

Embedding and using research in clinical practice (starting guide)

Professor Natalie Pattison @drnatpat

Researcher in Residence ICU Imperial College London, Imperial College Healthcare NHS Trust

Professor of Clinical Nursing, University of Hertfordshire and East & North Herts NHS Trust

Chair: National Outreach Forum (www.norf.org.uk)

Deputy Chair: NIHR National Specialty Group for Critical Care (www.nihr.ac.uk)

Chair: UK Critical Care Nursing Alliance (www.ficm.ac.uk/ukccna)



Applying and adopting research and embedding research in everyday practice

Learning outcomes:

- To understand where to begin in using research in clinical practice
- To know where to go to look for appropriate research evidence
- To know the distinction between engagement and involvement in research, and understand how you can get involved
- To consider how to ensure projects have a clinical impact

Embedding research: culture

Consider where you work:

- Are they ready?
- What do you need to know or do to get stakeholders on board?
- Prepare the ground
- “Clinical research is everybody’s business” (NIHR)
- Dealing with reluctance
- Behavioural approaches

NIHR: Clinically research-active hospitals

Better patient care outcomes:

- [Patients at research active hospitals have more confidence in staff](#) (Jonker L, et al, 2019)
- [Study activity, mortality rates and CQC ratings in NHS trusts](#) (Jonker L, Fisher J, 2017)
- [Research activity and the association with mortality](#) (Ozdemir BA, et al, 2015); [Cancer survival outcomes in hospitals with high research participation](#) (Downing A, et al, 2016)

Benefit for the health and care system:

- [Advancing health \(.PDF\)](#) (Medical Schools Council, 2022)
- [Transforming Health through innovation](#) (Academy of Medical Sciences, 2019)
- [Engagement of clinicians and organisations in research and healthcare performance](#) (Boaz A, et al, 2015)

A happier workforce:

- [Academic factors in medical recruitment](#) (Rees MR, Bracewell M, 2019)
- [Adapting, Coping, Compromising research \(.PDF\)](#)(GMC, 2018)
- [Career Fit and Burnout Among Academic Faculty](#) (Shanafelt TD, et al, 2009)



“Clinical research is everyone's future” (NIHR)

Diversity and inclusion

Patients and public at the centre

Spending	Spending time with groups and communities to understand individual needs and what is important to them.
Building	Building trust by involving local advocates for the community or group.
Giving	Giving groups and communities more control over the process and in research design to help build confidence.
Taking	Taking time to support communities to build up their capacity, knowledge and understanding.
Considering	Considering cultural and religious sensitivities

<https://www.england.nhs.uk/aac/publication/increasing-diversity-in-research-participation/>

Four groups of clinical academics: toe dippers and waders

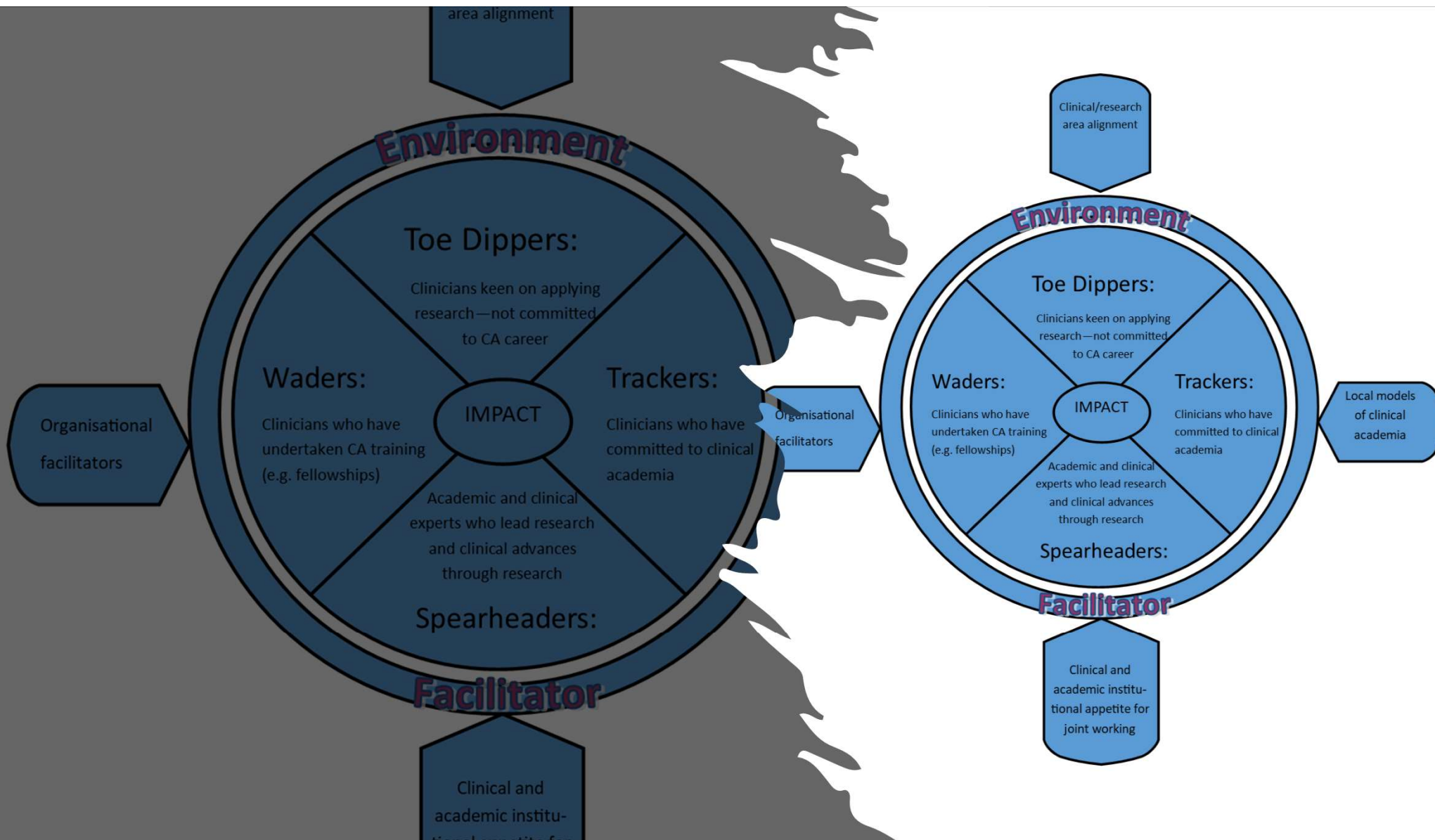
- ***Toe dippers:*** those motivated to pursue a Clinical Academic Career when they can access the research support to take forward their ideas from clinical practice into a robust piece of research.
- ***Waders:*** who understand and perceive the value of clinical academia, and who may progress to undertake formal clinical academic training, through a fellowship or rigorous academic training at doctoral level.

