



National Institute for
Health Research



Project Report

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1. Introduction

The purpose of this project is to systematically investigate and report the results of the National Institute for Health Research School for Primary Care Research (NIHR SCHOOL) [hereafter referred to as 'the School'] 'Impact at 10' project. This document will present the review and evaluation of research impact in terms of research and programme outcomes, and explore avenues for future projects into areas of impact research.

2. Background

The National Institute for Health Research (NIHR) is the research arm of the NHS. The NIHR spends the equivalent of around 1% of the NHS budget on improving the health and wealth of the nation through research. It funds more than 10,000 researchers in the NHS, universities, industry and elsewhere. Last year, more than 600,000 people took part in NIHR hosted research studies and more than 1,000 members of the public were involved in shaping NIHR research¹.

The School was created in 2006. Its current membership are the primary care departments at the Universities of Bristol, Cambridge, Keele, Manchester, Newcastle, Nottingham, Oxford, Southampton and University College London. The School brings together academics and practitioners from across the country to collaborate on cutting edge, topical primary care studies that have an impact both at policy level and in general practices around the country.

3. Purpose

The main roles of the School are to:

- Increase and develop the evidence base for practice in the primary care.
- Contribute to ongoing efforts to build research capacity in primary care.
- Improve research awareness in primary care.
- Create a 'critical mass' of research expertise and funding through coordinated and collaborative working across the country.

The School celebrated its 10th anniversary as a champion of research in primary care in 2016. The School has just awarded funds for its 13th funding round, its 14th round is in progress and two further rounds planned for 2018. This therefore seems a suitable time to review the impact SCHOOL funded research has made in relation to the School's main aims.

4. Objectives

This project aimed to collect a number of metrics and case studies, demonstrating the impact of School research and that we are achieving the aims and roles laid out in the 2015-20 5-year plan. A further aim is to evaluate the impact of School research and demonstrate the benefit the research outputs have generated in its first 10 years.

Impact can be measured in a number of ways, and it is important that these metrics are relevant and demonstrate to the relevant stakeholders (see section 5) the extent to which the School is achieving its aims.

5. Stakeholders

Stakeholders are defined as:

The Department of Health (DoH)

Ensure funds are having a meaningful and positive impact on primary care service provision

The National Institute for Health Research (NIHR)

Part of the mid-term review is impact of funded research to ensure funds are allocated appropriately.

Our Researchers

Ensure that funding will support projects and lead on to new research

The Public

Ensure funds are having meaningful and positive impact on key primary care service provision

A survey of public contributors to healthcare research indicated that their interests were similar to those of other stakeholders (such as researchers and the NIHR), but they would also like to know the impact of public involvement on research as well as the research impact itself. This is examined in a separate School review (see 2018 Patient and Public Involvement Case Study Booklet).

6. Metric Reports

In the Impact at 10 work plan the type of metrics to be used were listed. The following is a report of the main findings from this analysis

6.1. Brief metrics

Brief metrics refer to simple, quantitative measures of impact.

6.1.1. Publication Metrics

- From 2006 to September 2017 the School has supported 380 research projects, and our researchers have published 411 publications about SCPR-funded work. Their work has been cited 8,336 time, and referenced in 39 policy documents and clinical guidelines globally.
- ‘Diet or Diet plus Physical Activity versus Usual Care in Patients with Newly Diagnosed Type 2 Diabetes: The Early ACTID Randomised Controlled Trial’ <ref Andrews, R C et al 2011> is the most highly cited pieces of School research to date, with 1236 citations in peer-reviewed publications.
- ‘Can Machine-Learning Improve Cardiovascular Risk Prediction Using Routine Clinical Data?’ (Weng, Reys, Kai, Garibaldi, & Qureshi, 2017) is the piece of School funded research been engaged with the most online, with an Altmetric score of 558. This is a high-level measure of the quality and quantity of online attention that the article has received. This article is in the top 5% of all research outputs ever tracked by Altmetric. However, the score on its own does not mean much. The information provided by Altmetric provides context in relation to similar publications, publishers and institutions.
 - The break-down of online sharing indicates this research was mentioned by 20 news outlets, 4 blogs, 10 Facebook pages, 3 Google+ users, 1 Redditor and 479 tweeters. These numbers therefore indicate that the main method of dissemination was by Twitter.
 - The news outlets that covered this story included The Guardian and Forbes.
 - To analyse the Twitter information further, 87% of the social media shares of this article on twitter were by members of the public, whilst Scientists made up 7%, Practitioners made up 4% and science communicators made up just 1%. This indicates that the research has made significant public impact in the short time since its publication, when compared to the number of shares by professionals. Due to its recent publication date, it is unlikely this article will have a large

number of academic citations, so the comparison between social and academic impact is not possible at this time.

6.1.2. Policy Metrics

- Number of policy clinical guideline documents– 39 (see figure 3).

