



THE ASSOCIATION OF
PHARMACY TECHNICIANS UK



Getting started in research: A Webinar for Pharmacy Technicians

Hosted by APTUK

Phil Jones - Director of Education APTUK

In collaboration with Pharmacy Research Professionals





Why should research be of interest to you?

“The value of research in transforming health and care is significant; additionally, staff satisfaction, recruitment and retention is higher among staff who are involved in research.”

NHSE March 2023 Maximising the benefits of research: Guidance for integrated care systems

“Knowledge that is collected and created ‘on the ground’, through daily interaction and negotiation with practitioners, managers and service users, will provide better insight into the issues affecting these stakeholders, be more relevant to the local context and will, therefore, be more easily incorporated into changes in practice.”

BMJ - The role of embedded research in quality improvement: a narrative review



Why should research be of interest to you?

“For every £1 invested in NIHR research, society receives over £13 of returns over 60 years.”

National Institute for Health Care - Embedding a research culture





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“For every £1 invested in NIHR research, society receives over £13 of returns over 60 years.”

National Institute for Health Care - Embedding a research culture





“What is research/how do we build research skills (audit/QI) into our practice?”

Melanie Boughen MA (Healthcare Ed.), FHEA, FaPharmT
Director of Pharmacy Technician Education, UEA and Doctoral
researcher in Education

What is research?

‘a detailed study of a subject, especially in order to discover (new) information or reach a (new) understanding’

- (Cambridge Dictionary (Internet)): [RESEARCH | English meaning - Cambridge Dictionary](#))

Research is important and interesting but it is also complex

Difficult to jump from no skills or knowledge of research theory/practice or experience to undertaking a research project





How can you develop knowledge and skills that lead to research?





Activities that can build on research knowledge and skills

Audit: Compares local current practice against a defined standard

- Determine if something is being done to the expected standard – analyse how close is practice to what would be expected as best practice – recommendations - reaudit – improvements?

Service evaluation: A service evaluation seeks to measure a service that is currently being provided, to see what it is achieving.

- Used to evaluate how a service is performing and produce recommendations for improvements within the area - involves patients, staff - often based on patient /staff/public feedback

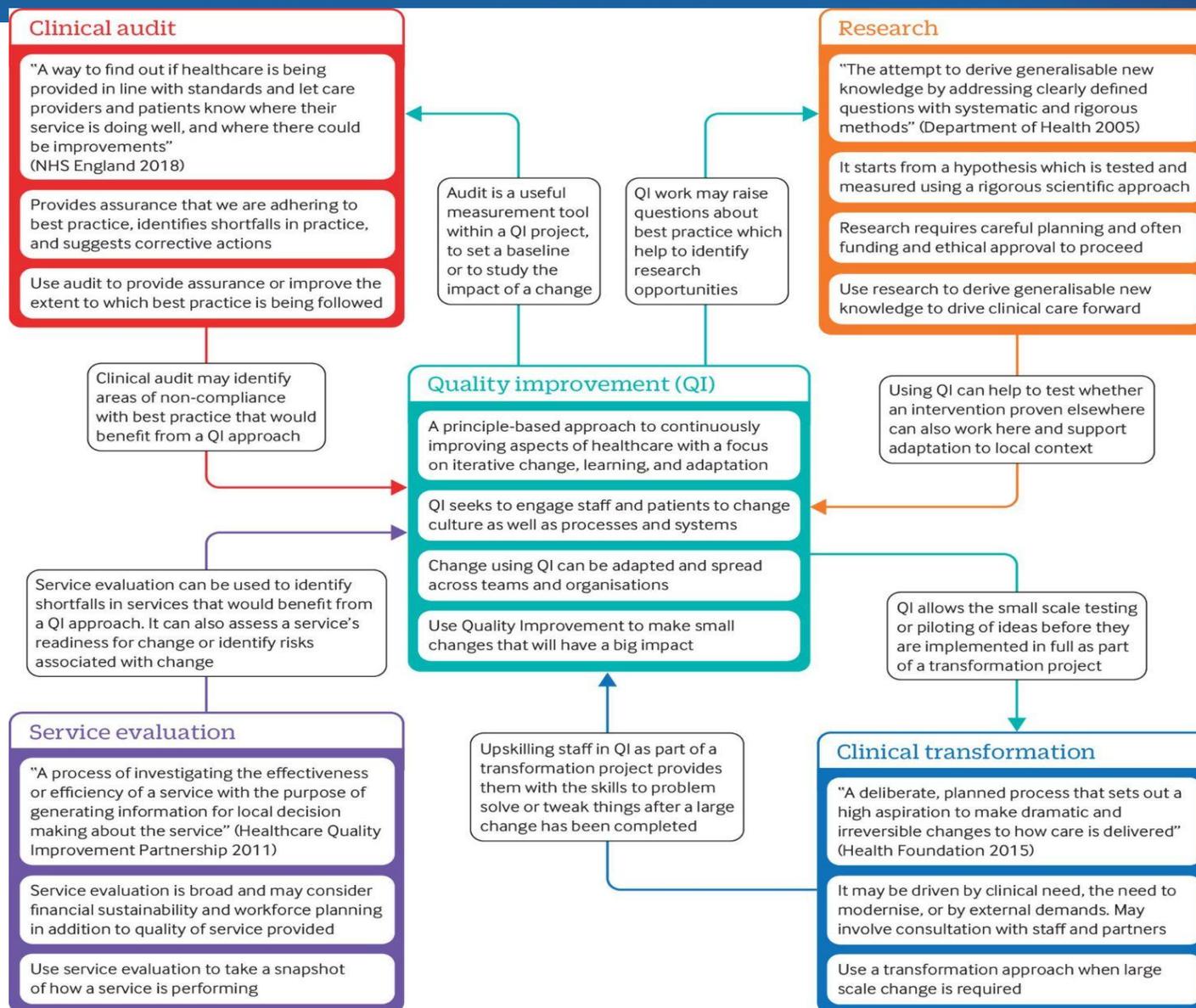
Quality improvement: Using/implementing a systematic change to improve patient experience and outcome

