ROYAL PHARMACEUTICAL SOCIETY

Transforming population health: The role of digital innovations in supporting person-centred care

Darren Powell
Clinical Lead - Transformation Directorate,
NHS England

ROYAL PHARMACEUTICAL SOCIETY

,

The NHS Wales Shared Medicines, Allergies and Intolerances Record

Cath O'Brien MBE FRPharmS
Chief Pharmacy Information Officer
Digital Health and Care Wales

National Data Resource for Health and Care & Digital Medicines

NHS Wales Digital Medicines Vision

" Making the prescribing, dispensing and administration of medicines, everywhere in Wales, safer, more efficient through digital "



Care Data Repository (CDR)
Provides a standards-based data store for storing, retrieving and updating care data records

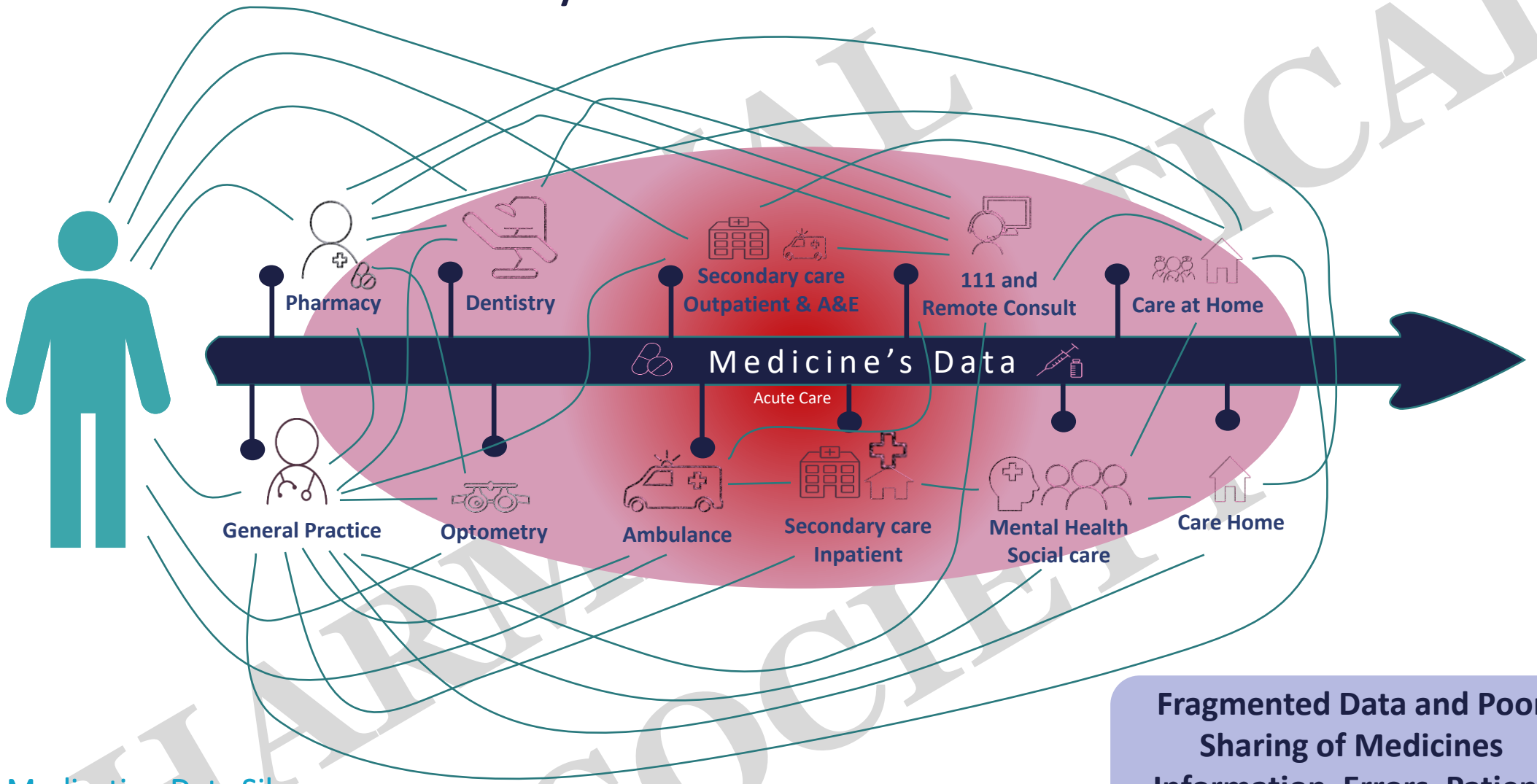
National Data & Analytics Platform (NDAP)
Advanced, scalable data warehousing and advanced analytics capabilities including predictive analyses, machine learning and visualisation tooling

Secure Data Environment (SDE)
Delivers a secure platform for collaborative studies involving academia, industry, health and care

Shared Medicines Record

GIG CYMRU NHS WALES
Iechyd a Gofal Digidol Cymru
Digital Health and Care Wales

The Medicines Journey



Medication Data Silos



Fragmented Data and Poor Sharing of Medicines Information, Errors, Patient Harm

PHARMACEUTICAL SOCIETY

SMR Key drivers

Opportunity for machine learning and AI to improve patient care

Duplicate Data Entry

Fragmented Data Standards and System Interoperability

Error prone, time consuming & can be lost



Clinical Decisions made without full medicines or allergy information

Lack of Patient Access and ability for citizen to manage their data digitally

Absence of national governance and clinical ownership – for consistency, accountability and data quality

NMP – Non-Medical Prescriber

The Shared Medicines, Allergies and Intolerances Record SMR

For Patients and Clinicians across Wales, the **Shared Medicines Record** is a patient centred medicines view that follows the patient across health board boundaries, supporting continuity of care and research.



The SMR Benefits

Medicines Optimisation

- Integration of medicines optimisation tools with the Shared Medicines Record (SMR)
- Improve patient safety, outcomes, and add value
- Case finding



Population Health

- Combining with other datasets
- Identify prescribing patters and variation, areas for improvement
- Health inequalities

Enhance patient safety

- Through access **to timely patient medicines and allergy information**

Reporting

- Improved data generation, and access to data to support local and national reporting requirements

Interoperability

- Facilitates **seamless data flow** & interactions between internal and external services.
- This **promotes collaboration**, enables data sharing, and simplifies the development of third-party integrations or extensions.