There were 2 papers cited in 3 policy documents

- Measures of multimorbidity and morbidity burden for use in primary care and community settings: a systematic review and guide. (Huntley, Johnson, Purdy, Valderas, & Salisbury, 2012) This is in the in the top 25% of all research outputs scored by Altmetric and referenced in:
 - *Multimorbidity: clinical assessment and management: Appendices A-Q*
Cited by National Institute for Health and Care Excellence on 06 Dec 2016
 - *Present and future configuration of health and social care services to enhance robustness in older age*
Cited by UK Government (GOV.UK) on 21 Jul 2015
 - *Kenmerken van individuen als voorspellers van zorgvraagzwaarte op populatieniveau: een verkennend onderzoek*
Cited by overheid.nl on 22 May 2014 (Dutch Government)
- Primary Care Medication Safety Surveillance with Integrated Primary and Secondary Care Electronic Health Records: A Cross-Sectional Study (Akbarov et al., 2015)
 - *Managing medicines for adults receiving social care in the community: Appendices A–F*
Cited by National Institute for Health and Care Excellence on 30 Mar 2017
 - Vaststelling van de begrotingsstaten van het Ministerie van Volksgezondheid, Welzijn en Sport (XVI) voor het jaar 2016; Verslag houdende een lijst van vragen en antwoorden; Verslag houdende een lijst van vragen en antwoorden
Cited by overheid.nl on 29 Oct 2015 (Dutch Government))
 - Antwoordbrief schriftelijke vragen bij de VWS ontwerpbegroting 2016 - Brief - Rijksoverheid.nl
Cited by rijksoverheid.nl on 28 Oct 2015 (Dutch Government)

6.1.3. Removed from the analysis

- Number of article reads and downloads
- Journal impact scores
- Number of publications per project

These metrics are less reliable in suggesting academic, policy and public impact of research, and as the data takes a great deal of time and energy to collect its inclusion in the final report is still under consideration.

