ROYAL PHARMACEUTICAL SOCIETY

Celebrating Excellence in Pharmacy Research and Leadership

Professor Diane Ashiru-Oredope
Deputy Chief Scientist,
Royal Pharmaceutical Society

Meet the Science and Research Team (SRT)



Amira Guirguis
Chief Scientist



Diane Ashiru-Oredope
Deputy Chief Scientist



Yen Truong
Senior S&R Manager



Helena Rosado
Senior S&R Manager



Jegak Seo
S&R Manager

Team objectives

- Develop research capacity and capability in pharmacy
- Increase the profile of science and research within pharmacy
- Drive innovation and build the evidence-base
- Ensure internal processes and products are driven by research/evidence-based decision making

Interested in what we do?
Scan here!

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Royal Pharmaceutical Society
Key Products of Science and Research

NIHR e-Learning & Academic Journals

- 9 modules for pharmacists and pharmacy technicians interested in research.
- The Pharmaceutical Journal

Celebrating Excellence

- The Barnett Award
- The Hanbury & Harrison Medal
- Outstanding Pharmacy Early-career Researcher Award (OPERA)

Research Support Services

- 1:1 sessions
- Mock interviews
- Publishing guidance
- Proposal development help

Research support form

Pharmacy Research Guides

In-depth guidance for all research stages, from developing research question to project evaluation.

Networking &Voices

- Blog posts
- RPS Annual Conference
- Industrial and Antimicrobial Expert Advisory groups
- Science and Research Committee

Research Funding Opportunities Hub

26 currently available funding calls including internships, doctoral, post-doctoral, large project, and funders.

Pharmaceutical Sciences & Industry Hub

Connecting pharmacists & scientists with industry – Opportunities, Skills, and Networks

Why Industry? – *Why this matters*

- **Pharmacists and scientists** are key across the medicine lifecycle **from research to safe use**.
- **Career pathways** into industry are often **unclear or difficult to navigate**.
- Our Hub provides a single, trusted space to **explore roles, build skills, and access real opportunities**.

Where You Can Work – *Role families*

- Medical Affairs
- Clinical Development
- Regulatory Affairs
- Quality (QA/QC/QP)
- Pharmacovigilance
- Manufacturing & Supply
- Market Access
- HEOR
- RWE & Data Science
- Digital & AI
- Medical Comms
- Strategy & Policy

How to Get In – *Routes to industry*

- Internships & Industrial Placement
- Graduate & Associate-level roles
- Fellowships & Secondments
- Returnships for those re-entering the workforce

*Our **Transition Playbook** helps translate NHS/community experience into industry-recognised competencies.*

Take Action Today – *RPS got you*

- **RPS Industrial Pharmacy Expert Advisory Group (IPEAG)** - our expert network that can help shape and quality-assure the Hub.
- **Visit the Industry Opportunities Hub** – links to live roles, programmes and events
- **Request 1:1 support** – mock interviews, application reviews, role shadowing pathways

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Session Summary - *Celebrating Excellence in Pharmacy Research and Leadership*

- **Highlights outstanding achievements** in pharmacy and pharmaceutical science across all career stages.
- **Features 2025 Hanbury Medal & OPERA Award** recipients sharing their research journeys.
- Showcases pharmacists who have secured **national research funding** and their future research ambitions.
- **Short oral presentations** from selected abstract authors presenting innovative, practice-driven research.
- **Panel discussion** on research leadership and the evolving role of clinical academics.
- **Aims** to inspire collaboration, celebrate research excellence, and strengthen the research culture within the pharmacy profession.

PRACTICAL

Learning Objectives

Recognise & Celebrate Research Excellence	Hear from the 2025 Hanbury and OPERA Award recipients and acknowledge their contributions to pharmacy and pharmaceutical science.
Understand Current Research Activity Across the Profession	Explore progress in embedding research within everyday pharmacy practice.
Gain Insight into Research in Practice	Learn from selected abstract authors presenting contemporary, practice-relevant research.
Appreciate Leadership in Pharmacy Research	Hear from pharmacists awarded national research fundings (e.g. NIHR, Kidney Research UK pharmacy fund, PRUK) on their research ambitions and future direction.

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OPERA Award Lecture (joint winner): Transforming treatment access through microneedle-based drug delivery: From concept to preclinical validation

Dr Qonita Kurnia Anjani, PhD
Research Fellow,
Queen's University Belfast

The journey so far....



Registered as a Pharmacist
(April 2018)



Completed my PhD
(October 2020)



Starting my Postdoc era
(January 2021)



Still postdoc ☺
(till now)
+ Adjunct prof in Indonesia

What I have done so far....

🔬 ***Research & Innovation***

- Developed **microneedle and implantable device models** for chronic and infectious diseases → **102 papers** & **3 book chapters** in 5 years
- Discovered key principles of **hydrogel-forming microneedles** → **4 patent applications**

🌍 **Collaboration & Translation**

- Partnered with **10+ universities** and **10+ pharma/CROs** worldwide
- Supported **translation and clinical readiness** of microneedle technologies
- Secured and managed **QUB internal** & **external funding**

🎓 **Mentorship & Leadership**

- **Co-supervised 20+ students** (PhD, MSc, BSc)
- Active **editorial board member and peer reviewer** for leading journals
- Managed **project budgets and lab resources**

🎤 **Engagement & Outreach**

- **20+ national and international presentations**, including **7 invited talks**

Still find time to **fix HPLCs and save the day!** 😄

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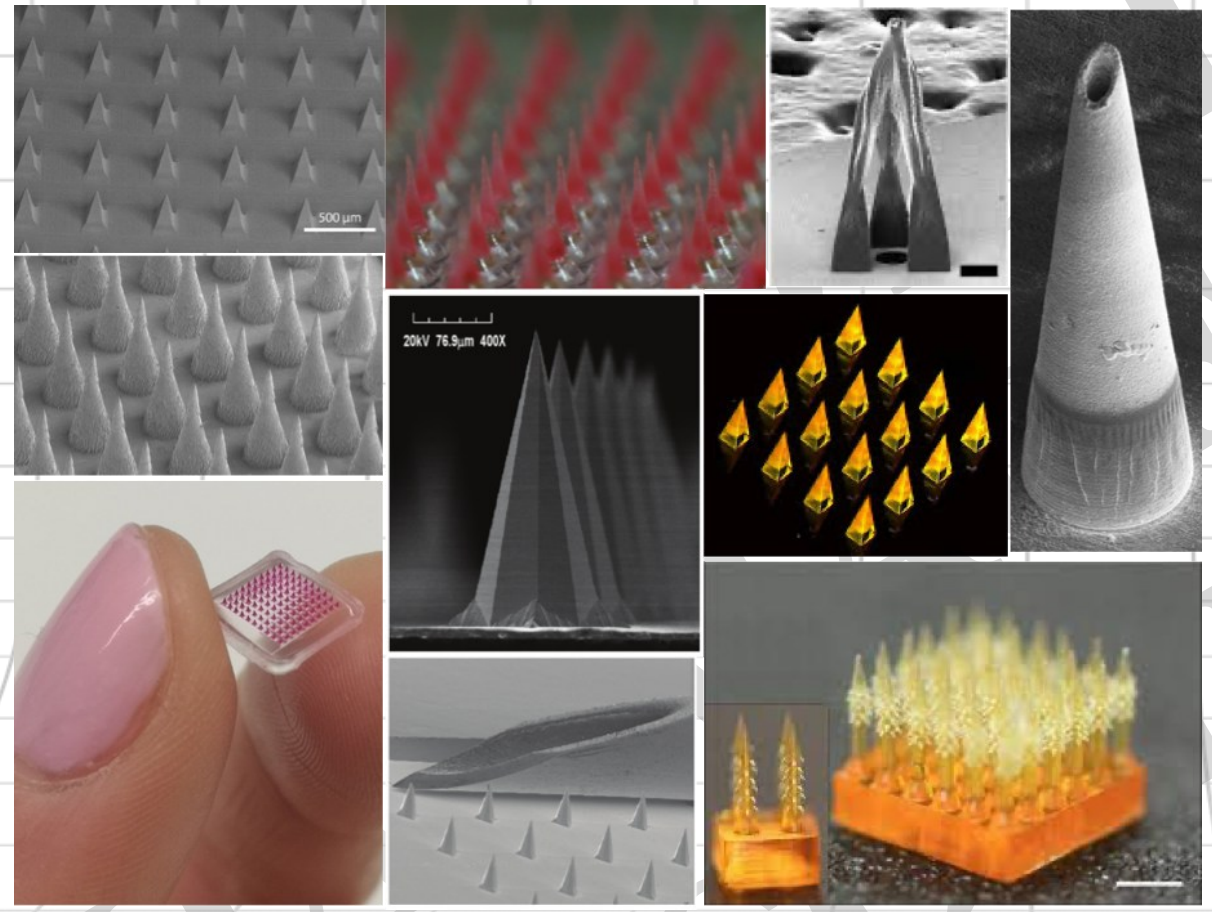
In this journey, I am not alone..







QUEEN'S UNIVERSITY BELFAST

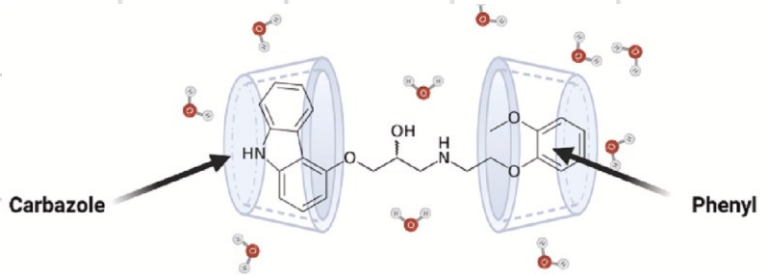


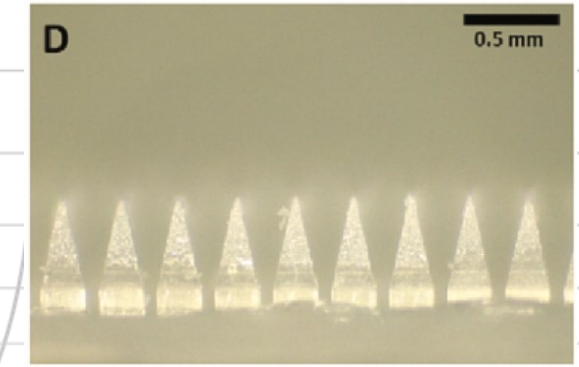
Microneedles or microarray patches

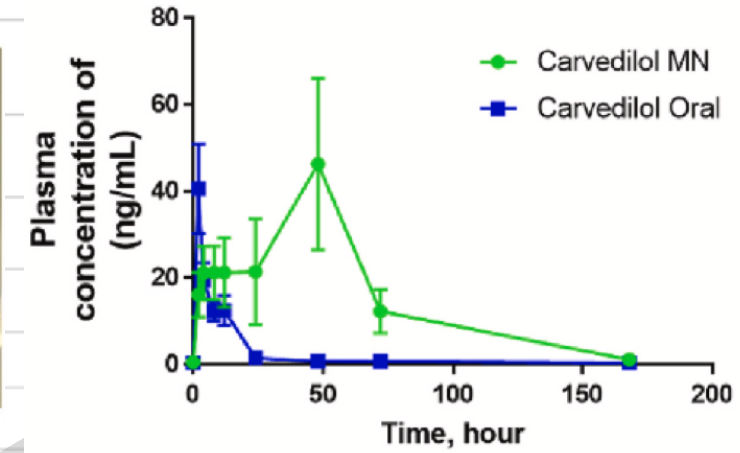
- The height of needles is ranging from **25 to 900 µm**
- Minimally invasive, can be **self-applied**
- As the microneedle array patches presents in solid state, "cold-chain" for transportation is **not required**
- This system can facilitate the delivery of wide range of molecules and compounds.

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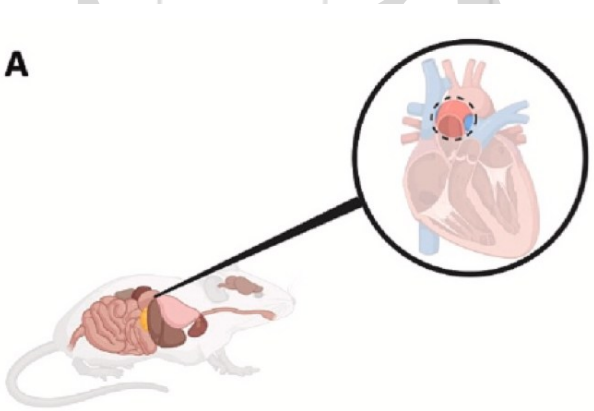
Carvedilol – Hypertension management

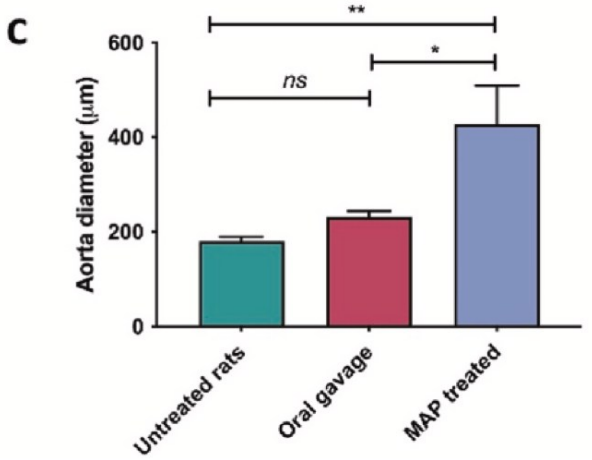


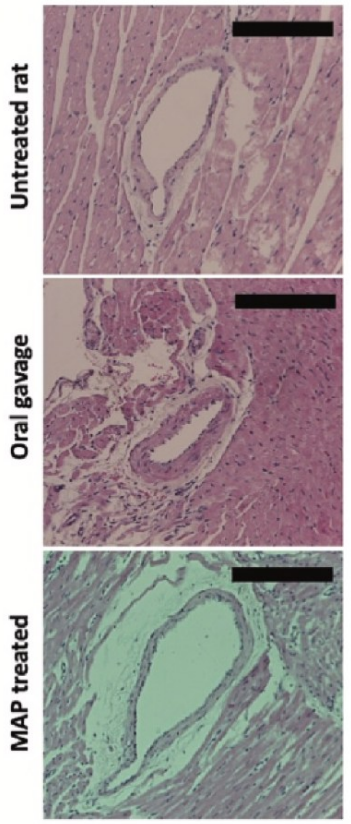




Pharmacokinetic studies showed sustained plasma level for over 6 days with only single application for 24 hours in healthy rats.

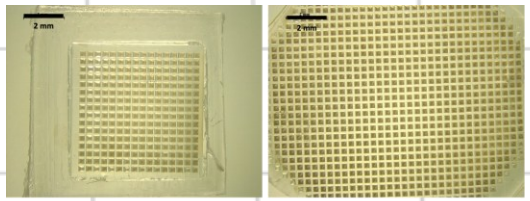


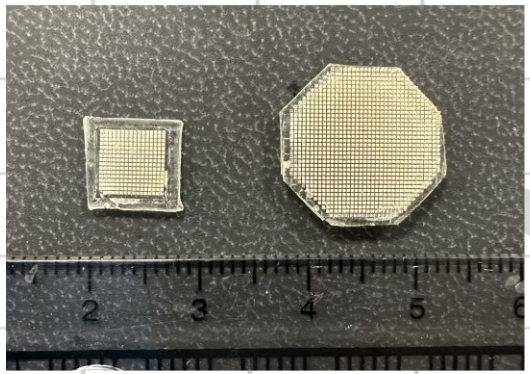


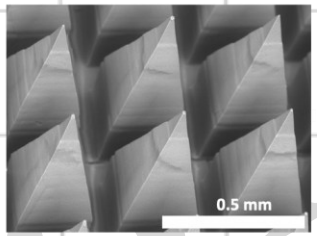


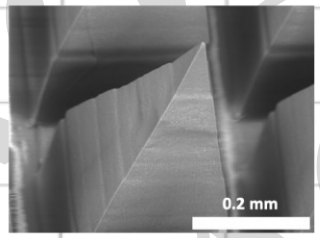
Anjani, et al. *Carbohydrate Polymers (2023)*

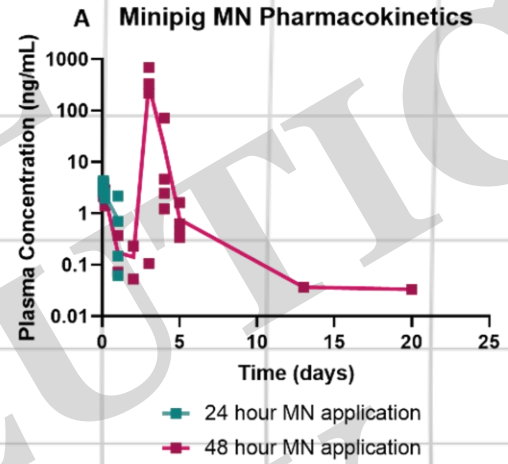
Long-acting delivery of islatravir for HIV treatment