Patient access

- Empowering patients in their health care

Consolidated view

- Consolidated view of patient's medicines and allergies record
- Available to clinicians when needed

FHIR Standards & Profiling- the technical bit!



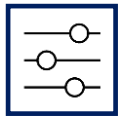
Medication Statement

- Medication
- Status (e.g. active/stopped)
- Reason
- Category (Inpatient, Outpatient, Community, Patient specified)
- Encounter/episode context
- Effective/Asserted date
- Dosage
- Who prescribed it
- Where was prescriber from



Allergy Intolerance

- Clinical Status
- Verification status
- Type
- Category
- Criticality
- Code
- Onset
- Asserted Date
- Recorded by /date
- Last occurrence
- Note
- Reaction



Medication Request

- Identifier
- Status
- Status reason
- Status changes date time
- Intent
- Category
- Priority
- Do not perform
- Medication
- Subject
- Information source
- Encounter
- Supporting information
- Authored on
- Requester
- Reported
- Dose
- Dispense request
- Substitution



Medication Dispensed

- Medication
- Reason for not dispensing
- Category (inpatient, outpatient, community)
- Context (encounter/Episode)
- Who and where is was dispensed
- Type
- Quantity and Days supplied
- Date and time prepared and handed over
- Dosage instruction
- Substitutions



Medication Administration

- Medication
- Status (in-progress, not-done, on-hold…)
- Category (Inpatient, Outpatient, Community)
- Reason for not taking (dislikes taste, side effects …)
- Context (Encounter/Episode)
- Date/time
- Type of administer(performer, verifier, witness) & Who administered
- Reason
- Dosage
- Note

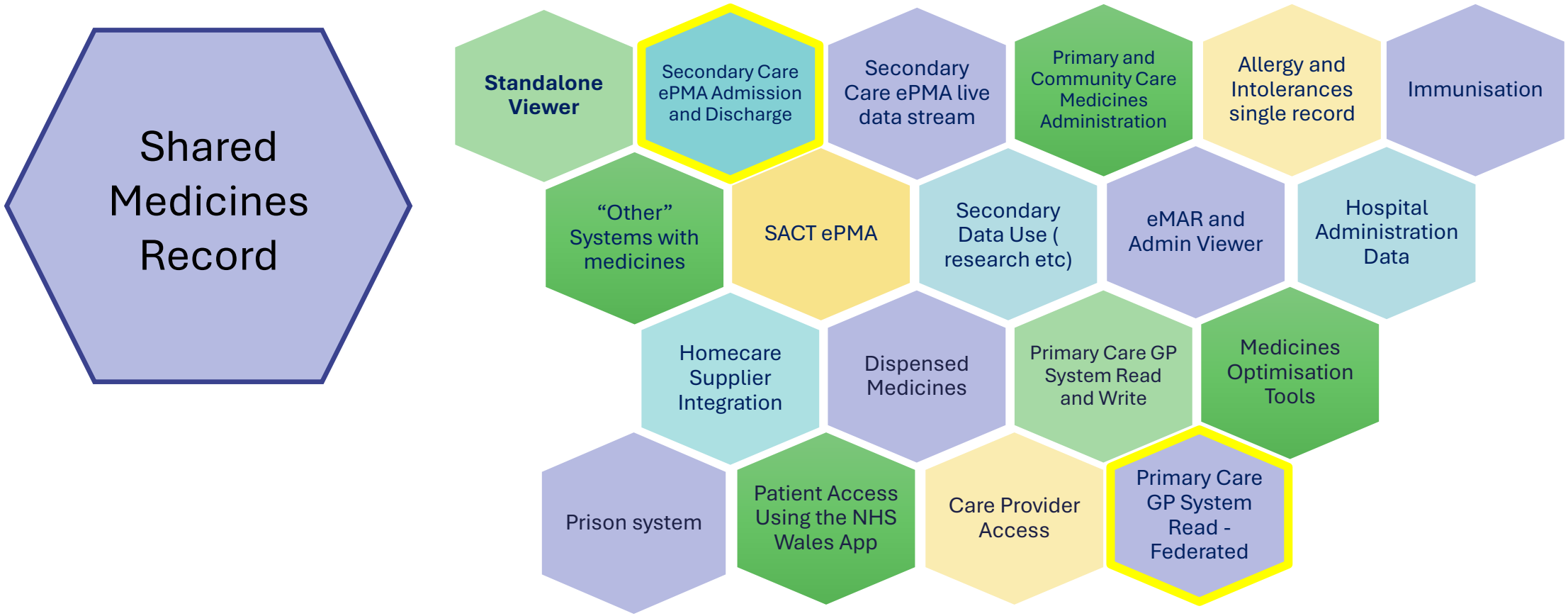


Immunisation

- Status
- Reason not done
- Vaccine code
- Context (encounter)
- Occurrence and recorded date & time
- Source
- Origin
- Location
- Manufacturer, lot number, expiration date
- Site, route, dose
- Who administered
- Note
- Reason
- Education provided
- Reaction date, detail, reported
- Protocol followed

BASED on HL7® FHIR® and Wales FHIR Implementation Guide

Shared Medicines Record- the path to maturity



ePMA – electronic prescribing and medicines administration
SACT – systemic anti-cancer therapies
eMAR – electronic medicines administration

ROYAL PHARMACEUTICAL SOCIETY

If Digital is the treatment, then why is it in short supply?

Anthony McDavitt FRPharmS

Director of Pharmacy & Depute Chief Officer,
NHS Shetland



Why this matters

People’s outcomes are digitally dependent

ROYAL PHARMACEUTICAL SOCIETY

Where do we stand just now?

