

# INTERDISCIPLINARY RESEARCH IN HEALTH SCIENCES (IRIHS) ANNUAL REPORT 2017

IRIHS is a research unit within the Nuffield Department of Primary Care Health Sciences at the University of Oxford. It is led by Professor Trisha Greenhalgh and Dr Sara Shaw. IRIHS aims to undertake high-quality interdisciplinary research, teaching and applied scholarship. Our work focuses in particular on the interface between clinical care, social sciences, business and management, health informatics and health economics.

## Main achievements in 2017

1. **EXPANSION OF ACADEMIC STAFF.** We have expanded from 11 academic staff to 15 plus 3 associates.
2. **RESEARCH:** Research income for new research studies included over £1M as principal or joint principal investigators. Around £10M in ongoing research grants.
3. **PUBLICATION AND DISSEMINATION:** We published over 40 peer-reviewed academic articles. We gave a number of high-profile keynote lectures, conference presentations and policy briefings. One senior researcher is Special Adviser to a House of Commons Select Committee.
4. **TEACHING:** We contributed to various MSc courses at Oxford. We have begun to develop a new MSc in Social Sciences for Healthcare.
5. **DOCTORAL STUDENTS.** We have 10 doctoral students at Oxford and one elsewhere. Two DPhil students passed with no corrections; two passed Confirmation of Status; two passed Transfer of Status and one has submitted a ToS report.
6. **STAFF DEVELOPMENT.** One NIHR In-Practice Fellow gained an NIHR Doctoral award; one researcher gained an Academy of Medical Sciences Springboard Award and another gained an ESRC Knowledge Translation Award. We have two Academic Clinical Fellows and three early career fellows who are applying for personal fellowships.

## Staff in post or associated in December 2017 (see also doctoral students below)

| Name       |             | Job title                       | Specialty                 | FTE       |
|------------|-------------|---------------------------------|---------------------------|-----------|
| Christine  | A'Court     | Researcher                      | GP                        | 40%       |
| Luke       | Allen       | Academic Clinical Fellow        | GP/public health          | 20%       |
| Eleanor    | Barry       | NIHR In-Practice Fellow         | GP/public health          | 50%       |
| Alex       | Christopher | Research assistant              | Social sciences           | 50%       |
| Christian  | Collins     | Academic Foundation Programme   | F2 doctor                 | associate |
| Clare      | Duddy       | Systematic Reviews Fellow       | Informatics               | 60%       |
| Nick       | Fahy        | Senior Researcher               | Health policy             | 100%      |
| Jillian    | Fardon      | BRC manager / PA to Trish G     | Admin / management        | 80%       |
| Teresa     | Finlay      | Researcher                      | Nursing / social sciences | 80%       |
| Alexander  | Finlayson   | Doll Fellow at Green Templeton  | GP                        | associate |
| Trisha     | Greenhalgh  | Professor / Co-director of Unit | GP / sociology            | 100%      |
| Sue        | Hinder      | Research consultant             | Sociology / evaluation    | 20%       |
| Linnemore  | Jantjes     | BRC administration              | Admin (maternity leave)   | 80%       |
| Polly      | Kerr        | BRC PPI/management              | Communications            | 100%      |
| Pavel      | Ovseiko     | Senior Research Fellow          | Health policy/ management | associate |
| Chrysanthi | Papoutsi    | Researcher                      | Social sciences           | 100%      |
| Alexander  | Rushforth   | Researcher                      | Social sciences           | 100%      |

|        |           |                                 |                           |      |
|--------|-----------|---------------------------------|---------------------------|------|
| Sara   | Shaw      | Senior Researcher / Co-Director | Health policy / sociology | 80%  |
| Julian | Treadwell | NIHR In-Practice Fellow         | GP/public health          | 50%  |
| Joe    | Wherton   | Senior Researcher               | Psychology / computing    | 100% |
| Salman | Waqar     | Academic Clinical Fellow        | GP                        | 30%  |
| Geoff  | Wong      | Senior Researcher               | GP                        | 50%  |