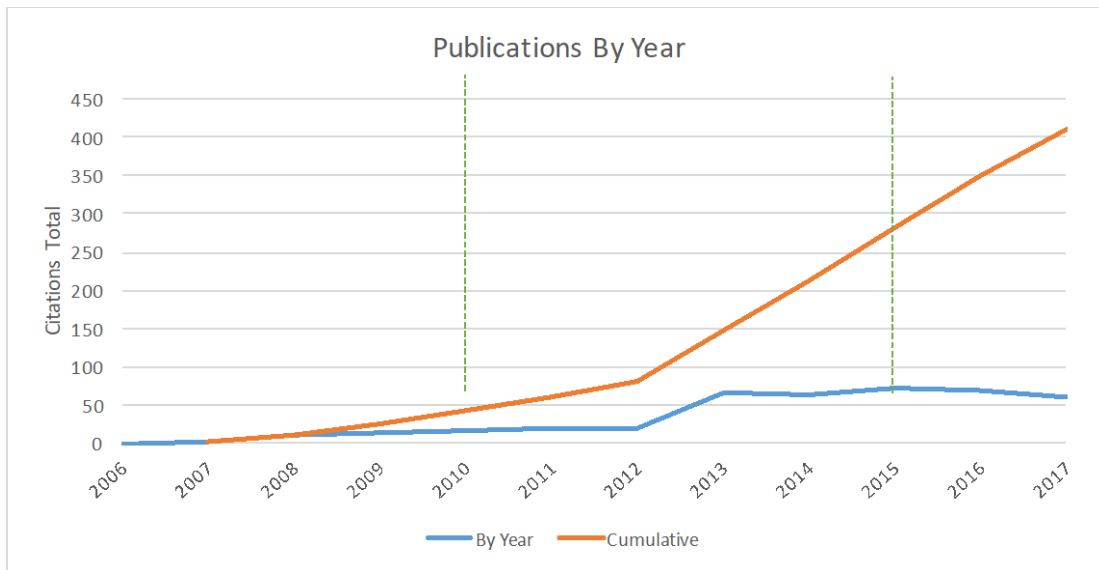


Figure 1. Number of School publications by Year and cumulative total

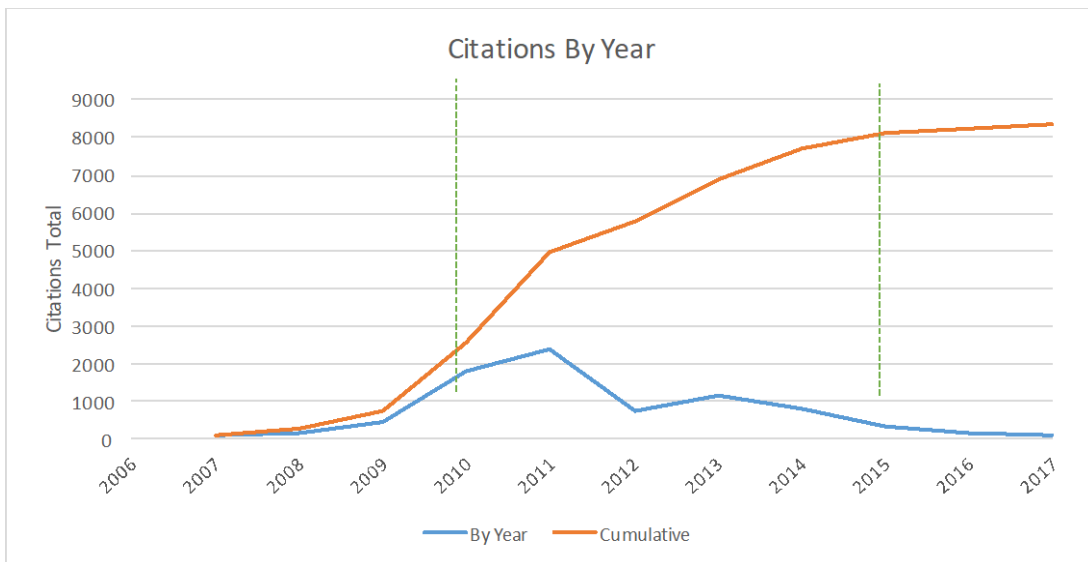


Figure 2. Number of School publication citations by year and cumulative total

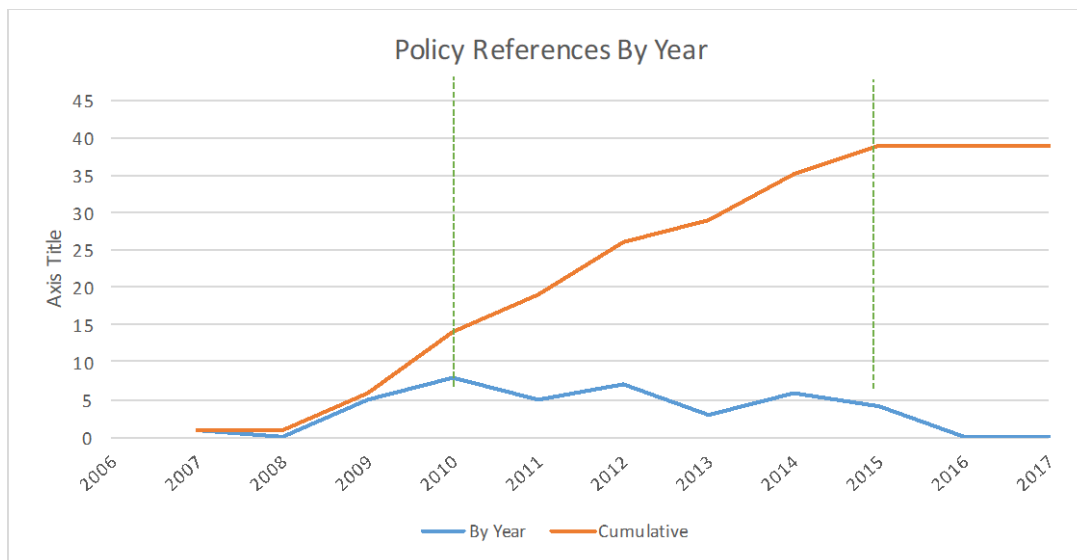


Figure 3. Number of School publication policy citations by year and cumulative total

Impact Case Studies

Researchers submitted examples of where their School-funded work has made an impact. These have been combined into themes across partners, to illustrate the overall impact of School-funded research.

7. Dementia Research

The research programme in dementia in primary care supported by the School is an exemplar of where early investment has built capacity and led to meaningful impacts. This includes a project hosted by UCL that used routinely collected primary care data to develop a five year risk prediction tool for dementia (Walters et al., 2016). This attracted global media attention from 22 news outlets internationally and made headline news in the UK, and has already been cited 8 times Internationally. The tool is undergoing validation in the UK, Hong Kong and Spain, and has potential to be implemented in practice to increase timely diagnosis of dementia. This study led to a collaborative grant in FR9 (Rait, Walters, Wilcock) between UCL and University of Newcastle, exploring public and practitioner perspectives on the implementation of dementia risk assessment. This new collaboration, supported by the School, then led to a recent successful joint bid between the two Partners to become a Dementia ‘Centre of Excellence’, delivering a programme of work to improve primary care post-diagnostic support, funded by the Alzheimer’s Society (Rait, Walters £1.6 million).

The School has further supported early career researchers in this area of research. This support includes a post-doctoral bridging fellowship and a small ‘pump-priming’ grant for a project on supporting carers of people with dementia in advanced stages/toward the end of life (Davies). This in turn has led to the development of ‘heuristics’ that have been implemented in practice in several settings. Dr Davies was recently awarded a post-doctoral fellowship from the Alzheimer’s society and won the prestigious Yvonne Carter Outstanding Early Career Researcher award from the SAPC/RCGP.

8. Cancer Resesarch

In 2007, School funds supported the MoleMate trial, led by Dr Fiona Walter and the Cancer Group at the Primary Care Unit in Cambridge. The trial explored the management of the serious skin cancer melanoma in primary care, showing that a novel diagnostic aid was no more effective in improving the management of suspicious pigmented lesions than the routine application of an existing checklist, as recommended by NICE guidelines (Walter et al., 2012). Findings from the MoleMate trial (Walter et al., 2008) were used to develop Dr Walter's NIHR Clinician Scientist award, funding the MelaTools studies, which investigates ways to help patients and GPs diagnose melanoma earlier (Usher-Smith et al., 2017).

