchers (at trainee level), future proofing surgical research not only in nation states but across the globe.

The research collaborative model provides all health care professionals and students the opportunity to contribute and conduct research. It has been recognised that trusts that are more engaged and by result are more active in research provide better patient care (better mortality rates) and have better staffing and facilities. Surgical research collaboratives can play an important role in establishing a research culture within organisations, helping to encourage staff and students into surgery, retain them in the long term and most importantly improve patient care.

Many challenges to the research collaborative model have been overcome, for example, authorship and recognition of contributors was difficult in the beginning. Making contributors PubMed citable resolved this issue. Funding during the start-up phase is difficult, unless sponsored by a large organisation or society, most continue to keep costs low with voluntary participation and manage (with the help of industry sponsors and successful grant applications) to meet their running costs (website, social media, meetings). Ensuring standards of research governance is currently the
main concern for large established research collaboratives. By conducting research in countries with different laws and standards (Research and Information governance); ensuring research is conducted in a way that honours the declaration of Helsinki is essential, and in many aspects, requires good faith. The biggest challenge is moving on from large cohort studiès which research collaboratives easily achieve) onto large, funded RCT’s; few have been able to achieve this as yet.

Ultimately the success of research collaboratives depends on the dedication of individual researchers and engagement of surgeons and their organisations across the continent. If individual surgeons commit and engage with these organisations, it will be possible to deliver high quality research into not only mainstream conditions (such as appendicitis or ureteric colic) but also rare conditions (like cystic adventitial disease) with low incidence in normal country sized populations, and importantly also in the often (in trials) underrepresented populations. Conducting high quality research on common and rare conditions will automatically engage journals, and in turn funders (NIHR and the European Institute of Innovation & Technology (EIT Health)), cementing the importance of research collaboratives as a cornerstone of the surgical research strategy now and into the future.

References


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