NREG: old banger or new vehicle for research?

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The Northern Region Endoscopy Group (NREG) is a collaborative endoscopy network. NREG provides the opportunity for clinicians across the entire Northern region to undertake high quality, clinically meaningful, health service based research. NREG research is undertaken across a wide range of endoscopy units with pooling of resources and ideas. NREG has presented a large number of abstracts and is contributing to a number of National Institute for Health Research trials. NREG is collaborating with other research teams in the UK and a number of research grants have been secured. NREG aims to make a significant contribution to the field of endoscopic research over the coming years.

What is NREG and why was it established?

The Northern Region Endoscopy Group (NREG), formed in 2007, is an endoscopy research network covering the area stretching from the Scottish Borders down to North Yorkshire and across to the western border of County Durham and northern Cumbria. NREG comprises all 17 endoscopy units in the nine NHS Trusts within the region and represents the 300 endoscopists, including gastroenterologists, surgeons and nurses who work in these units.

The total population served by the network is 3.5 million and just under 100 000 endoscopic procedures are performed in the region each year, comprising 45 000 upper gastrointestinal endoscopies, 28 000 colonoscopies, 18 000 flexible sigmoidoscopies and 3000 endoscopic retrograde cholangiopancreatographies (ERCPs).

The northern region has a long history of close collaboration in endoscopy, particularly with regard to endoscopy teaching. The region has had low endoscopy waiting times for many years and was the country's first region to have entire coverage by bowel cancer screening. This background of a well organised service coupled with a history of working together provided the ideal opportunity for regional endoscopists to take endoscopy on to the next level by undertaking collaborative research.

What can NREG offer?

Most endoscopists work in units that do not have sufficient patient numbers or resources to permit independent research. The network brings enthusiastic endoscopists together and gives them the opportunity to develop and participate in high quality, clinically meaningful health service based research. This enables research to be undertaken by pooling of research knowledge and resources and provides a large study population. The network also allows the opportunity for testing of new endoscopy technology across a range of clinicians and units.

Although the network boasts many areas of endoscopic expertise, one of the distinct advantages of NREG is that it incorporates individuals working in 'real life' endoscopy units ranging from small to very large and encompassing a broad spectrum of endoscopy skills and expertise. Thus NREG led research is likely to be generally applicable to other units throughout the country, as opposed to many studies published from specialised endoscopy units.

How is NREG organised?

- **Aims**—NREG aims to encourage, develop, coordinate and publish high quality endoscopic research.
- **Strategy**—To encourage collaboration between regional endoscopy units with pooling of ideas, expertise, resources and study populations.
- **Structure**—The group is coordinated by a chair and vice chair with each endoscopy unit in the region represented by a link person. All endoscopy units, regardless of size, have equal voting rights. The Association of Upper GI Surgeons and the Association of Coloproctology of Great Britain and Ireland are represented on the group. There are also nominated links for primary care, industry and nurse endoscopy.
- **Communication**—The link person represents colleagues within their endoscopy unit and coordinates the

dissemination of information from NREG to their local unit and ideas from the units back to NREG.

- Meetings—NREG meetings take place quarterly and are open to anybody with an interest in endoscopic research. Attendance includes: surgeons, nurse endoscopists and medical gastroenterologists. Meetings are broadly divided into two parts: updates on ongoing research projects and discussion of new ideas. Ideas are discussed at an embryonic stage and if the proposal is supported, a working group is formed to progress the study, led by the individual with the idea and the enthusiasm to take it forward.

What are NREG achievements?

To date, 25 abstracts have been presented at the British Society of Gastroenterology (BSG), Association of Coloproctology of Great Britain and Northern Ireland, National Cancer Research Institute, Digestive Diseases Week and Gastro 2009 meetings. These abstracts have included data from all units in the network and encompass more than 30 authors. A further eight abstracts have been submitted for BSG 2010. Manuscripts from many of these abstracts are now being prepared for publication. Research areas include bowel cancer screening, ERCP, endoscopy service provision and oesophageal stenting.

Because of the significant lead time in translating a research idea into a fully funded study, an early objective of NREG was to encourage network participation in established NIHR (National Institute for Health Research) trials. An advantage of this is that these studies attract funding for research personnel. NREG is collaborating closely with the national Barrett's Oesophagus Surveillance Study to provide region wide recruitment—NREG has contributed approximately one-third of all patients recruited over the first 3 months of the trial. NREG is also recruiting to several other NIHR trials and is collaborating with a Canadian group to produce the first validated colonoscopy comfort scoring system.

A second early objective was to set up a number of region wide audits to produce some early results and early engagement of clinicians. These included an ERCP audit (lead clinician Dr David Nylander) and an audit of colonoscopy performance

(lead clinician Dr John Greenaway). Undertaking these audits has demonstrated some of the difficulties in accessing data across multiple units but overcoming these obstacles will aid easier progress of future research.