## Higher degree students

1. **J Russell** (PT). 2011-. [Greenhalgh, Shaw]. *The rationality of rationing: a rhetorical policy analysis of deliberations about resource allocation in the NHS*. DPhil passed with no corrections Nov 2017.
2. **N Fahy** (PT). 2012- [Greenhalgh, Shaw]. *Incorporating psychological theory into the diffusion of innovations model in healthcare*. DPhil passed with no corrections December 2017.
3. **G Hughes** (PT) 2012-. [Greenhalgh, Shaw]. *Integrated care in practice: a study of health and social care for adults with complex needs considered to be at high risk of hospital admission*. Part funded by Wellcome SCALS grant. CoS passed March 2017.
4. **D Hurst** (PT) 2012- [Greenhalgh, Mickan]. *General Dental Practitioners' knowledge encounters*. ToS passed June 2015. Two papers published; two in pipeline. CoS passed April 2017.
5. **S Roberts** (PT) 2015- [Greenhalgh, Airoldi] Part-funded by North London CLAHRC /UCL Partners. *Managing pre-diabetes: Optimising commissioning of multi-agency interventions*. ToS passed July 2017.
6. **S Wieringa** (PT). 2016- [Greenhalgh, Engebretsen]. *Mindlines in guideline development*. Funded by University of Oslo. ToS passed July 2017.
7. **C Pilbeam**. (FT). 2016- . [Greenhalgh, Potter]. *Wellbeing and assisted living solutions*. Funded by Wellcome Trust. ToS report submitted November 2017.
8. **R Gleave** (PT). 2017-. [Shaw, Greenhalgh]. *Providing Government with evidence-based advice on the public's health*. Part-funded by NHS England. Commenced Oct 2017.
9. **A Rohrbasser** (PT). 2013- [Wong, Harris, Mickan]. *Exploring why Quality Circles work in Primary Health Care: A realist approach about how, why and under what circumstances they work*. ToS passed 2014.
10. **K Micklitz** (Oxford, PT) 2017 - [Wong, Howick]. *Mindfulness-based programs in the workplace: a realist review of what works, why, under what circumstances and in what respects*.
11. **T Stephens** (PT, based at Queen Mary) 2015- [Pearse, Shaw]. *What influences sustainability of quality improvement in acute healthcare settings? 9-month review passed at QMUL February 2016*.

## Research activity

New research grants secured in 2017:

1. **Enhancing technology-mediated communication: qualitative analysis of remote consultations in cancer, diabetes and heart failure** NIHR Research for Patient Benefit (RfPB) Programme, £150K March 2018-Sept 2019 [subject to contract]. (SS – PI)
2. **Reducing overdiagnosis and overprescribing: realist review**. NIHR Systematic Reviews Fellowship for C Duddy. £107K, Oct 2017- Sept 2020 (TG is technically PI but project led by GW).
3. **Facilitating the co-creation of virtual media for remote consultations**. ESRC Knowledge Exchange Fellowship, £25K (SS, JW – joint PIs).
4. **Co-development of virtual consultation services within the NHS**. ESRC Impact Acceleration Award, Apr 17 – Mar 18, £40K (SS, TG – joint PIs).
5. **Springboard Health of the Public 2040 Award** Academy of Medical Sciences / Wellcome Trust, £50K (CP, personal fellowship for research support).

6. **Care Under Pressure: a realist review of interventions to tackle doctors' mental ill-health and its impacts on the clinical workforce and patient care.** NIHR HS&DR Programme. £202K. November 2017 – May 2019 (GW, CP, co-investigators to Karen Mattick and Mark Pearson, University of Exeter).
7. **Scaling up virtual consultations across the NHS – implementing, evaluating and sustaining improvements.** Health Foundation Scaling Up Improvement Award, £472K, Dec 17 – May 21 (TG, SS, CP, JW – lead academic partners to NHS-led study by S Vijayaraghavan et al).

Ongoing research studies on which we are Principal Investigators:

1. **Partnerships for Health, Wealth and Innovation** (Biomedical Research Centre theme). NIHR, £6.5M. April 2017 – March 2022 with set-up period from Oct 2016. (TG, with NF).
2. **Studies in Co-creating Assisted Living Solutions (SCALS).** £1.053M Wellcome Trust Senior Investigator Award plus £27K Public Engagement Award. July 2015 – June 2020. (TG, with JW, SS, SH).
3. **Interventions to improve antimicrobial prescribing in doctors in training: a realist review.** NIHR HS&DR, £188K. (GW, with CP). July 2015 – Dec 2016.
4. **Virtual Online Consultations: Advantages and Limitations (VOCAL).** £497K. NIHR HS&DR. March 2015 – July 2017. (TG, with SS, JW and NHS partners from Barts Health).
5. **Realising the potential of realist research for improving the delivery of health services (RAMESES II).** NIHR HS&DR, £242K. Feb 2015 – Jan 2017. (GW, TG and partners from Leeds and Liverpool).