1. Who looks at rising demand and complexity and wonders if the system can cope?
2. Who thinks we're drowning in data… but starving for insight?
3. How confident are we at turning data into better clinical decisions?
4. **Who's confident that we'll do this in time?**



ROYAL PHARMACEUTICAL SOCIETY

Information friction in care: what's documented – and still hurting people

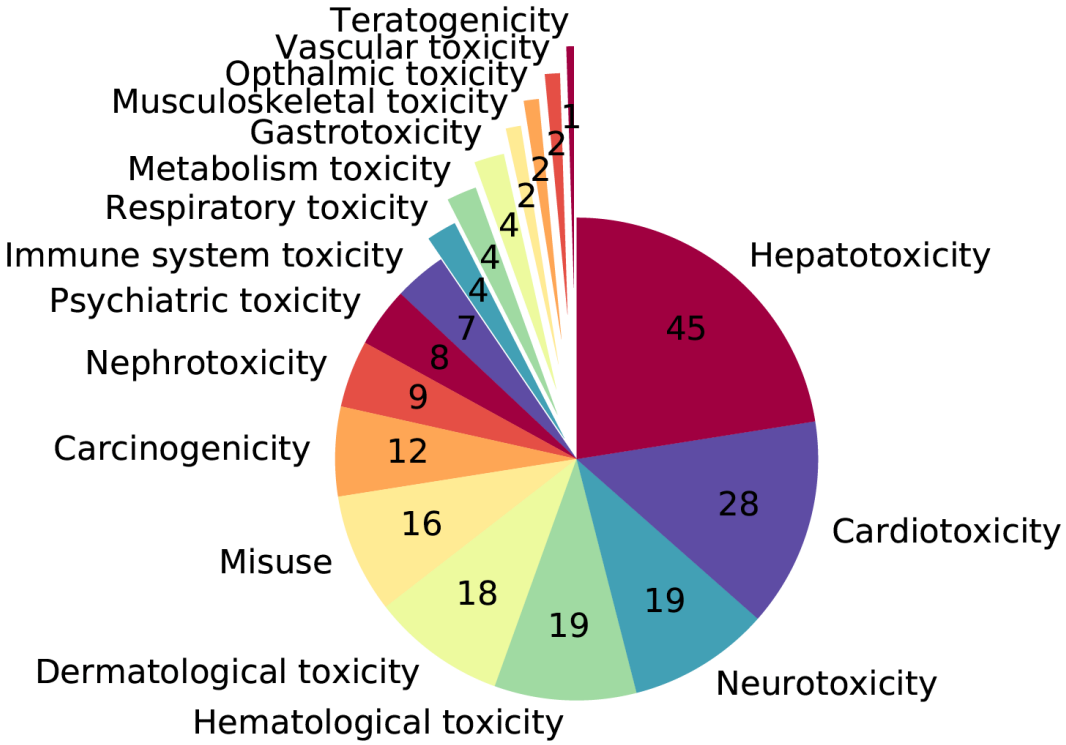
- **Missing context:** **~1 in 7 GP** and **1 in 6 OPD** visits lack key info → **~1 in 3 delays**, **~1 in 5 harm risk**.
- **Handoffs:** **~2/3** of communication **failures happen at transitions**.
- **Waste:** Fragmented records → **duplicate tests/imaging**
- **Staff load:** Up to **~50%** of day on EHR/desk work + **1–2 h** after hours
- **Why it persists:** Lack of capability internally, silos of systems, vendor-held data, missing provenance, patchy interoperability, temp staff workarounds.
- **So what:** Slower decisions, rework and chasing; **unsafe automation** without context.

ROYAL PHARMACEUTICAL SOCIETY

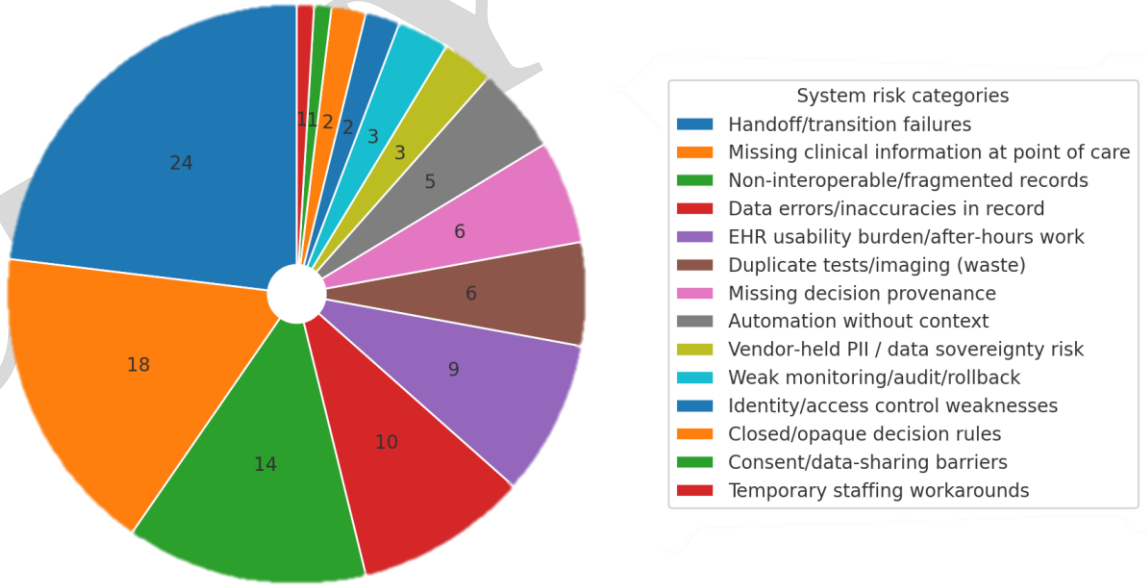
If digital were a medicine – would we tolerate these risks?

