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Opinion

What next for gastroenterology and hepatology trainee networks? Lessons from our surgical colleagues

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WHAT ARE THE TRAINEE RESEARCH NETWORKS AND THE POSITIVES THEY BRING

The initiation of trainee research networks dates back to 2008 when a regional group of General Surgeons developed the West Midlands Research Collaborative.[1] From these origins, the trainee-led collaborative research model generated national and international support, across a broad range of medical specialties to involve researchers of various levels from consultants to medical students.[2 3] Since then, many successful collaboratives have delivered high-impact studies,[4] benefiting patients and the people delivering this research. The growth of research collaborations became prominent, with the successful completion of multiple large national and international studies, and opportunities for research teams and leaders to train and develop.

Some noticeable examples of high-quality trainee-led research were the Reduction of Surgical Site Infection Using Several Novel Interventions (ROSSINI) trial, which recruited 760 participants from 21 sites,[3] and the Single Use Negative pRessure dressing for Reduction In Surgical site infection following Emergency laparatomy (SUNRRISE) study,[5] which was the first National Institute for Health Research (NIHR) portfolio randomised controlled trial to have a trainee as the named grant holder and has currently recruited 840 patients from across the UK and Australia. The overarching aim of these trainee-led research networks is to deliver high-quality multicentre audits or research projects that can have a positive impact on patient care. Furthermore, they are a novel opportunity for mentorship, whereby trainees can receive support and guidance from senior investigators, yet still lead all phases of their projects (conception, design, delivery and dissemination). The results of a survey among gastroenterology trainees gauging their interests in research and academic training published in 2019 showed that over 90% of trainees felt that the development of trainee research collaboratives was important.[6]

We believe the strengths of the trainee networks are they facilitate trainee-led, designed and delivered projects. This can contribute towards e-portfolio requirements as well as evidencing research and leadership skills for future job applications. More importantly, we believe they offer trainees the opportunity to work with and learn from peers at different stages of their training. It fosters collaborative research within and across regions, which we believe will have positive impacts on future collaboration as seniors. Trainee research networks allow trainees to develop their own ideas, priorities and directions, which in typical research and training settings are often set externally or supervisor-led.

This article has been written to stimulate discussion about what comes next for trainees in gastroenterology and our trainee research networks.

WHERE ARE THE GASTROENTEROLOGY AND HEPATOLOGY TRAINEE NETWORKS?

Trainee research networks have grown in gastroenterology, with the first regional networks formed in the Midlands in 2015. At least 10 regional networks have been now established in three of the four UK nations: WMRIG—West Midlands, GARNet—East Midlands,

GasTRIN NoW—North West, GLINT—Pan-London, YaHGuT—Yorkshire and Humber, OxYGEN—Thames Valley, MaGNET— Mersey, GRANT—North East, TReNDD—Northern Ireland and the Welsh Trainees Research Network Collaborative. These have brought trainees together. Many have successfully delivered regional and cross-regional projects, involving dozens of trainees and hundreds of patients. They have published in peer-reviewed journals, as well as poster and oral presentations at national and international conferences.[7–10]

BARRIERS TO SCALING UP AND FURTHER SUCCESS OF THE TRAINEE NETWORKS

Part of the British Society of Gastroenterology (BSG) Clinical Research Strategy 2018 is to develop a national trainee network for research and within 5 years for at least one trainee-led project to be delivered nationally.[11] This laudable goal is in sight. Establishing a national framework for trainee research networks was initially met with much enthusiasm, and attempts were made to support this with a BSG-sponsored set of lectures. Unfortunately, and despite adequate advertising, insufficient registrations were received to make the sponsored day viable, and so the event was ultimately cancelled. This year saw a fall in trainee network funding on a UK level. There also seems to be a trend that trainee network participation and output have declined over recent years.

Importantly, with the changes to the shape of gastroenterology training, it is quite possible that trainees have to prioritise other areas of training such as endoscopy over research.[12] It is also important to appreciate that many trainees remain unconvinced of the value of trainee networks over other forms of research activity, which could contribute towards the lack of uptake.

Furthermore, something that is probably overlooked is that not every trainee has an interest in research. Currently for a gastroenterologist to achieve completion of training, there is no requirement to publish in peer-reviewed journals. This differs from the surgical training model in which on completion of training many surgical specialties mandate the need for evidence of published work. It is therefore possible that many gastroenterology trainees see training networks as a further demand on their already limited time. For those who do have an academic interest, the trainee networks do not tend to lend themselves well for specific types of research such as those in basic or translational science and epidemiological studies. While these barriers are not impossible to overcome, they may dissuade young researchers with these particular interests from joining a trainee network.

While the projects the gastroenterology trainee networks have achieved are admirable, they have to date been mostly large-scale audits. These have not necessarily translated into ongoing quality improvement projects. Original research projects have been envisioned but not further developed or delivered. Overcoming these hurdles to deliver national projects, particularly an original research programme, will need leadership, guidance and strategic use of time.

Key things that could be emulated in gastroenterology to galvanise trainees are that surgical collaboratives reproducibly deliver through to the publication stage and that they publish under a corporate authorship model. Simply put this means that every participating trainee has citable evidence that delivers against the time they have invested in a particular project. No individual names are given, but, when the paper is viewed in PubMed, each person's name is listed under that corporate model. While this may have many advantages, some may suggest that corporate authorship does not reflect the differences in contributions across the networks and provide enough credit for those who lead and drive the projects. Furthermore, many trainees may prefer to spend their academic efforts into producing papers that list them as first or senior author, and hence this model of working may put some trainees off.

