ROYAL PHARMACEUTICAL SOCIETY

RPS Digital Innovation and Education Roundtable Report

5 JUNE 2025

THE OBJECTIVES OF THIS ROUNDTABLE WERE TO:

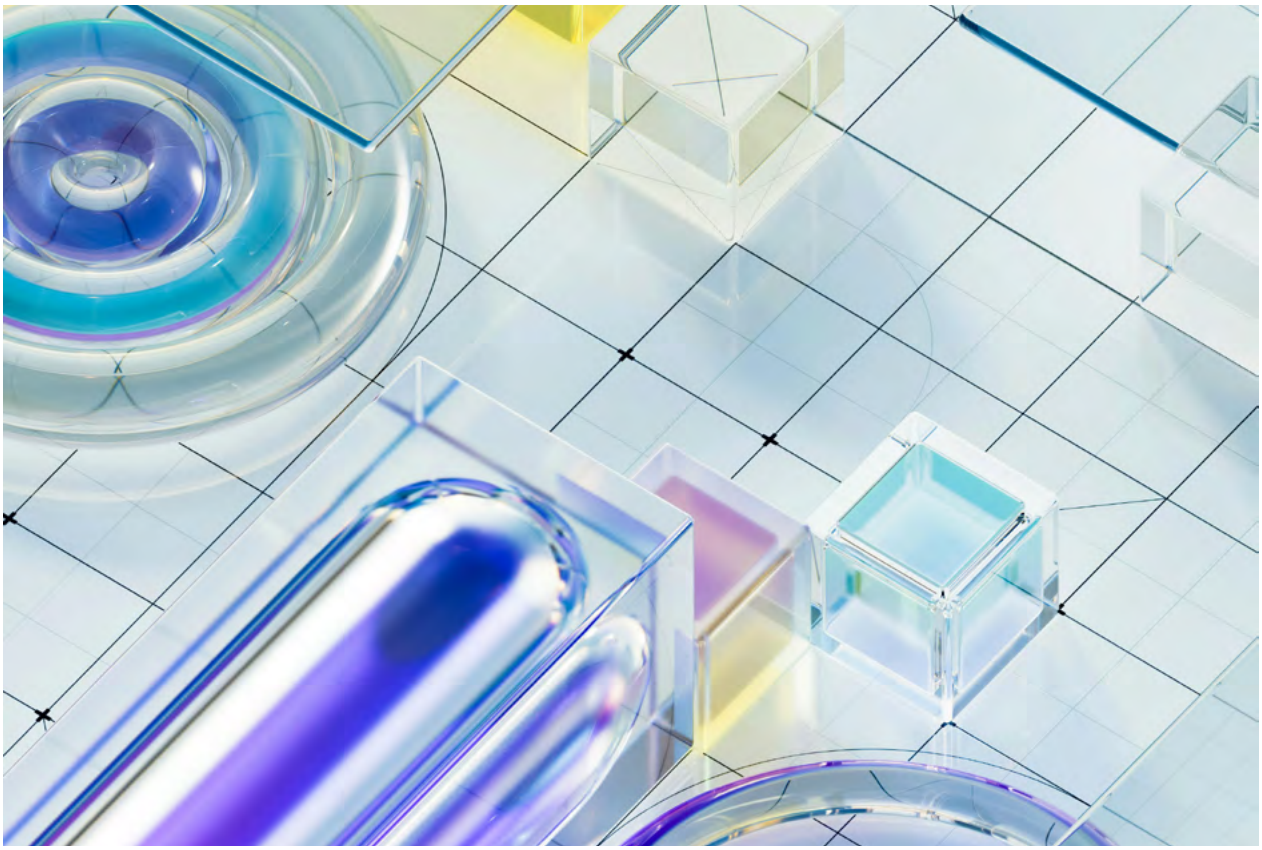
- **Bring together a range of stakeholders involved in education and training of pharmacists as well as those providing innovative technical solutions within pharmacy and medicines.**
- **To share insight and understanding on how having the right digital knowledge, skills and access to technical solutions can impact patients and improve patient care.**
- **To consider how the organisations in the room could, in collaboration with others, contribute to improving the understanding and use of technology within pharmacy.**

Following the publication of both the Royal Pharmaceutical Society (RPS) policies on Artificial Intelligence and Digital Capabilities for the Pharmacy Workforce, RPS facilitated this roundtable to bring together experts in the fields of digital innovation alongside key stakeholders in pharmacy education to explore what opportunities there are to support digital innovation in pharmacy and what the profession may need to navigate this.

During the event, attendees were asked to consider and discuss the role of the profession alongside the evolution of technology, looking at what is already happening and considering what the future may look like.

Attendees consisted of a range of stakeholders from regulators, education providers, national commissioners, digital and technology providers. **See Appendix 1** for a list of attendees.

The event was chaired by Geraldine McCaffrey, Chair of the Welsh Pharmacy Board, at the RPS, who welcomed everyone to the event.



Darren Powell, Chair of the RPS Digital Pharmacy Expert Advisory Group provided an overview of the RPS's strategic direction in digital capabilities and artificial intelligence (AI) within pharmacy practice. The presentation focused on two key policy outputs: the Digital Capabilities Position Statement and the AI in Pharmacy policy, both of which are foundational to modernising pharmacy services in a digitally connected NHS.