Yellow Card | Making medicines and medical devices safer





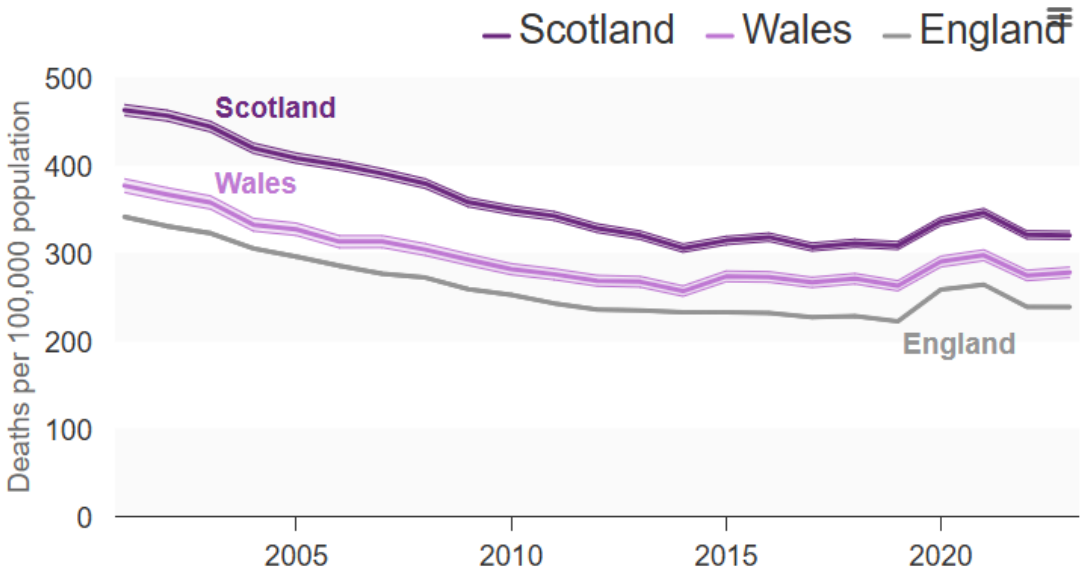
System risks in digital/information environments (relative signal strength)



Why this matters: Avoidable mortality

Scotland vs England and Wales

Avoidable mortality rates in Great Britain, all persons, 2001 to 2023.

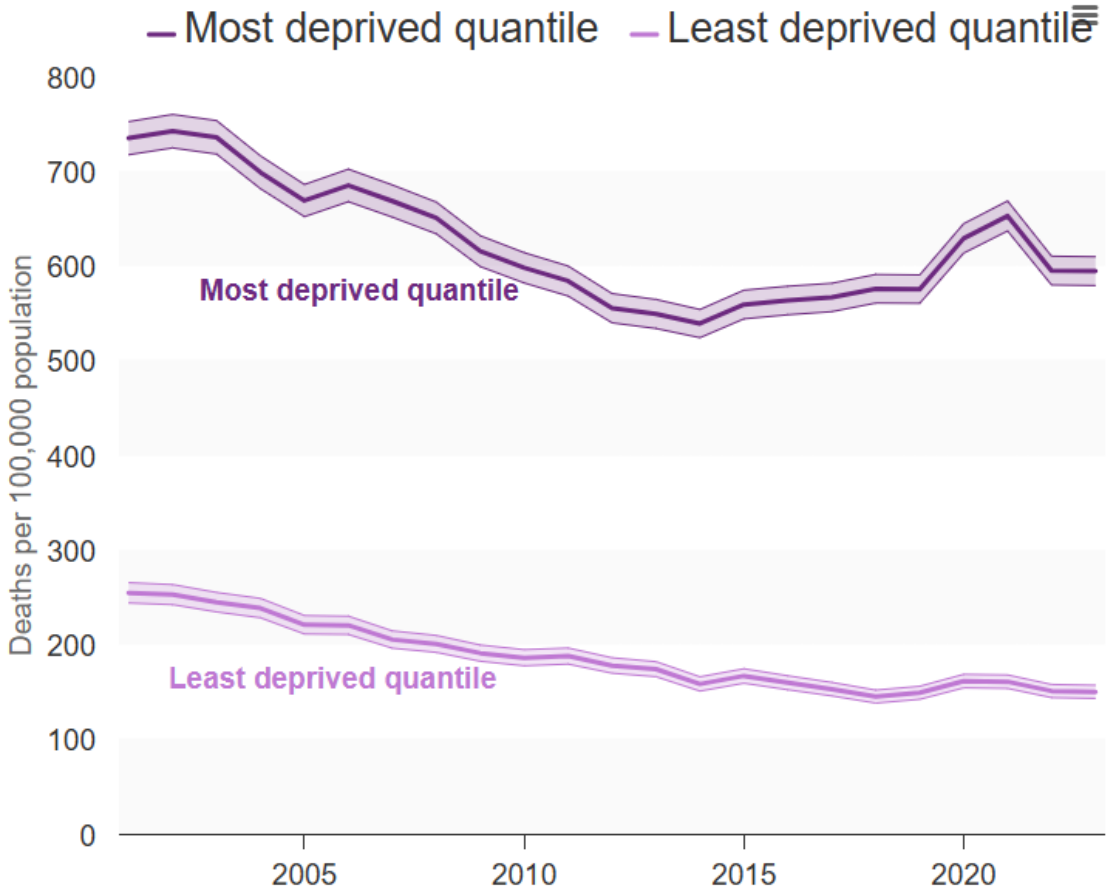


2023

- Scotland: **319.5**
- Low and Upper CI: **314.9 - 324.2**
- Wales: **277.3**
- Low and Upper CI: **271.3 - 283.4**
- England: **237.8**
- Low and Upper CI: **236.4 - 239.1**