(Pattison et al, Journal of Clinical Nursing 2021)

Four groups of clinical academics: trackers and spear-headers

- **Trackers:** those who have committed to a CAC, who continue through to post-doctoral work, leading research which informs their area of clinical practice.
- **Spear-headers:** have joint institutional commitment,
- act as role-models, and clinical and research experts in their area, leading programmes of research, as well as fostering clinical academic careers for others.

(Pattison et al, Journal of Clinical Nursing 2021)

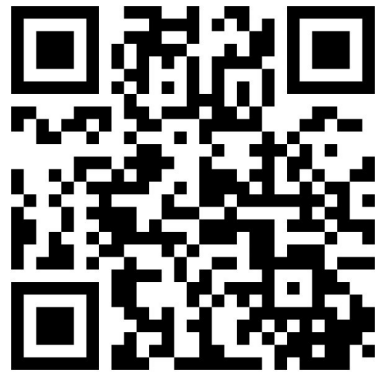


Menti.com

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1. Where do you see yourself?

2. What kind of culture do you work in?



Why should we bother with research?



- Without research we cannot make advances in patient care
- Nurses/AHP are more patient-focused and will notice areas for research that medical colleagues and other professionals don't consider (CTIMP bias)
- Shift to EBP means impetus to rationalise practice

Think of it as problem-solving



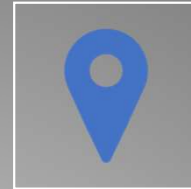
You have a clinical question

- Demonstrating insight and critical thinking
- Can it be developed into a research/QI/SE question?



What can you do to solve it?

- How will you do this?
- Appropriate methods?



Problem-solving to reach answer



**Applying the research/
new knowledge**

FINER

- **F**easibility
- **I**nteresting
- **N**ovel
- **E**thical
- **R**elevant

SPIDER

- **S**ample
- **P**henomena (of)
- **I**nterest
- **D**esign
- **E**valuation
- **R**esearch type¹



¹Cooke A et al (2012) Qual Health Res
22 (10) 1435-

Identify your clinical/research question/s



What is the most important issue/s to be addressed?



Who is it important to?

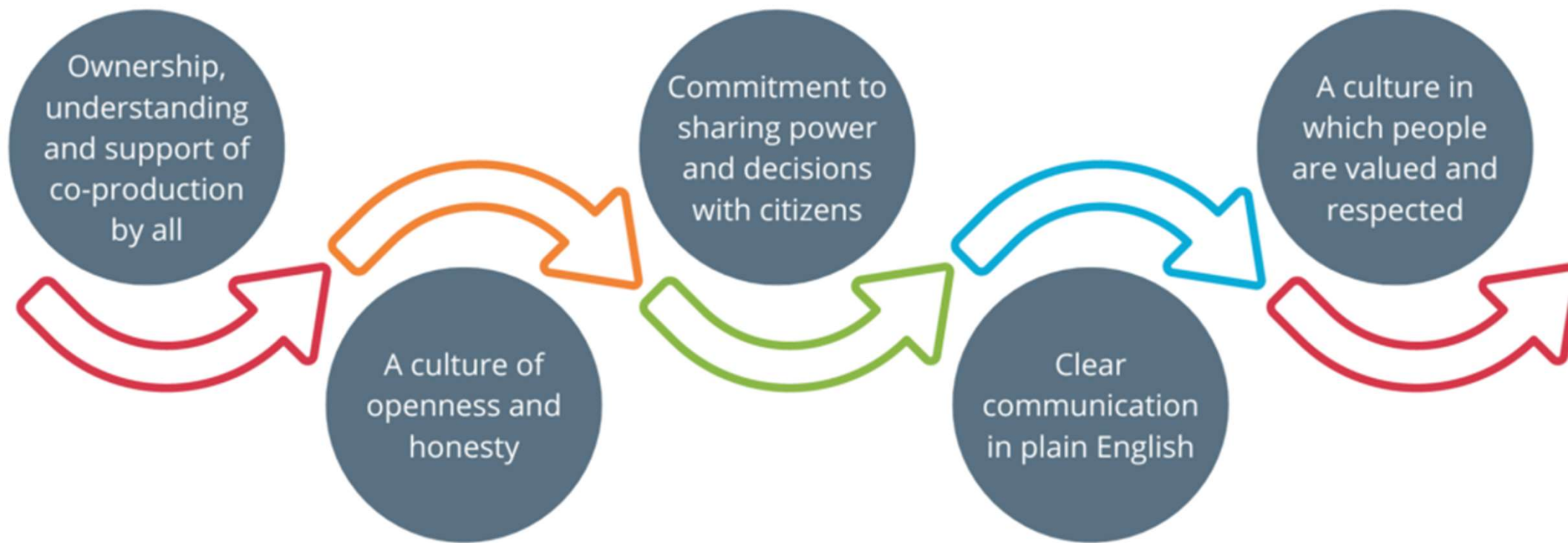


Is it achievable?