8.1. The DISCOVERY programme – collaborations and further research funding

Cross-School collaborations - involving 5 institutions and a Primary Care Trust - led to a NIHR programme award in 2010 which aimed to optimise the diagnosis of symptomatic cancer in primary care (PI Hamilton, Exeter; deputy PI Walter, Cambridge). The DISCOVERY programme's influential set of cross-institutional national and international research studies set out to explore, test and describe new or improved ways to help GPs and primary care teams detect cancer early in primary care. The programme has delivered more than 24 publications in high-impact journals and 3 PhDs to date, and would not have been possible without School support.

- The CAPER studies identified symptom risk profiles for a number of cancers, including kidney, bladder, prostate, breast, uterus, ovary, oesophageal-gastric, pancreas, lymphoma, leukaemia (Stapley et al., 2013).
- The SYMPTOM studies collected prospective data from patients as they were referred with symptoms suspicious of lung, colorectal and pancreatic cancer, as well as data from GP and hospital records. These studies highlight that healthcare professionals in both primary and specialist care should have an increased awareness of the risk of cancer among people with comorbid conditions, and highlight the risk of misattributing potential cancer symptoms in those with mental health problems (Walter et al., 2015; Walter, Emery, et al., 2016; Walter, Mills, et al., 2016)
- The PIVOT studies identified patient preferences for, and experiences of, referral for investigation for cancer symptoms (Banks et al., 2014).

Impact on public awareness

Findings from these research programmes have informed national public awareness campaigns and media discussion about reducing the patient interval by encouraging appropriate help-seeking for suspicious symptoms. For example, evidence from the Cambridge studies was used in some of the 'Be Clear on Cancer campaigns', launched in 2011 by the Department of Health and still ongoing in 2017

Impact on clinical practice

Overall, these research programmes have raised awareness amongst GPs of cancer diagnostics through publishing and discussion in GP press and high impact journals.

Programme findings were cited as underpinning evidence for guidance from NICE in 2015 in NG12; for example, the cost-effectiveness of the MoleMate system is discussed (page 218).¹

Individual studies have informed specific areas of activity: for example, the DISCOVERY programme's CAPER studies provided information on the risk for each symptom on its own and

¹ <https://www.nice.org.uk/guidance/ng12/evidence/full-guideline-pdf-74333341>

each combination of cancer symptoms. Summary information was provided directly to GPs in easy access formats.

Impact on commissioners and policy-makers

Early evidence suggests that Risk Assessment Tools can be applied to improve referral rates, conversion rates and detection rates in colorectal cancer. The PIVOT studies showed that patients clearly want testing at a lower threshold than is current in the NHS. Evidence was submitted to inform the revision of NICE Guidance NG12 and to inform international cancer diagnostic guidelines and diagnostic pathways.

Impact on this field of research

Taken together, these research studies have helped to drive a national ambition to achieve earlier cancer diagnosis, which in turn, is driving up investment in research on diagnostics in primary care. The first CRUK Catalyst award, made to the international CanTest Collaborative in 2016, led from Cambridge, will increase the capacity and sustainability of cancer detection research and provide for the first International School for Cancer Detection Research in Primary Care.

9. Orthopaedics

At Keele University, support from the School has led to a number of departmental and research advances in the field of Orthopaedics. In 2016, the 'Arthritis Research UK Primary Care Centre', together with clinical rheumatology partners at the Haywood Hospital, were awarded EULAR Centre of Excellence status.

9.1. PANDA-S

School funding has also supported further applications to external funders. Professor Danielle van der Windt also secured the first combined NIHR and Arthritis Research UK Programme Grant for Applied Research, with £2.6m for the 'Maximising outcome for patients with shoulder pain: using optimal diagnostic and prognostic information to target treatment (PANDA-S)' programme. PANDA-S aims to develop and evaluate a better approach (stratified care) to assessing the likely cause (diagnosis) and future outcome (prognosis) of shoulder problems, so that clinicians can offer optimal treatments matched to patient characteristics.

9.2. CONTACT

The CONTACT trial is supported by the School and run across 4 Partner Departments (Keele University, University of Southampton, University of Nottingham, University of Oxford). This is the first CTIMP to be run by Keele CTU, and the first ever head-to-head comparison of treatments for acute gout. The main trial objective is to compare the effectiveness of two licensed drugs, which are frequently prescribed within primary care, to reduce pain from acute gout; namely low-dose Colchicine and Naproxen, with a hope to provide clear recommendations for future clinical practice. For Keele University, this study was the first step in the scaling up of their research ambition, moving them away from local single centre trials to national multicentre CTIMP studies. For the School this study demonstrates a clear drive for collaboration across partners.

10. Multi Morbidity

Early funding from the School enabled the University of Manchester to rapidly develop their work on multimorbidity, and to establish their reputation in this area. In particular a number of

publications have contributed to evidence and guidance reported in health policy documents, such as Bower et al., (2011) in the systematic review for NICE Guidelines for Multimorbidity: clinical assessment and management (NG56)².