The Digital Capabilities section emphasised the need for pharmacy teams to develop and maintain digital literacy to deliver high-quality, personalised care. It highlighted the importance of embedding digital skills into future pharmacy education and training, ensuring access to relevant technologies, and investing in the upskilling of the current workforce. These capabilities are seen as essential for adapting to evolving healthcare technologies, enhancing patient safety, and meeting the needs of a digitally diverse public. The presentation underscored that digital transformation should not merely digitise existing services but should be used to reimagine and improve them.

In the AI segment, Darren Powell outlined how AI can enhance clinical decision-making, streamline operations, and support personalised medicine. He stressed the importance of responsible AI deployment, co-production with pharmacy teams and patients, and the need to address regulatory and ethical considerations. The policy calls for education and training to ensure the workforce can critically engage with AI tools, understand their limitations, and ensure they are used to augment, rather than replace, the human aspects of care. The session concluded with a call to action for collaboration, innovation, and continuous engagement to ensure that digital and AI advancements translate into tangible improvements in patient outcomes and service delivery.

DISCUSSION:

There was a discussion around the need to transform services rather than digitise pathways that are already in existence. Digital skills need to be a core competency for all those working in healthcare.

In terms of AI, attendees were adamant that AI deployment must protect the human side of care. It was noted that AI regulation is evolving in terms of use of patient data, patient awareness and consent, but more needed to be done to help regulators to set up the frameworks. AI tools don't always fit to clinical pathways and there is a huge gap in how AI is implemented in practice. Investment is needed to reshape clinical pathways.

There was a suggestion that the MHRA could engage more closely with practice when developing regulatory frameworks for AI in pharmacy and the use of the MHRA airlock was raised as a possible way to do this. The MHRA work with a small number of innovators annually and this could be a vehicle for testing technologies as well as the governance frameworks in development.

A combination of stakeholder input and user research is needed to make all of this work in practice.

Alec Price Forbes, National Chief Clinical Information Officer, NHS England spoke about the strategic shifts in healthcare with the emphasis on moving from:

- Analogue to digital
- Sickness to prevention
- Hospital to community

These shifts are central to NHS reform and digital transformation.

He mentioned that data is a core asset and likened data to crude oil: it is only valuable when extracted, refined and analysed. Real-time data use (e.g., risk stratification, cardiovascular disease (CVD) risk notifications) is essential for proactive care.

Electronic Patient Records (EPR) are key and EPR-related administration is the number one cause of clinician burnout. The 2024 EPR Usability Survey demonstrated a high demand for better EPR training and a need for stronger informatics teams. It also showed that although trust in EPR systems is growing, the trust in service delivery is lagging. Only 34% of respondents feel EPRs improve efficiency and there is wide variation in satisfaction across systems.

There is a need to focus on usability, standard workflows, training, and infrastructure. Outcome measurements and digital maturity assessments are key. For example, end-of-life care is hindered by fragmented prescription and pharmacy systems. This highlights the need for integrated, anticipatory care and digital coordination. Usability underpins optimisation to improve productivity.

Integrated Care Systems (ICS) have a role to play and should have an emphasis on shared care, digital integration, and person-centred pathways. Vendors have a responsibility to collaborate with teams for successful implementation.

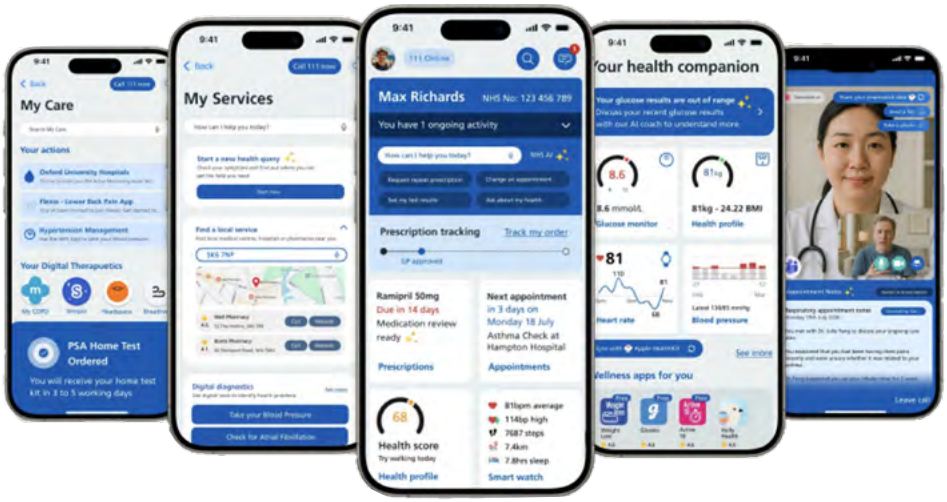
The Digital Priorities for the NHS are to reduce costs and system demand, improve patient experience and staff efficiency and unlock benefits.

The current areas of focus are around the NHS App integration, digital prescriptions and messaging, self-care tools, digital therapeutics and triage improvements. The NHS App is a central platform and is critical for future integration and service delivery. It supports booking, messaging, prescriptions, and health records.

The UK's AI Opportunities Action Plan outlines 50 recommendations. AI applications include diagnostics, triage, scheduling, public health, corporate services, and life sciences. AI is seen as a transformative force across all healthcare domains.