How can you answer that research question?

- What research/QI work is already out there in that area?
- Who do you need to engage?
- What resources are needed?
- Scope it: PICO/PEO/PIO



Co-production with patients and public



Evidence – where to look?



[NHS knowledge and library services](#)



[BMJ Best Practice](#) - national clinical decision support tool (online/app)



NHS OpenAthens, the [NHS Knowledge and Library Hub](#)



Tools to mobilise knowledge, and modules on [literature searching](#) and [health literacy](#).

<https://www.hee.nhs.uk/news-blogs-events/infographics/putting-trusted-evidence-knowledge-fingertips-nhs>

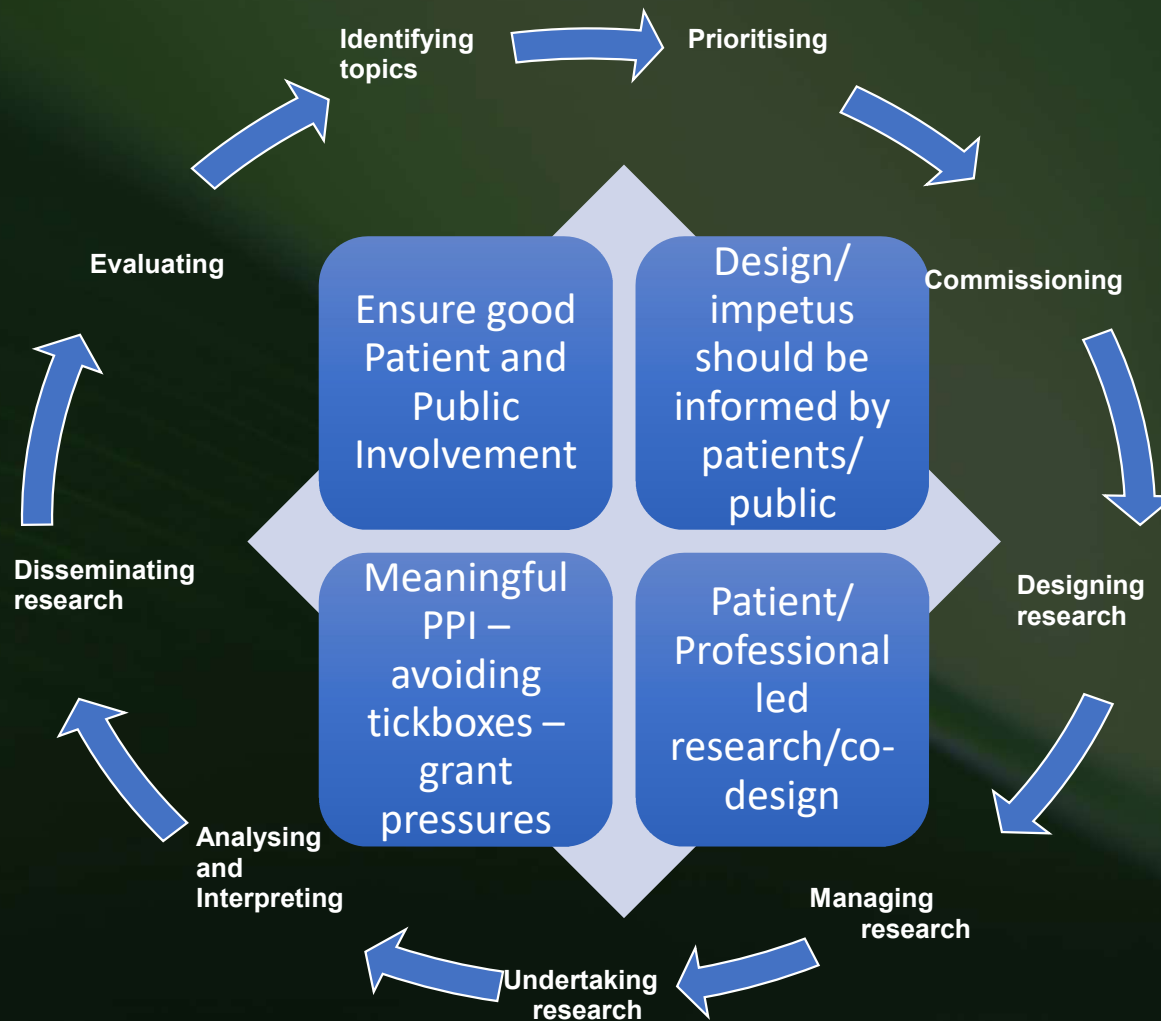
- To help identify local priorities [geodata](#) shows data by individual local authorities – literacy etc
- [easy read guides for people with learning disabilities and autism](#) about health choices and questions to ask, for people with learning disabilities.
- [NHS Knowledge for Healthcare Learning Academy](#) accredited funded, professional development opportunities

