



How can I do clinical research in the 21st Century NHS?

Useful links for pain researchers

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1. Continuing training and degree opportunities

1.1 Timing

So you think you want a career as a clinical academic...read more about timing and available training/scholarship programmes

<https://www.abdn.ac.uk/smmsn/acad/index.php>

1.2 Scholarship Programmes

The Scottish Clinical Research Excellence Development Scheme (SCREDS) [links to regional opportunities in Aberdeen, Dundee, Edinburgh, Glasgow and St. Andrew's]

[http://www.scotmt.scot.nhs.uk/specialty/scottish-academic-training-\(screds\).aspx](http://www.scotmt.scot.nhs.uk/specialty/scottish-academic-training-(screds).aspx)

1.3 Distance Learning Options

Surgical Sciences (RCSEd and University of Edinburgh) - online course leading to postgraduate certificate, diploma or masters qualification

<https://www.ed.ac.uk/studying/postgraduate/degrees/index.php?r=site/view&edition=2020&id=404>

Clinical Trials, Epidemiology, Public Health or Infectious diseases (London School of Hygiene and Tropical Medicine) - online courses leading to postgraduate certificate, diploma or masters qualification

<https://www.lshtm.ac.uk/study/courses/ways-study/distance-learning>

MSC in the Clinical Management of Pain (University of Edinburgh); also modular and diploma options

<https://www.ed.ac.uk/clinical-sciences/pain-management>

1.4 Flexible online short courses/ research methodology courses

Choose the pace, place and how you study. Part-time learning that fits around work and modern life to develop your qualifications and career with a unique building-block course structure.

The Institute of Applied Health Sciences in Aberdeen have created a series of short courses designed to develop research skills in small achievable blocks. Each course is designed to be 15 credits and can be taken as a single course or can be combined together to build your own degree whether this be Postgraduate certificate, Postgraduate diploma or a MSc.

<https://www.abdn.ac.uk/study/postgraduate-taught/degree-programmes/281/research-methods-for-health/> or to see a full list of all the course on offer: <https://on.abdn.ac.uk/health/>

The University of Edinburgh offers an annual 2 day Clinical Research Methodology Course.

For more information, email: education@edinburghcrf.ed.ac.uk

2 Conducting Research

2.1 Deciding what type of research you want to conduct

Is your project... research, audit or service evaluation?

Research	Service evaluation	Clinical audit
Derive new knowledge, generate or test hypotheses	To define or judge current care	To inform delivery of best care
Quantitative – hypothesis Qualitative – explore themes	Evaluates standard	Does the service reach a predetermined standard?
Defined questions, aims, objectives	Evaluates standard	Measures against a standard
Quantitative – compare interventions Qualitative – interventions and relationships	'In use' intervention	'In use' intervention
Treatments / data / investigations additional to routine care	Analysis of existing data OR simple questionnaire	Analysis of existing data OR simple questionnaire
Quantitative – intervention groups Qualitative – sampling framework	Intervention decided before evaluation	Intervention chosen before audit
May involve randomisation	No randomisation	No randomisation

Source:

<http://library.nhsggc.org.uk/mediaAssets/Research%20&%20Development/Is%20This%20Research%20Flowchart.pdf>

2.2 Research Networks

NRS Pain (and the Scottish Pain Research Community (SPaRC))

<http://www.nhsresearchscotland.org.uk/research-areas/pain>

The NRS Primary Care Network

<http://www.nhsresearchscotland.org.uk/research-areas/primary-care>

The West of Scotland Pain Research and Audit Network

Register to join this network here: <http://www.knowledge.scot.nhs.uk/painra.aspx>

2.3 Statistical resources

Frank Harrell's blog 'Statistical Thinking' where, amongst other things, he talks about statistical pitfalls. See here:

<https://www.fharrell.com/>

For more basic stats, the textbook 'Medical Statistics at a Glance' by Petrie:

<https://www.amazon.co.uk/Medical-Statistics-Glance-Aviva-Petrie/dp/140518051X>

Don't worry about the title, it's not all math-y! The Art of Statistics: Learning from Data by David Spiegelhalter

<https://www.penguin.co.uk/books/294/294857/the-art-of-statistics/9780241398630.html>

Ever need help choosing the right statistic test or need a bit of code? Check out UCLA's amazing online resource...