- Basic principle to enhance quality of patient care and services through collaboration of many different stakeholders. Likely to require= local employer authorisation only – must check with the QI lead

Research: Systematic activity using specific methodologies to discover new or generalisable knowledge - must have ethical approval

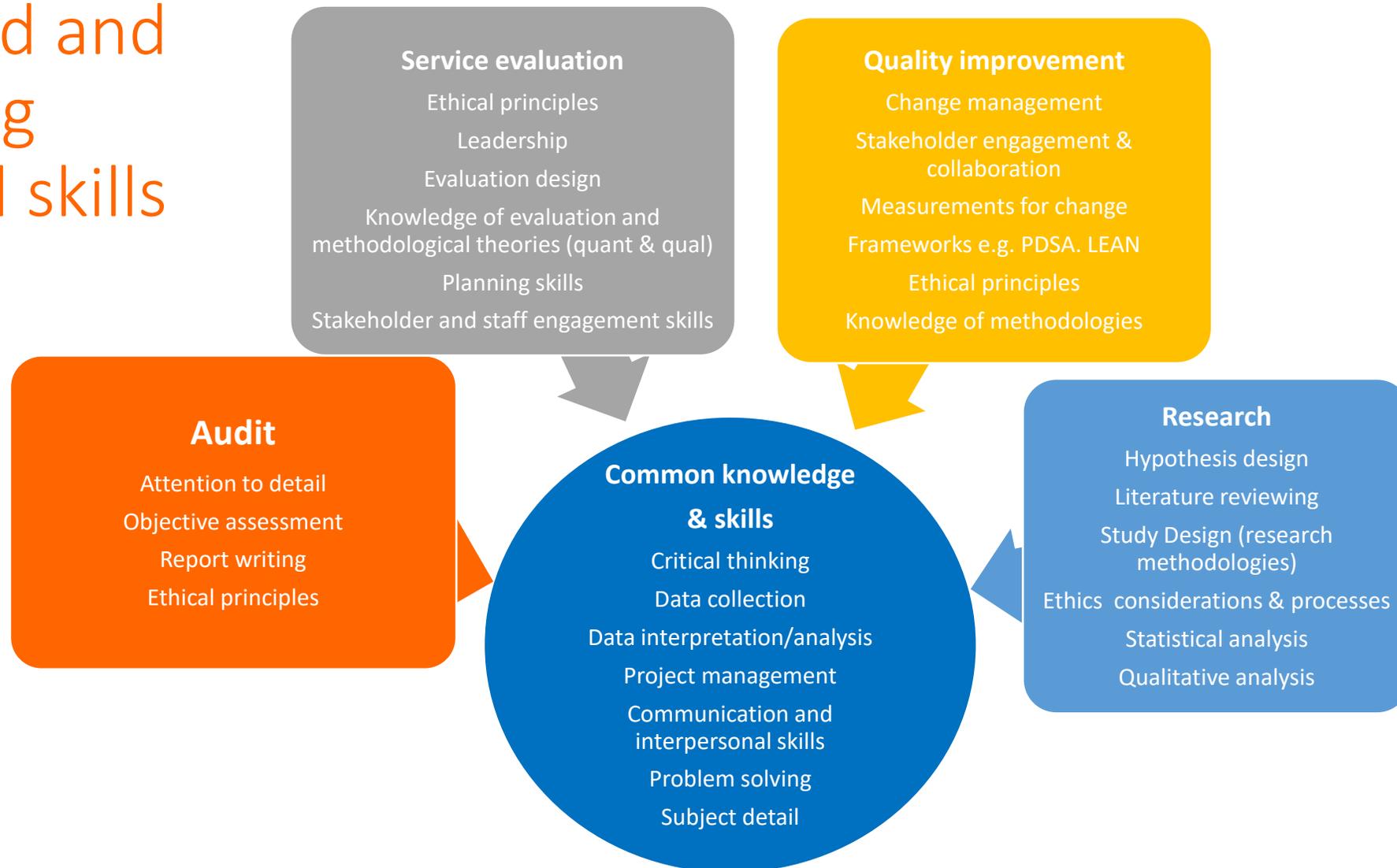
- Exploring and enhancing various aspects of health and care to develop **evidence-based** solutions to challenges in the health sector, ultimately improving human health and patient care.