One of the big areas has to be cultural transformation. Technology itself is not the sole solution and cultural change is essential. There has to be an emphasis on human factors, behaviour change, and system-wide collaboration.

OVERVIEW OF NHS APP



AI HEALTH COACH
Linking your medical record with wearables data to provide real-time coaching on lifestyle improvements

AT-HOME TESTING
Reduce health inequalities and improve early detection with at-home blood, genetic and other tests for condition discovery and management

INTELLIGENT NAVIGATION
Reduces pressures on GPs & A&E with intelligent AI that can triage and help patients find the right services. Services are recommended, based on information in your record

FULLY DIGITAL PATHWAYS
From triage to treatment without the need to leave your own home. Access to specialists via Patient Initiated Follow Ups (PIFU), releases significant elective capacity

SEAMLESS DATA SHARING
Easily share documents or photos with your health provider enabling faster triage and treatment

AMBIENT DOCUMENTATION
Streamline appointments with AI-powered actions, with the option to query and better understand the consultation, once completed

DIGITAL CONDITION MANAGEMENT
Specialist, multi-morbidity and mental health third party digital therapeutics, care plans, and biosensor monitoring will empower patients to manage their conditions, and stay out of hospital

HEALTH ADMIN MADE EASY
A personalised view of your care offers the right services at the right time - from prescription tracking to appointment management - reducing NHS admin time and DNAs

FIND THE RIGHT SERVICE FOR YOU
Patients can find and choose the best service for their care, whether in-person or online-with ratings and reviews to make it easier to choose

INTEGRATED DIGITAL DIAGNOSTICS
From digitising Health Checks to integrated diagnostics, the NHS App will vastly reduce pressures on GP, community and pharmacy services, particularly when couple with digital therapeutics

YOUR RECORD, YOUR RULES
Easily view and share your/your child's full clinical record (including biosensor and third-party app data) with apps or healthcare providers, at home or abroad

CURATED APPS AND SERVICES
Intelligently recommended wellness apps and services, in context of your needs - relevant to you and your condition to enable fewer NHS interventions

DISCUSSION

Whilst the use of improvement science was welcomed it was noted that incremental gains and human factors need to be considered.

The NHS App has already advanced significantly but a further enhancement that enabled a link to social and community care would be welcomed.

There is also need for data to be used responsibly, particularly any patient data. All data needs to be integrated and used for data driven care purposes. We must focus on the patient and ownership of data should sit with the patient where they decide when to share it with others. Data must be useful and usable.

It was felt that there was an overwhelming overlap of opportunities with business and commercial partners, and the NHS needs to collaborate with industry to help address funding issues, which seem to be regional rather than central funding streams.

There was a discussion on incentivising people to get involved in technology and how this might work in practice. It was felt that a range of technologies were being inserted into pathways and systems but the associated training to support the use of technology was not readily available.

Marion Bennie, Chief Pharmacist, Public Health Scotland presented on medicines intelligence digitalisation and data flows in Scotland. She showcased a data and medicines roadmap moving throughout the patient life journey. Data intelligence examples, using National Therapeutic Indicators and combined data sets, demonstrated potential variation in clinical practice which could be used to drive improvement in care provided locally and nationally at service and policy level. Key new innovations presented included a single patient view of medicines exposure across the whole health system to provide opportunities for new insight and action. These new assets linked to wider health system resources e.g. health care usage, and patient outcomes provides the basis for new insights into public value from medicines across health and wider public sector services.

Marion spoke about the use of these new resources as a basis to train AI for tailored clinical decision support tools but highlighted that there needs to be clear insight and assurance processes into how these AI tools generate output to provide clinical confidence in their use. Pharmacist leadership was essential for such developments, using their knowledge and skills, in the context of real-world data. For this we need to identify any workforce gaps within the pharmacy profession and support the necessary education and training.

Dan Corbett, Senior Lecturer for Digital Education, School of Pharmacy, Queens University, Belfast, presented on the progressive approach to integrating generative AI into education being taken by the School of Pharmacy at Queen's University Belfast. The importance of encouraging generative AI (GenAI) tool use within appropriate constraints was highlighted. Comprehensive training and teaching support should cover digital health contexts, practical platform functionality, and innovative applications that develop professional criticality. Rather than prohibiting these technologies students should be enabled to utilise AI tools in a manner which will benefit them directly, whilst doing so in a manner which is morally, ethically, and professionally sound. These aspects should be supported by school-provided training and resources.