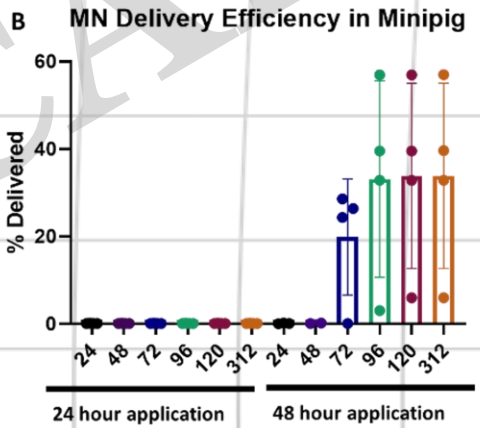


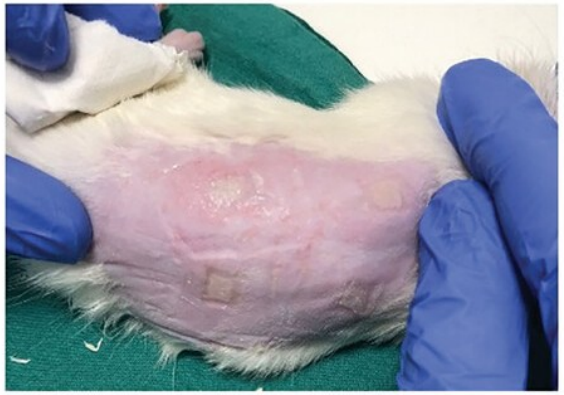


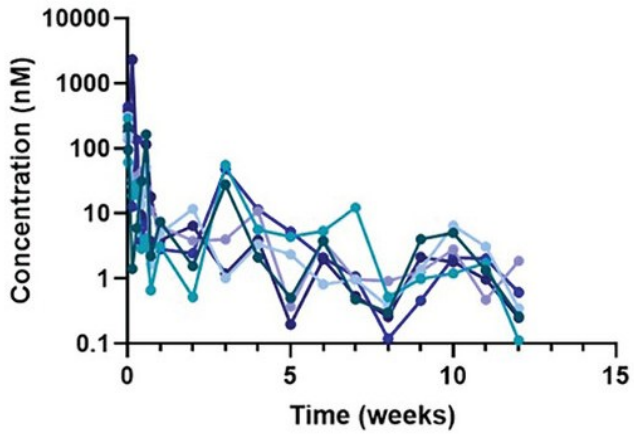




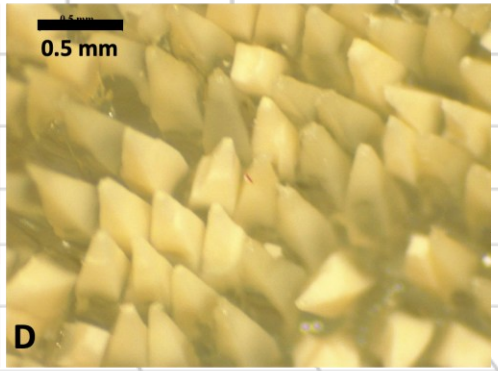


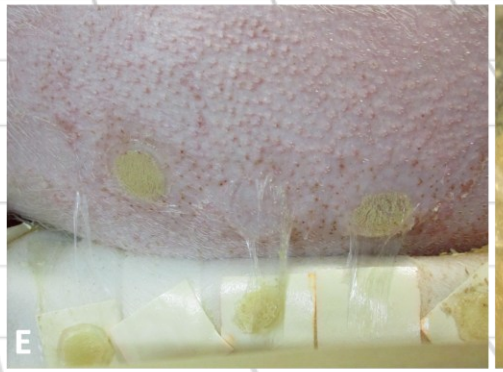


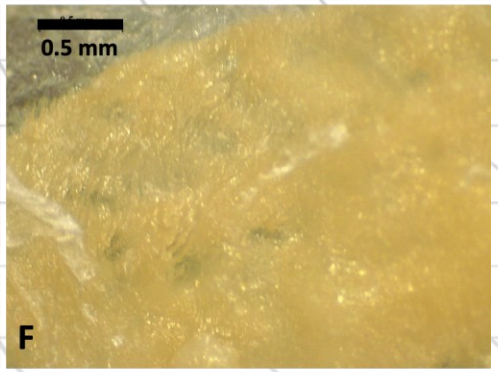








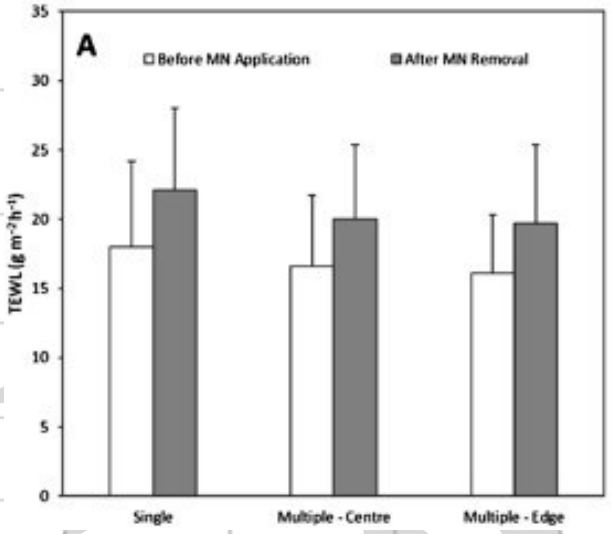


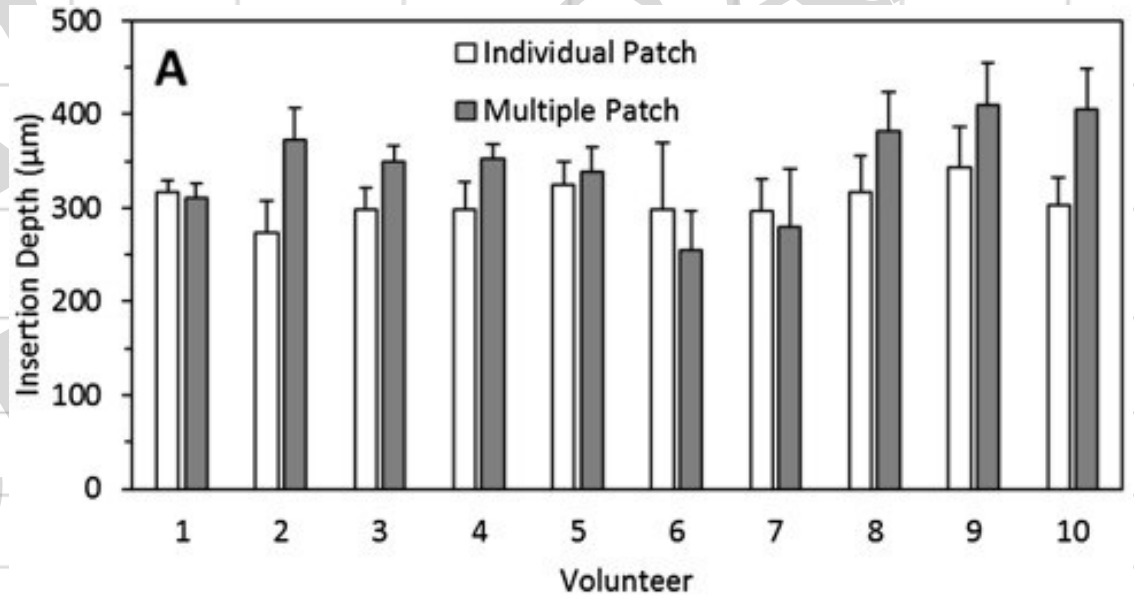


Anjani, et al. (2025). *Advanced Healthcare Materials*

Large Microneedle Patches: Findings from a Human Study





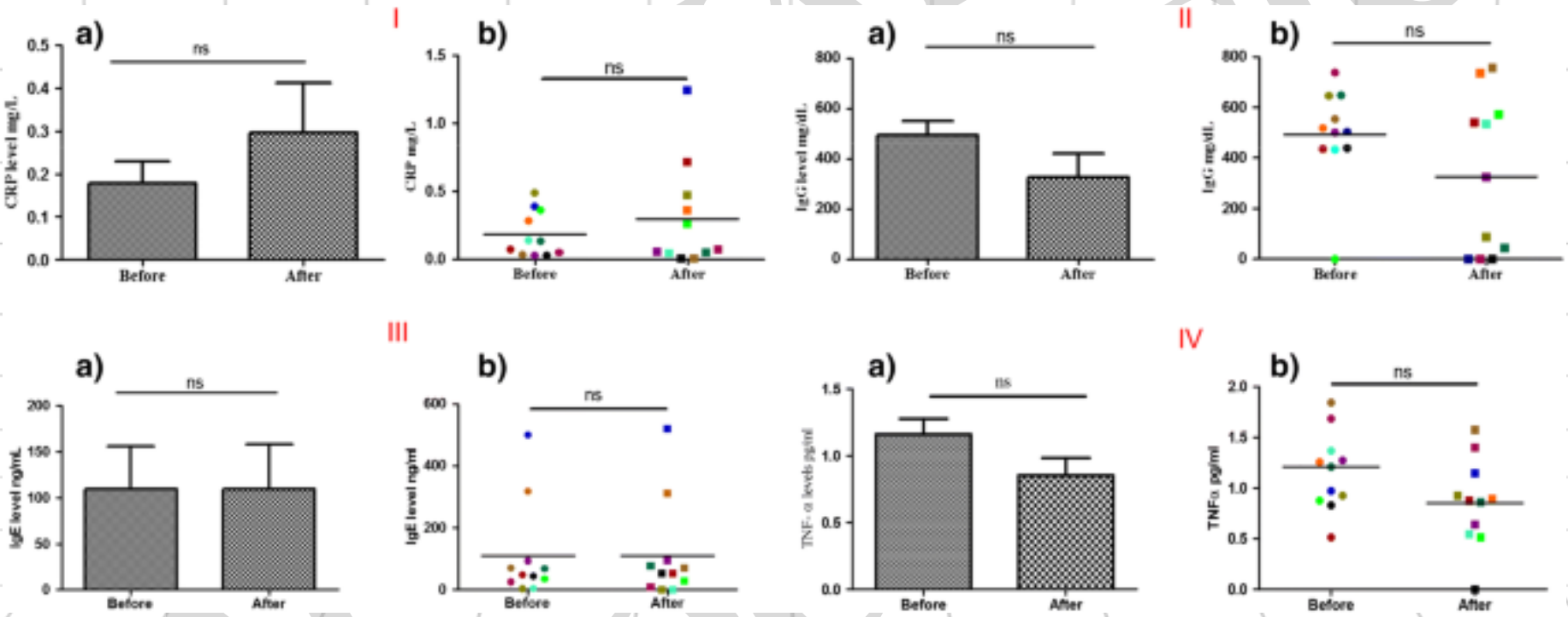


B

	Volunteer skin appearance monitoring			
	Before application	Immediately after MN removal	15 minutes after MN removal	1 hour after MN removal
Volunteer 8				
Volunteer 1				

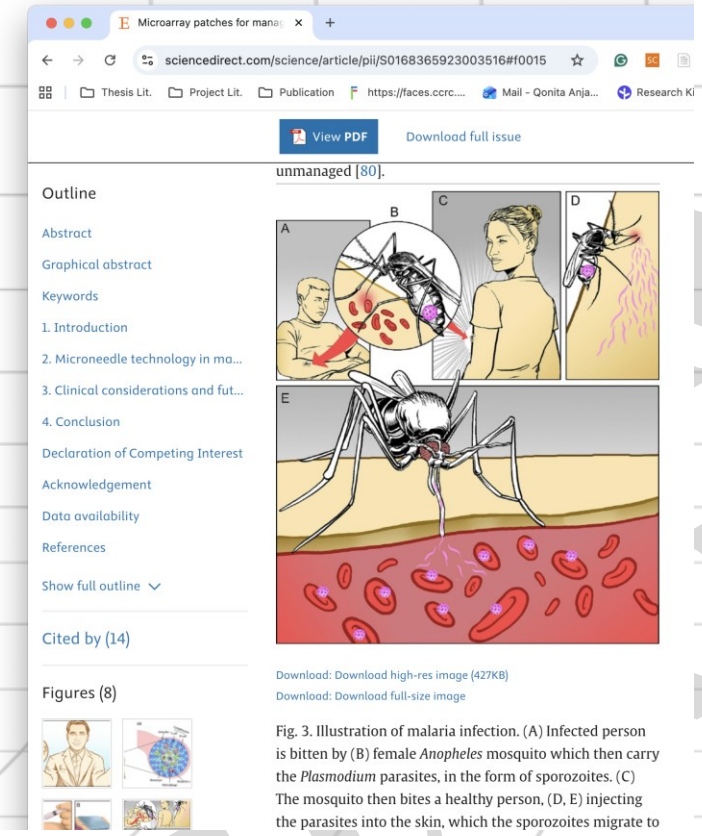
Ripolin, et al. (2017). *International Journal of Pharmaceutics*

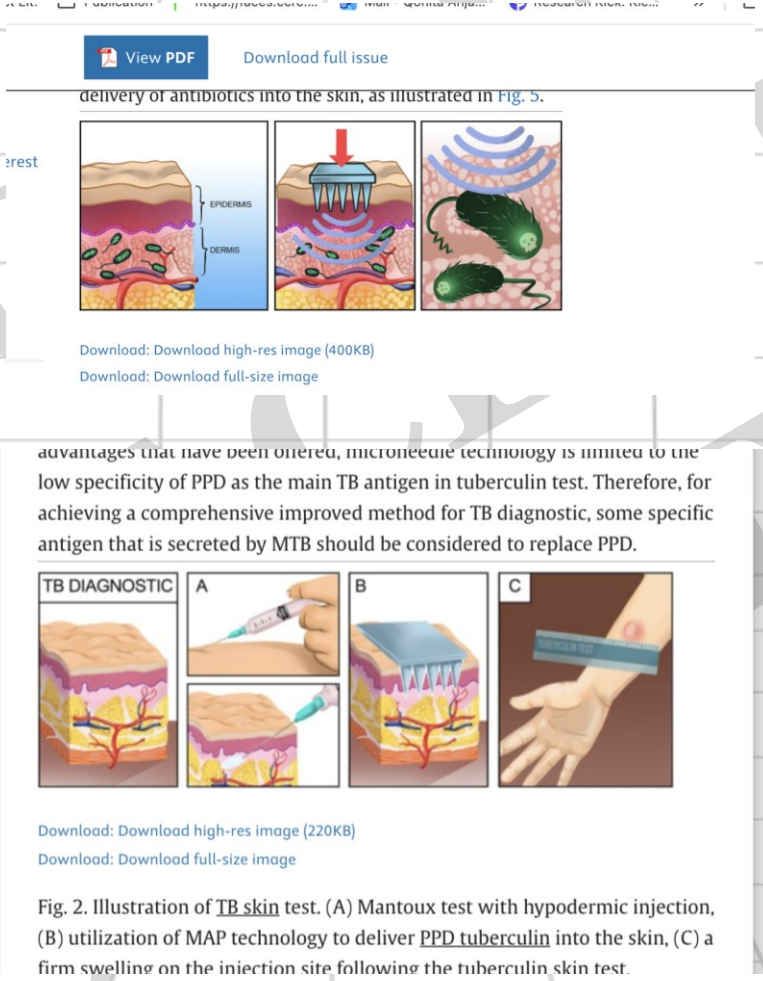
How does the skin respond to repeated applications of hydrogel microneedle patches?

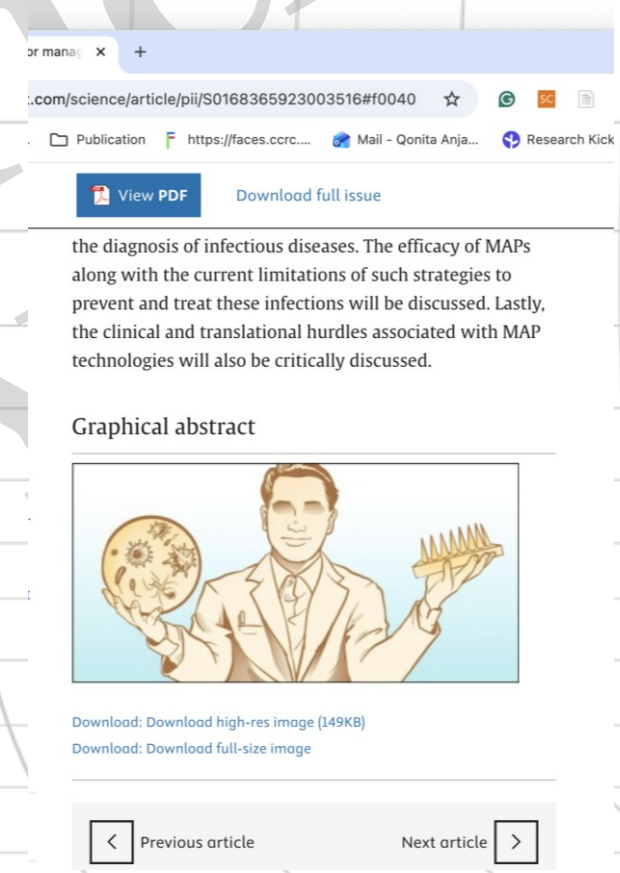


Kasasbeh, et al. (2020). *Drug Delivery and Translational Research*

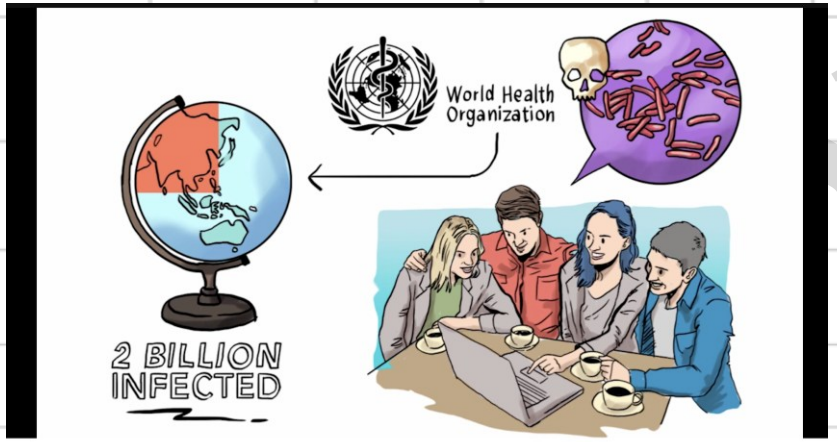
Approaches I use to reach a wider audience and disseminate my research (1) - Review article