How quality improvement interacts with other approaches to improving healthcare





Commonly used and overlapping knowledge and skills





How to access learning

FUNDED BY

NIHR | National Institute for
Health and Care Research

**ROYAL
PHARMACEUTICAL
SOCIETY**

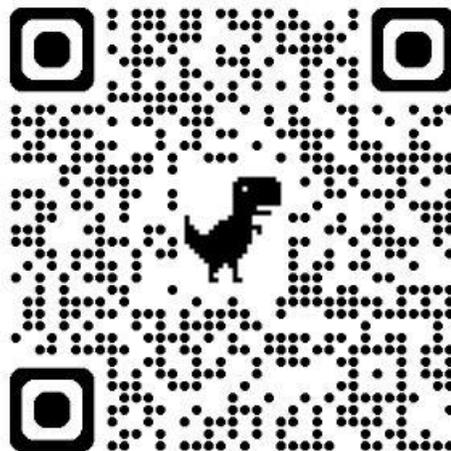
NIHR e-learning

- As a module of another post qualification course e.g. Master's degree
- YouTube videos – UK Healthcare Research

Who are these e-Learning modules for?

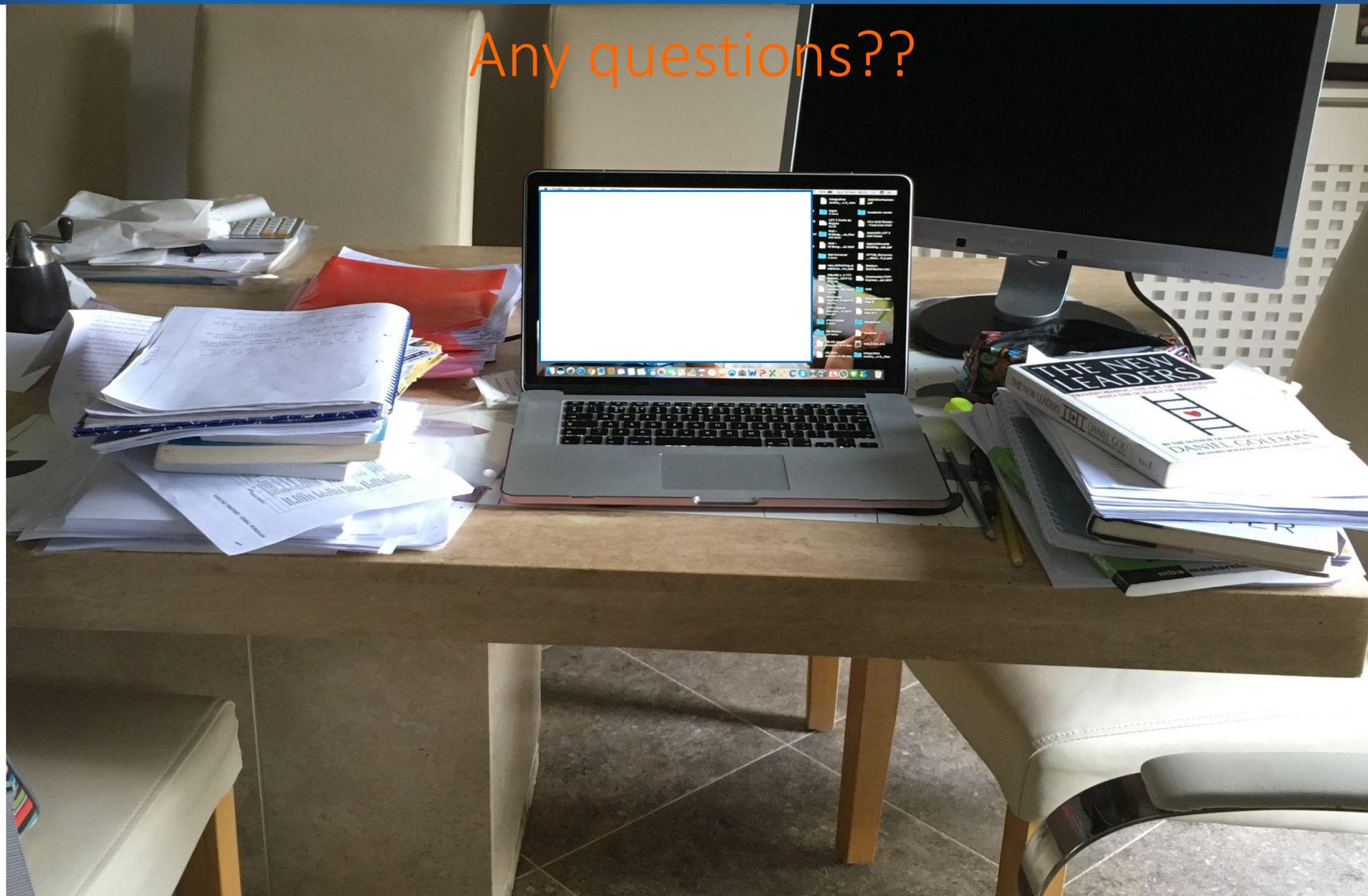
Pharmacists and pharmacy technicians interested in research