Ongoing research studies on which we are named co-investigators:

6. **Living with Feeling: Emotional Health in History, Philosophy and Experience.** Wellcome Trust Collaborative Award, £1.6M. Nov 2015 – Oct 2020. (TG, Co-I to T Dixon at QMUL).
7. **Can group clinics offer a better way to meet the complex health and social care needs of young adults with diabetes in an ethnically diverse, socioeconomically deprived population? (TOGETHER study)** NIHR HS&DR. £420k, Dec 2016 – Nov 2019. (TG, Co-I to S Finer at QMUL, CP qualitative lead).
8. **Optimising pharmacist-based treatment for smoking cessation (STOP).** NIHR Programme Grant, £1.35M, July 2011 – June 2017 (TG, Co-I to R Walton at QMUL).
9. **Developing a framework for a novel multi-disciplinary, multi-agency intervention(s), to improve medication management in older people on complex medication regimens resident in the community.** NIHR HS&DR. £196K. May 2017 – Dec 2018 (GW, co-I to Ian Maidment, Aston University)
10. **Optimising hearing-Related Communication for care Home Residents with Dementia (ORCHARD): a realist synthesis.** NIHR RfPB. £149K. Apr 2017 – June 2018 (GW, co-I to Tom Denning, U of Nottingham).
11. **Improving the evidence-base for primary care:** NIHR Evidence Synthesis working group. NIHR SPCR. £1,909,191. Oct 2017 to Sept 2020 (GW, co-investigator to Carl Heneghan).

## Main teaching achievements

1. **Oxford MSc courses.** We have taught on the MSc in Evidence-Based Health Care (TG, GW, CP, SS), MSc in International Health (Nuffield Department of Medicine, TG), MSc in Policy Evaluation (Blavatnik, SS). TG is co-lead on the Knowledge to Action Module in MSc in EBHC. GW has developed and leads the new MSc module in Realist Evaluation and Review with CP, who also teaches on the Qualitative Research module. We are in developing several new MSc modules including Digital Health (CP, JW), Health Policy and Systems (SS, NF) and Patients, Publics and the Politics of Evidence (TF, SS). All these modules will be offered as part of the MSc in EBHC but it is also planned to develop an MScs in Social Sciences for Healthcare with a similar modular structure and linked to the Department for Continuing Education (see Strategy).
2. **Undergraduate teaching.** AF is a Doll Fellow at Green Templeton College. TG and AF have taught on the undergraduate medicine course at Oxford and, along with SS, have mentees at Green Templeton.

## Staff and student development

**Allen:** Started as Academic Clinical Fellow in Primary Care, and continues as Expert Consultant to World Health Organisation.

**Barry:** Successful in application for NIHR Doctoral Fellowship.

**Finlayson:** Continues as Doll Fellow at Green Templeton, established as Director and Co-Founder of The Hill (Digital Health Lab and Incubator)

**Papoutsi:** Gained Academy of Medical Sciences / Wellcome Trust Springboard Health of the Public 2040 Award. Elected research Associate at Green Templeton College.

**Shaw:** Accepted on NIHR Senior Leaders Programme.

**Treadwell:** Submitted NIHR DRF application Dec 2017.

**Wherton:** Gained ESRC Knowledge Translation Fellowship.

### Supporting new DPhil applications:

- J Treadwell: An online tool for supporting quantitative estimation of benefits and harms of treatments for supporting GP-patient conversations. Application submitted to NIHR.
- J Walumbe: Supporting successful self-management strategies for people living with chronic pain. NIHR/HEE Clinical Doctoral Fellowship (pending outcome from interview in Nov 17).

## Academic publications in 2017

Publications considered possible returns to REF2021 are highlighted. Associates' publications not included.