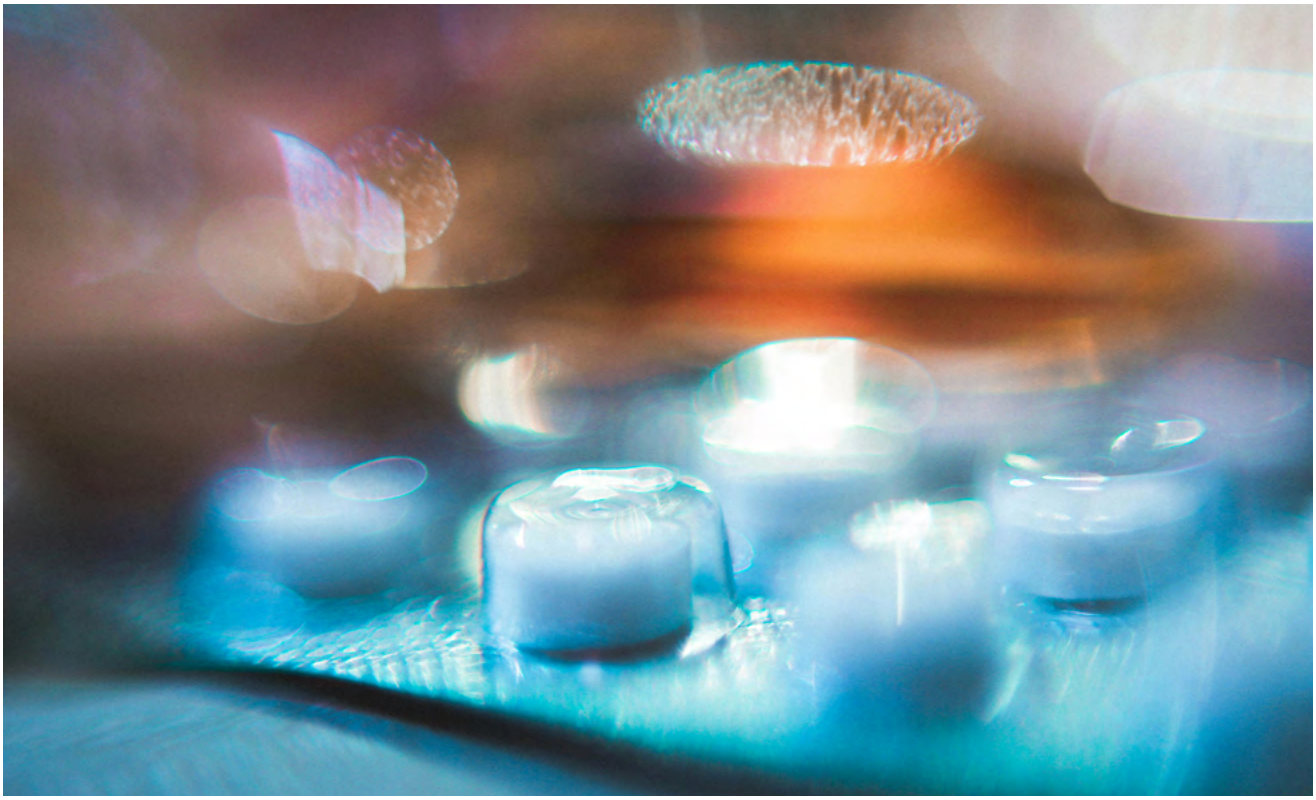
The presentation highlighted a number of examples of the integration of generative AI within the School of Pharmacy's education provision, including a case study evaluating GenAI use in global pain management assessment, leading to improvements in student performance, encouragement of deeper critical thinking in relation to key clinical considerations, and the enablement of students to recognise both the benefits and limitations of GenAI in clinical reasoning. QAIRx, an innovative capacity-building tool that provides students with realistic pharmacy practice scenarios, through digital simulation, was also briefly demonstrated.

The presentation's overarching message emphasised the need for considered, structured approaches to GenAI integration within MPharm programmes which prepare future pharmacists for a technology-enhanced and AI-driven healthcare environment, whilst maintaining the highest standards of professional practice, critical thinking, and patient-centred care.

Ewan Morrison, Director of Pharmacy, NHS National Services Scotland spoke about the Digital Prescribing and Dispensing Programme (DPDP) and how it is clinically driven by the need to free clinicians and pharmacists from administrative duties to allow more time for direct patient care. DPDP, as a bespoke solution, seeks to initially encompass the pathway from general practice-initiated prescribing to community pharmacy dispensing which on full implementation will cover 80% of all prescribed items. Future work will take place to use the same technology for the balance (20%) of the remaining prescribing e.g. out of hours and remote prescribing. Fundamental requirements of the solution include coverage of both prescribing and dispensing, to be patient focused, having an alignment with the national technology strategy principles and lastly a capability to extend into remaining areas of community prescribing with minimal technical debt.

This programme will assist Scotland in realising strategic commitments including; a pharmacist prescriber in every community pharmacy, community pharmacy as a key clinical touch point in all communities e.g. Pharmacy First, a move to the "digital dispensary", community pharmacy within the data and security envelope and having a system that can respond to future developments e.g. the digital patient app and for accurate and timely payments to contractors. This will assist in securing the community pharmacy as a key clinical location in communities across Scotland.

Jonathan Bevan, Digital Medicines Lead – Mid Yorkshire Hospitals NHS Teaching Trust & Chair AI Medicines Collaborative Group presented the development and outcomes of an AI-driven hospital pharmacy prioritisation tool designed to improve patient safety and reduce the burden of manual triage in medicines optimisation. The project, delivered in collaboration with Medipex Hippo Digital (Data and AI Consultancy Company) demonstrated the feasibility of using digitised medicines management data to predict high-priority patients with up to 97% accuracy. The proof-of-concept phase confirmed that AI can complement clinical judgement by surfacing explainable, high-risk cases through a responsible AI framework. The next phase, funded by the NIHR i4i PDA Award, will develop the tool into a minimal viable product and embed it within real-world workflows, with a strong emphasis on stakeholder engagement, governance, and clinical integration.