We want to build pharmacy professionals' knowledge and skills in research, so they can help to provide the evidence base to improve the practice of pharmacy and the health of the public.





Any questions??





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Opportunities for Pharmacy Technicians

Internships, Service
Improvement & Sharing Work

Laura Fillingham & Jess Humphreys

It's all about

you & me & him & her & them



Why this matters

Pharmacy Technicians are essential in innovation and service development

Growing national focus on workforce development

Opportunities to lead change and showcase impact

Rapidly developing role with new ways of working

Showcases the skillset of Pharmacy Technicians

May lead to career progression

Internships

(Example NEY Genomics Internship)

Increased
knowledge &
confidence

Leadership

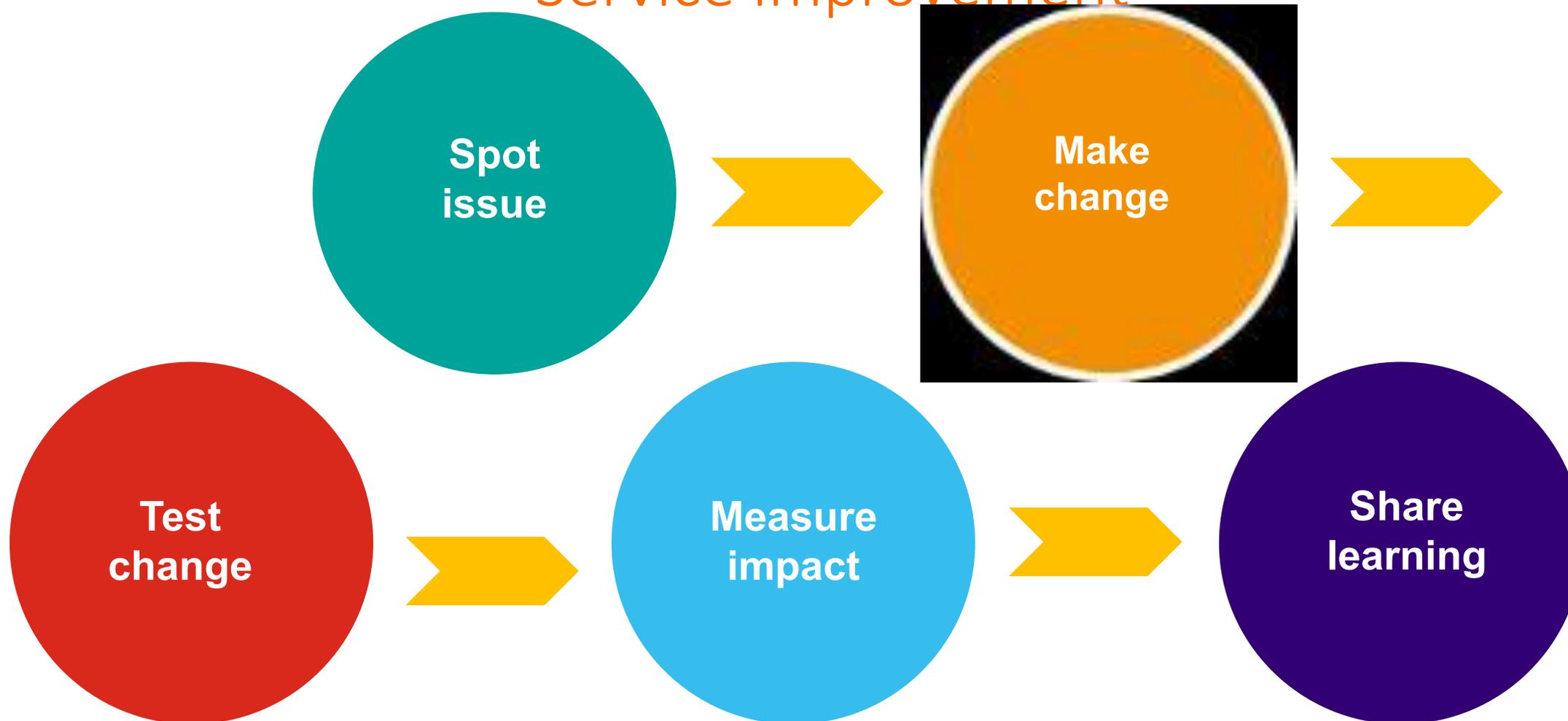
Project
management
skills

Networking
&
collaboration

Delivered
awareness
presentations,
article and
poster



Service Improvement





Posters & Sharing Work

**Raise the profile
of Pharmacy
Technicians, and
inspire others**

**Posters can be a
way to
showcase
pharmacy
technician-led
innovation**

**Opportunity to
share, learn
and improve.**

**Not limited to
showcasing
only once**



Call to Action

Apply for available opportunities

Offer to lead on projects

Share your work - even small wins matter

Look into joining local research networks

Support is available

PHARMACY TECHNICIAN EDUCATION & TRAINING IN PHARMACOGENOMICS

Jess Humphreys: Pharmacy Technician Intern, NHS North East & Yorkshire Genomic Medicine Service
 Laura Fillingham: Pharmacy Technician Intern, NHS North East & Yorkshire Genomic Medicine Service
 Kemi Webster: Pharmacist Intern, NHS North East & Yorkshire Genomic Medicine Service
 Emma Groves: Consultant Pharmacist, NHS North East & Yorkshire Genomic Medicine Service

INTRODUCTION

Pharmacogenomics (PGx) is the study of how a person's genetic makeup affects their response to medicines. It helps us to understand why some people experience side effects or do not respond to certain medicines, while others do.