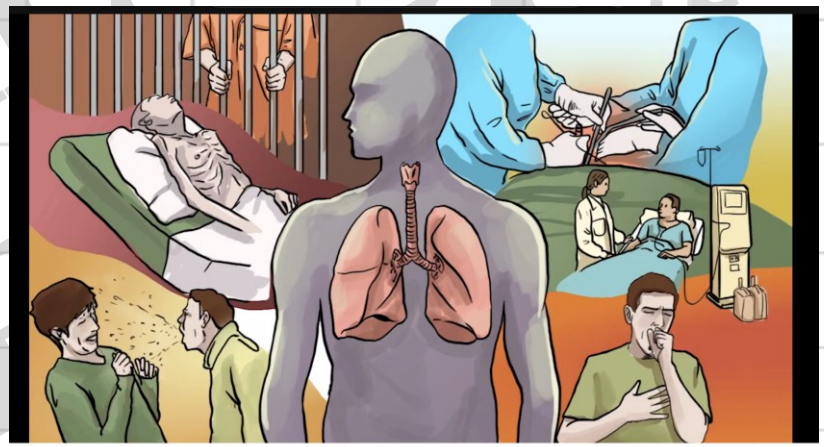




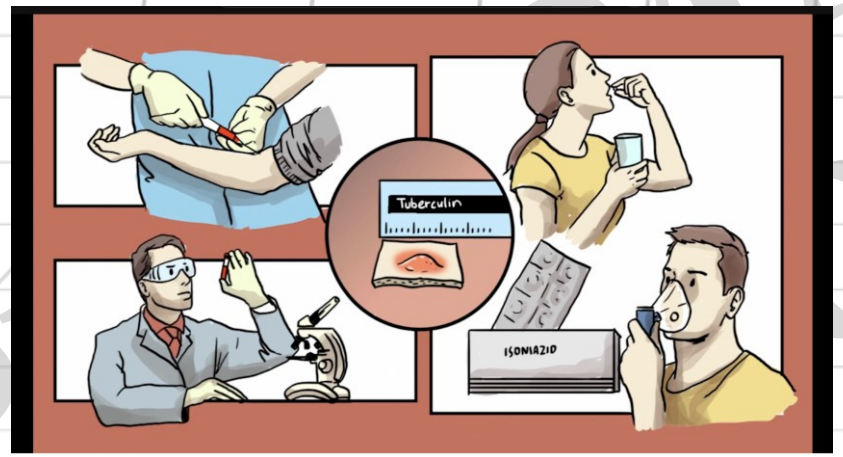
Approaches I use to reach a wider audience and disseminate my research (2)



Qonita Kurnia Anjani- 2020 TDM Focus Group Video Competition



Qonita Kurnia Anjani- 2020 TDM Focus Group Video Competition

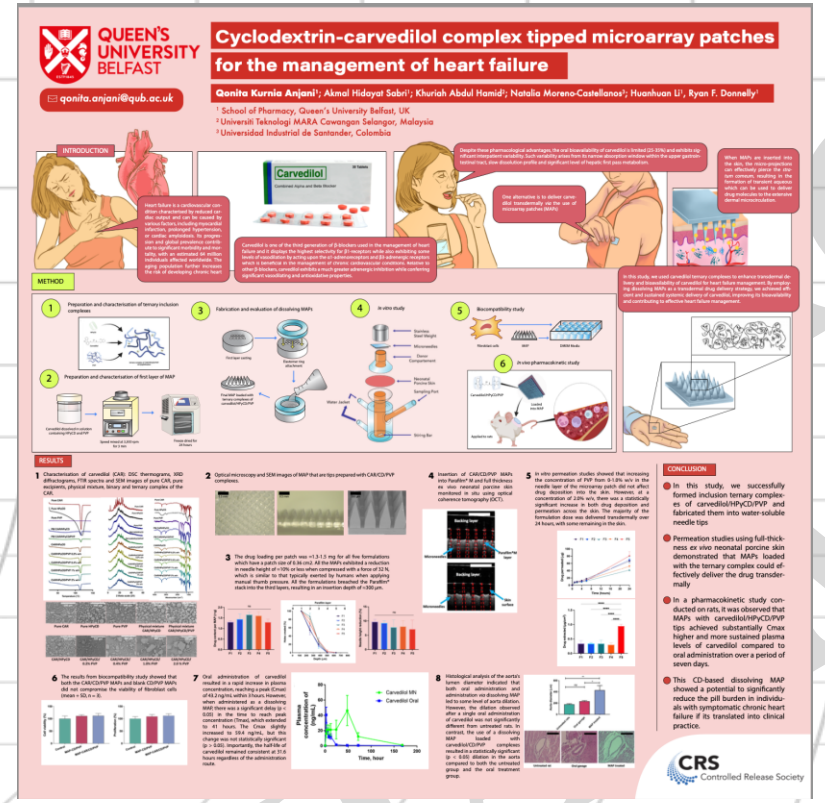


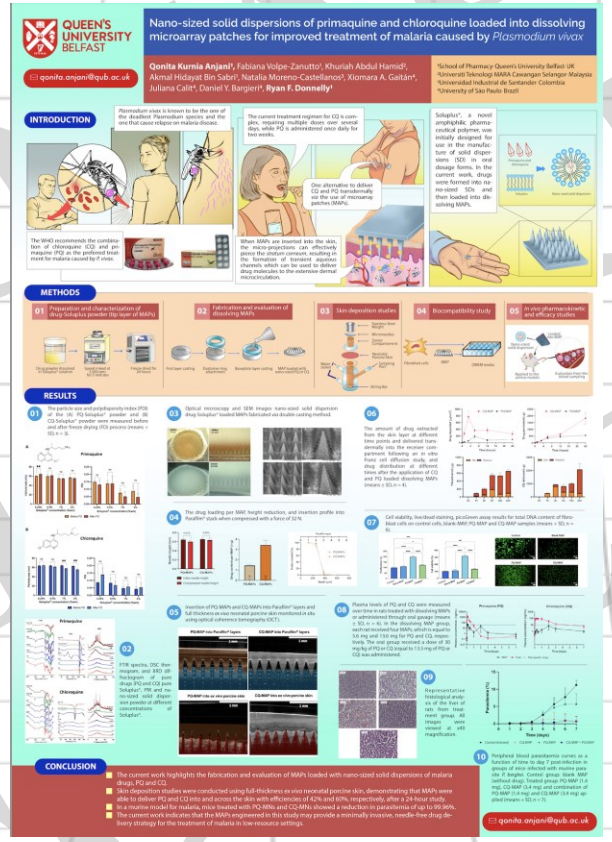
Qonita Kurnia Anjani- 2020 TDM Focus Group Video Competition

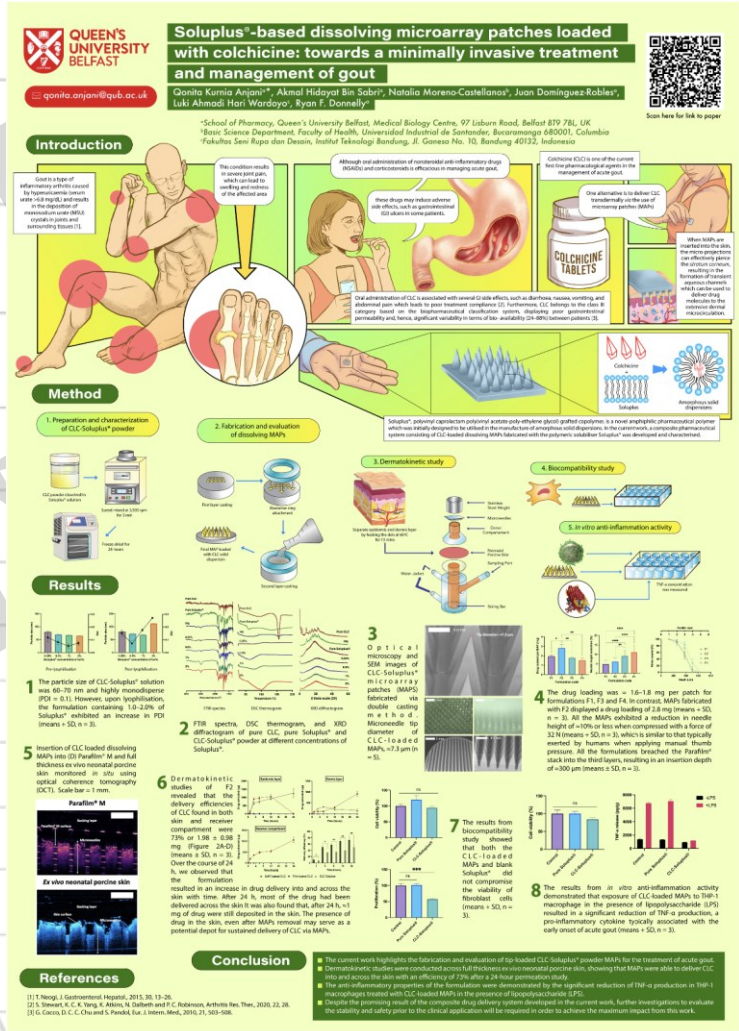


Qonita Kurnia Anjani- 2020 TDM Focus Group Video Competition

Approaches I use to reach a wider audience and disseminate my research (3)







QUEEN'S UNIVERSITY BELFAST

"If you want to go fast, go alone; if you want to go far, go together"
-African proverb-

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Thanks!

QUEEN'S UNIVERSITY BELFAST

qonita.anjani@qub.ac.uk Qonita Kurnia Anjani qonyanjani

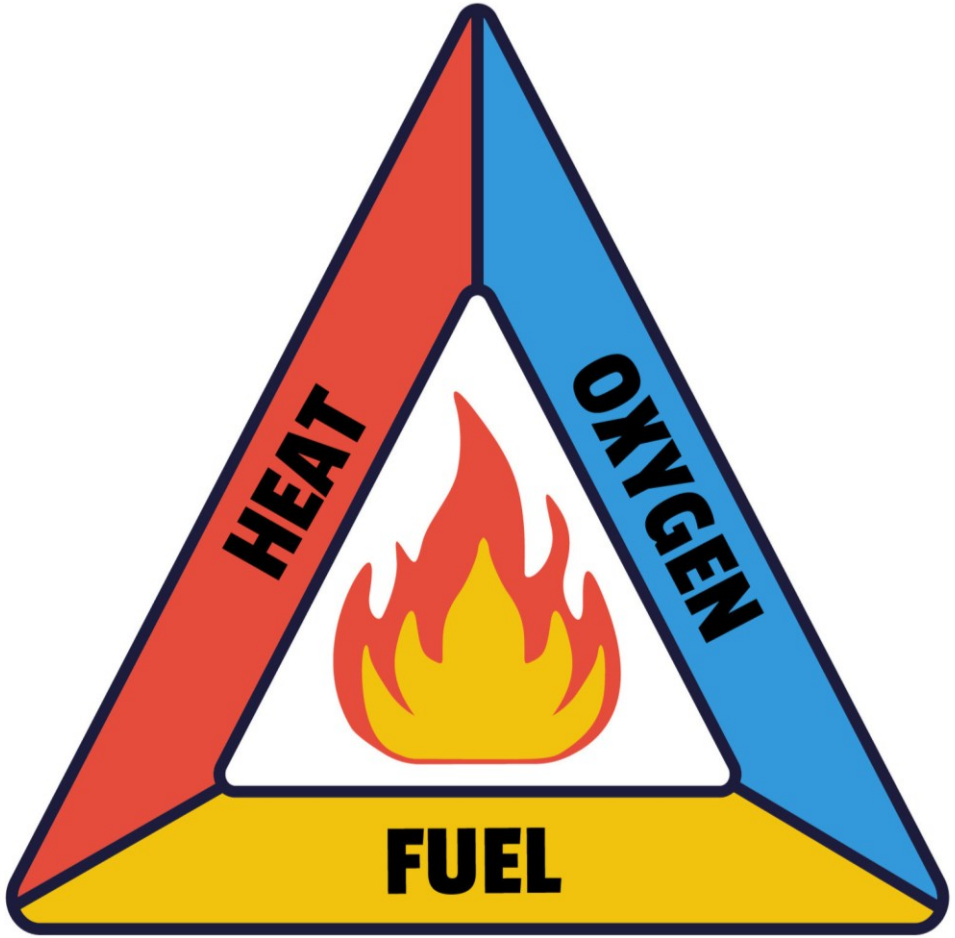
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OPERA Award Lecture (joint winner): When a question in everyday practice ignites a clinical academic career

Dr Jennifer M Stevenson
Integrated Care Pharmacist,
Guy's and St. Thomas' NHS Foundation Trust, London

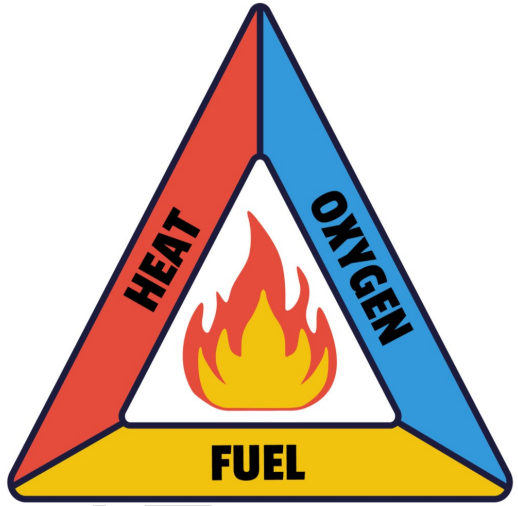
Honorary Senior Lecturer, Institute of Pharmaceutical Science, King's College London

Igniting a clinical academic career



PHARMACEUTICAL

Igniting a clinical academic career





Driving the fire

ROYAL PHARMACEUTICAL SOCIETY

Igniting a clinical academic career



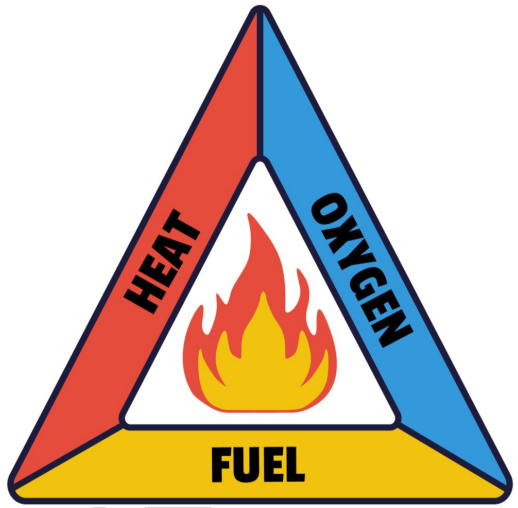
the
PHARMACEUTICAL JOURNAL
A Royal Pharmaceutical Society publication

Medicines management for one patient revealed gaps we could fill

PJ pharmaceutical-journal.com/career/career-feature/medicines-management-for-one-patient-revealed-gaps-we-could-fill/10970443.article
The Pharmaceutical Journal 1 JUL 2009

Lelly Oboh, consultant pharmacist, care of older people, and Jen Stevenson, STEP pharmacist, both at Lambeth Primary Care Trust, report on a case that highlights the need to develop local health community clinical pharmacy teams to lead joint working for older people

Mrs N, aged 87 years, was admitted to the intermediate care centre (ICC) in Lambeth, London, on 20 February 2009. Her GP had seen her for bilateral cellulitis and had referred her because she was "unable to take her medicines correctly". The intermediate care pharmacist (ICP) took a drug history based on the patient's own drugs brought to the centre.