Engagement v Involvement in research



Participation

Patient & Public Involvement in research



Differing values of research QI, SE, audit and research

- Talk to your clinical academic/local research leads

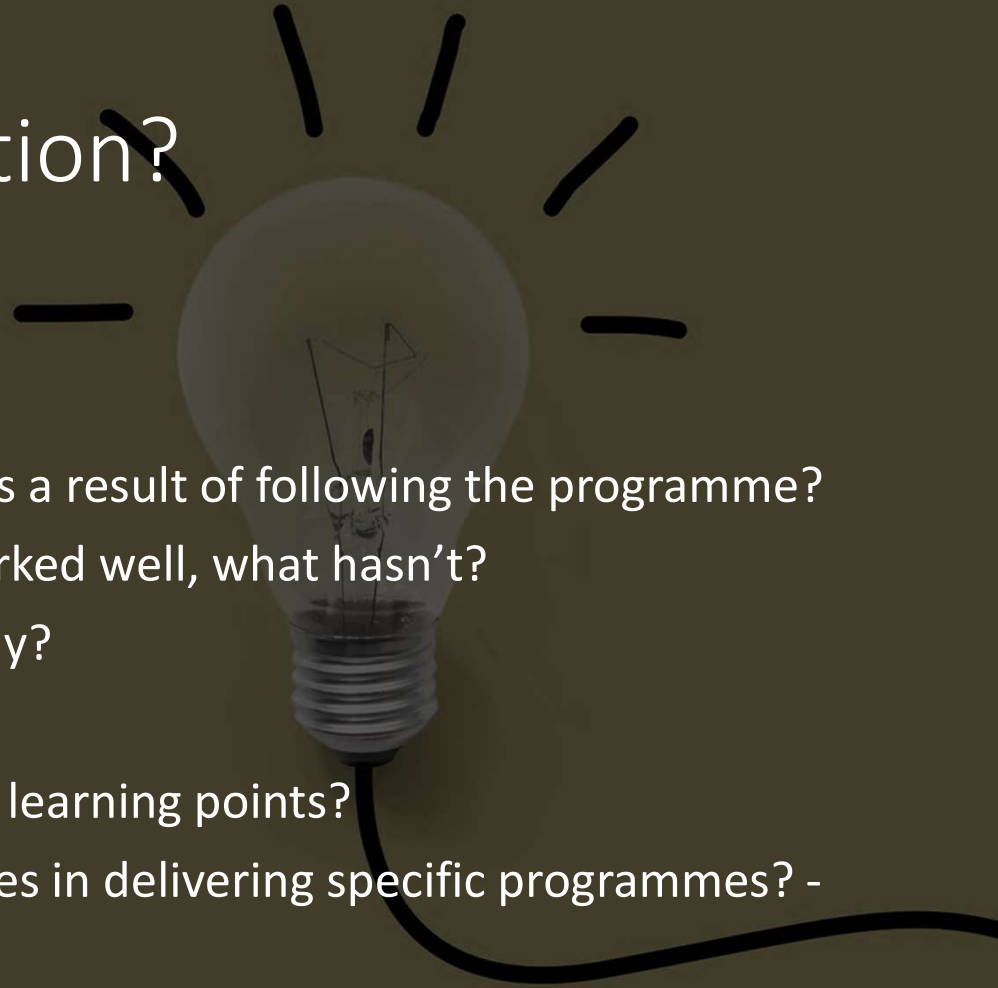
Audit	Service Evaluation	Quality Improvement	Research
Measures against a set standard (e.g. NICE)	No set standard available	No set standard	No set standard, may generate standard
Set timeframes	Set timeframes for evaluation of a service (multiple points in time)	Continual improvement (no clear start/end)	Can be either
No generation of new knowledge	No generation of new knowledge (aside from info about service); designed to judge current care	No generation of new knowledge (aside from info about service)	New knowledge generated that is generalisable/ Academic scholarship

Audit	Service Evaluation	Quality Improvement	Research
Questions against a set standard	Set questions of what information is required from the service	Questions may change/evolve during the cycles	Clear research questions/aims set <i>a priori</i>
Interventions in use only	Interventions in use only	Existing standards of care generally. Interventions can be new but not completely novel (limit to what it can evaluate)	Novel interventions (new devices/drugs/applications) Testing new methods/ideas Ethics mandatory
Local* benchmarking	Local* evaluation	Local improvement description	Wider implications/generalisability
No obligation to publish (rarely published/ accepted unless novel or large scale)	Can be published	Can be published if QI MSCQ principles applied	Obligation to publish

Why do a service evaluation?

To understand:

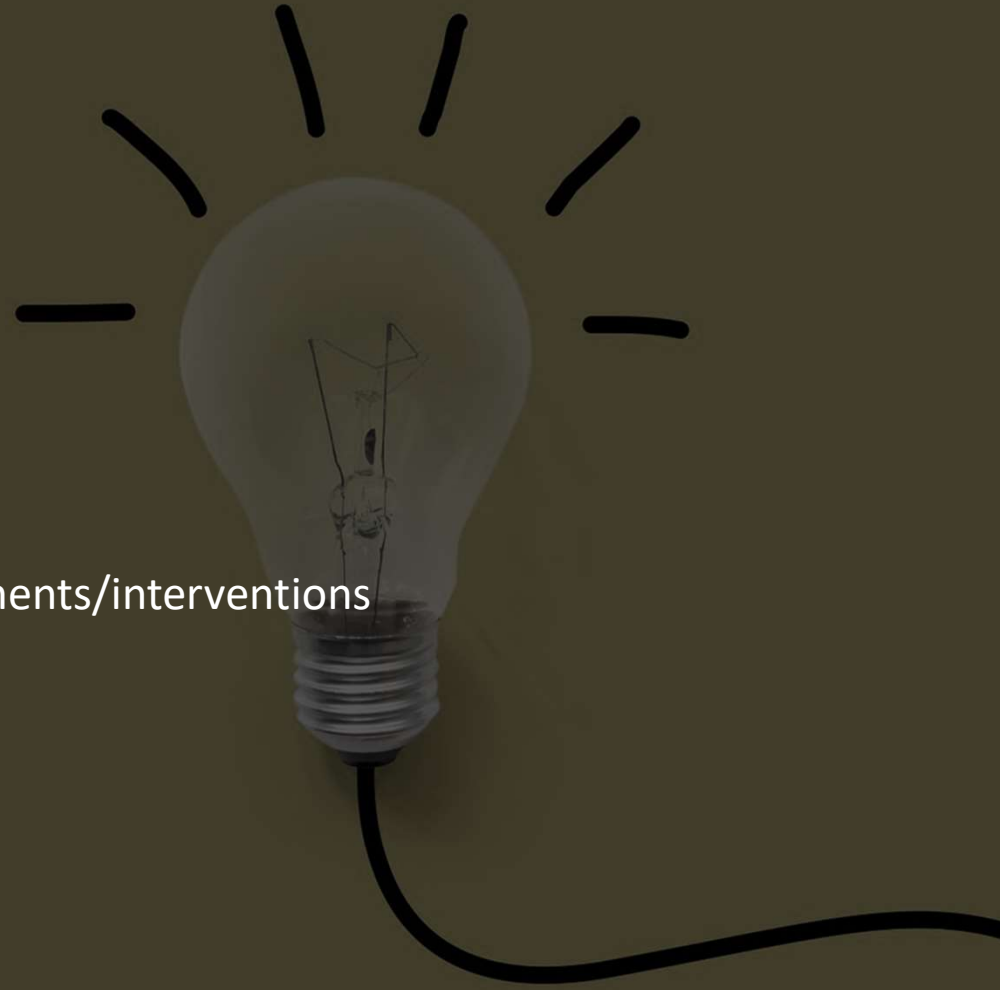
- Are we meeting the needs of our patients?
- What happens to our patients/outcomes as a result of following the programme?
- How successful is your service? What's worked well, what hasn't?
- Does the service or programme work locally?
- Were there any unintended outcomes?
- How can we improve the programme? Key learning points?
- Are we making the best use of our resources in delivering specific programmes? - Costs and benefits comparison?



Why do research?

To:

- Understand why issues are happening
- Test hypotheses
- Generate new knowledge
- Determine efficacy and effectiveness of treatments/interventions
- Draw inferences across populations
- Scale up beyond the local area
- Change practice beyond your immediate area
- Longevity
- Clear steps of rigour for reproducibility
- (can) Provide definitive evidence



Project design

- Seek advice – go to your clinical academic leads, your local research leads
- Work with experts: methodological and subject
- Be open
- *Are the objectives realistically achievable with that design? How will this research achieve them?*
- Work through eventualities
- Pragmatism/idealism
- Think scale
- Intended outcomes

Pre-empt ethics



Plan for approval
processes: REC and
HRA



R&D



Finance – funding to
implement/run the
study



Robust and
meaningful Patient
and Public
Involvement will pre-
empt ethics issues

Methods

- Plan for data collection
- Which measures; approach; style of interviewing; interview/topic guides?
- If using a tool, do your homework on its application, use and analysis
- Plot a timeline
- Allow for slippage
- Be realistic in terms of data collection and sample identification
- Imagine worst case scenario (e.g. COVID!)