Due to the varying responsibilities and skillsets of pharmacy technicians (29.2% of the registered pharmacy workforce¹), they are well-placed to assist with the integration of PGx into routine practice by disseminating information, assisting the wider multi-disciplinary team with treatment planning and ordering PGx testing, as well as discussing test results and treatment recommendations with patients.

The aim of this service improvement project was to assess the current PGx training and education needs of the pharmacy technician workforce.

Objectives:

- Establish current levels of PGx knowledge
- Establish current levels of confidence in relation to PGx
- Identify perceived barriers to developing PGx knowledge and confidence
- Identify training and education preferences

METHOD

A cross-sectional survey was conducted between 1st May to 30th June 2025.

An online questionnaire was created in the web-based application Microsoft Forms and disseminated via North East and Yorkshire's Chief Pharmacy Technician network, NHS England Workforce Training and Education teams, NHS Genomic Service Alliances' Pharmacy Leads, Pharmacy Technician training providers, the Chief Pharmaceutical Officer's Pharmacy Technician Professional Advisory Forum, and via social media with the assistance of Community Pharmacy England.

The survey was open to Pre-Registration Trainee Pharmacy Technicians and Pharmacy Technicians practicing in the UK.

24 survey questions included demographic information, Likert-scale questions and free text options to justify responses. Questions were piloted by 5 pharmacists and 2 pharmacy technicians. Quantitative data was analysed using descriptive statistics, while qualitative data from free text responses were thematically analysed.

This survey was registered on Newcastle upon Tyne Hospitals Foundation Trust's clinical effectiveness register (ID number 17584).

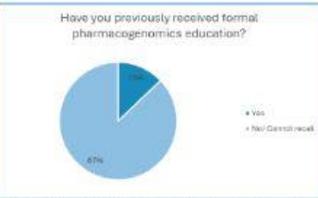


Figure 1 - Graph showing the percentage of respondents who have received formal pharmacogenomics education

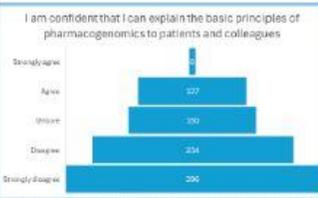


Figure 2 - Graph showing levels of confidence in ability to explain pharmacogenomics to patients and colleagues