Having undertaken a number of observational studies, several prospective interventional trials have been developed and NREG currently has six studies at various stages of funding applications. In November 2009, NREG was awarded its first NIHR grant. This is a Research for Patient Benefit study evaluating the role of oesophageal stents for benign strictures (lead clinician Dr Anjan Dhar).

NREG has the benefit of having input from an internationally renowned gastrointestinal primary care team, led by Professors Greg Rubin and Pali Hungin. NREG has developed close links with this team and a joint funding application to look at increasing uptake of colorectal cancer screening has been submitted to Research for Patient Benefit. A number of links with industry have been established and NREG has begun to undertake evaluation of new technologies.

NREG have been approached to collaborate with other centres within the UK and joint grant applications have been submitted, collaborating with Professor Mark Hull's unit in Leeds and with Dr Brian Saunderson's unit at St Mark's/Imperial College. NREG has provided the opportunity for trainees to contribute to regional research and audit.

In 2008, the BSG endoscopy research committee was established, chaired by Dr Andrew Veitch, and NREG links closely with this committee. NREG has developed close links with the primary care research network and with the comprehensive local research networks and the gastrointestinal speciality group. Much of NREG's initial research work was related to the bowel cancer screening programme. NREG has been encouraged and supported by the BSG and the National Endoscopy Team.

On 6 October 2009, NREG organised its first endoscopy symposium at the SAGE Centre in Newcastle-Gateshead, entitled 'Advances in luminal endoscopy'. The faculty included Professor Peter Cotton, Professor Christopher Gostout, Professor Hugh Barr, Dr Mark McAlindon, Dr Brian Saunders, Professor Roger Barton,

Dr John Silcock and Dr Roland Valori. The meeting was a huge success with high feedback scores. The intention is to host a biennial symposium at the same venue.

What difficulties have been overcome?

As with any collaboration of clinicians working in different trusts, there have been difficulties to overcome. Initially the network was driven forwards by a small number of enthusiastic individuals, with tacit support from the wider endoscopy community. However, as NREG has gathered momentum and begun to bear fruit, there is now enthusiastic input from a wide range of clinicians. The close friendship between gastroenterologists and surgeons across the region, with lack of one specific endoscopy 'power base', proved useful in ensuring that all units felt that this was a true collaborative network.

A second major hurdle has been the complex structure of research in the UK. The process can be hard to understand and there is a very steep learning curve to be climbed, even for those who have previously participated in research. Patience and persistence has been required. The NREG network has proven invaluable in sharing the burden and helping each other through the regulations. The network has been helped by the newly established Comprehensive Research Networks and by Professor Mark Hull on behalf of the BSG research committee.

Currently the group is run on a voluntary basis relying on the goodwill of enthusiasts. In order to more effectively progress and run collaborative studies, resources are required to provide time for individuals to undertake research. A number of funding options are currently being pursued.

How could other regions set up networks?

The success of NREG has generated interest from other regions, with plans to establish similar networks. We would strongly encourage this form of regional collaborative work. A few keen enthusiasts are needed to get the network going. We have found that success breeds interest and although the network started slowly, enthusiasm built as results were demonstrated. We set out with early achievable goals such as region wide audits that generated interest, demonstrated the network in action and produced results relatively

quickly. As abstracts were produced, other centres became aware of the network and we began to develop cross regional collaboration on prospective trials. We would hope to see networks collaborating with each other and with the BSG endoscopy research network.

Aims and objectives of NREG for the next 5 years

Our ambition is to see the UK as a world leader in endoscopic research and believe that one way to achieve this is through collaboration of research networks such as NREG.

We wish to see NREG undertaking and publishing high quality endoscopic research on a regular basis and plan to achieve this with the following objectives.

- Publications—NREG has so far generated a large number of abstracts. The next phase of the development of the network is to translate these abstracts into peer reviewed publications.
- Funding—To gain funding and NIHR portfolio status for a number of the projects currently under development. Resources will allow the network to function more effectively.
- Ideas—To continue to develop high quality clinically relevant endoscopy research proposals.
- Technology—To strengthen further our relationships with industry and undertake assessments of new technology.
- Collaboration—To strengthen collaboration with the BSG National Endoscopy Research Network; with academic partners and with other regional networks. We hope to see similar networks developed throughout the country.

Has the journey been worth it?

Seeing NREG develop from a late night discussion in a bar at the BSG in Glasgow to a fully functioning region wide research network has been hugely rewarding. Progressing NREG has involved a lot of hard work but we are proud of our achievements to date and are confident that this is just the start of NREG's journey.

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