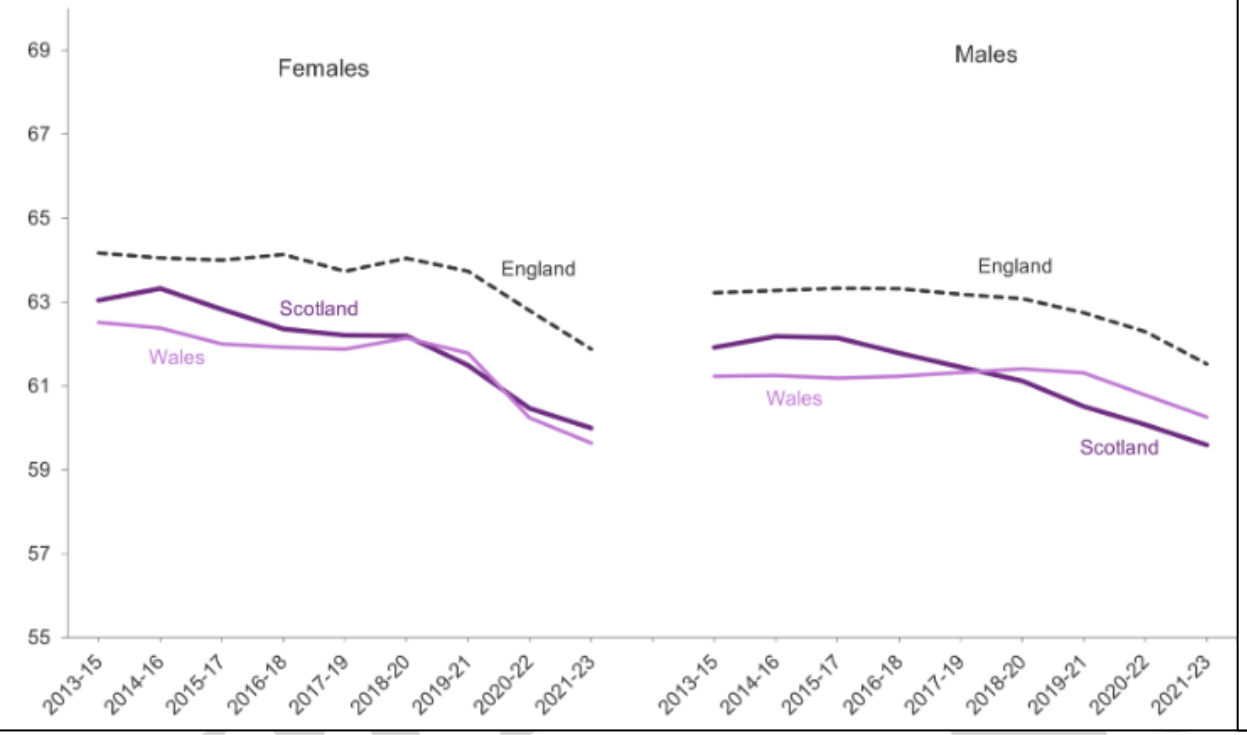
The Richest vs the Poorest

Avoidable mortality rates by deprivation, all persons, 2001 to 2023.

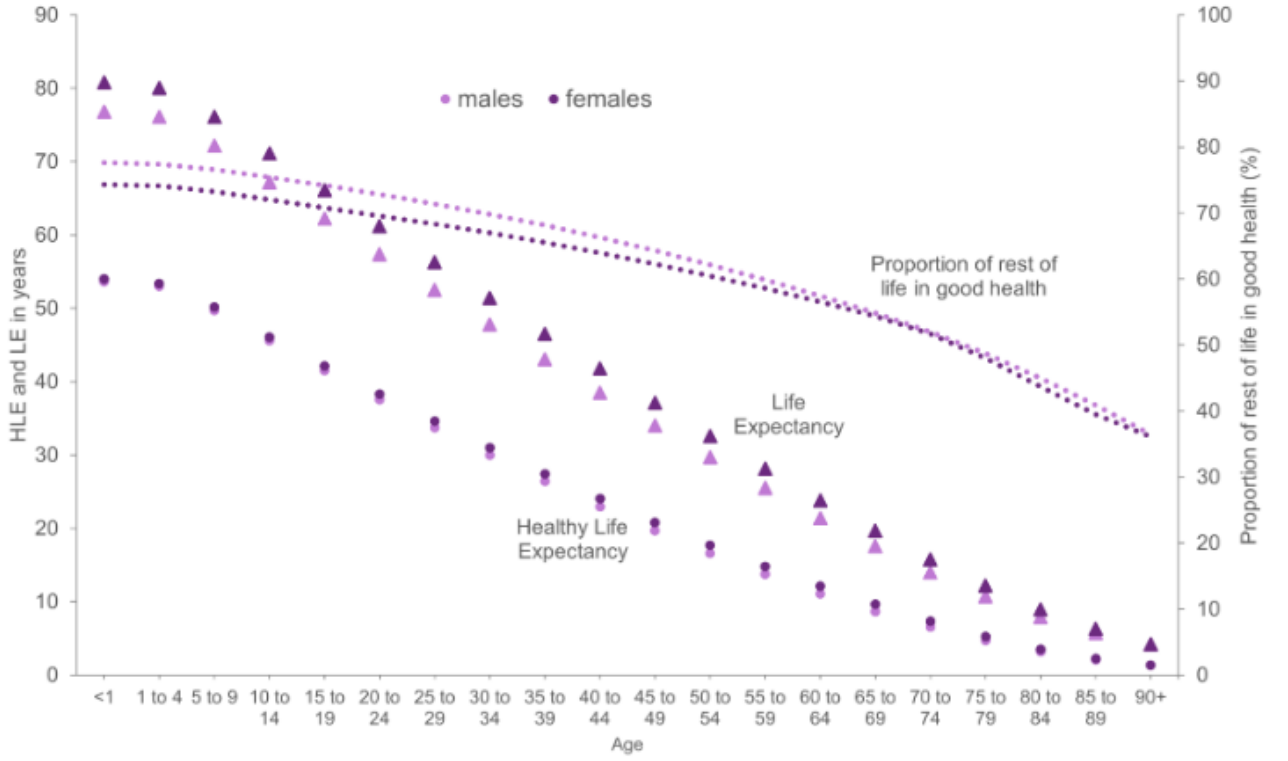


Why this matters: Healthy Life Expectancy

Healthy Life Expectancy at birth in Scotland, England and Wales, 2013-2015 to 2021-2023



Healthy life expectancy and life expectancy at all ages in Scotland, 2021-2023



Time is the resource.
We'll need to **manufacture it**.

We can't buy time. The £s are maxed out.

We can't hire time. Talent and hours are scarce – even if we had the £s

We're going to have to Manufacture it and redeploy the dividend

ROYAL PHARMACEUTICAL SOCIETY

Reframing Digital as a Clinical Generalism

We don’t **refer** digital; we **practice** it.