Roberts et al., (2012) in The Australian Health Policy Collaboration document 'Beyond the fragments: preventing the costs and consequences of chronic physical and mental diseases'³; and Blakemore et al., (2014) in the NICE 'Chronic obstructive pulmonary disease in over 16s: diagnosis and management' guidance.⁴

School funding also led to the generation of external funding income:

- The Multimorbidity programme of the National Institute for Health Research Greater Manchester Primary Care Patient Safety Translational Research Centre (NIHR GM PSTRC)(Daker-White et al., 2014).
- The 'Collaborative Interventions for Circulation and Depression (COINCIDE) trial', funded by the Greater Manchester (GM) Collaboration for Leadership in Applied Health Research and Care (CLAHRC). The trial found that collaborative care incorporating brief low intensity psychological therapy in partnership with practice nurses in primary care can reduce depression and improve self-management of chronic disease in people with mental and physical multimorbidity.
- The 'Comprehensive Longitudinal Assessment of Salford Integrated Care (CLASSIC): a study of the implementation and effectiveness of a new model of care for long-term conditions' funded by the NIHR Health Services and Delivery Research (HSDR) Programme. This study is designed to evaluate the ability of the Salford Integrated Care Programme (SICP) to deliver improvements in experience, health outcomes and cost effectiveness in older patients. This research also led to the University of Bristol's NIHR HSDR award for 'Improving the management of patients with multimorbidity in general practice (3D) Trial'.
- Equally, early School funding for recruitment research supported the Medical Research Council (MRC) Methodology Research Programme (MRP) 'Systematic Techniques for Assessing Recruitment to Trials (START)' which is a programme of research designed to test recruitment interventions. In turn this has led to a NIHR Doctoral Research Fellowship, NIHR HSDR 'TRials Engagement in Children and Adolescents (TRECA) study, and supporting the University of Manchester's membership of the North West Hub for Trials Methodology Research.

² <https://www.nice.org.uk/guidance/ng56/evidence/appendices-aq-pdf-2615543104>

³ <https://www.vu.edu.au/sites/default/files/AHPC/pdfs/beyond-the-fragments.pdf>

⁴ <https://www.nice.org.uk/guidance/cg101/evidence>

11. Cardiovascular and Metabolic Diseases

The public impact of many pieces of published School research is clear. Research by Taylor et al., (2017) conducted at the University of Oxford, has shown survival rates for patients with heart failure have not improved since 1998. This research was reported in 90 local, national and international print and online news outlets between January and September 2017, including The Telegraph⁵, The Express⁶ the Mail Online ⁷, and Yahoo News ⁸.

School research has also been highlighted in professional publications. Doctoral researcher Benjamin Fletcher and researcher partners at both Oxford and Cambridge had their publication about self-monitoring blood pressure in patients with hypertension (Fletcher et al., 2016) featured in the British Journal of General Practice. The research presented the findings of a survey (with 300 GPs) to assess current practice of using self-monitoring of blood pressure (SMBP) for the control of hypertension.

Oxford PIs led a series of trials (BAFTA, SAFE) and SRs that have helped shape international and NICE atrial fibrillation guidelines for screening and treatment strategies to prevent stroke. We also developed and tested novel anticoagulation strategies for safer and more effective anticoagulation in primary care (utilising computerised clinical decision support, near patient testing, and nurse training) which was adopted by the NHS as their preferred UK model. Results from studies undertaken by the EBM group showed self-monitoring of oral anticoagulation decreases thromboembolic events by half, and major haemorrhage. An international collaboration of trialists showed reductions in the subset of patients with artificial heart valves was even greater, with a 2/3rd reduction in thromboembolic events at five years. The work was used to underpin the Government white paper on shared decision making and is included in clinical knowledge summaries, the British Committee for Standards in Haematology. Internationally the implications for practice are included in the 9th American College of Chest Physicians Evidence-Based Clinical Practice Guidelines on Antithrombotic & Thrombolytic Therapy

12. Service and workforce provision

12.1. Facilitating NHS implementation of new service improvement

A team from six School departments developed and evaluated a Patient Safety Toolkit for general practices - now available to all GPs in UK via the RCGP website and accessed over 10,000 times since its launch in 2015 (Bell et al., 2016).

The School also supported feasibility work in the University of Nottingham, in parallel with implementation of a new tool to improve identification of familial hypercholesterolaemia (FAMCAT) in NHS general practice (Weng, Kai, Andrew Neil, Humphries, & Qureshi, 2015).

13. Improving Public Awareness of Healthcare and Diseases

13.1. Access to information

The development of the www.healthtalkonline.org by colleagues at the University of Oxford has provided the public with information about what it's really like to have a health condition such as

⁵ <http://www.telegraph.co.uk/news/2017/01/30/no-improvement-heart-failure-death-rates-since-1990s/>

⁶ <https://www.express.co.uk/life-style/health/760744/heart-failure-cancer-symptoms-disease>

⁷ <http://www.dailymail.co.uk/news/article-4173884/Heart-attack-sufferers-saved-avoiding-E.html>

⁸ <https://in.news.yahoo.com/no-improvement-heart-failure-survival-rates-two-decades-112206059.html>

breast cancer or arthritis, and much of the evidence provided about these conditions stems from research supported by the School. The site also offers free information for health professionals. Modules have included 'Experiences of Antidepressant's and 'Conditions that threaten women's lives in childbirth and pregnancy'. www.healthtalkonline.org was listed in The Times '50 Top Websites You Can't Live Without' and ranked second in their top 5 health websites.