Igniting the fire



Driving the fire

PHARMACEUTICAL SOCIETY

Igniting a clinical academic career



the
PHARMACEUTICAL JOURNAL
A Royal Pharmaceutical Society publication

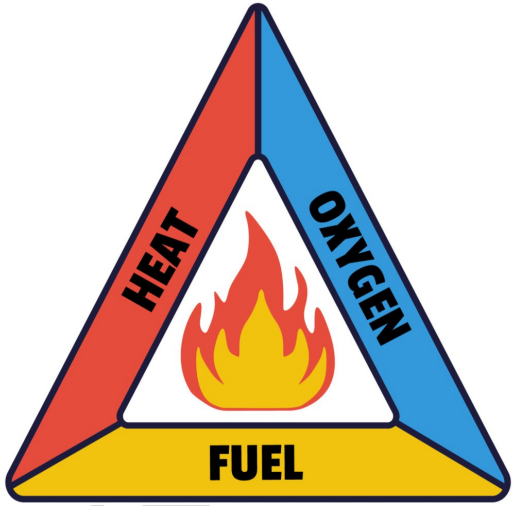
Medicines management for one patient revealed gaps we could fill

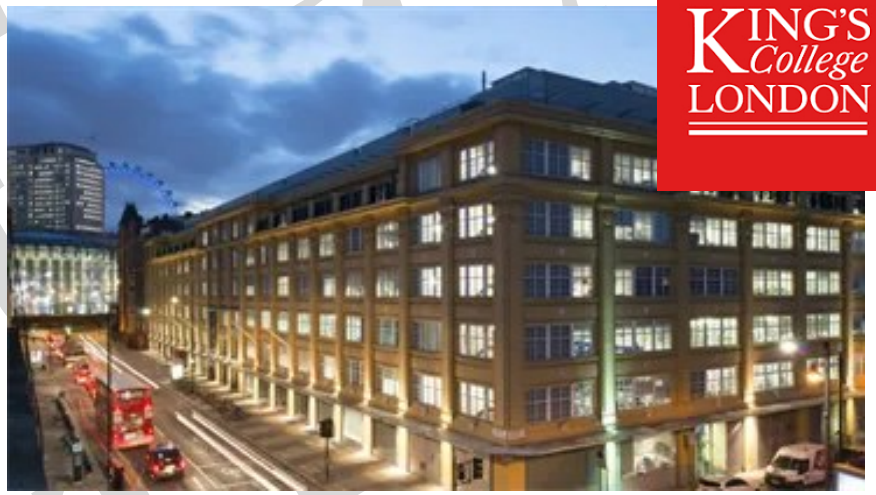
PJ pharmaceutical-journal.com/career/career-feature/medicines-management-for-one-patient-revealed-gaps-we-could-fill/10970443.article
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Igniting the fire





KING'S College LONDON

Growing the fire



Driving the fire

PHARMACEUTICAL

Predicting the risk of post-discharge medication related harm in older adults

Clinical Interventions in Aging
Dovepress
open access to scientific and medical research
Open Access Full Text Article
ORIGINAL RESEARCH

Predicting adverse drug reactions in older adults; a systematic review of the risk prediction models

Age and Ageing 2019; **00:** 1–5
doi: 10.1093/ageing/afz121
Published electronically

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COMMENTARY

Medication-related harm: a geriatric syndrome

Jennifer M. Stevenson[1,3], J. Graham Davies[1], Finbarr C. Martin[2]

[1]Institute of Pharmaceutical Science, King's College London
[2]Department of Population Health Sciences, King's College London
[3]Pharmacy Department, Guy's and St. Thomas' NHS Foundation Trust, London

Address correspondence to: Jennifer M. Stevenson. Telephone: 020 7848 4838, Email: jennifer.stevenson@kcl.ac.uk

Age and Ageing 2022; **51:** 1–9
https://doi.org/10.1093/ageing/afac054

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RESEARCH PAPER

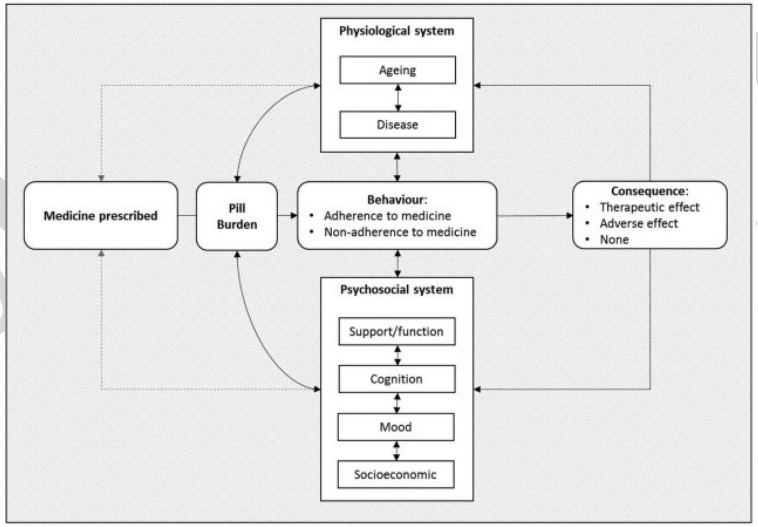
A multi-centre cohort study on healthcare use due to medication-related harm: the role of frailty and polypharmacy

Jennifer M. Stevenson[1,2], Nikesh Parekh[3,4], Kia-Chong Chua[5], J.Graham Davies[6,7], Rebekah Schiff[8], Chakravarthi Rajkumar[9,10], Khalid Ali[9,10]

Modest accuracy:

- Heterogeneity
- Was something missing?





✓ Fulfilled geriatric syndrome criteria

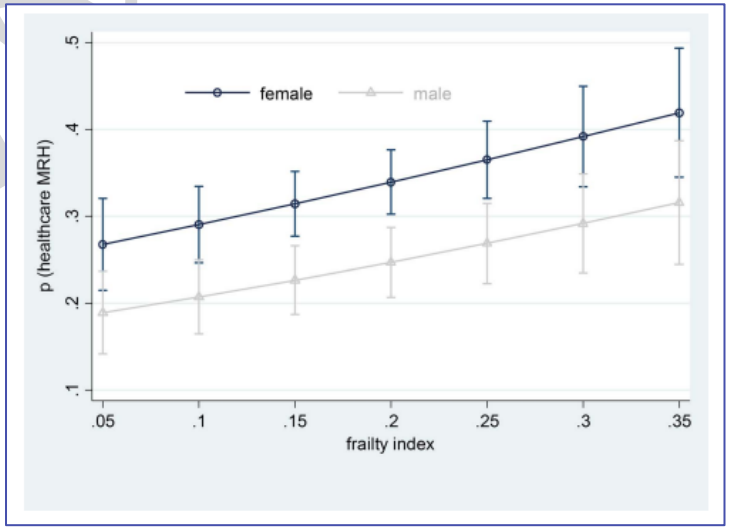


Figure 2. Average marginal estimates (95% confidence intervals) of probabilities of healthcare service use due to medication-related harm at representative values of frailty index.



KCL Institute of Pharmaceutical Science Best PhD thesis 2017

PHARMACEUTICAL

Predicting the RIsk of post-discharge Medication-related harm in the Elderly (PRIME Collaboration)



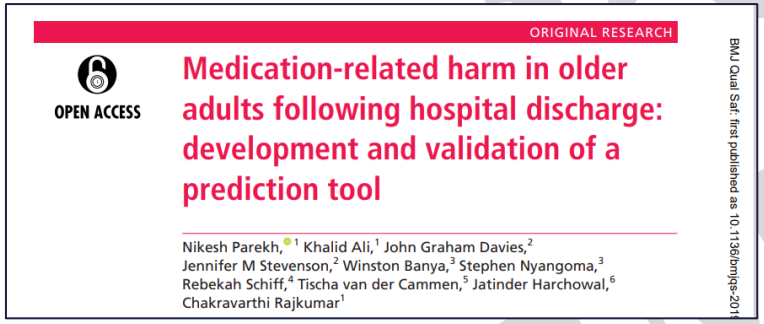
BJCP British Journal of Clinical Pharmacology

ORIGINAL ARTICLE | Open Access

Incidence and cost of medication harm in older adults following hospital discharge: a multicentre prospective study in the UK

Nikesh Parekh, Khalid Ali, Jennifer M. Stevenson, J. Graham Davies, Rebekah Schiff, Tischa Van der Cammen, Jatinder Harchowal, James Raftery, Chakravarthi Rajkumar, on behalf of the PRIME study group, ... See fewer authors

First published: 22 May 2018 | https://doi.org/10.1111/bcp.13613 | Cited by: 1



ORIGINAL RESEARCH

OPEN ACCESS

Medication-related harm in older adults following hospital discharge: development and validation of a prediction tool

Nikesh Parekh,[1] Khalid Ali,[1] John Graham Davies,[2] Jennifer M Stevenson,[2] Winston Banya,[3] Stephen Nyangoma,[3] Rebekah Schiff,[4] Tischa van der Cammen,[5] Jatinder Harchowal,[6] Chakravarthi Rajkumar[1]

BMJ Qual Saf: first published as 10.1136/bmjqs-2014

Aim: Identify the incidence, preventability, severity and cost of post-discharge MRH in older adults

Method: Recruited 1280 patients from 5 hospitals in England and followed up for 8 weeks. Identified MRH using primary care records, patient interview and hospital readmission

Results:

- 37% (413) patients experienced MRH
- 81% (336) were serious (four patients died due to MRH)
- 52% (214) potentially preventable
- Cost = £396 million/year (£243 million/year potentially preventable)

PRIME prediction tool	
Yes = 1, No = 0	
Age	80
Male	1
Antiplatelet drug	1
Sodium level (mmol/l)	142
Antidiabetic drug	1
Past adverse drug reaction	1
Number of medicines	15
Living alone	1
RISK of medication harm requiring healthcare within 8 weeks	37%

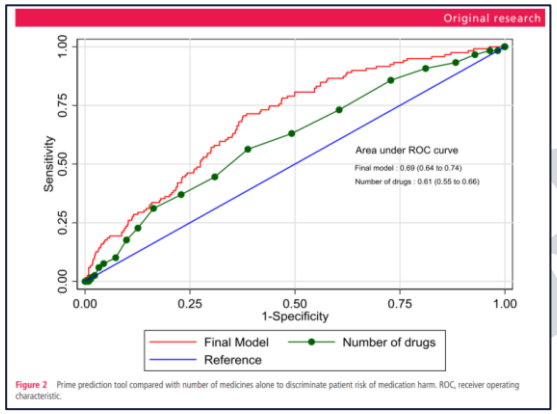


EuGMS 2018: Best platform presentation
HSJ Patient Safety Award 2020: Improving Safety in Medicines Management Initiative

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Predicting the RIsk of post-discharge Medication-related harm in the Elderly (PRIME Collaboration)

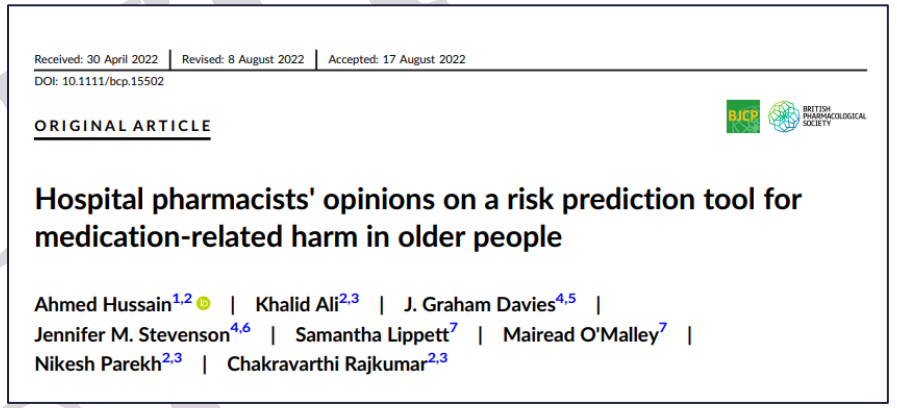
Why don't you just use number of medicines?



Is it better than what we already do?



What do the people using it think of it?



"It does make you kind of think a bit more holistically about the patient. So, you could think about whether the patient gets help with their medications either from family friends or from their carers."

"…it will not just help prioritise clinical screening and medication review but also discharge prioritisation."







PHARMACEUTICAL SOCIETY

Future work, knowledge mobilisation and impact

Non-adherence:

- Understanding non-adherence in older adults living with frailty



Utility of the COM-B model of behaviour change to explain non-adherence to medicines in older adults

Jennifer Stevenson[1], Panos Karveleas[1], Ashleigh Maric[1], Rita Shah[1], Katherine LeBosquet[2], Lelly Oboh[3], John Weinman[1]

- Development of pragmatic interventions

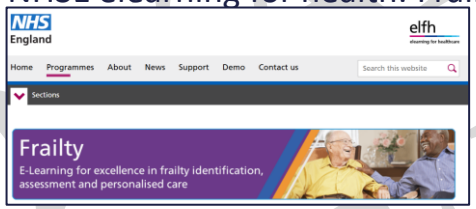
1662 **PILOT TESTING OF A BRIEF PRE-CONSULTATION MEDICINES ADHERENCE SCREENER IN A GERIATRIC OUTPATIENT SETTING**

J.M. Stevenson[1,2], S. Chapman[1], A. Ibrahim, T. Ibrahim, N. Syed[1], J. Weinman[1]
[1] Institute of Pharmaceutical Science, King's College London; Pharmacy Department, Guy's and St. Thomas' NHS Foundation Trust
[2] GKT School of Medical Education, King's College London



Education:

- NHSE elearning for health: Frailty



- MPharm Geriatric Pharmacy curriculum





- Humanising Healthcare podcast



- AHP delivery of medicines reconciliation and support needs assessment in intermediate care services

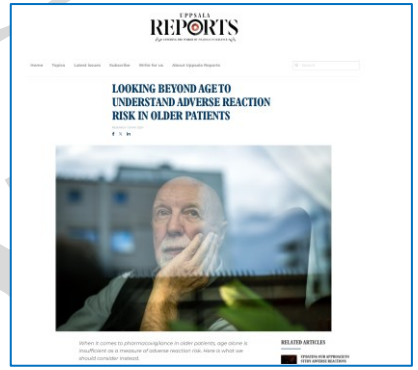




IFIC International Foundation for Integrated Care

Decision-making around medicines:

- Frailty-attuned pharmacovigilance - appropriateness based on risk v benefit



- Clinical Judgement Analysis of the decision to initiate anticoagulation in NVAF

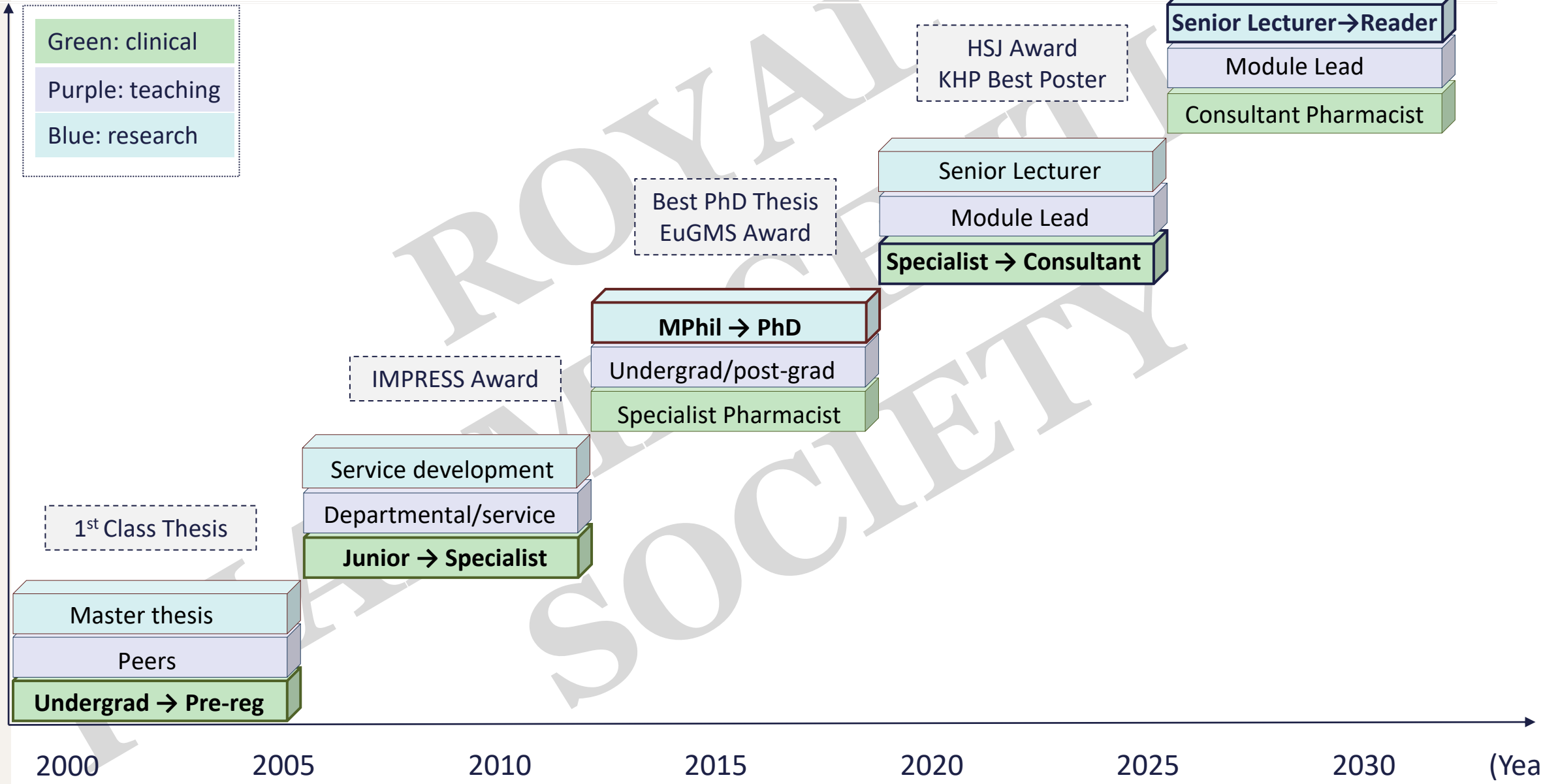




Janique Waghorn
(PhD candidate)

ROYAL PHARMACEUTICAL SOCIETY

Career trajectory: Clinical Academic Pharmacist



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Acknowledgements

- Prof Graham Davies
- Prof Finbarr Martin
- Dr Rebekah Schiff
- Prof Peter Hylands
- Duncan McRobbie
- Prof Jugdeep Dhesi
- Prof Claire Steves
- Prof Tischa van der Cammen
- Dr Aðalsteinn Guðmundsson
- Prof Mirko Petrovic
- Katherine LeBosquet
- Tess Pettifer
- Dr Kia-Chong Chua
- Prof Chakravarthi Rajkumar
- Dr Khalid Ali
- Dr Nikesh Parekh
- Prof Joe Chilcott
- Winston Banya
- Dr Sarah Chapman
- Dr Alison Wright
- Prof John Weinman
- Dr Vivien Auyeung
- Massimo Pezzolato
- Dr Jig Patel
- Dr Tim Rakow
- Janique Waghorn
- Prof Ben Forbes
- Gareth Kitson
- Nicola Torrens
- Elaine Lyons
- Gwen Hopkins
- Lelly Oboh
- Giovanni Furlan…..
- My family and friends!

NIHR | National Institute for Health and Care Research

EuGMS

brighton and sussex medical school

Guy's & St Thomas' Charity &...

KING'S College LONDON

NHS Guy's and St Thomas' NHS Foundation Trust

BGS British Geriatrics Society Improving healthcare for older people

Funding for the future of ageing well
VIVENSA FOUNDATION

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Poster Presentations

ROYAL PHARMACEUTICAL SOCIETY

Best Poster – Oral Presentation
(Poster ID: 154)

Establishing the determinants and potential solutions for pharmacy professionals engaging with research; a theory-based national survey

Charlotte Jones

PHARMACY RESEARCH PROFESSIONALS

Royal Pharmaceutical Society Conference 2025

Establishing the determinants and potential solutions for pharmacy professionals engaging with research; a theory-based national survey

Charlotte Jones on behalf of the NIHR-Supported Incubator for Pharmacy Professionals

ROYAL PHARMACEUTICAL SOCIETY

SUPPORTED BY
NIHR | National Institute for Health and Care Research

Why research?

