

Development of a Health Informatics Working Group to Enhance the Conduct of Research in Primary Care

Simon Wathall^{1,2} and Sarah A Lawton¹ on behalf of the Health Informatics Working Group^{1,2}

¹ Keele Clinical Trials Unit, Keele University, Staffordshire, ST5 5BG

² NIHR Clinical Research Network: West Midlands, Keele University Science & Innovation Park, Keele, Staffordshire, ST5 5NH

Background

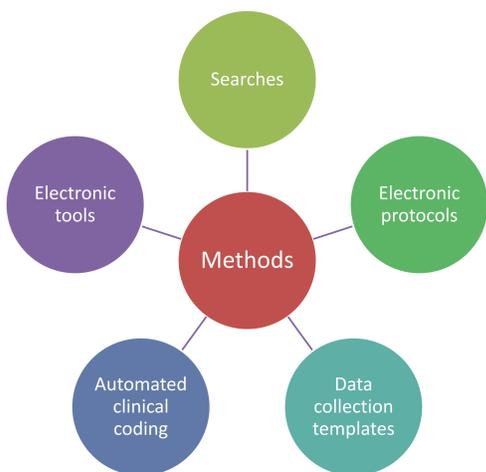
Experience gained from conducting primary care research, supported by Keele Clinical Trials Unit (CTU), shows that targeted Health Informatic (HI) support early in the design phase enhances the conduct of research and improves recruitment and retention rates. Primary care infrastructure is complex and requires a number of different strategies which are innovative, efficient and transferable in order to successfully coordinate, recruit and retain both sites and participants in primary care research. An established Health Informatics Working Group (HIWG) has been developed as a collaborative approach, involving Keele CTU and the NIHR Clinical Research Network: West Midlands (CRN WM), to oversee, develop, support, track and quality assure the HI operational activity for research within primary care settings.

Keele CTU is a registered UKCRC CTU, specialising in the development and delivery of multicentre randomised clinical trials, an increasing portfolio of Clinical Trials of Investigational Medicinal Products (CTIMPs) and epidemiology studies in both primary care and at the secondary care interface. CRN WM is one of 15 clinical research delivery arms of the NHS and responsible for ensuring the effective delivery of research within the primary care infrastructure throughout the WM area.

Methods

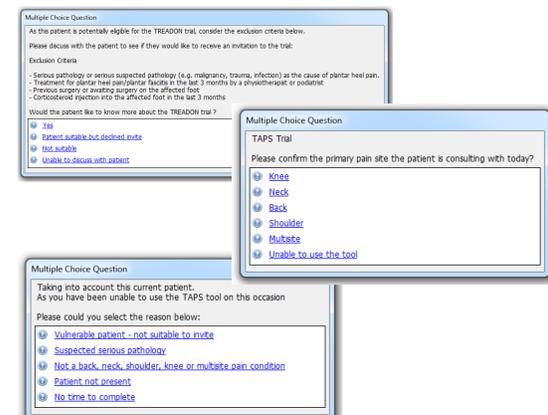
When embedding research within the primary care setting, consideration must be paid not only to the engagement and motivation of the healthcare professional conducting the research but also the techniques proposed to allow the research to be performed. As primary care providers face ever increasing time constraints there is an opportunity to use primary care clinical systems to more easily embed research within the primary care setting.

A range of innovative methods have been developed by the HIWG, tailored on the bespoke requirements of clinical research teams to perform; feasibility and eligibility screening, recruitment, tagging and data collection functions and are provided with quality assurance and instructions for use.

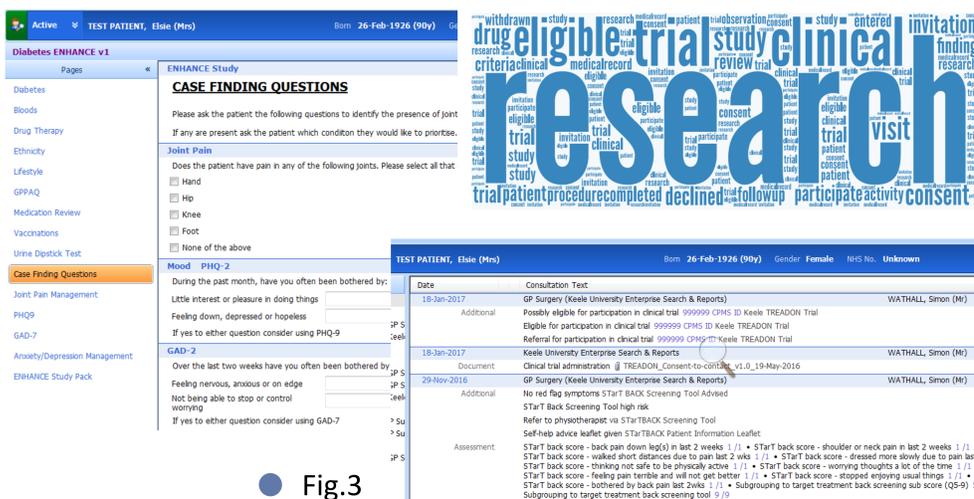


- **Searches** - Feasibility, eligibility and recruitment searches to identify eligible patients for research studies.
- **Electronic protocols** - Automated processes which, through a series of decisions and actions, aid patient screening, data entry, information display and auto populated documents (Fig 1).
- **Data collection template** - Electronic tables or document templates to facilitate accurate and consistent data entry. (Fig 2).
- **Automated clinical coding** – Ability to record research activity using existing and bespoke study specific Read codes. (Fig 3).
- **Electronic tools** - Embedded stratification and screening tools to aid referrals and clinical assessments.

● Fig.1



● Fig.2



● Fig.3

Successful National Implementation



- An electronic protocol identified patients with a low incidence condition (PMR) and facilitated the completion of a fax referral form to aid the invitation of eligible patients¹.
- 386 GPs identified 739 first time consulters with PMR during a 24 month recruitment period.
- Baseline recruitment rate was 88% of eligible participants identified.

Results

100% of Keele CTU supported research activity involving general practices have utilised the HIWG. The groups' innovations assist to implement a robust, standardised and automated, quality assured, method of performing research activity in primary care settings. Greater precision of sample identification, reduced paperwork and increased efficiencies can be achieved, assisting with the retention of research participants, resulting in accessible interrogation and interpretation of research data.

Conclusion

As there is variability in CRN resourcing nationally, the HIWG standardises the conduct of research in primary care settings, improving consistency and engagement with the primary care research infrastructure. Utilising GP clinical systems to embed research tools, results in simple, efficient and automated methods for primary care partners, thus making the use of the HIWG innovations an attractive option for research teams. Scaling up of the HIWG over time will allow the working group to provide a service for other clinical systems and clinical research teams conducting research in the primary care setting.

Contact details

Author: s.wathall@keele.ac.uk

Keele CTU: ctu.operations@keele.ac.uk

Acknowledgements:

¹ The PMR Study - funded by the Arthritis Research UK (grant number 19634).

The views expressed in this publication are those of the authors and not necessarily those of the NHS, the NIHR or the Department of Health.