BREAKOUT SESSION 1

Key themes from the breakout sessions are captured below:

Workforce training

There is a need to upskill all pharmacists to critically appraise digital tool usage, especially when it impacts their clinical decision making. Pharmacists have to be pragmatic, thoughtful and risk aware with the tools they employ, understanding any potential unintentional harm. There is a need to use clinicians' skills and not just rely on digital tools. Pharmacists need to have the confidence to use and assess digital tools.

Attendees expressed views that there is a huge amount of digital technology available but that the profession needs direction. It was suggested that there be separate workstreams, for example, undergraduate, community pharmacy, hospital but others disagreed because of the ability to undertake portfolio working.

We need to also consider digital inequalities in terms of the patients we interact with. Pharmacists have to have skills as clinicians to manage those patients who are not digitally literate.

Undergraduate training

Pharmacy students need to be able to interpret AI outcomes, but this doesn't seem to be captured in the undergraduate syllabus currently. A blended learning approach may help to teach students about statistics and their use in practice. Current undergraduates are being raised in a digital world and have more 'trust' of digital / AI tools, but they need to be aware that they need to critically assess them if using them in professional practice.

Digital and technology is a fast-moving arena and it is challenging for education bodies to ensure everything is kept up to date in terms of educational content.

Use of AI in pharmacy

Some studies have shown that AI is more empathetic than humans. AI could be used to provide clinical decision support at the point of care.

In terms of adoption of technology, there are real differences within the generations in the workforce. There was a feeling amongst attendees that it is the millennials who have the biggest appetite for technology and that Gen Z +A appear to focus on the need for tools to help them problem solve themselves.

There is a lack of guidelines around the use of large language models, a lack of guidance on how pharmacists should interact with the models and what the remit is.

As more people buy and use 'wearables', can we collect the data from these within the system? For example, generating data from heart rate, O_2 sats etc., to help develop a picture of individual health.

Evidence base

As a profession, we need to move to critical thinking around evidence-based medicine and evidence-based use of technology.

There is uncertainty around the implementation of AI and what the functionality will be. It is not known how we will look at spread and scale. There is a need to move away from pilots and into generating the evidence base for the use of technology and, in particular, AI.

The technology to solve problems exists but the current funding and regulation processes can be a barrier.

System issues

Interoperability of systems and the end to end journeys for patients and professionals are not always developed through the lens of clinicians. Technology needs to be rationalised across settings to ensure interoperability, there needs to be a holistic view in terms of what it means for patients and professionals. Technology has to be used in the most effective way.

With a focus on primary care transformation, as part of the 10-year plan, to shift from hospital to communities, community pharmacists need the tools to deliver clinical services.

The collection of data and its utilisation has to benefit patient outcomes, although this could be a future benefit, rather than an immediate one.

Grant and seed funding is sometimes needed to help innovation and drive through change throughout systems.

National differences

In order to ensure the National Digital Medicines Programme in Wales aligns with the pharmacy vision there is a requirement for professional re-imagining and incorporating technology and innovation into professional practice.

Cath O'Brien, Chief Pharmacy Information Officer, Digital Health and Care, Wales (DHCW) gave an overview of the work done by the Federation of Informatics Professionals (FEDIP) to establish role profiles for a number of clinical informatics positions. She also outlined the work being undertaken within Digital Health and Care Wales to create a Clinical Informatics Framework that supports the understanding of the Clinical Informatics function within DHCW and by stakeholders. The framework shows the clinical informatician contribution to system design and implementation and the improvement of healthcare services though better use of technology and data. Cath raised the question of how clinical informatics careers fit within the pharmacy career framework and how we consider the development of informatics careers for pharmacy professionals.

The British Pharmacy Students Association (BPSA) presentation emphasised the increasing significance of digital health in pharmacy education and practice. Pharmacy students across the UK recognise digital tools as essential, noting the shift to electronic prescriptions and the growing need for digital consultations.

Students value the role of data analytics, clinical decision tools, and mobile health apps in improving patient care and adherence. They expect healthcare professionals to use NHS-approved digital platforms and stress the importance of digital empathy in virtual interactions.

There is strong student interest in AI technologies (e.g., robotic dispensing, AI-driven reviews), evidence-based apps, and virtual simulations for training. They want to be actively involved in implementing digital tools and believe training should include patient education, General Data Protection Regulation (GDPR), and information governance.

Looking ahead, students view AI as a positive force and see digital literacy as key to enhancing safety, outcomes, and the pharmacist's role in patient care.

Atif Saddiq's presentation, as **chair of the UK-Wide School of Pharmacy Digital Community of Practice (SoPDCoP)**, provided delegates with an overview of the purpose and aims of the group. Atif highlighted how the group are currently working on an Indicative Curriculum for Digital Health for undergraduate pharmacy students; this Indicative Curriculum will have 8 key themes/elements which will be used to expand on the General Pharmaceutical Council (GPhC) initial education and training standards and will help Schools of Pharmacy design their courses to ensure digital health is integrated into their programmes. Once published, this indicative curriculum will be free to use for other aspects of pharmacy training and development. Other outputs of note included proposed plans to run a School of Pharmacy Hackathon in Summer 2026 which will allow pharmacy students and other stakeholders to come together to build and/or improve healthcare-related software/hardware during the event. For those interested in the SoPDCoP, please reach out to Atif via: a.saddiq9@bradford.ac.uk

Amna Khan-Patel, Clinical Fellow, NHS England shared the national work which is underway to improve digital capabilities and skills of the pharmacy workforce. She spoke about the need to level up the skills of all the pharmacy workforce in terms of digital capabilities. NHS England has established a task and finish group to explore how to do this. The priorities of the working group are to:

- Professional frameworks: Review of existing professional frameworks supporting digital skills development.
- Education and Training: Assess the current digital training for pharmacy professionals and produce a resource that signpost to relevant training course and intended audience.
- Career pathways: Review progression routes for clinical informatics and co-develop (with the FEDIP) a pharmacy case study for the generic Chief X Information Officer (CXIO) job profile.