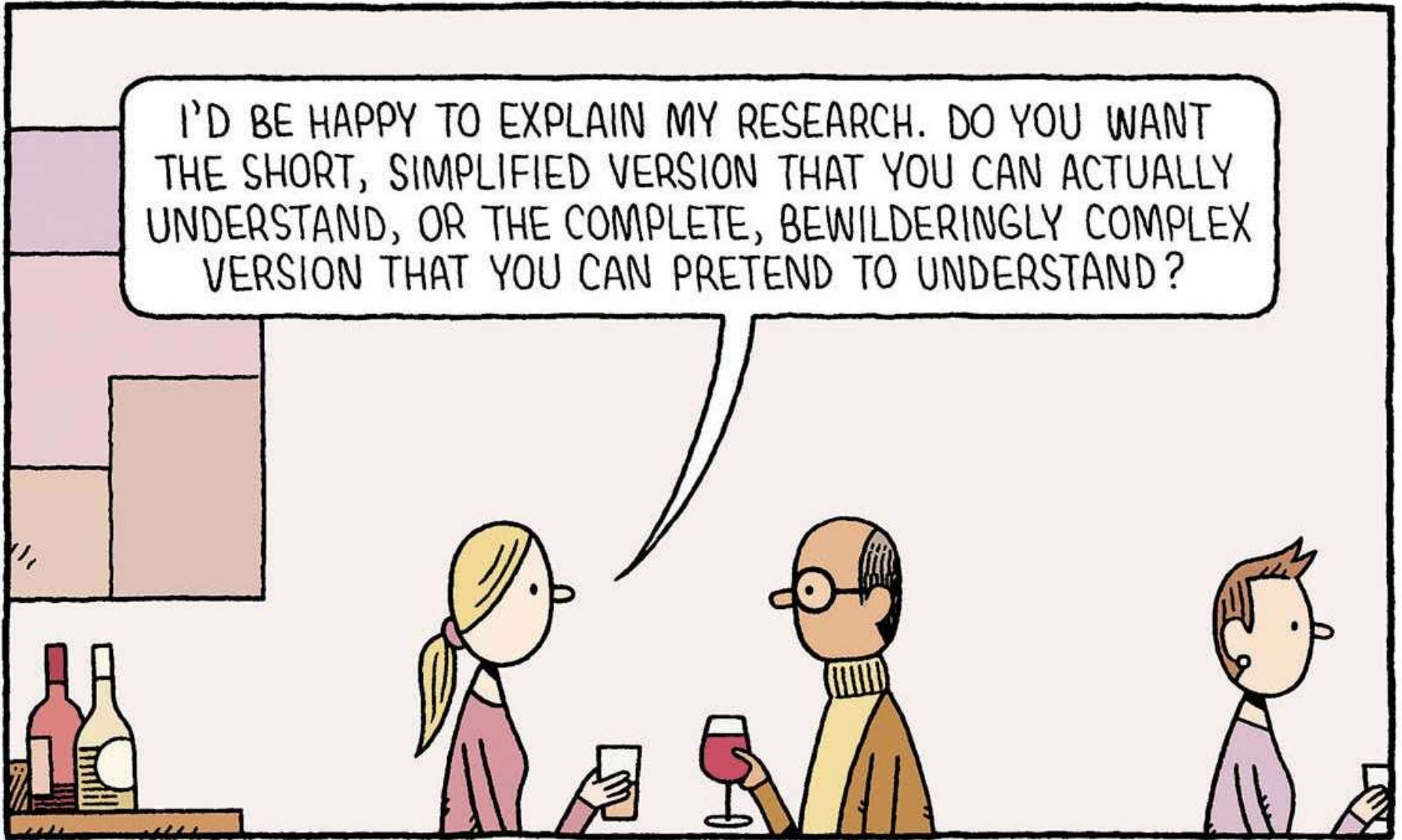




Research issues –if implementing others' research

- How appropriate is the research to your group of patients/families/staff?
- Will the proposed research answer issues you have?
- How important was the research?
- Can you be sure you are not cherry picking?
- (Is it justifiable to implement it? How transferable was that research, is the inconvenience justified?)

I'D BE HAPPY TO EXPLAIN MY RESEARCH. DO YOU WANT THE SHORT, SIMPLIFIED VERSION THAT YOU CAN ACTUALLY UNDERSTAND, OR THE COMPLETE, BEWILDERINGLY COMPLEX VERSION THAT YOU CAN PRETEND TO UNDERSTAND?

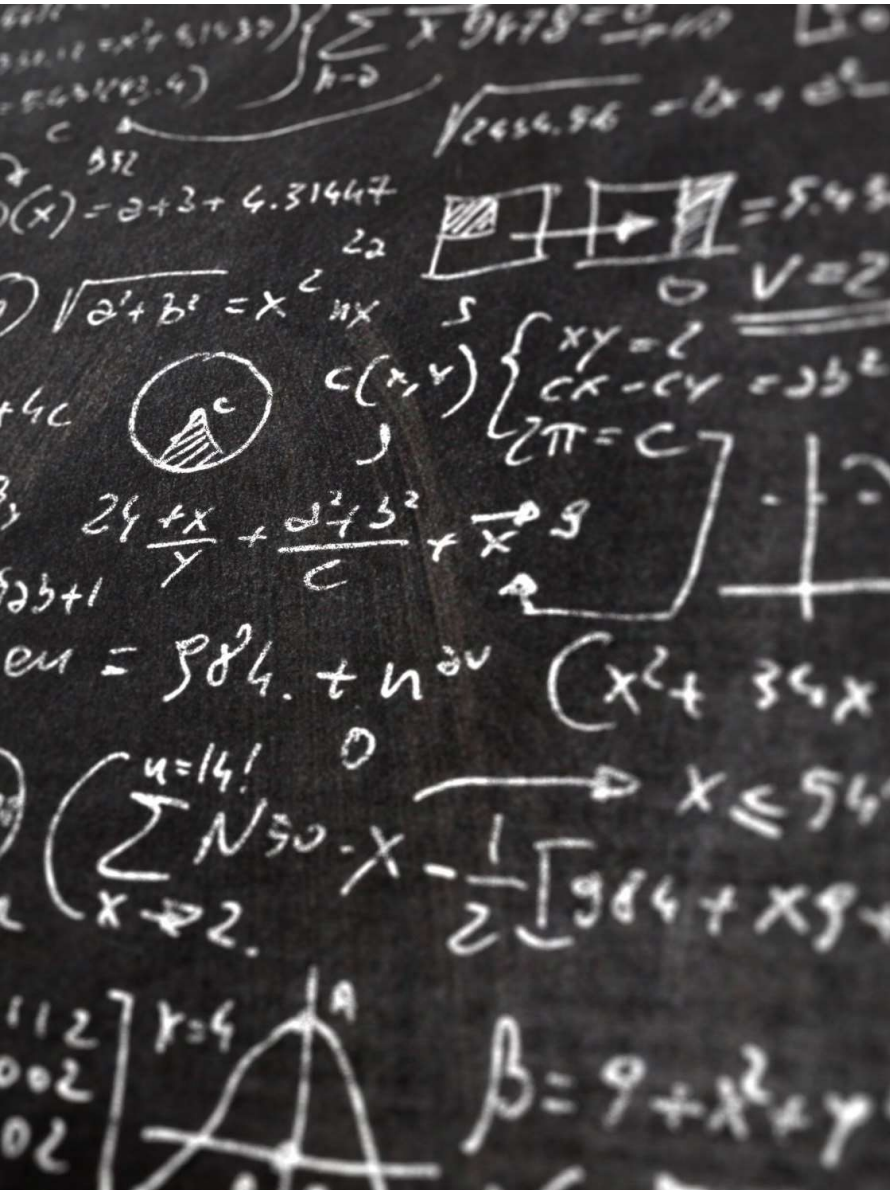


TOM GAULD for NEW SCIENTIST

Considerations when designing/ implementing new research studies

- Demonstrate clinical relevance and applicability
- Engage local champions
- Use change management theory/practice
- Design some quick wins / demonstrate benefit for patients / families / HCPs
- Ensure that you provide feedback for the clinical teams





Let's think again re: intended research

- What are the local implications – how does this translate into context for the rationale?
- What do I want to achieve from implementing the research?
- Are the objectives realistically achievable with that design? How will this research achieve this?
- Think - Why have I chosen this research?