<https://stats.idre.ucla.edu/other/mult-pkg/whatstat/>

Check out 'Language for communicating frequentist results about treatment effects' put out by datamethods.org

<https://discourse.datamethods.org/t/language-for-communicating-frequentist-results-about-treatment-effects/934>

'A Reference Collection to push back against "Common Statistical Myths"' put out by datamethods.org

<https://discourse.datamethods.org/t/reference-collection-to-push-back-against-common-statistical-myths/1787>

For R free stats packages

<https://www.r-project.org/>

An online course on 'Data Skills for Reproducible Science' using R

<https://psyteachr.github.io/msc-data-skills/>

A repository of materials from Professor Andy Field's statistical textbooks, including lots of information on using the free statistics software R and RStudio

<http://milton-the-cat.rocks/home/index.html>

2.4 Reading Resources

<https://www.nature.com/articles/s41562-016-0021>

2.5 Writing resources

EQUATOR: Enhancing the QUALity and Transparency Of health Research. Your one-stop-shop for writing and publishing high-impact health research: A comprehensive library for health research reporting.

<http://www.equator-network.org/>

3 National Research Priorities

Scotland's Health and Social Care Research Strategy

<https://www.gov.scot/Publications/2015/10/5164>

NHS England (AHSN Network)

<https://www.ahsnnetwork.com/nhs-research-innovation-priorities>

<https://www.ahsnnetwork.com/wp-content/uploads/2019/07/National-survey-of-local-research-and-innovation-needs-of-the-NHS.pdf>

CSP Research Priorities

<https://www.csp.org.uk/professional-clinical/research-and-evaluation/research-priorities>

James Lind Alliance

<http://www.jla.nihr.ac.uk/top-10-priorities/>

4 Regional and National Resources

NHS Research Scotland

www.nhsresearchscotland.org.uk

Chief Scientific Officer

www.cso.scot.nhs.uk

NHS Health Research Authority

<https://www.hra.nhs.uk/>

West of Scotland Safe Haven

<http://www.nhsggc.org.uk/about-us/professional-support-sites/nhsggc-safe-haven/>

Scottish Policy and Research Exchange

<https://spre.scot/about-us/>

Medical Research Council

www.mrc.ukri.org

Nursing, Midwifery and Allied Health Professionals Research Unit

<http://www.nmahp-ru.ac.uk/>

Council for Allied Health Professionals Research

<https://cahpr.csp.org.uk/about-cahpr>

British Pain Society

<https://www.britishpainsociety.org/>

North British Pain Association

Membership link: <https://sites.google.com/view/north-british-pain-association/membership>

NRS Pain and the Scottish Pain Research Community

<https://www.nhsresearchscotland.org.uk/research-areas/pain>

Versus Arthritis

<https://www.versusarthritis.org/research/research-funding-and-policy/our-approach-to-research-funding/pain/>

Royal College of Anaesthetists Faculty of Pain Medicine

<https://www.rcoa.ac.uk/faculty-of-pain-medicine>

5 NHS Scotland Resources

NHS Scotland Research and Development

<https://www.nhsresearchscotland.org.uk/contact/regional-nodes>

NHS Scotland Clinical Research Facilities

<https://www.nhsresearchscotland.org.uk/research-in-scotland/facilities/clinical-research-facilities>

NHS GGC specific:

Staff Bursary Scheme

<http://www.nhsggc.org.uk/working-with-us/hr-connect/learning-education-and-training/staff-bursary-scheme/guide-to-the-bursary-application-form/#>

Clinical Effectiveness

<http://www.staffnet.ggc.scot.nhs.uk/Corporate%20Services/Clinical%20Governance/Clinical%20Effectiveness/Pages/Home.aspx>

Tayside specific:

AHSP: Academic Health Science Partnership in Tayside:

<https://www.ahspartnership.org.uk/ahsp>

TASC: Tayside Medical Science Centre / Academic Health Science Partnership in Tayside:

<http://www.ahspartnership.org.uk/tasc/about-tasc>

Tayside Clinical Trials Unit –

<http://www.ahspartnership.org.uk/tasc/tayside-clinical-trials-unit/about-tctu-2>

6 Useful sites for funding

BMA Foundation

www.bmafoundationmr.org.uk

British Pain Society (members only)

<https://www.britishpainsociety.org/for-members/grants-and-awards/>

Chief Scientific Officer Scotland

<https://www.cso.scot.nhs.uk/funding-2/>

Grant Finder Website

<https://www.idoxgrantfinder.co.uk/>

IASP

<https://www.iasp-pain.org/Education/GrantList.aspx?navItemNumber=649>

Medical Research Council

www.mrc.ukri.org

National Institute for Health Research

<https://www.nihr.ac.uk/>

<https://www.nihr.ac.uk/explore-nihr/support/academy.htm>

Versus Arthritis

<https://www.versusarthritis.org/research/research-funding-and-policy/our-approach-to-research-funding/>

Wellcome Trust

www.wellcome.ac.uk

7 Profession Specific Funding Opportunities

British Psychological Society

<https://www.bps.org.uk/about-us/awards-and-grants>

Chartered Society of Physiotherapy

<https://www.csp.org.uk/professional-clinical/research-and-evaluation/research-funding/physiotherapy-research-foundation>

Royal College of Anaesthetists

<https://www.rcoa.ac.uk/research>

Royal College of Nursing

<https://www.rcn.org.uk/professional-development/research-and-innovation/research-funding-opportunities>

Royal College of Occupational Therapists

<https://www.rcot.co.uk/news-and-events/awards-and-funding/ukotr>

The National Institute of Academic Anaesthesia

(<https://www.niaa.org.uk/>)

8 NHS research fellowships

Nursing: <https://www.nes.scot.nhs.uk/education-and-training/by-discipline/nursing-and-midwifery/careers-and-recruitment/early-clinical-career-fellowships.aspx>

AHPs: <https://www.nes.scot.nhs.uk/education-and-training/by-discipline/allied-health-professions/the-ahp-careers-fellowship-scheme.aspx>

And the more general one, which is usually taken up by medics, but open to others

<https://www.nhsresearchscotland.org.uk/education-and-funding/fellowships>

9 Charity Organisations

Fibromyalgia Action UK

<http://www.fmauk.org/>

NASS

<https://nass.co.uk/>

National Rheumatoid Arthritis Society

<https://www.nras.org.uk/>

Pain Concern

<http://painconcern.org.uk/>

PainUK

<https://painuk.org/>

Versus Arthritis

<https://www.versusarthritis.org/>

10 Patient and Public Involvement

The new IASP initiative, Global Alliance of Pain Patient Advocates Task Force

<https://www.iasp-pain.org/About/Content.aspx?ItemNumber=9424>

NIHR INVOLVE website (includes information about involving patients and the public at all stages of the research process; guidelines for PPI payments, and how to write a concise plain English summary (ie Lay Summary).

<https://www.invo.org.uk/>

A Researcher's Guide to Patient and Public Involvement: A guide based on the experiences of health and medical researchers, patients and members of the public. Healthtalk.org; University of Oxford

<https://oxfordbrc.nihr.ac.uk/wp-content/uploads/2017/03/A-Researchers-Guide-to-PPI.pdf>

- In March 2018, the journal BMJ Open set new requirements for patient and public involvement statements. The PPI statement needs to answer the following questions, but provide good guidance on thinking about PPI activities even before starting research.
 - ❖ How was the development of the research question and outcome measures informed by patients' priorities, experience, and preferences?
 - ❖ How did you involve patients in the design of this study?
 - ❖ Were patients involved in the recruitment to and conduct of the study?
 - ❖ How will the results be disseminated to study participants?

- ❖ For randomised controlled trials, was the burden of the intervention assessed by patients themselves?
- ❖ Patient advisers should also be thanked in the contributorship statement/acknowledgements.

<https://blogs.bmj.com/bmjopen/2018/03/23/new-requirements-for-patient-and-public-involvement-statements-in-bmj-open/>