1. **Greenhalgh T, Wherton J, Papoutsi C**, Lynch J, **Hughes G, A'Court C, Hinder S, Fahy N**, Procter R, **Shaw S**: Beyond Adoption: A New Framework for Theorizing and Evaluating Nonadoption, Abandonment, and Challenges to the Scale-Up, Spread, and Sustainability of Health and Care Technologies. *J Med Internet Res* 2017, **19**(11): e367
2. **Roberts S, Barry E**, Craig D, Airoidi M, Bevan G, **Greenhalgh T**. Preventing type 2 diabetes: systematic review of studies of cost-effectiveness of lifestyle programmes and metformin, with and without screening, for pre-diabetes. *BMJ Open* 2017;7.
3. Contandriopoulos D, Benoit F, Bryant-Lukosius D, Carrier A, Carter N, Deber R, Duhoux A, **Greenhalgh T**, Larouche C, Leclerc BS *et al*: Structural analysis of health-relevant policy-making information exchange networks in Canada. *Implement Sci* 2017, **12**(1):116.
4. **Greenhalgh T**. *How to implement evidence-based healthcare* (book). Oxford, Wiley 2017.
5. **Greenhalgh T**. Adjuvant chemotherapy: an autoethnography. *Subjectivity* 2017; doi 10.1057/s41286-017-0033-y.
6. Morris J, Campbell-Richards D, **Wherton J**, Sudra R, Vijayaraghavan S, **Greenhalgh T**, Collard A, Byrne E, O'Shea T: Webcam consultations for diabetes: findings from four years of experience in Newham. *Practical Diabetes* 2017, **34**(2):45-50.
7. Steed L, Sohanpal R, James WY, **Greenhalgh T** *et al*. Equipping community pharmacy workers as agents for health behaviour change: developing and testing a theory-based smoking cessation intervention. *BMJ Open* 2017;7(8):e015637. doi: 10.1136/bmjopen-2016-015637.
8. **Greenhalgh T, Shaw S, Fahy N**: The bright elusive butterfly of value in health technology development. *International Journal of Health Policy and Management* 2017, **6**(x):1-5.
9. Shaw J, **Shaw S, Wherton J, Hughes G, Greenhalgh T**. Studying Scale-Up and Spread as Social Practice: Theoretical Introduction and Empirical Case Study. *Journal of Medical Internet Research* 2017; **19**: e244.