In collaboration with the Centre for Pharmacy Postgraduate Education (CPPE) a new 'Introduction to Clinical Informatics' is being developed and should be available in the Autumn of 2025. A new 'e learning gateway' section on the CPPE website is also being produced as part of the national work to support digital skills and capabilities. It will provide signposting to core and advanced learning resources in digital.

Duncan Rudkin, Chief Executive Officer, GPhC spoke about the common threads that had been discussed throughout the meeting but posed the question of the regulator's role in terms of digital and AI. Within the Initial Education and Training Standards (IET) for pharmacists there are broad learning outcomes that cover technology and digital. Duncan welcomed the indicative digital curriculum that is being developed.

He mentioned that the regulator has considered that it would not be wise to be too prescriptive, but that education providers and foundation training providers are required to demonstrate that education provision is revised when there are significant changes in practice in order to reflect this.

The dilemma for the regulator is around the value of providing clear expectation in this area but also not causing innovation to be hindered, so not saying that particular capabilities are needed for particular technologies, which could mean the standards getting out of date very quickly.

Duncan mentioned the potential to develop professional standards if there were any specific gaps that needed addressing. The accreditation process for independent prescribing was highlighted and the fact that learning outcomes for pharmacy technicians are not digitally specific. The regulator would be consulting on new initial education and training standards for pharmacy technicians later in 2025, which would provide an opportunity to explore how digital literacy should be addressed in those standards.

BREAKOUT SESSION 2

Clinical informaticians

The skill and expertise of clinical informaticians was noted and there was an understanding that this needed to be better utilised. There was not necessarily a linear career route to becoming a clinical informatician within pharmacy.

Interest was expressed in developing leadership for digital pharmacy leaders and the need to invest in the current workforce, medicines and safety, taking into consideration human factors and behavioural change.

Some discussion was had around whose responsibility it was to enable pharmacy students to engage with digital platforms during their studies.

Development of technology

As decision making tools are developed it is essential that they are critically appraised from a clinical perspective. The responsibility for the decisions made needs to reside with the healthcare professional and not the AI tool.

Concerns were raised around how we can be assured about the quality and use of tools and following that, how we could reward performance or excellence in adoption of digital systems.

Hearing concerns and apprehension about use of AI, it was suggested that users should be allowed to choose the level of interaction they need so that the technology could meet the users where they are at and the use of passive tools could be used in a system to engage people.

What does excellence in spread and scale look like for the profession and for patients?

Examples of digital technology in practice

There was a discussion about how to get involved in innovation as an individual practitioner as well as what do we need to do in order for the pharmacy professional workforce to develop for the digital future.

Some areas of specialism are already adopting tools and developing guides e.g. cancer through the British Oncology Pharmacy Association (BOPA).

Within medicines homecare, Sciensus are piloting electronic prescriptions where this previously was predominantly paper based. They are using AI to transcribe paper prescriptions onto their electronic systems for business processes.

A key message is to keep the patients' needs in sight and for pharmacists to act as a bridge to technology

Actions:

- RPS should be lobbying with a unified message across devolved nations to influence their longer-term strategy on digital innovation surrounding medicines and pharmacy practice.
- An education piece for pharmacists in the digital space needs to be developed, emphasising the importance of clinical judgement and critical appraisal.
- RPS should facilitate the development of a worked example of a digital role moving through the credentialling process. This would guide pharmacists on the type of evidence they would be able to include as part of the credentialing process. This would also raise the profile of digital pharmacy careers including those as clinical informaticians.
- RPS will facilitate a series of events to enable stakeholders to 'deep dive' into particular aspects of digital capabilities and AI.

Appendix 1: Attendees

NAME	TITLE	ORGANISATION
Alec Price Forbes	National Chief Clinical Information Officer	NHS England
Alex Clarke	Commercial Product Operations Manager	Sciensus
Amira Chaudry	Senior Clinical Advisor and Inspector	General Pharmaceutical Council
Amita Aggarwal	Chair, Digital Medicines Group	British Computing Society
Amna Khan Patel	Clinical Fellow	NHS England
Atif Saddiq	Chair of School of Pharmacy Digital Community of Practice	Bradford University
Bastiaan Buijtenhuijs	Chair, AI group & Head of Product at iQ HealthTech	British Oncology Pharmacy Association
Cate Whittlesea	Professor of Pharmacy Practice, UCL	Pharmacy Schools Council
Cath O'Brien	Chief Pharmacy Information Officer	Digital Health and Care, Wales
Craig Murdoch	Co-Founder	DigiPharma
Dan Al-Thion	Community Pharmacy IT Policy Manager	Community Pharmacy England
Dan Corbett	Senior Lecturer (Digital Education)	School of Pharmacy, Queens University, Belfast
Darren Powell	Chair	RPS Digital Pharmacy Expert Advisory Group