"Making research everybody's business"



Pharmacy professionals accounted for only 2.7% of the applications in the NIHR doctoral fellowship pool during 2014–2021 [1]

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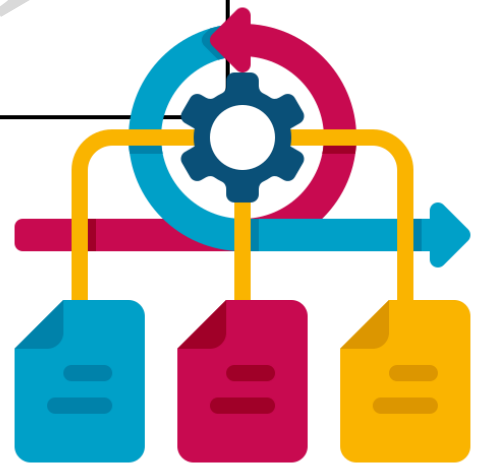
PHARMACY RESEARCH PROFESSIONALS

Methods

Sought to establish the agreement to identified determinants (barriers enablers) in focus groups with the wider profession.

Survey (and prior focus groups) were underpinned by the Theoretical Domains Framework [2] . Descriptive analysis of results.





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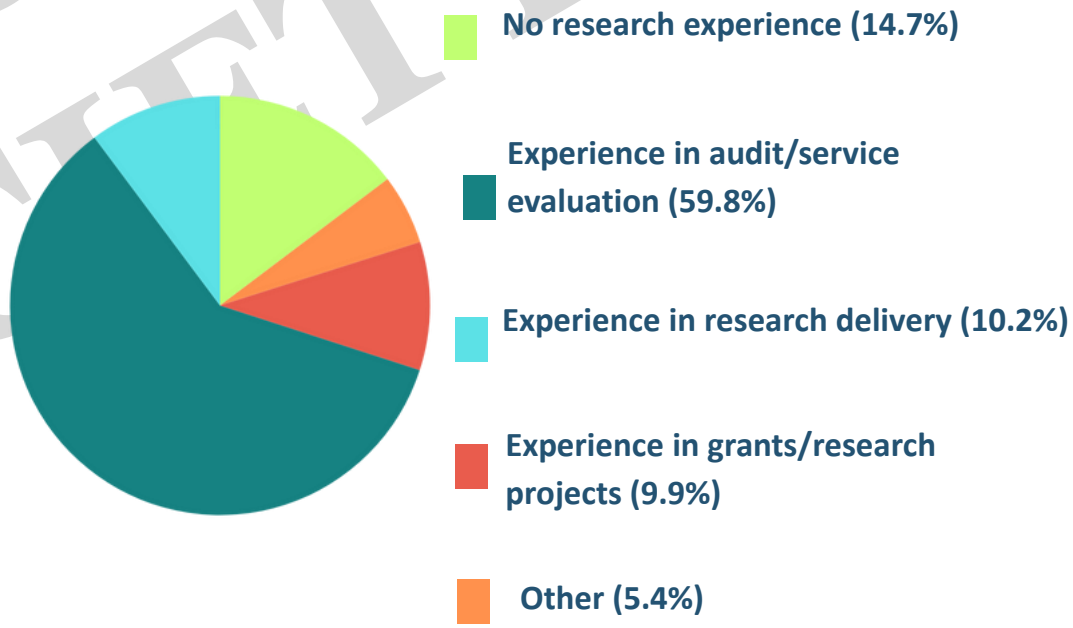
Results

Jan – Feb 2025 - 871 responses.

The majority of respondents were pharmacists (79.1%), and the remainder pharmacy technicians (20.9%).

Most respondents were from secondary care (64.1%) followed by primary care (15.6%).

The majority were based in England (82.5%).



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Results

Capability-related domains

- Mentorship to help monitor progress in research

Opportunity-related domains

- Available time to do research
- Research embedded into pharmacy job plans and career pathways
- Receiving encouragement would support research engagement
- Hearing about research to inspire research engagement

Motivation-related domains

- Would engage with research if it were required in revalidation
- A personal benefit to incentivise research engagement
- Patient/policy outcomes as motivations to do research
- Small-scale projects build confidence to engage with research

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Thank you!

Interested in our work or want to be involved? Get in touch!

LinkedIn: Pharmacy Research Professionals

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1. NHS England. Report of a UK survey of pharmacy professionals' involvement in research 2024 [19/03/2024]. Available from: https://www.england.nhs.uk/long-read/report-of-a-uk-survey-of-pharmacy-professionals-involvement-in-research/.
2. Atkins L, Francis J, Islam R, O'Connor D, Patey A, Ivers N, et al. A guide to using the Theoretical Domains Framework of behaviour change to investigate implementation problems. Implementation Science. 2017;12(1):77.

ROYAL PHARMACEUTICAL SOCIETY

Best Poster – Oral Presentation
(Poster ID: 209)

An exploration of the facilitators and barriers to primary care pharmacists providing mental health care during medication reviews

Anya Bowen

An exploration of the facilitators and barriers to primary care pharmacists providing mental health care during medication reviews



Bowen, A., Hodson, K.
Cwm Taf Morgannwg University Health Board (CTMUHB), School of Pharmacy and Pharmaceutical Sciences, Cardiff University

Presenting at the RPS Annual Conference: :
Miss Anya Bowen MPharm PRPharmS IP MClinPharm

ROYAL PHARMACEUTICAL SOCIETY

background

Why conduct this service evaluation?



The number of patients diagnosed with mental health conditions has increased, with many presenting to the primary care setting. Primary care pharmacists are well placed to support people living with mental health conditions, as they review patients with chronic conditions in practice and provide advice on medication-related issues. [1] However, studies have identified the need to better integrate pharmacists as members of the mental health team and provide further mental health training to better utilise this profession. [2-3]



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AIM

To explore the facilitators and barriers to primary care pharmacists providing mental health care during medication reviews.



METHODOLOGY

- A qualitative study, utilising face-to-face or virtual 1-2-1 semi-structured interviews.
- Pharmacists experienced in primary care medication reviews (cluster pharmacists and prescribing advisors).
- Data analysed using inductive thematic analysis.
- Ethical approval was obtained from Cardiff University's School of Pharmacy and Pharmaceutical Sciences Committee and CTMUHB Research and Development Department.

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results

Twenty-seven pharmacists were invited, of whom thirteen participated. Three key themes were identified:



THEME 1

Competence in Conducting Mental Health Care



THEME 2

Primary Care Infrastructure



THEME 3

Community Of Practice

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DISCUSSION AND CONCLUSION



ADVISORY ROLE

Due to the disparity between theoretical knowledge and applied confidence

TRAINING

Focus on pharmacological and non-pharmacological areas

PEER SUPPORT

Buddying systems, supervision sessions, group discussions to provide emotional support

RESOURCES

Mental health review resources for both pharmacists and patients

ROLE AMBIGUITY

Clarification around pharmacist expectations within the cluster role

IMPROVED CONNECTIVITY

Between primary care and specialist mental health services

PHARMACEUTICAL SOCIETY

THANK YOU FOR LISTENING

Any questions?

anya.bowen@wales.nhs.uk

PHARMACEUTICAL SOCIETY

References

1. National Institute for Health and Care Excellence (NICE). Medicines optimisation: the safe and effective use of medicines to enable the best possible outcomes [Internet]. London: NICE; 2015 [cited 2024 Jun 11]. Available from: https://www.nice.org.uk/guidance/ng5/chapter/recommendations
2. Crespo-Gonzalez C, Dineen-Griffin S, Rae J, Hill R. A qualitative exploration of mental health services provided in community pharmacies. PLoS ONE, 2022;17(5):e0268259. doi:10.1371/journal.pone.0268259
3. Gorton H, Littlewood D, Lotfallah C, Spreadbury M, Wong K, Gooding P, et al. Current and potential contributions of community pharmacy teams to self-harm and suicide prevention: A qualitative interview study. PLoS ONE, 2019;14(9):e0222132. doi:10.1371/journal.pone.0222132

ROYAL PHARMACEUTICAL SOCIETY

Best Poster – Oral Presentation
(Poster ID: 269)

Development of a Nanofibre-Based Drug Delivery Framework of Thymoquinone for Transdermal Application in Localised Breast Tumour Therapy

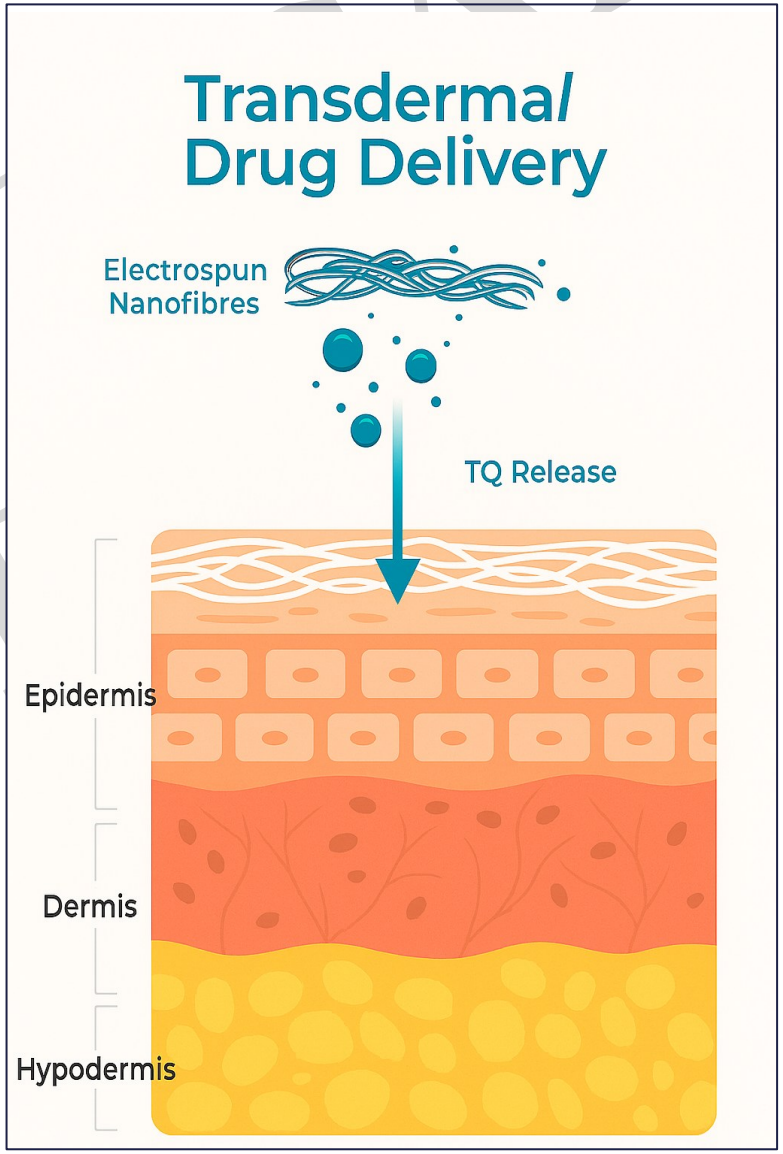
Ghazali, Y.[1], Conway, B.[1], Adebisi, A.[1]

[1] Department of Pharmacy, School of Applied Science, University of Huddersfield, Huddersfield, England

University of HUDDERSFIELD
Inspiring tomorrow's professionals

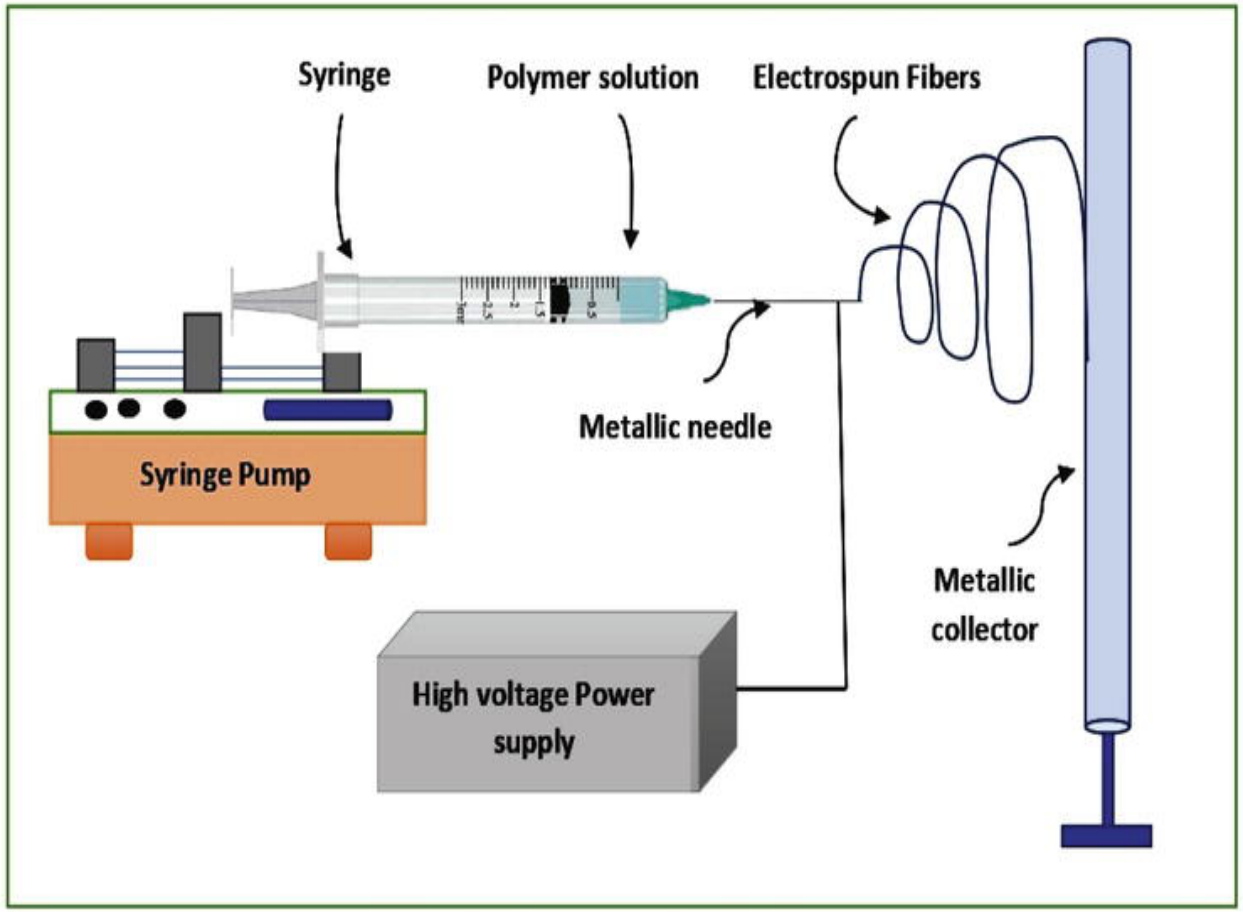
Introduction

- Breast tumour remains a leading cause of mortality [1].
- Current treatments are quite invasive, with limited target precision.
- Nanofibre systems, with high surface area-to-volume ratio can enable controlled and localised release [2].
- In this study, we report the preliminary development of thymoquinone (TQ) - loaded nanofibres, investigating their suitability as a platform for localised transdermal delivery against breast tumours.



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Method



Electrospinning Setup

Polyoxazoline (POX) nanofibres with TQ (1 mg/mL) fabricated using Spinbox System (Bionicia, Spain).

Design of Experiment

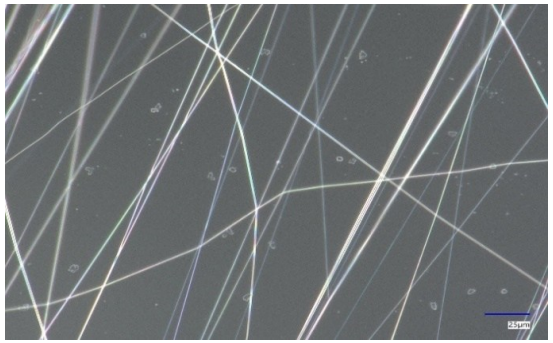
POX concentration (25–35 % w/v), voltage (15–20 kV), and flow rate (0.5–1.0 mL/hr) were varied across 10 trial formulations.

Fibre Characterisation

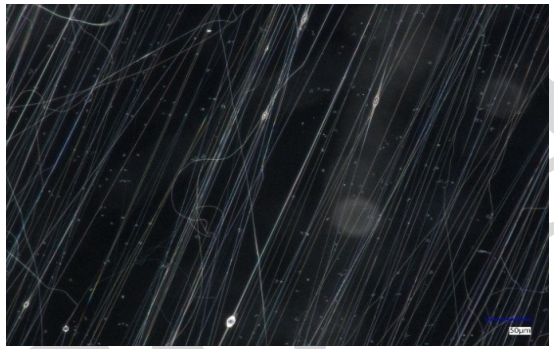
Morphology and diameter assessed via Keyence Microscope imaging and ImageJ analysis.