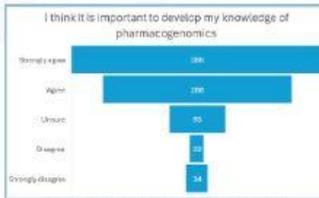


Figure 3 - Graph showing attitudes towards pharmacogenomics learning



Figure 4 - Image outlining the top 5 pharmacogenomics learning needs

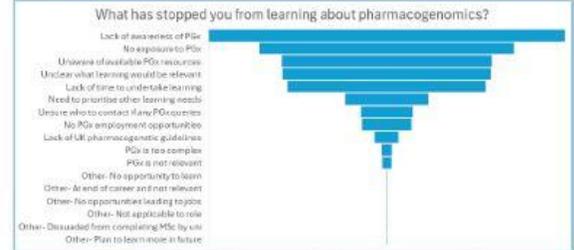


Figure 5 - Graph showing the barriers to undertaking pharmacogenomics learning

RESULTS / FINDINGS

- 87 responses were received - 119 PTPTs, 685 PTs, 11 Other, and 2 excluded
- 87% had not received or could not recall having received any formal PGx education
- Overall, confidence levels in relation to PGx were low
- The top barrier to PGx learning was a lack of awareness
- The preferred learning methods were e-learning, face-to-face training, and online workshops

DISCUSSION / CONCLUSION

The findings suggest that, despite a lack of PGx awareness and education, there is enthusiasm within the workforce to develop knowledge and confidence. This supports the findings of a previous UK pharmacy workforce survey completed in 2022².

Limitations of this survey include a higher response rate from those working in hospital (63.7%) and a small sample size (2.6% of the registered pharmacy technician workforce responded).

References

- General Pharmaceutical Council. Registers [Online]. 2025 [cited 20 June 2025]. Available from: <https://www.pharmacyregulation.org/registers>
- Wickens H, Simpson S, Pope A, Allen J. Pharmacy and Genomic Medicine: A UK-wide survey of pharmacy staff assessing their prior education, confidence and educational needs [Online]. 2023 [cited 10 March 2025]. Available from: https://academic.oup.com/jppp/article/31/Supplement_2/ii53/7453341

EVALUATION OF THE NORTH EAST & YORKSHIRE PHARMACY GENOMICS INTERSHIP 2024/2025

Laura Fillingham: Pharmacy Intern, NHS North East & Yorkshire Genomic Medicine Service
 Kemi Webster: Pharmacy Intern, NHS North East & Yorkshire Genomic Medicine Service
 Jess Humphreys: Pharmacy Intern, NHS North East & Yorkshire Genomic Medicine Service
 Emma Groves: Consultant Pharmacist, NHS North East & Yorkshire Genomic Medicine Service

INTRODUCTION

Pharmacogenomics (PGx) is an essential aspect of precision medicine, presenting the opportunity to tailor drug therapy according to individual genetic profiles. Within the NHS, integrating genomics into routine care is a national priority, as defined by the Genomic Medicine Service (GMS) and the NHS Long Term Plan^{1,2}. Nonetheless, there remains a considerable gap between the increasing professional interest in genomics and the availability of structured, experiential learning pathways that provide practical experience, particularly for pharmacists and pharmacy technicians³.

To bridge this gap and support the professional development of Pharmacists and Pharmacy Technicians in genomics the NHS North East and Yorkshire Genomic Medicine Service (NEY GMS) offered a 12 month intership, 2 days per week between September 2024 and September 2025. The objectives of the intership included:

- Promote genomics awareness, education, and understanding among pharmacy professionals in the NEY.
- Enhance the leadership and project management skills of interns by offering experiential opportunities to support the coordination of regional initiatives focused on enhancing pharmacogenomics services.
- Support personal and professional development in accordance with the NHS England pharmacy genomics workforce, education and training strategic framework⁴.
- Strengthen networking and inter-professional collaboration in the design and implementation of PGx services across NEY.

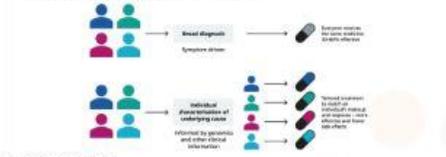


Figure 3: Personalised medicine. From NHS England Pharmacy genomics workforce, education and training strategic framework⁴, adapted from NHS England Learning Outcomes Through Personalised Medicine <https://www.nhs.uk/long-term-plan/2019/09/nhs-long-term-plan-version-12.pdf>

MEASURES

Aim: To evaluate the extent to which the intership achieved its objectives, in order to inform future iterations of the programme design and delivery.

Objectives:

- To examine the individual intern's development in knowledge, skills and confidence in genomics over the course of the intership.
- To assess the perceived value and impact of the intership on the intern's employment organisation.
- To measure the impact of the intership on the implementation of pharmacogenomics and pharmacy workforce development in NEY.