NAME	TITLE	ORGANISATION
Diane Ashiri-Oredope	Chief Scientist	Royal Pharmaceutical Society
Duncan Rudkin	Chief Executive Officer	General Pharmaceutical Council
Ewan Morrison	Director of Pharmacy	NHS National Services Scotland
Fiona McIntyre	Policy and Practice Lead, Scotland	Royal Pharmaceutical Society
Geraldine McCaffrey	Chair	RPS Welsh Pharmacy Board
Heidi Wright	Practice and Policy Lead, England	Royal Pharmaceutical Society
Helena Young	Senior learning and development pharmacist	Centre for Postgraduate Pharmacy Education
Iblal Rakha	Informatics Pharmacist / NHS Clinical AI Fellow	Oxford University Hospitals Clinical AI Research Group
Janice Perkins	Chair	RPS Community Pharmacy Expert Advisory Group
Jessica Yap	Chief Pharmaceutical Officer's Clinical Fellow	NHS England
Jono Bevan	Digital Medicines Lead, Mid Yorkshire Hospitals NHS Teaching Trust & Chair North East and Yorkshire Digital Pharmacy and Medicines Network	National Pharmacy AI collaborative
Joseph Thompson	Vice chair	RPS Early Careers Expert Advisory Group
Laura Doyle	Head of Undergraduate and Foundation Pharmacist	Health Education and Improvement, Wales
Laura Wilson	Director for Scotland	Royal Pharmaceutical Society

NAME	TITLE	ORGANISATION
Leon Zlotos	Associate Postgraduate Pharmacy Dean	NHS Education Scotland
Marion Bennie	Chief Pharmacist	Public Health Scotland
Paula Higginson	Head of learning development	Centre for Postgraduate Pharmacy Education
Pinkie Chambers	Chair, AI group	British Oncology Pharmacy Association
Polly Shepperdson	Partnerships Manager	First databank
Rahul Singal	Chief Pharmacy and Medicines Information Officer	NHS England
Shafer Stellema	Pharmacy Lead for UK and Europe	EPIC
Sean McBride Stewart	Lead Pharmacist Medicines Management Resources	NHS Greater Glasglow and Clyde
See Mun	Digital and Quality Improvement Specialist	Specialist Pharmacy Services
Stacey Middlemass	Chair	RPS Primary Care Pharmacy Expert Advisory Group
Sunayana Shah	Chair	RPS Industrial Pharmacy Expert Advisory Group
Susan Gibert	Member / Director of Customer Experience	RPS Hospital Expert Advisory Group / Sciensus
Tariq Muhammed	Chief Executive Officer	Titan PMR Ltd
Tony McDavitt	Director of Pharmacy & Controlled Drugs Accountable Officer, Interim Depute Chief Officer	NHS Shetland
Yasmin Karson	Pharmacy AI Consultant	Digital Clinical Safety Karsons Pharmacy

Appendix 2: Speaker Biographies

Alec Price Forbes: Alec Price-Forbes joined NHS England as National Chief Clinical Information Officer at the start of October 2024. Alec is an experienced Consultant Rheumatologist at University Hospitals Coventry and Warwickshire NHS Trust, was previously the Trust's CCIO and was the NHS's first system CCIO for Coventry and Warwickshire's Health and Care System. He has also held roles as Clinical Lead and co-Chair for NHSE's Digital Blueprinting Steering Group and as CMIO for 3M Healthcare (UK and Ireland).

With a reputation as a compassionate and empathic clinician, he has an established track record of working across care settings to facilitate new ways of working to transform health and care delivery. With extensive experience in strategic planning and quality improvement, he has successfully led many programmes and projects, accelerating and embedding core digital capabilities. These include the Shared Care Record, consolidating EPR capabilities with a vision for a single EPR, Virtual Health and Care capabilities and a Population Health Management solution. In 2021, he spearheaded the creation of a digitally enabled Transformation Strategy for Coventry and Warwickshire's ICS. This emphasised the convergence and standardisation of systems to deliver maximal integration, focusing on citizens and patients and not just care providers.

He is passionate about the role of high quality data, digital technologies and capabilities in enabling us to reimagine health and care services and outcomes in meeting the Quintuple Aim of Healthcare and dedicated to improving patient care by fostering a culture of change and collaboration.

Amna Khan-Patel is currently a Clinical Fellow at NHS England in the Digital Medicines Programme following the completion of the Chief Pharmaceutical Officer's Clinical Fellowship (2023/2024). Prior to this role, Amna has worked in secondary care where she completed her MSc in Secondary Care. that focused on a quality improvement to support the production and implementation of an electronic pharmacy handover. This project aimed to enhance the communication of patient information within the pharmacy team using the digital solution implemented by the organisation to improve efficiency and patient safety.

During her fellowship Amna led the national project on closed loop medicines management (CLMM) which explored the adoption of these systems by revisiting the Global Digital Exemplar Trusts that were supported to implement these digital solutions. The work involved reviewing the benefits and challenges organisations have encountered since adoption. As part of this project a set of blueprints have been produced to show the different workflows that can be used to implement CLMM.

Prior to her current role, she was the Education and Training Lead and is keen to support the development of pharmacy workforce in digital skills and competencies to improve the way patient services are delivered. She is passionate about the ongoing development of the pharmacy workforce and is committed to advancing digital literacy in the sector, ensuring that technology enhances both the quality of care and patient outcomes.