Challenges- Menti.com 7252 5424

(also: <https://www.menti.com/aosnkuwa5am>)

What are your
organisational challenges?

How do you overcome
these?



Organisational Culture

Forces against change

- Bad experience of change
- Low tolerance/repeated change
- Increasing workload and stress levels
- Staff/skills shortage
- Staff not motivated to provide this care 'not interested' attitude
- No feedback / incentives
- No perceived need for change
- New staff not fully integrated into trust, may view change as criticism of their care.





Challenges to Changes Introducing & Implementing Research

The reality of clinical practice – it is busy with:

- Increasing acuity and activity
- Increasing public expectation
- Challenges with low staffing numbers / agency nurses
- Overload (perceived) of research/ guidelines / protocols / new evidence
- Challenge of change management / clinical leadership skills
- Trainees keen to do projects – work with them
- Motivation of individuals – something aside from clinical

How can I implement or do research?



Find something you are passionate about



Manageable/small



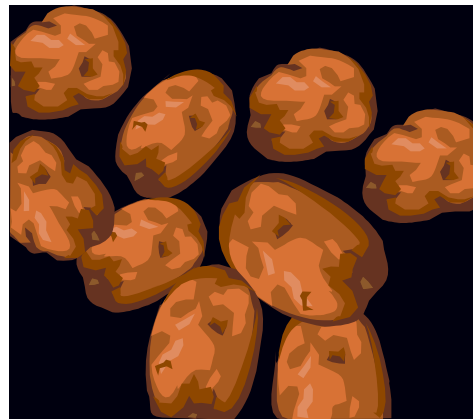
Journal Club/Publishing/
Presenting



Think about how you will implement it (pilot it?)



Discuss with others



- Access to research evidence
- Organisational support to implement
- Collegiate support
- Culture- receptive to change
- Context of potential change – is it a hot potato?!

Things to think about

- What are you trying to do? Articulate your goals.
- How is it done at present, and what are the limitations of current practice?
- What is new, and why do you think it will be successful?
- What difference will it make?
- What are the advantages/disadvantages (risks etc)?
- How much will it cost? How long will it take?
- What are outcomes for success?



—
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So
What?



Ethics:

- Is it ethical to approach in this way?
...goes beyond patients/families to colleagues as well
...are you using your position appropriately to recruit?
- If it has been done before, is it justifiable to repeat it? (How transferable was that research, is the inconvenience justified?)
- Still need to consider ethics in Service evaluation/QI

Preparing the protocol

What is the evidence to support the research question?

What has been done before?

What is the evidence base to support the intended approach?

What is the value of the answer to patients?

Will having the answer help patients live longer / live better? If yes, how?

How long will it take to complete the study/trial?

Will the answer be relevant when the trial is completed?

Questions to ask yourself

Do you think patients will be interested in enrolling? Is the patient population really representative?

What numbers are expected to enrol – is this reasonable?

Are methods reproducible and clear?

Have all ethical concerns been mitigated?

Powering of the study (if appropriate), is this reproducible? Analysis plan clear?

Dissemination plan clear?