Methods:

The evaluation used a mixed-methods approach. A survey was distributed to all interns at the end of the programme to capture self-reported changes in knowledge, confidence, and overall experience. A complementary survey was also sent to the interns' employers to gather feedback on the value of the intership. In addition, a descriptive analysis of intern's project outputs was undertaken and a count of education and engagement activities delivered by the interns during the 12 month period. The evaluation was registered on the Newcastle upon Tyne Hospitals NHS Foundation Trust clinical effectiveness register.

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RESULTS

The interns engaged in a wide range of educational activities to develop their understanding of genomics and pharmacogenomics. These included completing e-learning modules, interactive tutorials, webinars, and curated resources provided by national organisations such as CPPE, the National Genomics Education Programme, and the Royal Pharmaceutical Society, as well as leading projects and keeping up to date with key guidelines and research developments in the field. They then applied and shared this learning while supporting genomics awareness raising initiatives and contributing to education and training activities.

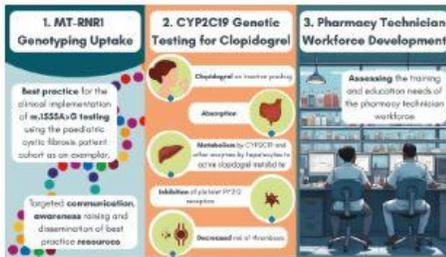


Figure 2: Pharmacy Genomics Internship Project, CYP2C19 genetic testing for clopidogrel adapted from 'Using pharmacogenetics to improve patient outcomes report'⁵

Additional outcomes of the intership evaluation included:

- Two pharmacists and two pharmacy technicians started the intership, with three on track to complete the full 12 months of the intership
- Satisfaction with the intership experience is high.
- Interns showed significant growth in genomic knowledge and educational delivery skills.
- A marked increase in confidence, with interns rating their ability to apply genomics in practice at 9 or above on a 10-point scale
- Interns valued the learning and networking opportunities, and benefitted from the opportunity to individually plan and execute a project
- Challenges included lack of project management experience, budget constraints and balancing intership responsibilities alongside existing job commitments



Figure 3: Results from the confidence question. On a scale from 1 to 10, how confident do you now feel in applying genomics to pharmacy practice, where 1 means 'not confident at all' and 10 means 'completely confident'?

DISCUSSION / CONCLUSION

The Pharmacy Genomics Internship offers an impactful, scalable and effective model for cultivating leadership in genomic medicine within the field of pharmacy. By bridging the gap between interest, knowledge and experience, the program facilitates the sustainable integration of pharmacogenomics into routine pharmacy practice, thereby enhancing personalized care delivery in alignment with NHS genomics goals. It promotes leadership, collaboration, and service improvement, making this model a potential blueprint for workforce development in other regions and specialities aiming to incorporate genomics into daily healthcare practice.





Thank you



My Research Journey

Angela Yeomans

**Senior Pharmacy Technician Clinical
Trials at Shrewsbury and Telford NHS
Trust**

September 2025





My Journey

Student Pharmacy
Technician Good
Hope Hospital
Qualified 1984

Rotational Pharmacy
Technician
Royal Shrewsbury
Hospital 1986

Dispensary Manager
1998

Senior Pharmacy
Technician
Clinical Trials 2011

Retirement
September 2025



Initially



- Earliest memory: Acetazolamide suspension to treat Haemorrhagic Ventricular Dilation with a one-page instruction sheet, keeping only a copy of the completed formula sheet.
- SaTH Sponsored studies: Using a black felt tip pen to colour in the back of GTN patches and placebo to blind them to patients in the trial.
- Number of studies increased, more complexity, additional regulations/requirements which required more oversight from pharmacy.
- Good Clinical Practice became the gold standard.





Good Clinical Practice

- Completed a good clinical practice course and began to enhance my knowledge
- Additional courses e.g. University of Leeds Clinical Trials Course (3-day residential)
- Colleagues/friends
- Asking questions
- Reading Books
- Learning from my errors
- Peer support via membership with West Midlands Pharmacy Clinical Trials group
- GCP: Regulate the clinical trial service offered and to begin to build the basis of IMP management.





Integrating Pharmacy

- Integrated Pharmacy into the Research team.
- Attended monthly meetings with R and I and the Research nurses.
- Championed the use a research management system (EDGE) in pharmacy and created workflows
- Integrated new members of R and I into pharmacy – student pharmacy technicians spent time in R and I





Motivation

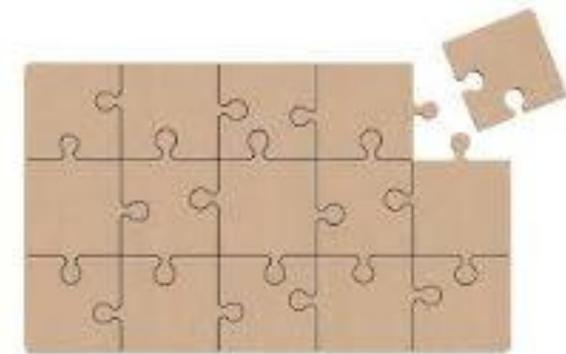
- Personal enjoyment of role, I am proud that I have taken part in facilitating the delivery of world class research.
- SaTH patients have access to new drugs and treatments.
- SaTH doctors' benefit by having the experience of prescribing and using new treatments.
- New studies, always interesting and challenging as no two studies are the same.