"The methods used by HERG have set the benchmark for research into health and illness experiences" - Sir Muir Gray, Director, National Knowledge Service & NHS Chief Knowledge Officer.

13.2. The future directions of general practice

Work led by Richard Hobbs at the University of Oxford found that people in England are visiting their GP practices more often, and are having longer consultations than they were in 2007. This has resulted in a 16% rise in clinical workload. Published in the Lancet, the research suggests there are signs that the overall primary care system in England may be reaching "saturation point." (Hobbs et al., 2016).

13.3. Clinical Advice and Guidance Documents

13.3.1. Domestic Violence in Primary Care

Dr Alison Gregory, University of Bristol, conducted research as part of a School doctoral fellowship and a Primary Care Scientist Launching Fellowship, which explored the impact domestic violence and abuse has on the informal supporters (friends, relatives, neighbours and colleagues) of survivors. (A. C. Gregory, 2017; A. C. Gregory, Williamson, & Feder, 2016; A. Gregory, Feder, Taket, & Williamson, 2017)

Bristol City Council, in collaboration with Avon & Somerset's Primary Care Commission, launched a public campaign targeting informal supporters of domestic violence and abuse survivors during July and August 2015. This consisted of billboard posters, radio adverts, website and guides and Dr Gregory was commissioned to produce the guide for informal supporters based on this research. The Guides were distributed across a range of community venues in Bristol⁹. In 2016, Avon & Somerset Constabulary and Leicester City Council both used the guide as part of their regional campaigns¹⁰¹¹.

North Somerset Council also used the guide as part of a regional campaign, which was released in November 2017¹², and made available on the internal websites for Avon & Wiltshire Mental Health Partnership (AWP) and North Somerset Community Partnerships. Since the release they have been inundated with requests for hard copies for health and community venues across the region including: libraries, children's centres, the hospital, midwives and drug and alcohol support services.

Dr Gregory has also written an article in SAFE (a quarterly magazine for practitioners featuring practical domestic violence initiatives, strategies and policy developments) for the leading national charity for domestic violence and abuse, Women's Aid ¹³ This exposure is likely to increase interest in the guide, for use in other geographical areas.

⁹ <http://www.bava.org.uk/wp-content/uploads/DVA-Friends-and-Family-Booklet.pdf>

¹⁰ <https://www.thisisnotanexcuse.org/wp-content/uploads/2015/09/Domestic-Abuse-Friends-and-Family-Help-Guide-1.pdf>

¹¹ <http://www.uava.org.uk/wp-content/uploads/2016/11/UAVA-friends-family-booklet.pdf>

¹² (<http://www.n-somerset.gov.uk/wp-content/uploads/2017/11/domestic-abuse-friend-and-family-help-guide.pdf>)

¹³ <https://www.womensaid.org.uk/research-and-publications/safe/>

13.3.2. Weight Management in Primary Care

PhD Student Charlotte Aldebury has conducted research using conversational analysis to understand how to address and explore weight management for families. Conversation analysis (CA), is the study of talk-in-interaction. This method enables researchers to explore actions which are achieved with talk, and to build of an evidence base of what communication strategies work well, and not so well, in practice. This method can be used alongside quantitative data to compare conversational strategies with longer term patient behaviours, like adherence to treatment. Conversation analysis demonstrates that the way doctors recommend treatment and the words and phrases that they use, have significant implications for patient understanding and action. Through careful attention to the details of talk, conversation analysis can identify ways to contribute to the smooth running of medical conversations. This research has now been used to inform public health England's 'Let's talk about weight' guide¹⁴.

14. Pump priming for underfunded research areas, leading to larger grants

Particularly domestic violence (see section 13.1) and skin conditions; these topics are now mature research programmes within the University of Bristol's CAPC funded by the NIHR HTA and PGfAR grants. These projects would not have been possible without input from School funds to conduct preliminary work.

An example is the piloting of the PATH trial of a psychological intervention for survivors of domestic violence (Brierley et al., 2013) which was the basis of the trial in the PROVIDE programme.

Newcastle University's global health bid would also not have been possible without seed funding from the School.

15. Facilitating Collaborations

15.1. Wellcome Trust PhD Programme for Clinicians

The Wellcome Trust PhD Programme for Clinicians unites four of the strongest primary care departments (Cambridge, Keele, Oxford and Southampton) who are the leading members of the NIHR School for Primary Care Research. We were successful in our application to host the programme for £5.2 million and the first cohort of Fellows will commence in September 2017. This collaborative approach will ensure the highest quality methodological training is delivered, allowing us to train the next generation of primary care scientists.