The trainee network model also works because at the helm are dedicated trainees with the backing of senior consultants who may help overcome some of the research barriers while still allowing trainees to take full ownership. The Intercollegiate Surgical Curriculum requires evidence of research participation and outcomes; including peer-reviewed publications in recognised journals to each trainee has made a significant contribution.[13] This may have many advantages, but some have suggested this may drive quantity over quality and hence may not be a good scientific model of training to follow.[14] Despite this, over many years, successive surgical trainees have developed their networks to meet and then greatly exceed the requirements. The projects they are delivering actually make a difference to patient care.

It is also important to appreciate the relatively modest costs that are involved in trainee networks such as website maintenance and meeting organisation. Fortunately, many funding sources for trainee networks are available, for example, through organisations GutsUK, Dr Falk Pharma, the Midland Gastroenterological Society, the BSG and United European Gastroenterology, but these are potential further barriers to achieving large-scale projects.

One other key principle of setting up the trainee networks remains building a committee and a team to help drive, deliver and promote these trainee networks. While larger deaneries may have a large pool of potential trainees who may be interested in the roles, it should be appreciated that for smaller regions with less trainees, forming these committees and recruitment may also be a significant challenge not faced by the larger deaneries.

Significantly, many of the trainee networks remain in their infancy, and therefore it may be difficult to

judge the levels of success of such networks at this stage. It should also be noted that the COVID-19 pandemic caused a huge loss in research momentum in many areas of gastroenterology.[15] For many, focus was shifted towards helping in large national projects[16] to help combat the pandemic rather than local regional ones. It is therefore possible that the recovery from the pandemic may also revive the trainee networks.

SOLUTIONS THAT COULD OVERCOME THESE BARRIERS

Lessons from our surgical colleagues also show that trainee research networks need to be regularly nurtured. Some networks have struggled as successive trainees have for various reasons been unable to maintain and grow the networks entrusted to them, and new trainees have not been able or sufficiently supported to develop and deliver projects.

Moving forward, it is our belief that these networks offer trainees an opportunity to get involved in research and do something meaningful from an early stage. Furthermore, we need to create the time, support, funding and nurturing of motivated trainees to help take gastroenterology trainee networks further.

With the support of organisations such as the BSG and the NIHR, trainees can set up and lead specific projects and initiatives embedded in their training programmes. Specifically, it may be beneficial to set up support networks with those that can offer mentorship and help navigate study design, ethical approvals, statistical analysis and bioinformatics. The BSG Mentorship programme offers an excellent opportunity to support interested trainees.

Representation of trainee research networks within the BSG may enable trainees from across the UK to provide peer-led support and establish common goals. Each trainee network remains independent but connected to a central hub. The hub could provide access to shared resources, frameworks to use or adapt (eg, for authorship) and facilitate further collaboration. This could provide better integration with BSG committees, IT support (eg, for secure data collection) and funders.

Incentivising the participation in and completion of projects will be another method of providing support and encouragement, with perhaps trainee network prizes. Potentially over time, the Joint Royal Colleges of Physicians Training Board (JRCPTB) and other groups may encourage or require Good Clinical Practice certification and participation in research during specialty training. Training Programme Directors are well placed to consider how participation in trainee network projects could be recognised against current and future training requirements and how they could help foster networks in their region by providing time during training days.

Finally, trainees' employers and local educational leads need to value the trainee networks and help promote them. It is probable that many are not fully aware of what the trainee networks do, and hence trainee collaboratives need to raise awareness through societies such as the Royal Society of Medicine. Ultimately, for many trainee networks to prosper, it is likely that employers and local educational leads provide interested clinicians with some time during their working week to help develop these networks. The JRCPTB encourages trainees to have at least half a day week for educational opportunities,[17] and this could be the ring-fenced time needed for these activities

Ultimately, the success of trainee research networks lies with trainees themselves. This endeavour requires trainees to step up to lead their networks, to design and complete projects, to deliver on collective achievement, and to share and act on their findings to improve patient care. For some of the networks that have only recently been established, this may just require some time and support. The future success, however, requires buy-in from seniors, the mentorship of established researchers through support particularly with adequate time. The potential of trainee research networks is clear. You will find almost any door that you push against will open. What comes next is in your hands.

Summary of recommendations for success of the trainee networks

Trainees
- Deanery, department and training programme directors to encourage protected time for keen trainees to take on leadership roles within trainee networks.
- Deanery, department and training programme directors to support those who show an interest in research leadership.
- Accept corporate style authorship.

Networks
- Nurture and guide other networks.
- Work collaboratively.
- Build research networks nationally and internationally.

Training/Training Programme Directors
- Build protective time into trainees' work to enable time for the research networks.
- Support, promote and nurture trainees to join and grow their networks.

Leadership
- Integrate National Institute for Health Research and British Society of Gastroenterology projects into the trainee networks.
- Provide senior support and mentorship to trainee networks.
- Consider incentivising successful trainee networks through prizes and awards.

FUTURE AND SHAPE OF SUCCESS

For once, the COVID-19 pandemic gives us a glimmer of hope. Through the pandemic, we used existing gastroenterology trainee research networks to encourage trainees to collate outcomes from their patients with inflammatory bowel disease (IBD) who developed COVID-19. This has again shown that the combined effort of trainees through networks can produce powerful data and at the time of writing has led to an accepted manuscript in the *Lancet Gastroenterology and Hepatology* journal. While these projects were not exclusively trainee-led, they do highlight that under the right leadership these projects can compile powerful highly cited data while also giving trainees a platform to understand and get involved in research. Furthermore, there is an ongoing UK-led trainee initiative that is exploring variations in IBD practices across Europe with over 30 trainees across Europe taking part.

The future will hopefully see the gastroenterology and hepatology trainee networks across the country unite forces to achieve large-scale multicentre research akin to what the surgeons have achieved. With the correct ambition and buy-in from the important stakeholders interested in the trainee networks, we believe this can be achieved.

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