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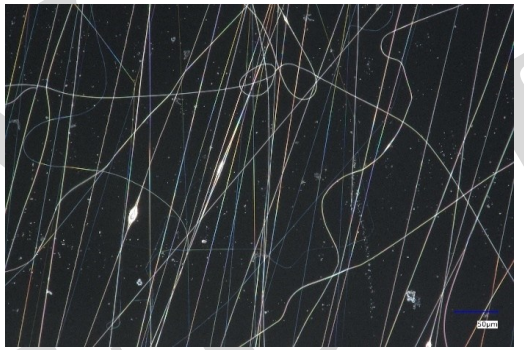
Results



F1 Nanofiber; Diameter = 0.516 ± 0.007 µm



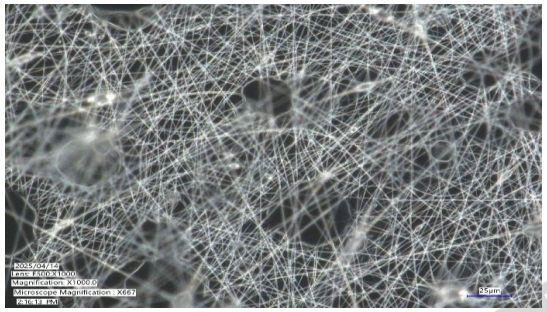
F2 Nanofiber; Diameter = 0.450 ± 0.064 µm



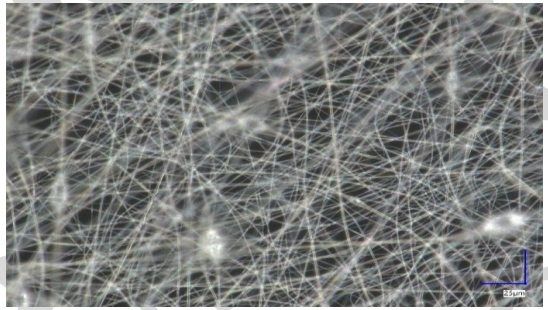
F3 Nanofiber; Diameter = 0.765 ± 0.019 µm



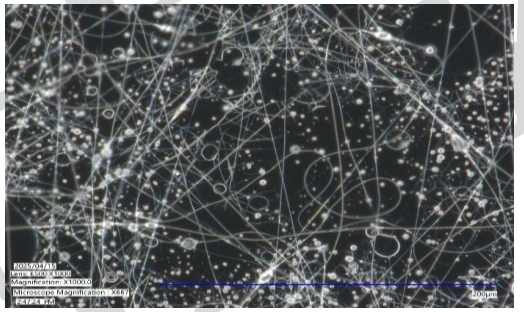
F4 Nanofiber; Diameter = 0.506 ± 0.089 µm



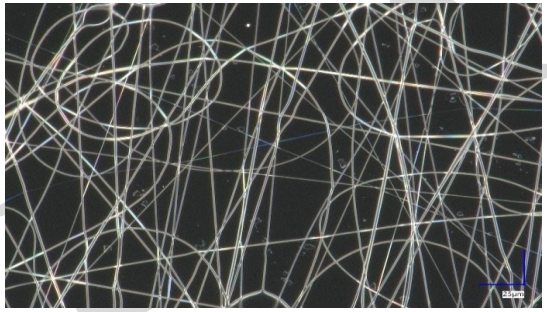
F5 Nanofiber; Diameter = 0.848 ± 0.065 µm



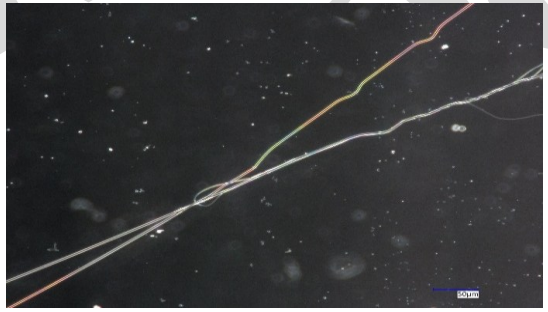
F6 Nanofiber; Diameter = 0.731 ± 0.015 µm



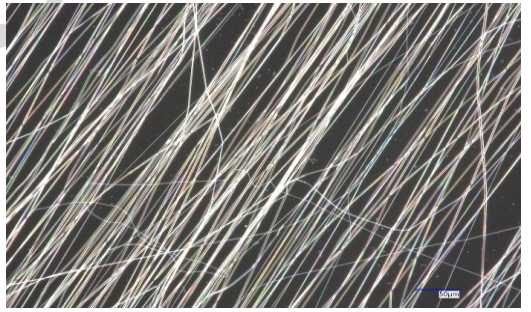
F7 Nanofiber; Diameter = 1.161 ± 0.168 µm



F8 Nanofiber; Diameter = 0.466 ± 0.012 µm



F9 Nanofiber; Diameter = 0.583 ± 0.025 µm



F10 Nanofiber; Diameter = 0.397 ± 0.020 µm

"Nanofibre Diameter Range: 0.397–1.161 µm across formulations; seven (F1–F4, F8–F10 with green captions) achieved smooth, uniform fibres within the favourable 300–800 nm window for transdermal delivery."

RPS PHARMACEUTICAL PROCESS

Conclusion

"This work demonstrates the successful development of TQ-loaded POX nanofibre frameworks using electrospinning. A set of seven formulations met the criteria for diameter and morphology, with further characterisation and optimisation planned. These nanofibre frameworks hold potential as core components of transdermal systems for localised breast tumour therapy."

References:

[1] Bray F, Ferlay J, Soerjomataram I, Siegel RL, Torre LA, Jemal A. Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA: a cancer journal for clinicians*. 2018 Nov;68(6):394-424.

[2] Bhattarai DP, Aguilar LE, Park CH, Kim CS. A review on properties of natural and synthetic based electrospun fibrous materials for bone tissue engineering. *Membranes.* 2018;8(3):62. doi:10.3390/membranes8030062.

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Thank You
For Listening
Yusuf Ghazali
yusuf.ghazali@hud.ac.uk

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Best Poster – Oral Presentation (Poster ID: 211)

An evaluation of the Scottish pharmacist clinical academic fellowship programme: developing research to advance pharmaceutical care practice across the NHS

Dr Clare Depasquale

Susan Roberts, Dr Leon Zlotos, Prof Marion Bennie, Prof Andrew Sturrock, Prof Scott Cunningham

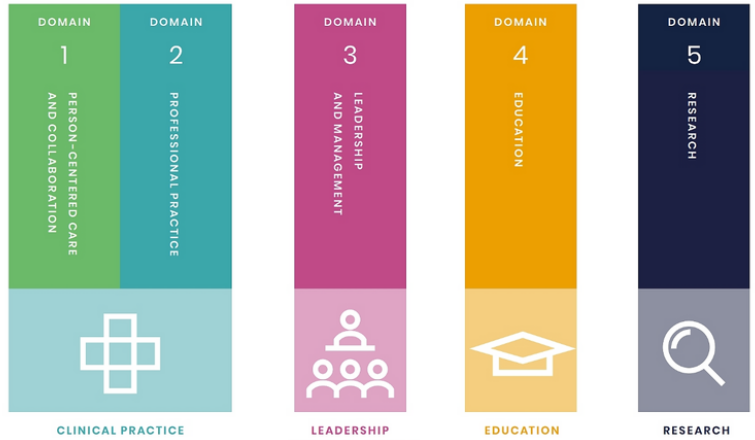
ROBERT GORDON UNIVERSITY ABERDEEN

NHS Education for Scotland

University of Strathclyde Science

WHY

- The Royal Pharmaceutical Society's credentialing curricula incorporate five broad domains that align to four 'pillars of practice'. Research is one of these pillars [1].



- Performance in this 'pillar' most frequently impedes credentialing success [2].

- The Scottish Pharmacist Clinical Academic Fellowship (SPCAF) programme was created; a collaboration with Higher Education Institutions and NHS Education for Scotland; to develop a network of Clinical Academic Pharmacist posts.
  - 6 Fellows appointed
  - 2-year programme
  - 0.4FTE

1. Royal Pharmaceutical Society. Credentialing. Defining and assuring post-registration standards of patient-focused pharmacy practice. [homepage on the internet]. London: RPS; 2025 [cited 2025 May 7]. Available from: https://www.rpharms.com/development/credentialing
2. Royal Pharmaceutical Society. RPS annual credentialing report 2022. [homepage on the internet]. London: RPS; 2022 [cited 2025 May 7]. Available from: https://www.rpharms.com/Portals/0/Credentialing/RPS%20Annual%20credentialing%20report%202022%20final.pdf?ver=spMTf5yMraBSMpAunhwXEw%3D%3D

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AIM

To explore the views and experiences of key stakeholders involved in the SPCAF programme cohort 1 (2021-2023).

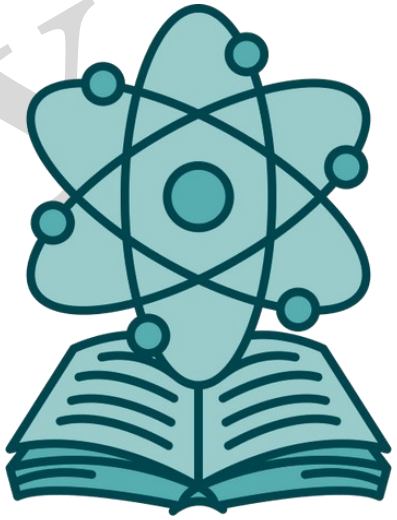
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HOW

- Online semi-structured **interviews** were conducted between December 2024 - January 2025 with:
    - 5 SPCAF programme **Fellows**.
    - 5 **other stakeholders** (Fellows' line managers, local/academic mentors, wider pharmacy team members).



- Study was theory informed
    - The **Theoretical Domains Framework** (TDF) [3].

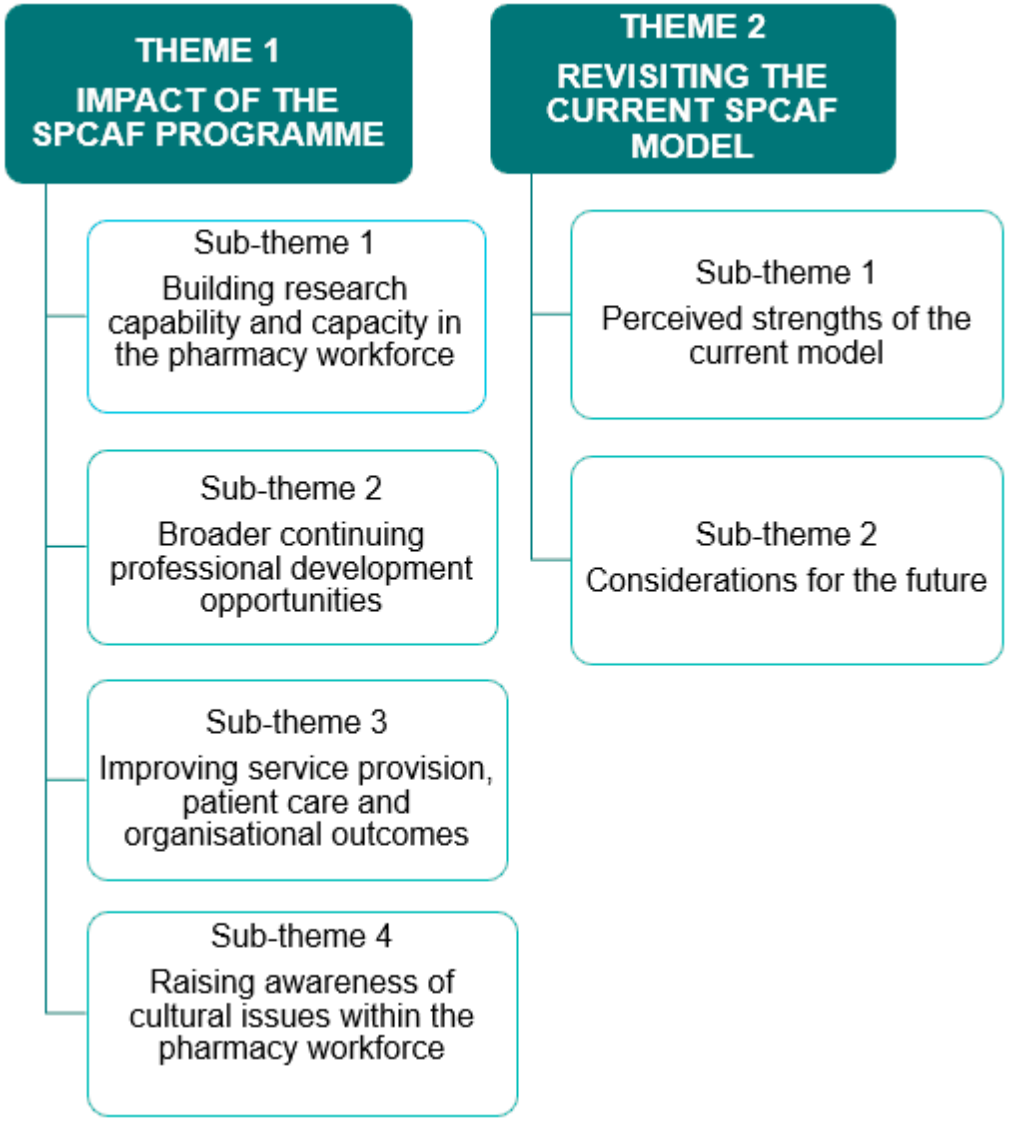


- **Thematic analysis** was applied to transcripts.

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3. Atkins L, Francis J, Islam R, O'Connor D, Patey A, Ivers N et al. A guide to using the Theoretical Domains Framework of behaviour change to investigate implementation problems, Implement Sci, 2017; 12(77).

WHAT



*… **it will not only affect and help the students who are doing the research, but what they learn will knock on to other people.** For example, my student has been asked to input into somebody else's data analysis based on the skills that she's learnt, so it's already having knock on effects to other people.*
(OS 3)

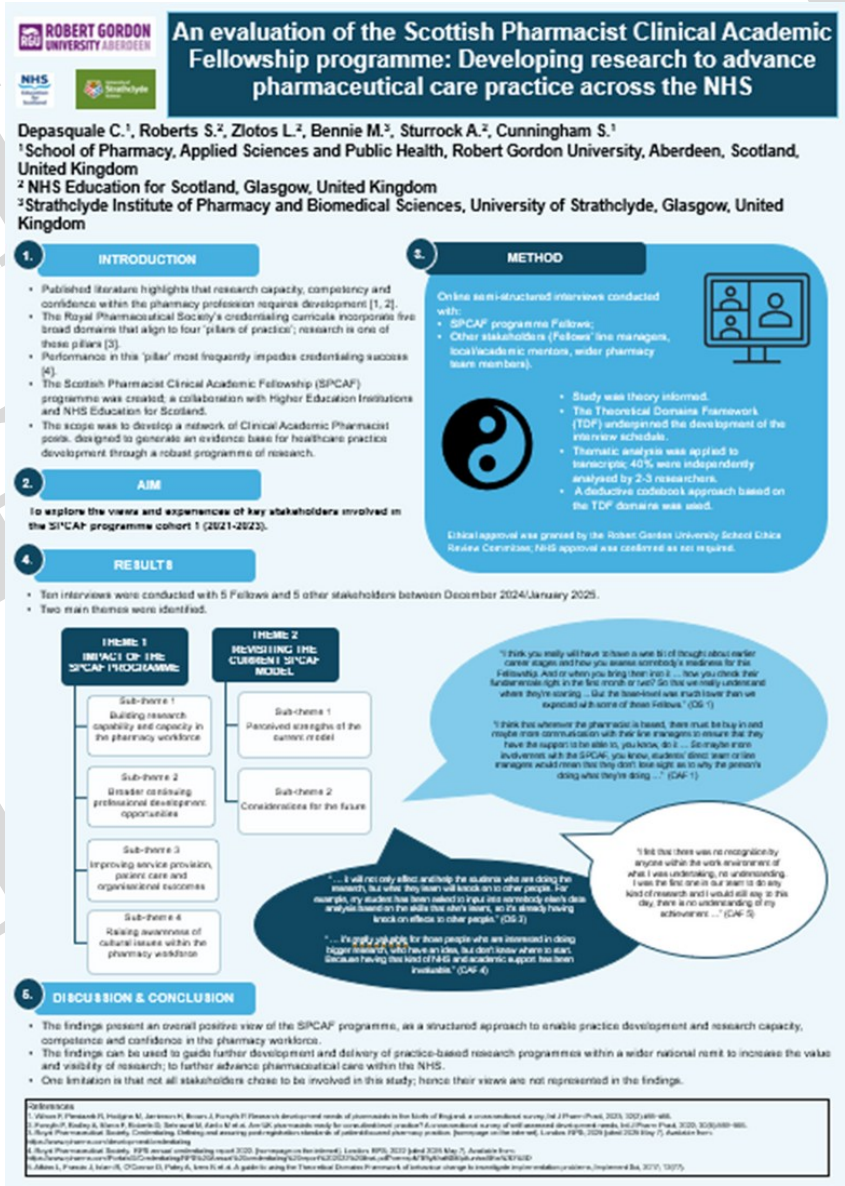
*… it's really valuable for those people who are interested in doing bigger research, who have an idea, but don't know where to start. Because **having that kind of NHS and academic support has been invaluable.***
(CAF 4)

*I think you really will have to have a wee bit of thought about earlier career stages and how you assess somebody's readiness for this Fellowship. And or when you bring them into it … how you check their fundamentals right in the first month or two? So that we really understand where they're starting ... But **the base-level was much lower than we expected with some of these Fellows**.*
(OS 1)

THANK YOU!

Dr Clare Depasquale

c.depasquale@rgu.ac.uk



ROBERT GORDON UNIVERSITY ABERDEEN

An evaluation of the Scottish Pharmacist Clinical Academic Fellowship programme: Developing research to advance pharmaceutical care practice across the NHS

Depasquale C.[1], Roberts S.[2], Zlotos L.[2], Bennie M.[3], Sturrock A.[2], Cunningham S.[1]

[1]School of Pharmacy, Applied Sciences and Public Health, Robert Gordon University, Aberdeen, Scotland, United Kingdom

[2] NHS Education for Scotland, Glasgow, United Kingdom

[3]Strathclyde Institute of Pharmacy and Biomedical Sciences, University of Strathclyde, Glasgow, United Kingdom

1. INTRODUCTION

- Published literature highlights that research capacity, competency and confidence within the pharmacy profession requires development [1, 2].
- The Royal Pharmaceutical Society's credentialing curricula incorporate five broad domains that align to four 'pillars of practice'; research is one of those pillars [3].
- Performance in this 'pillar' most frequently impedes credentialing success [4].
- The Scottish Pharmacist Clinical Academic Fellowship (SPCAF) programme was created; a collaboration with Higher Education Institutions and NHS Education for Scotland.
- The scope was to develop a network of Clinical Academic Pharmacist posts, designed to generate an evidence base for healthcare practice development through a robust programme of research.