Challenges

- Setting up a study - Fitting the pieces together and the management of the IMP.
- Working with sponsors and the importance of compromise.
- Finance and building the team – Business case failure leads to success.





Proudest moments

- Raising the profile of Pharmacy within the Research team, improving communication and team work. Nominated for the SaTH Research Champion Award.

- Work undertaken during Covid, participating in the Recovery and Preg-CoV study.

RECOVERY

Preg-CoV
Evaluating COVID-19
Vaccines in Pregnancy

- Championing the use of EDGE.



- Receiving positive feedback about the new training plan for our Pre-Registration Pharmacy Students.



Is this the future of Pharmacy Technicians?

- Substantial role in setting up and delivering clinical trials, directly impacting patient access to new treatments, finding more effective treatments, improving clinical practice, providing better patients outcomes and reducing costs.
- Ideally suited to become more involved with research, experience and project management skills to offer, leadership, counselling patients, writing protocols /manuals. Aiding with recruitment, IMP administration. So, I believe a pharmacy technician can be a PI and lead on a study.
- My advice if you are interested in any aspect of research is to **ask if you can be involved.**



Finally

- I have loved my role in research, watching new drugs be introduced and seeing them benefit patients but after working over 40 years in the NHS it is my time to leave.
- I hope to pass the baton on to a new member of staff who will enjoy working in research as much as I have and will continue to push the role of a pharmacy technician in research forward.
- Any questions?





Stepping into academia

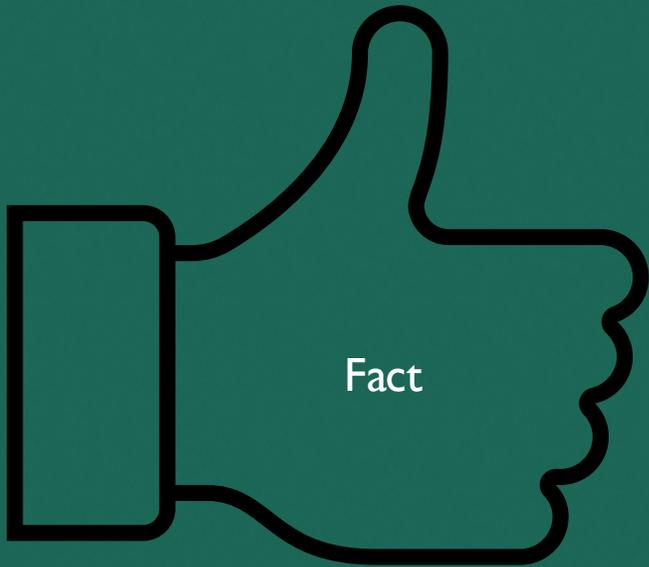
Alison Hemsworth

Post Graduate Researcher

PhD Student



Fact or Myth – Can Pharmacy Technicians Become Academics?



Fact



Myth

What's your personal view or experience?

What exactly is academia?



Institutions



People



Activities



Values



Disciplines

Do you have to enter academia
via the traditional route?



Can you work whilst you are getting there?



Are Funding Opportunities Open to Pharmacy Technicians?



Why should I consider academia/research?



- Underpins innovation
- Enhances problem solving skills
- Keeps a profession current
- Drives policy change

Questions?





THE ASSOCIATION OF PHARMACY TECHNICIANS UK

The “NIHR-Supported Incubator for Pharmacy Professionals”

Who we are and how we can support you!

Charlotte Jones



Pharmacy Research Professionals





Started January 2024 and funded by the National Institute for Health and Care Research.

Our aim is to increase research capacity in pharmacy.



PHARMACY
RESEARCH
PROFESSIONALS

What we can do for you:

Finding opportunities!

- Talk to your colleagues and pharmacists about being involved in audit and quality improvement work – do you have an idea or something you want to improve in your workplace?

England:

- Internships
- INSIGHT (Masters in Research)
- Associate Principal Investigator Scheme

Funding and mentorship via Pharmacy Research UK





Contact us

- Pharmacy Research Professionals (LinkedIn)
- Fill out our feedback form – sign up to our newsletter