10. **Greenhalgh T**, Ovseiko PV, Fahy N, et al. Maximising value from a United Kingdom Biomedical Research Centre: study protocol. *Health Research Policy & Systems* 2017;15:70. doi: 10.1186/s12961-017-0237-1.
  11. **Greenhalgh T, Shaw S, A'Court C**. Understanding heart failure; explaining telehealth. A hermeneutic systematic review. *BMC Cardiovascular Disorders* 2017; 17: 156.
  12. **Papoutsis C**, Hargreaves D, Colligan G, et al. Group clinics for young adults with diabetes in an ethnically diverse, socioeconomically deprived setting (TOGETHER study): protocol for a realist review, co-design and mixed methods, participatory evaluation of a new care model. *BMJ Open* 2017;7(6):e017363.
  13. **Wieringa S**, Engebretsen E, Heggen K, **Greenhalgh T**. Has evidence-based medicine ever been modern? A Latour inspired understanding of a changing EBM. *Journal of Evaluation in Clinical Practice*, e-pub ahead of print May 2017.
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| <ol style="list-style-type: none"> <li>14. Bishop DVM, Snowling MJ, Thompson PA, <b>Greenhalgh T</b>, and the Catalise-consortium: Phase 2 of CATALISE: a multinational and multidisciplinary Delphi consensus study of problems with language development: Terminology. <i>Journal of Child Psychology and Psychiatry</i> 2017: epub ahead of print.</li> </ol> |
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15. Hanney S, **Greenhalgh T**, Blatch-Jones A, Glover M, Raftery J: The impact on healthcare, policy and practice from 36 multi-project research programmes: findings from two reviews. *Health Research Policy and Systems* 2017, 15(1):26.
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| <ol style="list-style-type: none"> <li>16. <b>Barry E, Roberts S</b>, Oke J, Vijayaraghavan S, Normansell R, <b>Greenhalgh T</b>. Can type 2 diabetes be prevented using screen-and-treat policies? Systematic review and meta-analysis of screening tests and interventions for pre-diabetes. <i>BMJ</i> 2017; 356: i6538.</li> </ol> |
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17. Greenhalgh T, Malterud K. Systematic reviews for policymaking: muddling through. *Am J Public Health*. 2017; 107(1): 97-9.
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| <ol style="list-style-type: none"> <li>18. Thompson C, <b>Greenhalgh T</b>, Smith N, Lewis D, Cummins S. "I don't know how I'm still standing": A Bakhtinian analysis of social housing and health narratives in East London. <i>Social Science and Medicine</i> 2017; 177: 27-34.</li> </ol> |
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19. **Papoutsis C**, K. Mattick, M. Pearson, N. Brennan, S. Briscoe, **G. Wong**, Social and professional influences on antimicrobial prescribing for doctors-in-training: a realist review. *Journal of Antimicrobial Chemotherapy*, 2017. 72(9): p. 2418-2430.
  20. **Hughes G**. New models of care: the policy discourse of integrated care. *People, Place and Policy*, 2017; 11(2): 72-89.
  21. Casey M, Swinglehurst D, **Shaw SE**. How virtual consultations shape and reshape the work of general practice: a qualitative case study. *British Journal of General Practice*, epub ahead of print 2017, doi <https://doi.org/10.3399/bjgp17X693137>
  22. **Rushforth A**, De Rijcke S. Quality Monitoring in Transition: The Challenge of Evaluating Translational Research Programs in Academic Biomedicine. *Science and Public Policy* 2017; 44, 1, 513-522.
  23. Hammarfelt B, **Rushforth A**. Indicators as Judgment Devices: An Empirical Study of Citizen Bibliometrics in Research Evaluation. *Research Evaluation* 2017; 26, 3, 169-18.
  24. Ngwenya N, Kenton C, Jones L, Gibson F, Pearce S, Flatley M, Hough R, Stirling C, Taylor R, **Wong G**, Whelan J. Experiences and Preferences for End-of-Life Care for Young Adults with Cancer and Their Informal Carers: A Narrative Synthesis. *Journal of Adolescent and Young Adult Oncology* 2017;6:200-211.
  25. **Fahy N**. & Hervey, T.K., 2017. What does Brexit mean for health in the UK? *Eurohealth*, 23(1), pp.24–26.
  26. **Allen LN**. You're not speaking my language: reframing NCDs for politicians and policy makers. *The Lancet*. 2017 Oct 27;390(10105):1831.
  27. **Allen LN**, Feigl AB. Reframing non-communicable diseases—Authors' reply. *The Lancet Global Health*. 2017 Nov 30;5(11):e1072.
  28. **Allen L**. The Trump budget: what does it mean for global health? *Br J Gen Pract*. 2017 Aug 1;67(661):358.
  29. **Allen LN**. Financing national non-communicable disease responses. *Global Health Action*. 2017 Jan 1;10(1):1326687.
  30. **Allen L**, Cobiac L, Townsend N. Quantifying the global distribution of premature mortality from non-communicable diseases. *Journal of Public Health*. 2017 Feb 10:1-6.

31. **Allen L**, Williams J, Townsend N, Mikkelsen B, Roberts N, Foster C, Wickramasinghe K. Socioeconomic status and non-communicable disease behavioural risk factors in low-income and lower-middle-income countries: a systematic review. *The Lancet Global Health*. 2017 Mar 31;5(3):e277-89.
32. **Allen L**, Dunlop C. Our role in addressing inequalities. *Br J Gen Pract*. 2017 Mar 1;67(656):108-.
33. Potter CM, Batchelder L, **A'Court C**, et al. Long-Term Conditions Questionnaire (LTCQ): initial validation survey among primary care patients and social care recipients in England. *BMJ Open* 2017;7:e019235. doi:10.1136.
34. Maidment I, Booth A, Mullan J, McKeown J, Bailey S, **Wong G**. Developing a framework for a novel multidisciplinary, multi-agency intervention(s), to improve medication management in community-dwelling older people on complex medication regimens (MEMORABLE)—a realist synthesis. *Systematic Reviews* 2017; 6:125.
35. Brennan N, Bryce M, Pearson M, **Wong G**, Cooper C, Archer J. Towards and understanding of how appraisal of doctors produces its effects: a realist review. *Medical Education* 2017 doi:10.1111/medu.13348
36. **Wong G**. Getting to grips with context and complexity – the case for realist approaches. *Gaceta Sanitaria* 2017 doi.org/10.1016/j.gaceta.2017.05.010
37. **Allen LN**, Fox N, Ambrose A. Quantifying research output on poverty and non-communicable disease behavioural risk factors in low-income and lower middle-income countries: a bibliometric analysis. *BMJ Open* 2017;7:e014715.
38. Freeman A, Marshall M, **Treadwell J**, Spiegelhalter D, Rafi I, 2017. Communicating risk in primary care: what the Academy of Medical Sciences report means in practice. *Br J Gen Pract* 67(661):346
39. Kearney M, **Treadwell J**, Marshall M. 2017. Overtreatment and undertreatment: time to challenge our thinking. *Br J Gen Pract* 67(663):442
40. **Fahy, N.** et al., 2017. How will Brexit affect health and health services in the UK? Evaluating three possible scenarios. *The Lancet*, 6736(17), pp.1–9.