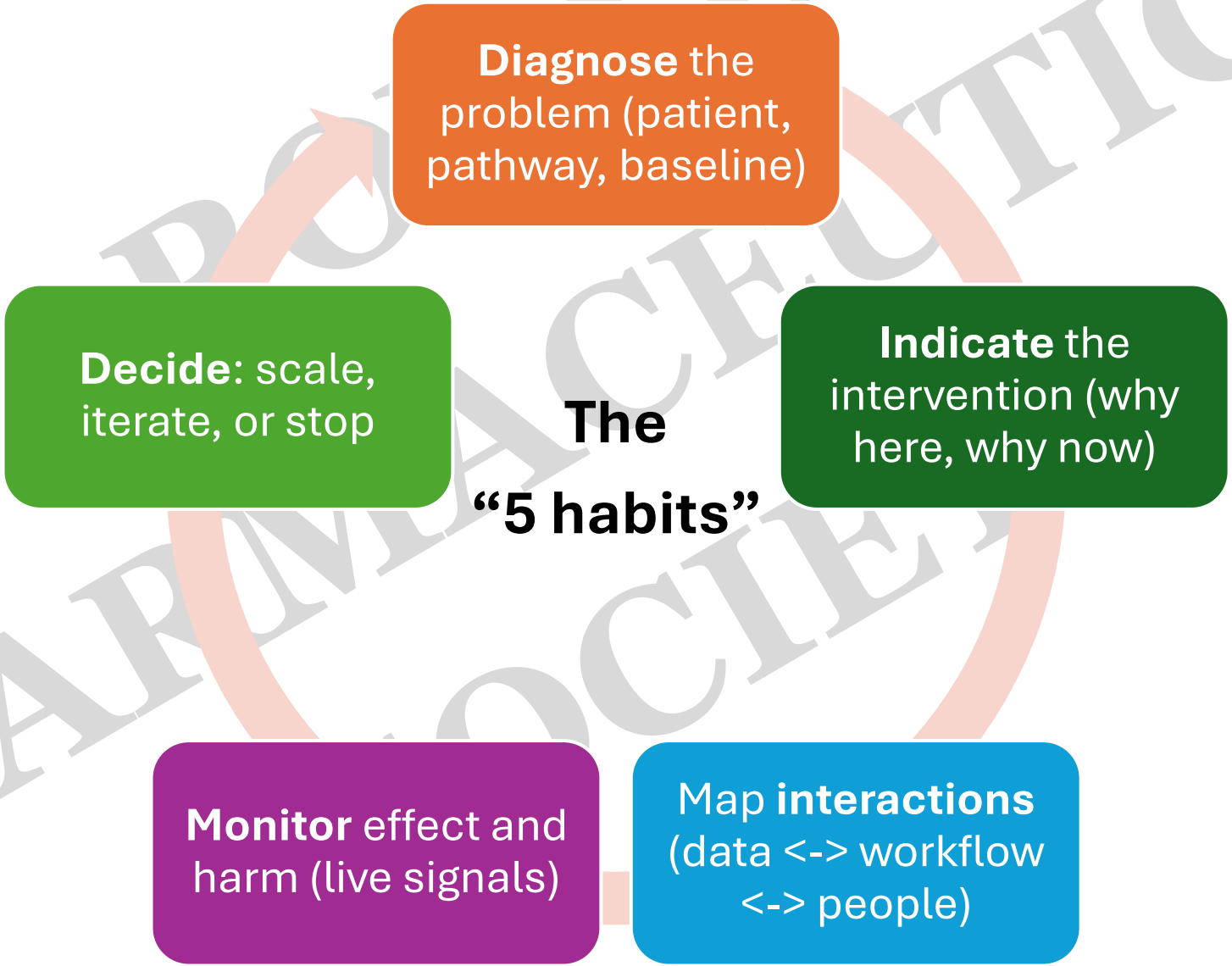
ROYAL PHARMACEUTICAL SOCIETY

Digital needs to be a generalism

- Core skill for **every** clinician & team
- Problem-led, not product-led practice
- Shared language → safer, faster decisions
- Embedded in care; **not outsourced**
- Specialists **support**, generalists **deliver**

ROYAL PHARMACEUTICAL SOCIETY

What **generalist digital** looks like in practice



PHARMACEUTICAL SOCIETY

Two traps that hinder generalism

Outsourcing the thinking

- **Vendor-led** pilots which define the problem
- Local context & risk get sidelined

Tool-first reflex

- **Buy before baseline**; automate the confusion
- Governance as brake, not steering

ROYAL PHARMACEUTICAL SOCIETY

Leadership and Creating Conditions

When we’re old enough and wise enough to not blame predecessors; and some of us young enough to live through the challenges ahead.

ROYAL PHARMACEUTICAL SOCIETY

Leadership and Creating Conditions

As leaders, we have a responsibility to create the strategic conditions that enable innovation to emerge from those closest to the work - our operational teams and service users. How do we build systems that:

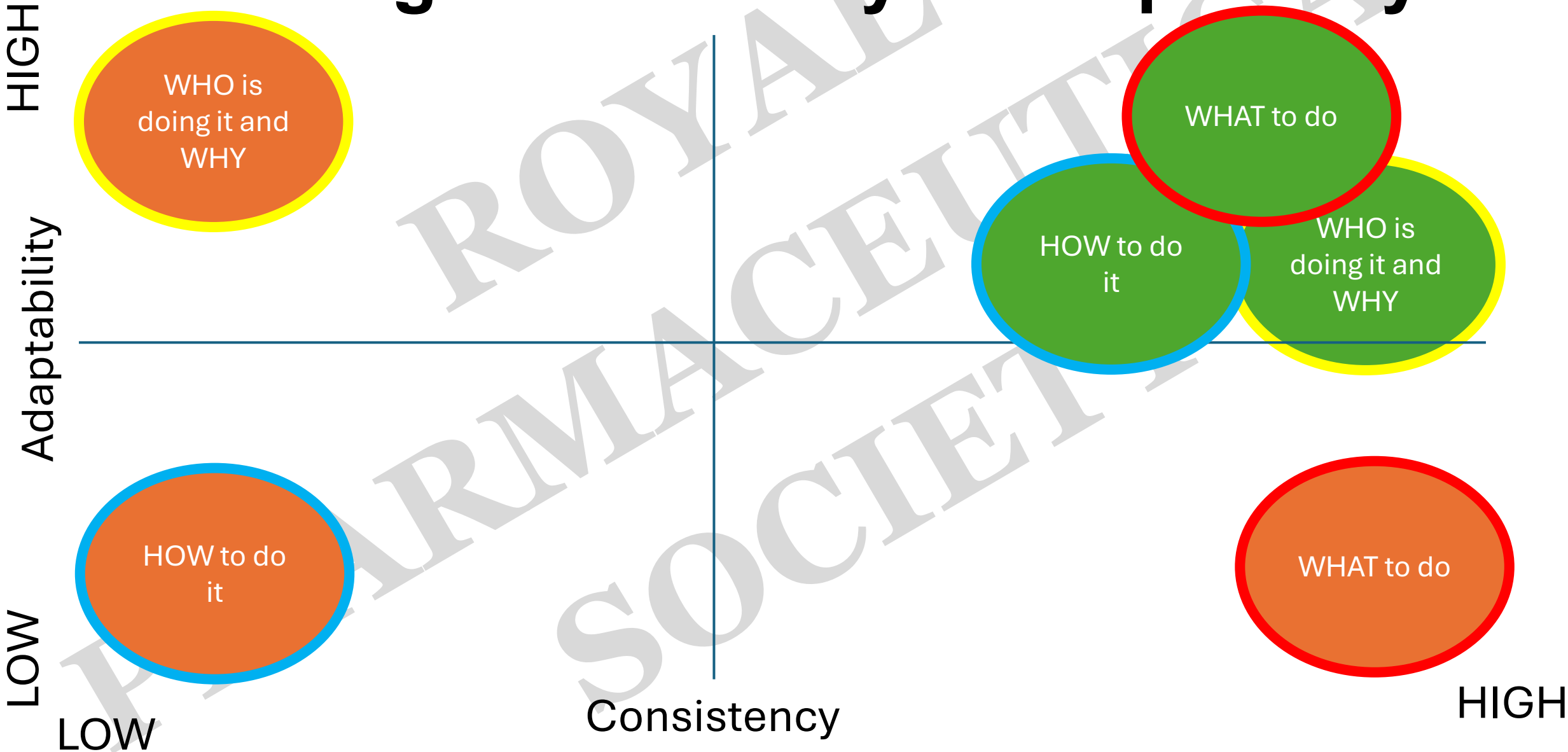
- (1) **incentivise people** to invest time and take ownership of their ideas;
- (2) **reduce the cognitive, regulatory and cultural barriers** that often overwhelm or deter innovation & improvement - including fear of scrutiny, loss of control, or increased workload;
- (3) **develop a realistic appetite for investment and risk**; and
- (4) **ensure our enabling functions** - finance, digital, governance - **act as facilitators** rather than passive gatekeepers

ROYAL PHARMACEUTICAL SOCIETY

Fear isn't a strategy



Balancing Consistency & Adaptability



ROYAL PHARMACEUTICAL SOCIETY

From control → competence

Protectionism	→	Outcome-first
“*Don’t change our role*.”	→	“*Change what improves outcomes*.”
Blanket bans	→	**Risk-stratify**; tolerate/mitigate/stop
Zombie programmes	→	**Time-box**; scale or stop
Policy as defence	→	**Governance as learning**

ROYAL PHARMACEUTICAL SOCIETY

Shetland’s approach

Built around the individual, for the breadth of many applications

ROYAL PHARMACEUTICAL SOCIETY

“How can we, as NHS Shetland, ensure that we have safe and effective systems in place that protect people against the wider system contexts and challenges?”