15.2. Evidence Synthesis working group

The Evidence Synthesis Working group (ESWG) is a collaboration of all nine primary care member departments of the School of Primary Care Research.¹⁵

Primary care is increasingly under considerable pressure to meet the demands of an ageing population and to transform care with more done in the community, against a backdrop of ensuring new technologies are used whilst maintaining budgets. A cross-school collaboration has

¹⁴ <https://www.gov.uk/government/publications/adult-weight-management-a-guide-to-brief-interventions>

¹⁵ <https://www.spcr.nihr.ac.uk/projects/evidence-synthesis>

been formed to address important questions with the aim of delivering a significant number of high impact systematic reviews to underpin effective care in important priority areas for the NHS.

16. Next steps

During the process of collating School research impact, different stakeholders have indicated that there are other areas of impact that would be useful to assess.

16.1. DoH and NIHR – Economic impact

The DoH and the NIHR are interested in the economic impact of School funded research. This will require dedicated time and effort by Health Economists, and is outside the remit of the current project. We hope to involve partners with experience of economic impact analysis to develop this project.

16.2. Public Contributors – Impact of Public involvement

Public contributor feedback indicated that whilst the public were interested in the same information as other stakeholders, they were also interested in the impact that public involvement had on research, and how ‘involvement-heavy’ projects compare to ‘involvement-light’ projects in terms of impact. A separate project is already underway and results will be disseminated to all stakeholders in 2018.

17. References

- Akbarov, A., Kontopantelis, E., Sperrin, M., Stocks, S. J., Williams, R., Rodgers, S., ... & Ashcroft, D. M. (2015). Primary care medication safety surveillance with integrated primary and secondary care electronic health records: a cross-sectional study. *Drug safety*, 38(7), 671-682.
- Banks, J., Hollinghurst, S., Bigwood, L., Peters, T. J., Walter, F. M., & Hamilton, W. (2014). Preferences for cancer investigation: a vignette-based study of primary-care attendees. *The Lancet. Oncology*, 15(2), 232–40. [https://doi.org/10.1016/S1470-2045\(13\)70588-6](https://doi.org/10.1016/S1470-2045(13)70588-6)
- Bell, B. G., Spencer, R., Marsden, K., Perryman, K., Campbell, S. M., & Avery, A. J. (2016). Building a Patient Safety Toolkit for use in general practice. *InnovAiT: Education and Inspiration for General Practice*, 9(9), 557–562. <https://doi.org/10.1177/1755738016650468>
- Blakemore, A., Dickens, C., Guthrie, E., Bower, P., Kontopantelis, E., Afzal, C., & Coventry, P. (2014). Depression and anxiety predict health-related quality of life in chronic obstructive pulmonary disease: systematic review and meta-analysis. *International Journal of Chronic Obstructive Pulmonary Disease*, 9, 501. <https://doi.org/10.2147/COPD.S58136>
- Bower, P., Macdonald, W., Harkness, E., Gask, L., Kendrick, T., Valderas, J. M., ... Sibbald, B. (2011). Multimorbidity, service organization and clinical decision making in primary care: a qualitative study. *Family Practice*, 28(5), 579–587. <https://doi.org/10.1093/fampra/cmr018>
- Brierley, G., Agnew-Davies, R., Bailey, J., Evans, M., Fackrell, M., Ferrari, G., ... Feder, G. S. (2013). Psychological advocacy toward healing (PATH): study protocol for a randomized controlled trial. *Trials*, 14, 221. <https://doi.org/10.1186/1745-6215-14-221>
- Daker-White, G., Hays, R., Esmail, A., Minor, B., Barlow, W., Brown, B., ... Bower, P. (2014). MAXimising Involvement in MUltiMorbidity (MAXIMUM) in primary care: protocol for an observation and interview study of patients, GPs and other care providers to identify ways of