2. AIM

To explore the views and experiences of key stakeholders involved in the SPCAF programme cohort 1 (2021-2023).

3. METHOD

Online semi-structured interviews conducted with:

- SPCAF programme Fellows;
- Other stakeholders (Fellows' line managers, local/academic mentors, wider pharmacy team members).

- Study was theory informed.
- The Theoretical Domains Framework (TDF) underpinned the development of the interview schedule.
- Thematic analysis was applied to transcripts; 40% were independently analysed by 2-3 researchers.
- A deductive codebook approach based on the TDF domains was used.

Ethical approval was granted by the Robert Gordon University School Ethics Review Committee; NHS approval was confirmed as not required.

4. RESULTS

- Ten interviews were conducted with 5 Fellows and 5 other stakeholders between December 2024/January 2025.
- Two main themes were identified.

THEME 1: IMPACT OF THE SPCAF PROGRAMME

- Sub-theme 1: Building research capability and capacity in the pharmacy workforce
- Sub-theme 2: Broader continuing professional development opportunities
- Sub-theme 3: Improving service provision, patient care and organisational outcomes
- Sub-theme 4: Raising awareness of cultural issues within the pharmacy workforce

THEME 2: REVISITING THE CURRENT SPCAF MODEL

- Sub-theme 1: Perceived strengths of the current model
- Sub-theme 2: Considerations for the future

"I think you really will have to have a wee bit of thought about earlier career stages and how you assess somebody's readiness for this Fellowship. And or when you bring them into it ... how you check their fundamentals right in the first month or two? So that we really understand where they're starting ... But the bare-level was much lower than we expected with some of these Fellows." (DS 1)

"I think this wherever the pharmacist is based, there must be buy in and maybe more communication with their line managers to ensure that they have the support to be able to, you know, do it ... So maybe more involvement with the SPCAF, you know, students' direct team or line managers would mean they don't lose sight as to why the person's doing what they're doing ..." (CAF 1)

"... it will not only affect and help the students who are doing the research, but what they learn will knock on to other people. For example, my student has been asked to input into somebody else's data analysis based on the skills that she's learnt, so it's already having knock on effects to other people." (DS 2)

"I felt that there was no recognition by anyone within the work environment of what I was undertaking, no understanding. I was the first one in our team to do any kind of research and I would still say to this day, there is no understanding of my achievement ..." (CAF 5)

"... it's really valuable for those people who are interested in doing bigger research, who have an idea, but don't know where to start. Because having this kind of NHS and academic support has been invaluable." (CAF 4)

5. DISCUSSION & CONCLUSION

- The findings present an overall positive view of the SPCAF programme, as a structured approach to enable practice development and research capacity, competence and confidence in the pharmacy workforce.
- The findings can be used to guide further development and delivery of practice-based research programmes within a wider national remit to increase the value and visibility of research; to further advance pharmaceutical care within the NHS.
- One limitation is that not all stakeholders chose to be involved in this study; hence their views are not represented in the findings.

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Best Poster – Oral Presentation
(Poster ID: 253)

Comparative effectiveness of pharmacological treatments in managing physical function and joint stiffness in knee osteoarthritis: A Component Network Meta-Analysis

Dr Bawan Ahmed
University of Greenwich

Knee Osteoarthritis

- Among all OA conditions, knee joint OA is the most prevalent and substantially burdens public health, accounting for about 83% of the overall OA burden.
- In the UK alone, 10 million individuals (1 in 6) have OA; an estimated 50% have Knee OA (Versus Arthritis, 2023).

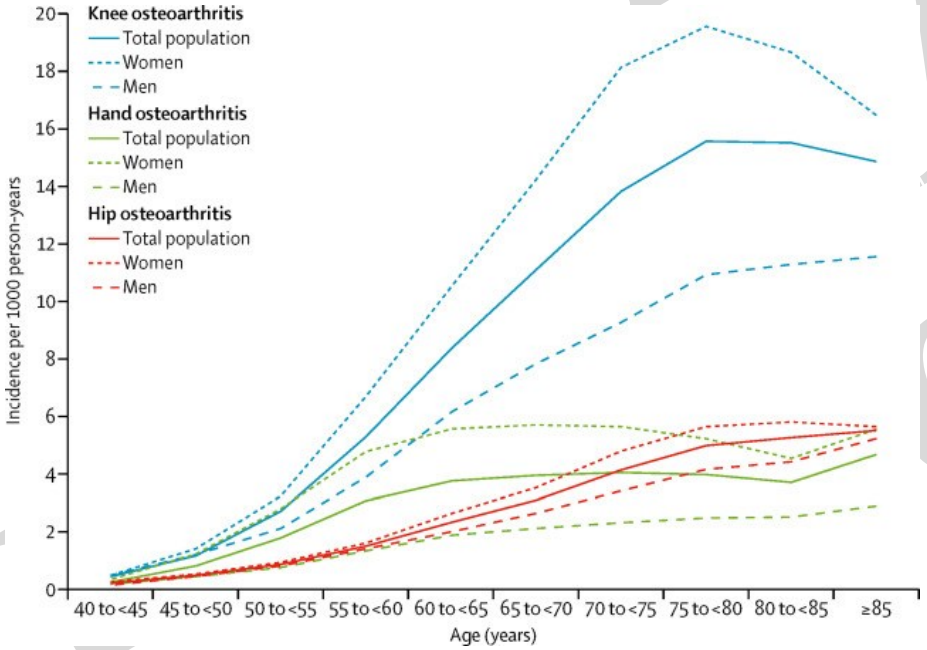
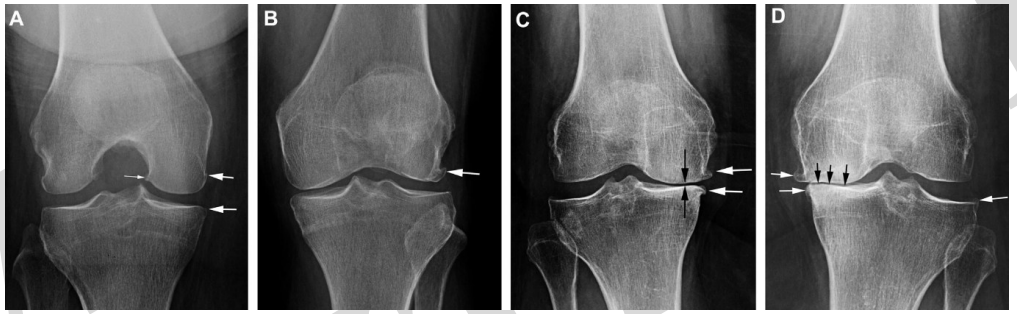


Fig.1 Age and gender-specific incidents of OA (Hunter & Bierma-Zeinstra, 2019)



(Katz et al., 2021)

Core symptoms:

- **Pain**
- **Joint stiffness**
- **functional disability**

- Currently, there is no known cure for OA
- Surgery remains the only treatment option, BUT:
- Patients typically undergo an average of **13.3 years of non-surgical management of Knee OA** before becoming eligible candidates for surgery (Losina et al., 2015)

- **Algorithms and models of care are available, but there are significant EBM gaps in osteoarthritis care.**
- **We have many treatments, but a lack of direct comparisons.**

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Open access Protocol

BMJ Open

Relative effectiveness of non-surgical interventions for pain management in knee osteoarthritis: a protocol for a component network meta-analysis of randomised controlled trials

Trevor Thompson ,[1] Bawan Ahmed ,[1] Sharon Marie Weldon,[1,2] Orestis Efthimiou,[3,4] Brendon Stubbs[5,6]

To cite: Thompson T, Ahmed B, Weldon SM, *et al*. Relative effectiveness of non-surgical interventions for pain management in knee osteoarthritis: a protocol for a component network meta-analysis of randomised controlled trials. *BMJ Open* 2021;**11**:e048298. doi:10.1136/bmjopen-2020-048298

► Prepublication history and additional supplemental material for this paper are available online. To view these files, please visit the journal online (http://dx.doi.org/10.1136/bmjopen-2020-048298).

TT and BA are joint first authors.

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ABSTRACT

Introduction Knee osteoarthritis is a chronic degenerative disease associated with significant chronic pain, disability and impaired quality of life and is the most common form of osteoarthritis. There is no cure for knee osteoarthritis, and the main therapeutic goals are pain management and improving quality of life. The objective of this study is to evaluate the relative efficacy and acceptability of available interventions using network meta-analysis (NMA) to provide a comprehensive evidence base to inform future treatment guidelines.

Methods and analysis A comprehensive literature search of major electronic databases (MEDLINE, EMBASE, Cochrane Central Register of Controlled Trials) and clinical trial registries will identify randomised control trials (RCTs) of interventions listed in NICE guidelines for the treatment of knee osteoarthritis in adults. We will perform an NMA to estimate relative intervention effects across the whole treatment network. If any studies use multicomponent intervention packages, we will employ a component NMA model to estimate the contribution of individual components. The quality of evidence will be assessed using the Confidence in Network Meta-Analysis approach, which is based on the traditional GRADE framework adapted for NMA. Risk of bias (RoB) will be assessed using the revised Cochrane RoB 2.0 tool for RCTs.

Ethics and dissemination This study does not require ethical approval. Findings will be submitted to a peer-reviewed journal.

PROSPERO registration number CRD42020184192.

Strengths and limitations of this study

- Network meta-analysis (NMA) will estimate the relative effects of two treatments even when no primary studies have directly compared them.
- Component NMA will assess the relative contributions of individual components in a treatment package.
- Confidence in Network Meta-Analysis methodology will providence confidence ratings of evidence quality.
- Individual treatment component effects may not be estimable if there are insufficient combined intervention studies.
- Treatments that violate the consistency assumption cannot be reliably assessed with NMA.

BACKGROUND

Osteoarthritis (OA) is a chronic degenerative musculoskeletal disorder of the joints, which most commonly affects the knee, hip and hand.[1] OA is characterised by microscopic and macroscopic anatomical changes of the joint with a complex pathophysiological change of articular cartilage and subchondral bone.[2] This complex pathophysiology leads to cartilage degradation, bone remodelling, osteophyte formation and synovial inflammation, causing pain, disability and loss of normal biomechanical joint function.[3] OA resulting from 'wear and tear' is by far the most common and typically develops at around 55–60 years; although secondary OA resulting from injury, congenital abnormality or inflammation can also occur.[1]

OA is the most common form of arthritis and affects more than 300 million people worldwide.[4] Since OA is associated with major structural changes of the joints leading to pain and functional disability, its epidemiological and economic burden on healthcare providers and society are substantial.[4] OA was estimated to be the fourth-leading cause of disability by the year 2020.[5] In the UK alone, it is estimated that around 34% of people aged 45 years and older, approximately 8.75 million people, have sought treatment for OA.[6] The economic burden can be direct (eg, treatments) or indirect (eg, working days lost). A study in 2013 estimated that the negative economic impact of OA on UK economy

NIHR | National Institute for Health Research

PROSPERO
International prospective register of systematic reviews

Relative effectiveness and acceptability of non-surgical interventions for pain management in knee osteoarthritis: a protocol for a component network meta-analysis
Trevor Thompson, Bawan Ahmed, Sharon Weldon, Marialivia Bernadi, Brendon Stubbs

Citation
Trevor Thompson, Bawan Ahmed, Sharon Weldon, Marialivia Bernadi, Brendon Stubbs. Relative effectiveness and acceptability of non-surgical interventions for pain management in knee osteoarthritis: a protocol for a component network meta-analysis. PROSPERO 2020 CRD42020184192 Available from:
https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42020184192

Review question
To assess the relative effectiveness and acceptability of non-surgical treatments listed in NICE guidelines for the management of pain from knee osteoarthritis

Databases
MEDLINE, EMBASE, CENTRAL, and trial registries.

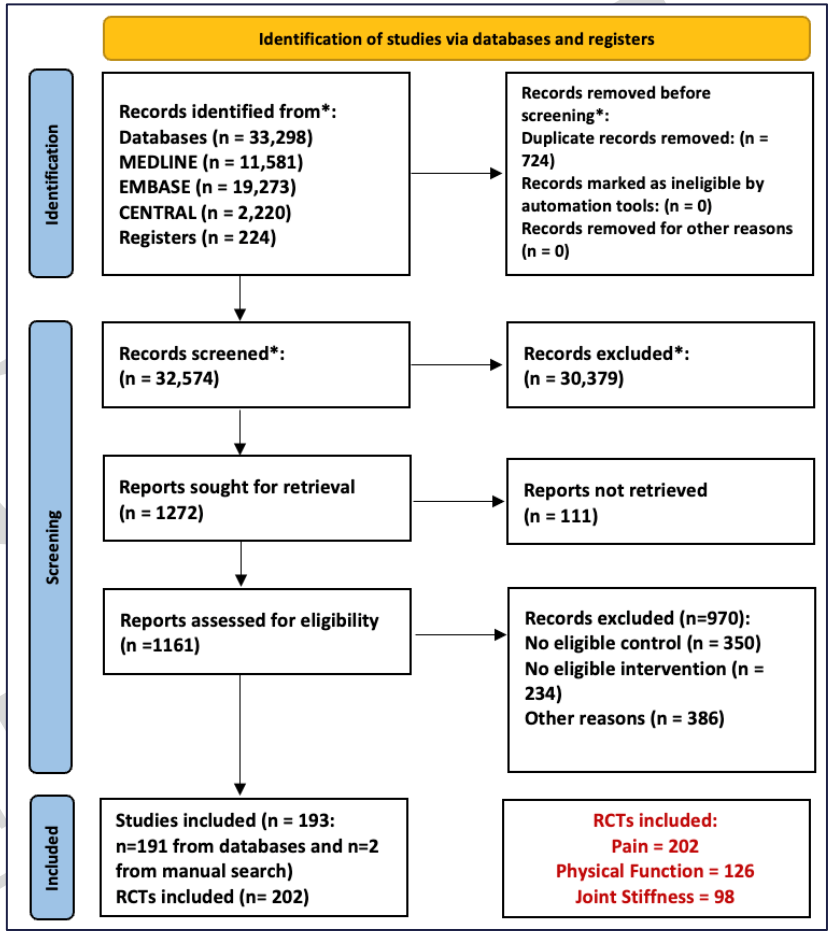
Population (P)
Adults (≥18 years) with KNOA based on a clinical or radiographic diagnosis

Interventions (I)
Oral Paracetamol
Non-selective NSAIDs (Oral: with or without gastroprotection, Topical and Transdermal)
COX2-inhibitors
Oral and Transdermal Opioids
Duloxetine
Topical Capsaicin
Intra-articular Hyaluronic acid (IAHA)
Intra-articular Corticosteroids (IACS)

Comparison or Control (C)
Another eligible active intervention or control (placebo, no treatment, or usual care)

Outcomes: Pain (primary outcome), Stiffness, Physical function, and acceptability
Assessed over: Immediate (up to two weeks), Short (closest to 3 months), Medium (closest to 6 months), Long (closest to 12 months)
Effect size measure : MD & OR

Study type (S)
Randomised Controlled Trials (RCTs)





IJPP International Journal of Pharmacy Practice

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JOURNAL ARTICLE

Relative analgesic effectiveness of pharmacological interventions in knee osteoarthritis: a component network meta-analysis

B Ahmed, T Thompson

International Journal of Pharmacy Practice, Volume 32, Issue Supplement_2, November 2024, Pages ii67–ii68, https://doi.org/10.1093/ijpp/riae058.080
Published: 08 November 2024

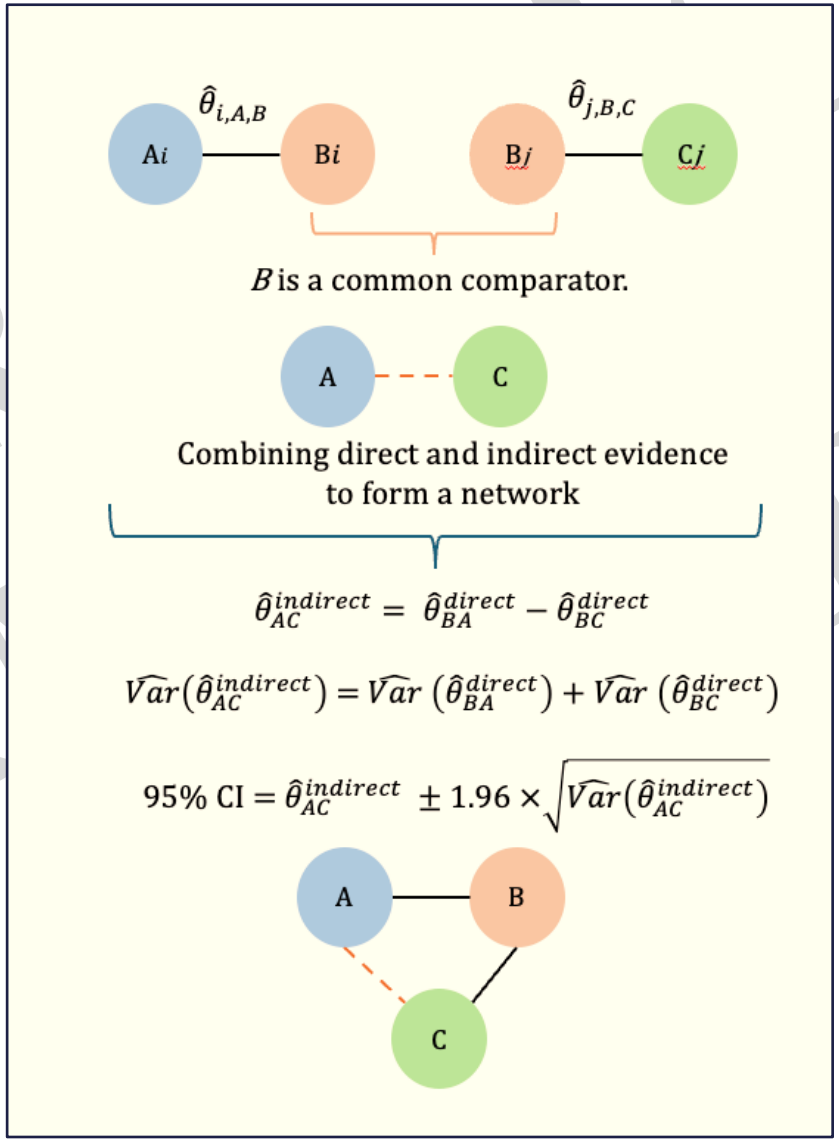
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What's Network Meta-Analysis (NMA)?