Atif Saddiq: Atif Saddiq is the chair of the UK-wide School of Pharmacy Community of Practice (SoPDCoP) and works as a portfolio pharmacist and his current roles include, Assistant Professor at The University of Bradford; Training Programme Director at NHS England; Co-Founder at Pharmacy Foundations; and Independent Prescribing Advanced Clinical Practitioner and Clinical Research Lead in General Practice. Atif has a keen interest in Digital Health, primary care, common and minor ailments, and academia.

Cath O'Brien: Appointed as Chief Pharmacy Information Officer for DHCW Cath is engaged with the delivery of the current digital medicines initiatives as well as helping shape the next steps in achieving the digital medicines vision for NHS Wales. Historically, Cath has held a number of senior pharmacy roles at WCPPE and RPSGB and well as senior management in the NHS including

Director of the Welsh Blood Service and Chief Operating Officer at Velindre NHS University Trust. She was made Member of the Order of the British Empire (MBE) for leading the development of the Advanced Therapies Statement of Intent for Welsh Government.

Dan Corbett: Dr Dan Corbett is a Senior Lecturer (Digital Education) at the School of Pharmacy at Queen's University Belfast. He specialises in developing digital/blended learning resources, in addition to innovation in curriculum design and the implementation of educational technologies, including the use of generative artificial intelligence. His extensive experience in enhancing digital education provision spans across pharmacy programmes in both UK and international contexts.

Darren Powell: Darren Powell FRPharmS serves as the Chair of the Digital Pharmacy Expert Advisory Group at the Royal Pharmaceutical Society and as a Clinical Lead within the Transformation Directorate of NHS England. With an extensive clinical background and a commitment to digital innovation, Darren advocates for the digital transformation of pharmacy. Their leadership has been instrumental in aligning technological advancements with patient-centred care, ensuring the responsible and effective implementation of digital tools across the NHS.

Duncan Rudkin was appointed by the Privy Council as the founding chief executive and registrar of the GPhC and has been with the organisation since its inception in 2010. Prior to that Duncan had worked in General Dental Council for a number of years, including a period as chief executive there. His original professional background was as a commercial solicitor.

Ewan Morrison is the Director of Pharmacy at NHS National Services Scotland and is the co-lead of the national digital prescribing and dispensing programme (DPDP). He has worked at NSS since 2014 and prior to that he worked in various secondary care Pharmacy roles including the regional Pharmacy lead for the Southeast of Scotland Cancer Network. Clinically, he has a long-standing involvement in cancer services. He has also worked for various Pharmaceutical Companies in Medical/Marketing roles. In addition, Ewan has been working for the Scottish Government for two days per week for the past four years and is currently working with the Chief Pharmaceutical Officer as an advisor on Pharmacy and Medicines related topics.

Geraldine McCaffrey: Geraldine McCaffrey serves as the Chair of the Welsh Pharmacy Board at the Royal Pharmaceutical Society, and as a member of the RPS Assembly and the Pharmaceutical Press Board. She is the Principal Pharmacist for Research & Development at Betsi Cadwaladr University Health Board and is seconded part time to Digital Health and Care Wales supporting the development of the Shared Medicines Record and Digital Medicines Roadmap for Wales.

Geraldine's PhD research explored perspectives of pharmacy teams on increasing digital maturity in secondary care. She has extensive experience in leading pharmacy teams, services and improvement initiatives. She has a keen interest and experience in service transformation to improve patient & staff experience and patient outcomes - recognising that digital, data and technology can be key enablers.

Jonathan Bevan is the Digital Medicines Lead at Mid Yorkshire Hospitals NHS Trust, with extensive experience in delivering digital transformation within healthcare services. A qualified pharmacist and graduate of the NHS Digital Health Leadership Academy, Jonathan combines clinical expertise with strategic leadership in digital medicines, artificial intelligence, and data-driven innovation.

Jonathan has experience of major initiatives including leading multi-trust and Trust-wide implementation of digital systems. He has direct operational experience leading AI-driven innovative projects, notably the development of a machine learning tool for patient prioritisation within clinical pharmacy services, delivered through collaboration with academic researchers and specialist digital consultants. He chairs the Northeast and Yorkshire Digital Medicines Network and is the founding Chair of the National Collaborative Working Group for Data and AI to Support Pharmacy. Jonathan is also a member of the Northeast and Yorkshire AI Collaborative Forum, contributing to regional AI development strategies.

Committed to embedding digital and data literacy across healthcare, Jonathan has developed specialist roles to future-proof the workforce and advocates for a human-centred approach to digital innovation. A regular national and international speaker, he champions responsible, inclusive digital transformation that enhances patient care and strengthens healthcare systems.

Marion Bennie: Professor of Pharmacy and Pharmacoepidemiology, University of Strathclyde and Chief Pharmacist, Public Health Scotland (PHS). She provides leadership in the development of national medicines data assets and resources - most recently a whole system prescribing dataset across primary and secondary care – and generation of real-world evidence to support safe and effective clinical care. Marion is a Fellow of the: Royal Pharmaceutical Society, UK; Faculty of Public Health, Royal Colleges of Physicians, UK, and; Royal College of Physicians, Edinburgh.

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