- reducing patient safety failures. *BMJ Open*, 4(8), e005493. <https://doi.org/10.1136/bmjopen-2014-005493>
- Fletcher, B. R., Hinton, L., Bray, E. P., Hayen, A., Hobbs, F. R., Mant, J., ... McManus, R. J. (2016). Self-monitoring blood pressure in patients with hypertension: an internet-based survey of UK GPs. *British Journal of General Practice*, 66(652), e831–e837. <https://doi.org/10.3399/bjgp16X687037>
- Gregory, A. C. (2017). “The edge to him was really, really nasty”: abusive tactics used against informal supporters of domestic violence survivors. *Journal of Gender-Based Violence*, 1(1), 61–77. <https://doi.org/10.1332/239868017X14896674831469>
- Gregory, A. C., Williamson, E., & Feder, G. (2016). The Impact on Informal Supporters of Domestic Violence Survivors. *Trauma, Violence, & Abuse*, 152483801664191. <https://doi.org/10.1177/1524838016641919>
- Gregory, A., Feder, G., Taket, A., & Williamson, E. (2017). Qualitative study to explore the health and well-being impacts on adults providing informal support to female domestic violence survivors. *BMJ Open*, 7(3), e014511. <https://doi.org/10.1136/bmjopen-2016-014511>
- Hobbs, F. D. R., Bankhead, C., Mukhtar, T., Stevens, S., Perera-Salazar, R., Holt, T., ... National Institute for Health Research School for Primary Care Research. (2016). Clinical workload in UK primary care: a retrospective analysis of 100 million consultations in England, 2007–14. *Lancet (London, England)*, 387(10035), 2323–2330. [https://doi.org/10.1016/S0140-6736\(16\)00620-6](https://doi.org/10.1016/S0140-6736(16)00620-6)
- Roberts, R. G., Gask, L., Arndt, B., Bower, P., Dunbar, J., van der Feltz-Cornelis, C. M., ... Anderson, M. I. P. (2012). Depression and diabetes: The role and impact of models of health care systems. *Journal of Affective Disorders*, 142, S80–S88. [https://doi.org/10.1016/S0165-0327\(12\)70012-5](https://doi.org/10.1016/S0165-0327(12)70012-5)
- Stapley, S., Peters, T. J., Neal, R. D., Rose, P. W., Walter, F. M., & Hamilton, W. (2013). The risk of oesophago-gastric cancer in symptomatic patients in primary care: a large case-control study using electronic records. *British Journal of Cancer*, 108(1), 25–31. <https://doi.org/10.1038/bjc.2012.551>
- Taylor, C. J., Ryan, R., Nichols, L., Gale, N., Hobbs, F. R., & Marshall, T. (2017). Survival following a diagnosis of heart failure in primary care. *Family Practice*, cmw145. <https://doi.org/10.1093/fampra/cmw145>
- Usher-Smith, J. A., Kassianos, A. P., Emery, J. D., Abel, G. A., Teoh, Z., Hall, S., ... Walter, F. M. (2017). Identifying people at higher risk of melanoma across the U.K.: a primary-care-based electronic survey. *British Journal of Dermatology*, 176(4), 939–948. <https://doi.org/10.1111/bjd.15181>
- Walter, F. M., Emery, J. D., Mendonca, S., Hall, N., Morris, H. C., Mills, K., ... Rubin, G. P. (2016). Symptoms and patient factors associated with longer time to diagnosis for colorectal cancer: results from a prospective cohort study. *British Journal of Cancer*, 115(5), 533–541. <https://doi.org/10.1038/bjc.2016.221>
- Walter, F. M., Mills, K., Mendonça, S. C., Abel, G. A., Basu, B., Carroll, N., ... Emery, J. D. (2016). Symptoms and patient factors associated with diagnostic intervals for pancreatic cancer (SYMPTOM pancreatic study): a prospective cohort study. *The Lancet Gastroenterology & Hepatology*, 1(4), 298–306. [https://doi.org/10.1016/S2468-1253\(16\)30079-6](https://doi.org/10.1016/S2468-1253(16)30079-6)
- Walter, F. M., Morris, H. C., Humphrys, E., Hall, P. N., Kinmonth, A. L., Prevost, A. T., ... Emery, J. (2008). Protocol for the MoleMate™ UK Trial a randomised controlled trial of the MoleMate system in the management of pigmented skin lesions in primary care [ISRCTN 79932379]. *BMJ*, 337(oct22 1), a1937–a1937. <https://doi.org/10.1136/bmj.a1937>
- Walter, F. M., Morris, H. C., Humphrys, E., Hall, P. N., Prevost, A. T., Burrows, N., ... Emery, J. D. (2012). Effect of adding a diagnostic aid to best practice to manage suspicious pigmented

lesions in primary care: randomised controlled trial. *BMJ (Clinical Research Ed.)*, 345, e41110. <https://doi.org/10.1136/BMJ.E41110>

Walter, F. M., Rubin, G., Bankhead, C., Morris, H. C., Hall, N., Mills, K., ... Emery, J. (2015). Symptoms and other factors associated with time to diagnosis and stage of lung cancer: a prospective cohort study. *British Journal of Cancer*, 112(S1), S6–S13. <https://doi.org/10.1038/bjc.2015.30>

Walters, K., Hardoon, S., Petersen, I., Iliffe, S., Omar, R. Z., Nazareth, I., & Rait, G. (2016). Predicting dementia risk in primary care: development and validation of the Dementia Risk Score using routinely collected data. *BMC Medicine*, 14(1), 6. <https://doi.org/10.1186/s12916-016-0549-y>

Weng, S. F., Kai, J., Andrew Neil, H., Humphries, S. E., & Qureshi, N. (2015). Improving identification of familial hypercholesterolaemia in primary care: Derivation and validation of the familial hypercholesterolaemia case ascertainment tool (FAMCAT). *Atherosclerosis*, 238(2), 336–343. <https://doi.org/10.1016/J.ATHEROSCLEROSIS.2014.12.034>

Weng, S. F., Reys, J., Kai, J., Garibaldi, J. M., & Qureshi, N. (2017). Can machine-learning improve cardiovascular risk prediction using routine clinical data? *PLOS ONE*, 12(4), e0174944. <https://doi.org/10.1371/journal.pone.0174944>