### Major keynote lectures, workshops and conference presentations 2016

1. Greenhalgh T. *Evidence in a Post-Truth World*. Keynote at Global Evidence Summit, Cape Town, September 2017.
2. Papoutsis C, Greenhalgh T, Shaw S. *We Need to Talk About Complexity*. 2-day international workshop at Green Templeton College, June 2017.
3. Wong G. *Walking the talk: Being realist in practice*. International Conference for Realist Research, Evaluation and Synthesis, Brisbane, Australia, Oct 2017.
4. Wong G. *How do you solve a problem like complexity?* TAnDem Arts & Dementia Conference, Malvern, Worcestershire, UK, Sept. 2017.

### External appointments / policy engagement / public engagement

#### Fahy

- Specialist adviser to House of Commons Health Committee for their inquiry into Brexit and health and social care;
- Policy adviser within an EU-funded research project “Transfer of Organisational innovations for Resilient, Effective, equitable, Accessible, sustainable and Comprehensive Health Services and Systems”, a 29-partner consortium bringing together ministries, research institutes and universities and aiming to set a Europe-wide agenda for research into health services and systems;
- Chair of WHO/EURO Expert Advisory Group to enhance monitoring and reporting for the Health 2020 policy strategy.

### **Greenhalgh:**

- Selected for University of Oxford 'Diversifying Portraiture' initiative
- Founding Fellow, Faculty of Clinical Informatics
- Chair, NHS England Committee on Communication in Patient Safety
- WHO Alliance for Health Policy and Systems Research, Scientific and Technical Advisory Committee
- Visiting Professor, Radboud University, Nijmegen, Netherlands
- European Public Health Association, International Advisory Group on Public Health Research Impact
- Oxfordshire Health Inequalities Commission
- Executive Committee, Future of Health & Care Initiative, Green Templeton College

### **Shaw**

- Delivering Primary Health Care to Homeless People, NIHR Advisory Committee
- Executive Committee, Future of Health & Care Initiative, Green Templeton College

### **Wherton**

- Supporting programme for implementation and roll-out of remote consultations at Barts Health NHS, Oxford University Hospitals NHS Foundation Trust, and Norfolk and Norwich University Hospitals Foundation Trust (as part of Impact Acceleration Award with TG and SS).
- Member, Oxford Academic Health Science Network (AHSN) Informatics Oversight Group

### **Wong**

- Member, National Institute for Health and Care Excellence, Guidelines Manual Virtual Reference Group
- Panel Member, NIHR, Health Technology Assessment Programme – Primary Care Panel

## **Strategy for 2018**

1. **RESEARCH:** Consolidate and progress our current funded programmes of work – especially BRC, SCALS, TOGETHER and the newly-funded RFPB extension of VOCAL. New grant income is not a priority except to maintain staff posts. Horizon-scan for longer-term opportunities as SCALS will end in 2020.
2. **PUBLICATION AND DISSEMINATION:** All research staff to publish one REF-returnable empirical paper or systematic review. Continue and extend public engagement work in SCALS-related research, and continue local and national implementation of VOCAL findings with a view to a REF impact case study in implementation of digital technologies.
3. **TEACHING:** Continue to deliver existing MSc modules (Knowledge into Action, Realist Evaluation and Review); and to progress in-pipeline modules for MSc in EBHC. Submit outline for MSc in Social Sciences for Healthcare. Keep doctoral students on track. Ensure postdocs gain supervision experience.
4. **STAFF AND STUDENT DEVELOPMENT.** Support new DPhil applications related to our existing research programmes; ensure that all early career researchers have clear career plans and opportunities for progression. Where appropriate, submit applications for pre-doctoral, doctoral, post-doctoral and senior research fellowships.

Trisha Greenhalgh and Sara Shaw  
December 2017