Resources/communities available to support
engagement and embedding of research

CATO

ARC

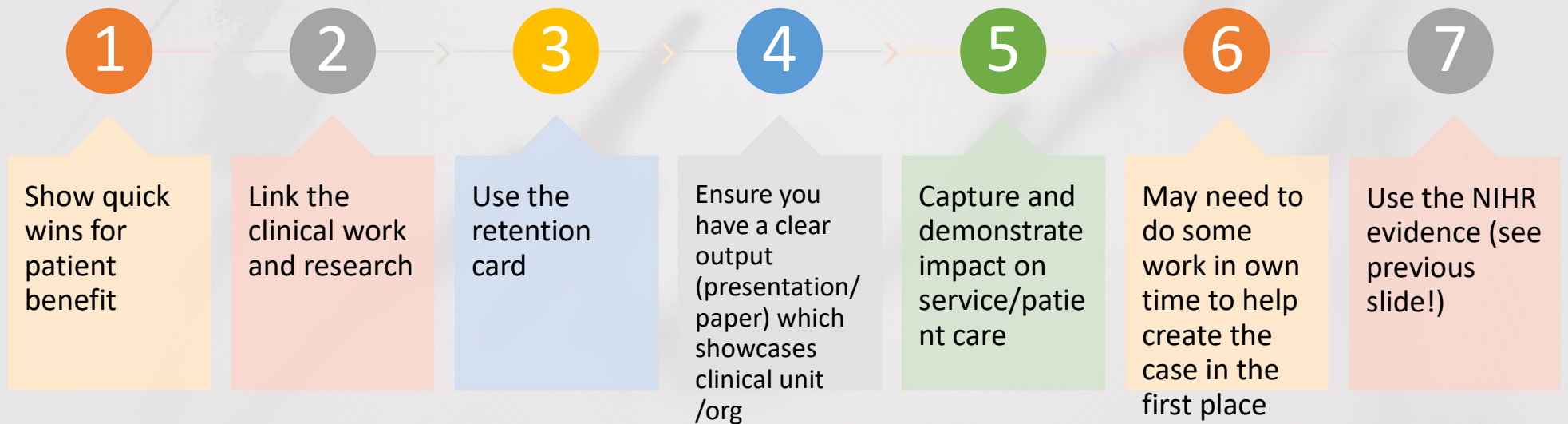
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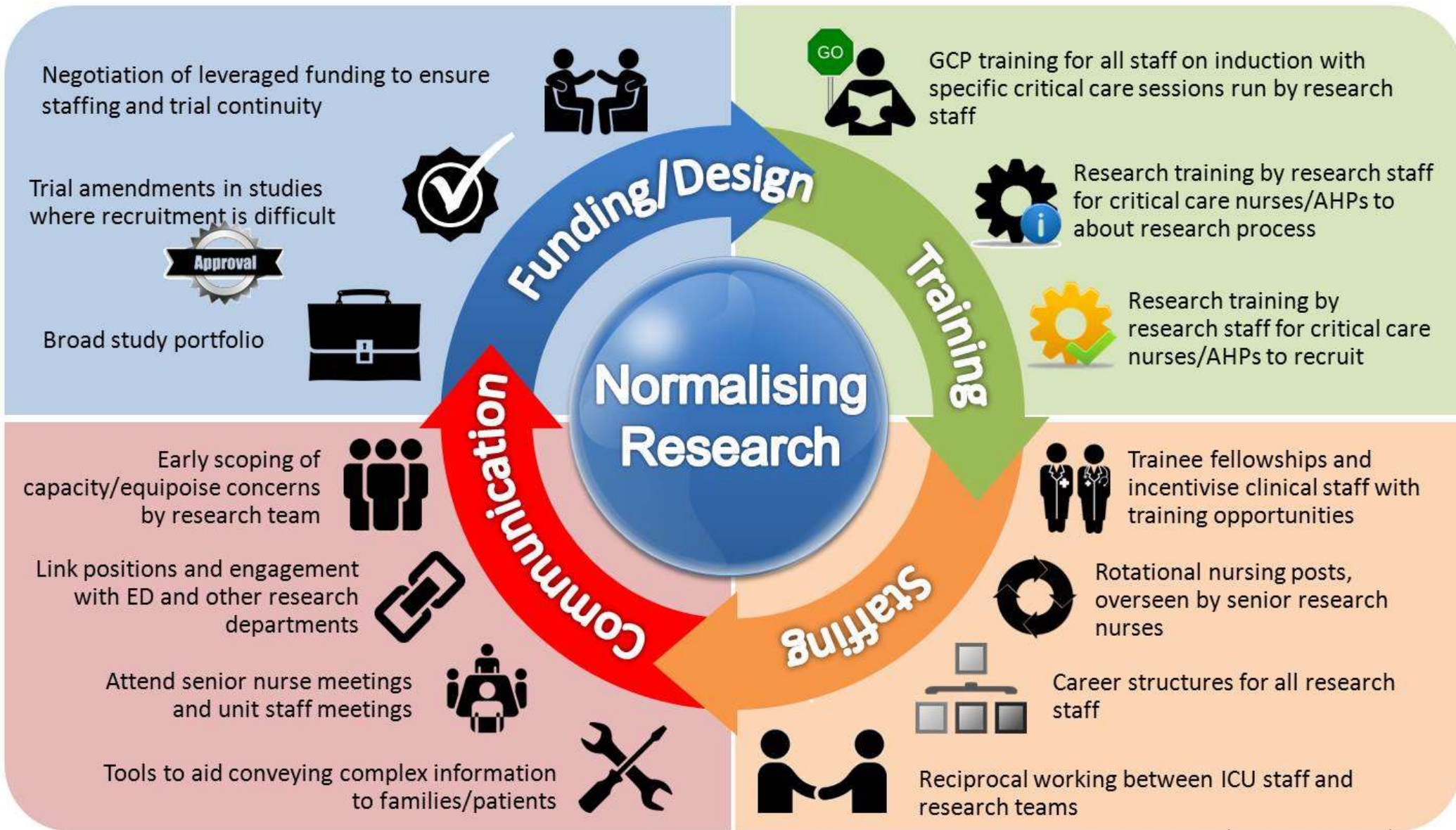
NIHR Learn

Implementation

Health Foundation

How to argue the case for protected time







Knowledge transfer and mobilization - where to go for implementation support

NIHR Dissemination Centre

NHSE <https://www.england.nhs.uk/aac/what-we-do/embedding-research-in-the-nhs/>

ARC <https://arc-sl.nihr.ac.uk/research-and-implementation/our-research-methods/implementation-science>
<https://implementationscience.biomedcentral.com/>

CRN <https://sites.google.com/nihr.ac.uk/hsrtoolkit/dissemination-impact/implementation-science>

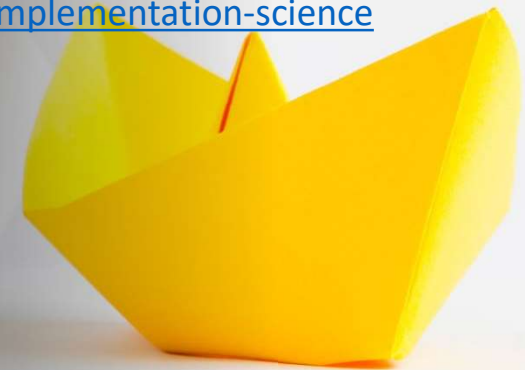
Frameworks:

CFIR Consolidated Framework for Implementation Research

NPT Normalisation Process Theory (Carl May, LSTHM)

TDF Theoretical Domains Framework (Jill Francis, City)

PARIHS Promoting Action on Research Implementation in Health Services



<https://impsciuw.org/implementation-science/research/frameworks/>

Encouraging research