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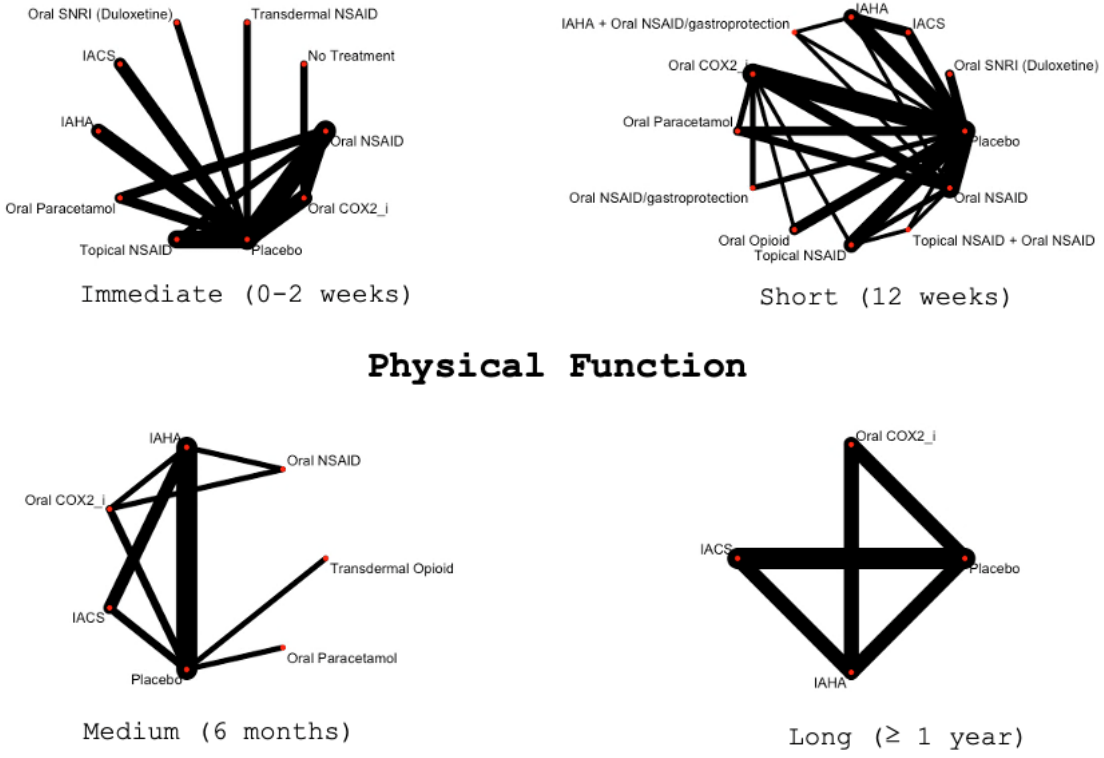


Fig.2 Network of treatment comparisons for physical function and stiffness from immediate to long-term. Ahmed *et a*l. (n.d.) manuscript in preparation

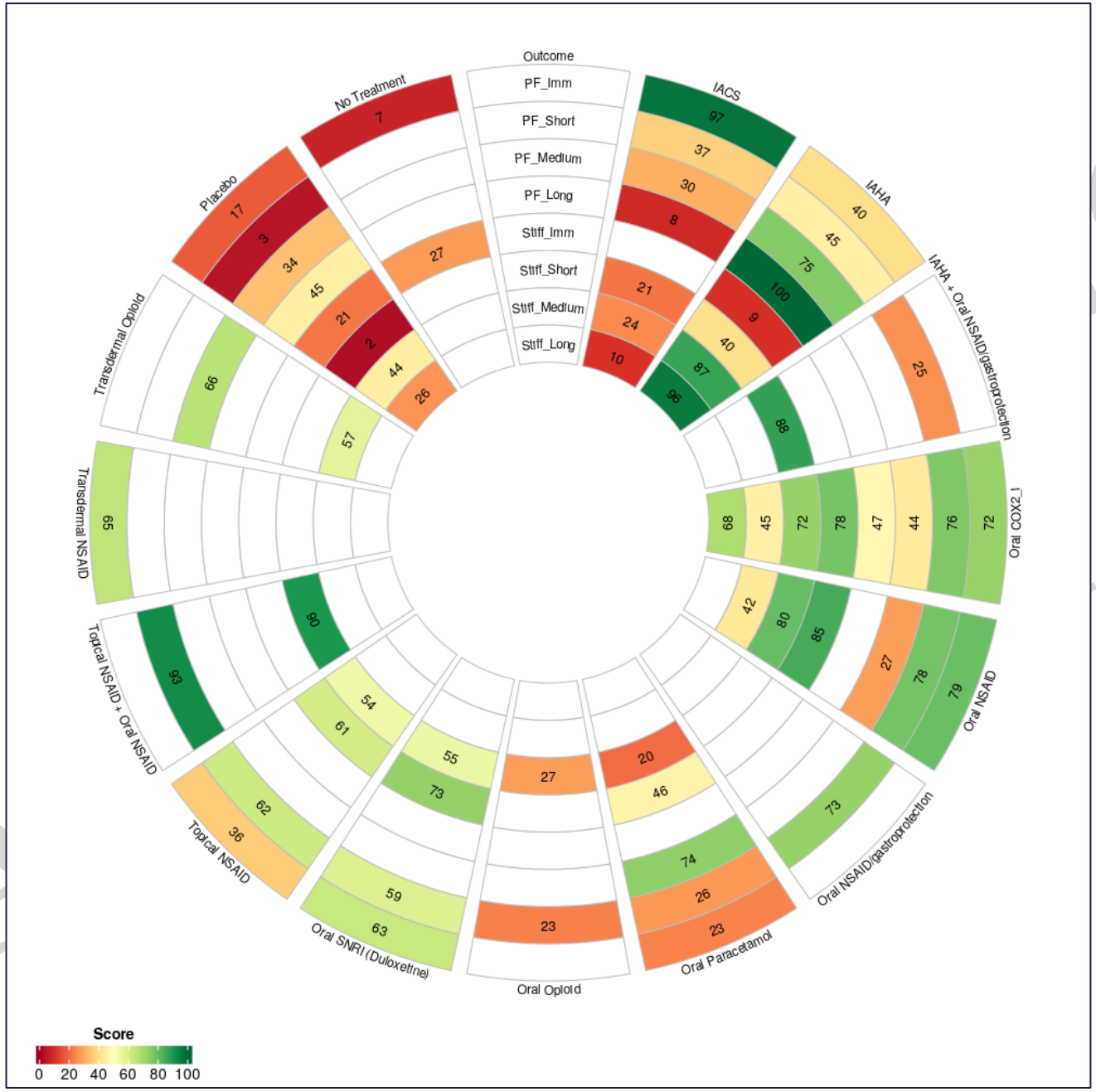


Fig.4 Standard NMA rank heat plot. Ahmed *et a*l. (n.d.) manuscript in preparation

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- Dr Trevor Thompson (Co-lead/co-author) - University of Greenwich
- Professor Sharon Weldon - University of Greenwich
- Professor Damian Poulter- University of Greenwich
- Dr Orestis Efthimiou- University of Bern
- Dr Brendon Stubbs – King's College London

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Panel Discussion

Celebrating Pharmacy Research Leadership

Panel Discussion – *Celebrating Pharmacy Research Leadership*

Multiple NIHR Funding



Professor Cathrine McKenzie
Professor in Intensive Care Pharmacy, University of Southampton and Honorary Consultant Pharmacist; Member, RPS Science & Research Committee

Leading NIHR student internships



Dr Daniel Okeowo
MPharm Deputy Degree Programme Director Newcastle University, Member of RPS, RPS Early Careers Expert Advisory

2025 OPERA Winner



Dr Jennifer Stevenson
Lead Pharmacist for Older Adults, Guy's and St.Thomas' NHS Foundation Trust in London

Head of Science Strategy MRC/UKRI



Dr Sarah Trenfield
Head of Science Strategy at Medical Research Council*/UKRI, Pharmacist*

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Career milestones

Professor Cathrine McKenzie
c.a.mckenzie@soton.ac.uk

1999 PhD Fellowship GSTT Charity First non-medical awardee

HARP-2, IMP reconciliation **badly!**

UKCPA Clinical Research Award £30,000 PROTECTED-ICU (UK)

2012 VACS-Vasopressin in sepsis, IMP dispensing, patient eligibility

2013 SPICE-III site Principle investigator (first non-medical)

2017 A2B trial Alpha-2-agonists versus propofol for sedation

2019 ATHOS-III, blinded IMP and aseptic dispensing

2021

Intensive Care Society
Rejected

Alzheimer's Society
Rejected

2022

NIHR Wessex ARC Research Enhancement
Awarded £10k

Southampton Research Leaders Programme
Awarded £100k

2023

NIHR SCPRA
Awarded £320k

2025

NIHR Efficacy Mechanism and Evaluation
£2.74M AWARDED

Effective mentors - Danny McAuley, David Harrison and Michael Grocott

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Dr Daniel Okeowo
Daniel.Okeowo@newcastle.ac.uk

My research journey so far…



MPharm (Durham/Newcastle University)
2014 – 2018

- 4th year dissertation research focused on deprescribing



PhD (University of Leeds)
2019 – 2023

- NIHR-funded scholarship
- How can safe deprescribing be implemented in primary care?
- Collaboration on projects focused on medicine safety



Lecturer (Newcastle University)
2022 – to date

- PhD Supervision
- NIHR Undergraduate Internship Award
- NIHR Team Science Camp Award
- NIHR Application Development Award

Therapeutic Advances in Drug Safety
Volume 9, Issue 11, November 2018, Pages 619-630
© The Author(s), 2018, Article Reuse Guidelines
https://doi.org/10.1177/2042098618795770

Original Research

Clinical practice guidelines for older people with multimorbidity and life-limiting illness: what are the implications for deprescribing?

Daniel Okeowo[1], Alastair Patterson[2], Cynthia Boyd[3], Emily Reeve[4], Danijela Gnjidic[5], and Adam Todd[6]

International Journal of Pharmacy Practice, 2023, XX, 1–27
https://doi.org/10.1093/ijpp/riad001
Advance access publication 1 March 2023
Review Article

Barriers and facilitators of implementing proactive deprescribing within primary care: a systematic review

Daniel A. Okeowo[1,2,*], Syed Tabish R. Zaidi[1,2], Beth Fylan[2,3,4] and David P. Alldred[1,2]

Research | Open access | Published: 16 October 2024

The patient's perspectives of safe and routine proactive deprescribing in primary care for older people living with polypharmacy: a qualitative study

D. A. Okeowo, B. Fylan, S. T. R. Zaidi & D. P. Alldred

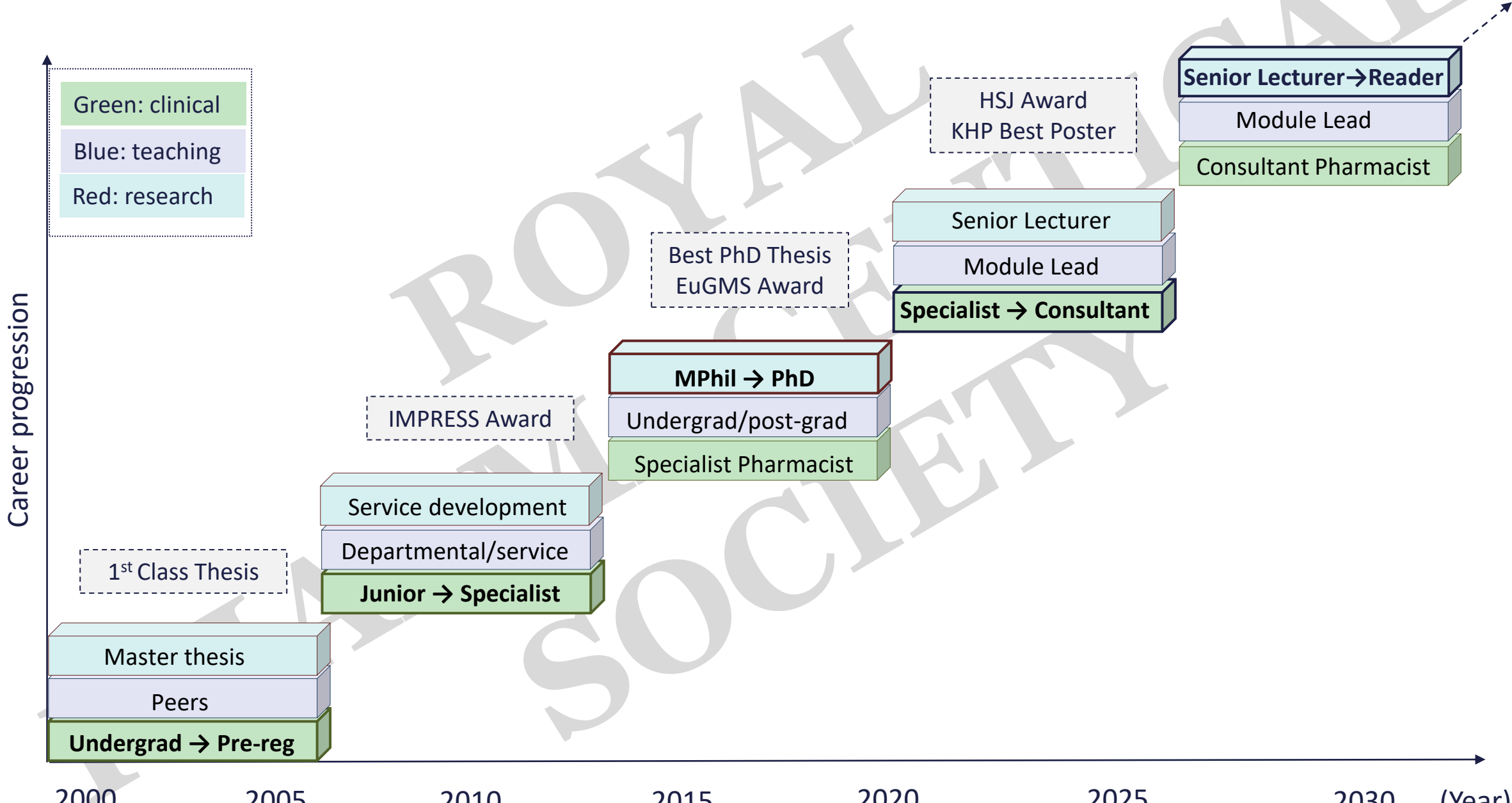
BMC Geriatrics **24**, Article number: 844 (2024) | Cite this article

How can community pharmacy teams prevent prescription and over-the-counter opioid misuse in North East England? A qualitative study using the Capability, Opportunity and Motivation Behaviour (COM-B) model

Ogochukwu Fidelia Offu[1], Daniel Okeowo[1], Shelina Visram[2], Adam Pattison Rathbone[1], Laura Lindsey[1,2]

Career trajectory: Clinical Academic Pharmacist

Dr Jennifer Stevenson
jennifer.stevenson@kcl.ac.uk



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My Journey (so far)

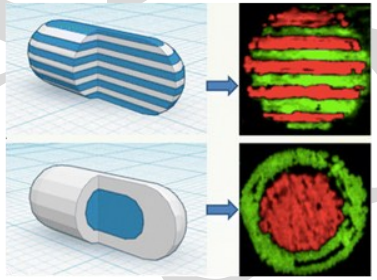
Dr Sarah Trenfield
sarah.trenfield@mrc.ukri.org

2011 — MPharm Degree (Cardiff University / Prifysgol Caerdydd)

2015 — Split Industry/Hospital Pre-registration Pharmacist (MSD; Guy's and St Thomas' NHS Foundation Trust)

2016 — GPhC reg

PhD in Pharmaceutics (3D Printing and Digital Health) (CDT in Advanced Therapeutics and Nanomedicines; UCL; Pfizer)



2018 — Director of Innovation at start-up biotech (FABRX pharmaceutical 3D printing)



2020 — Stakeholder Engagement Manager (UKRI Medical Research Council)

2023 — Head of Engagement / Partnerships (Interim)

2025 — Head of Science Strategy



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Core Questions for Each Panellist

Professor Cathrine McKenzie	If you had £100k for capacity building, would you prioritise methods training, mentorship, infrastructure, or evaluation, and why?
Dr Daniel Okeowo	What is your playbook for getting students from “placement” to “paper” within an academic year timeframe?
Dr Jennifer Stevenson	What practical tactics have helped you secure protected time for research within service-heavy roles?
Dr Sarah Trenfield	How have NIHR pathways or MRC/UKRI initiatives concretely accelerated leadership development for pharmacists, and what’s the most under-used entry point?

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Together,
we are pharmacy.