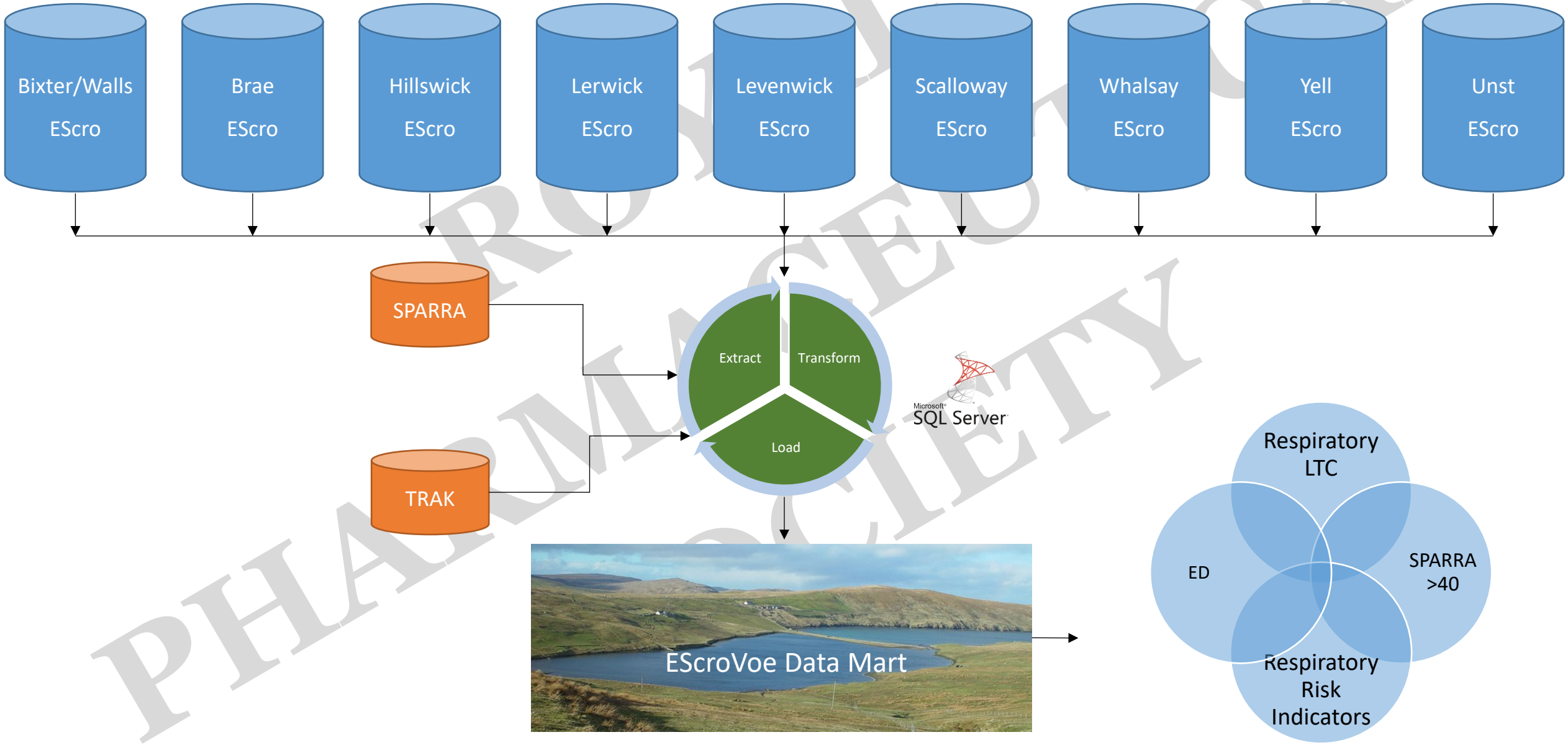
Our Principles for Delivery

1. **Listen, then act** - staff insight + community voice + data.
2. **Own the outcome** - accountable to every islander.
3. **Improve value delivered** - remove waste and low value.
4. **Outcomes before dashboards** - effective, safe, fair access first.
5. **No faux silos** - share the load across sectors and roles.
6. **One team, everywhere** - shared goals, local delivery.
7. **Engage at scale** - many channels, repeatable, two-way, including our communities.

ROYAL PHARMACEUTICAL SOCIETY

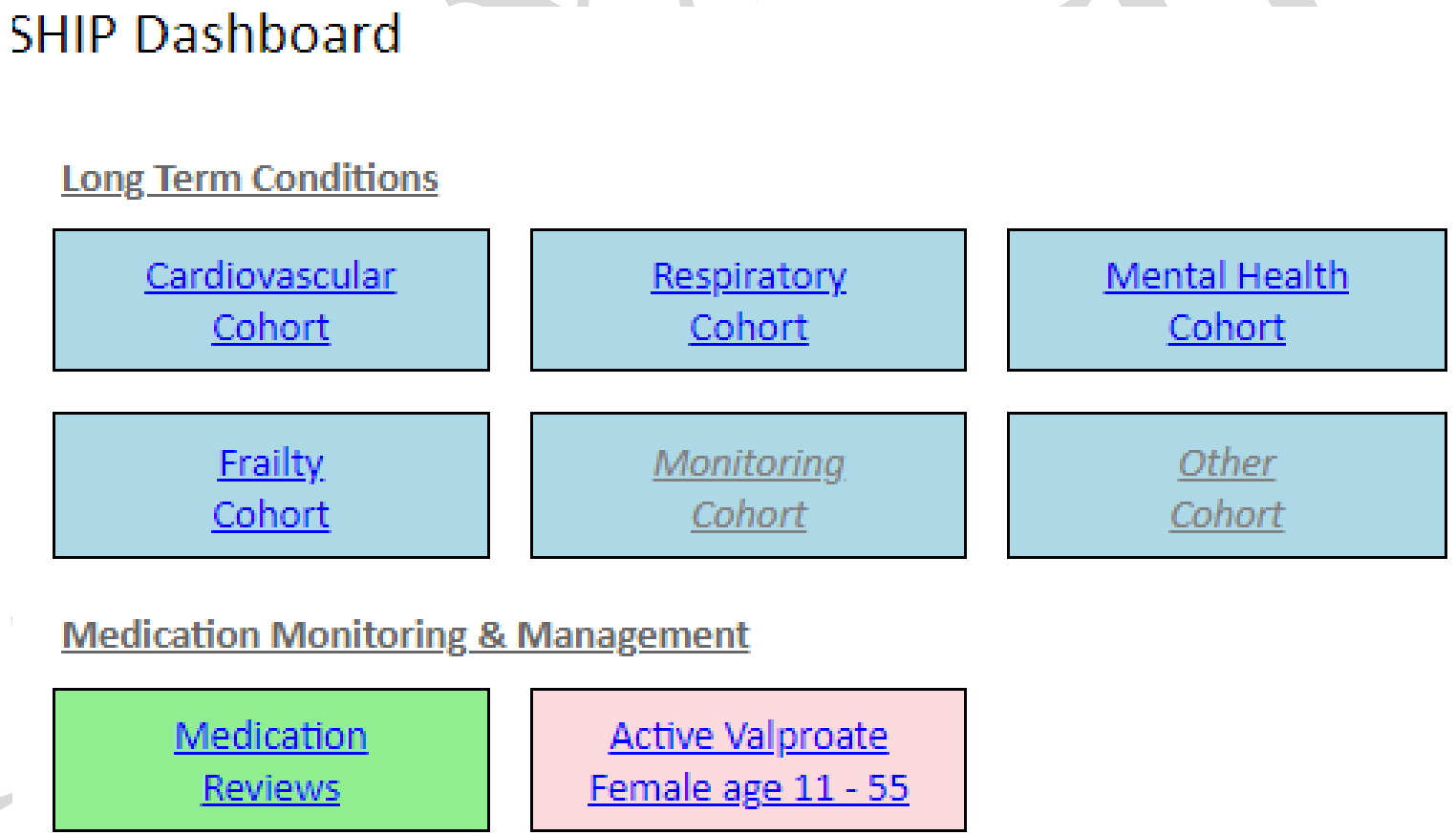
“Complexity is the enemy of execution.”

Building our SHIP



ROYAL PHARMACEUTICAL SOCIETY

Level 1



PH AL TICAL

Level 2

SHIP Dashboard > Cardiovascular LTCs

As of 24th February 2025, 5533 individuals registered at the Practices you *(Anthony McDavitt)* have permissions to view had at least one Cardiovascular LTC.

Summary counts by LTC are included below. Click on the blue text to find out more about each specific LTC:

All Cardiovascular *(5533)*	Atrial Fibrillation *(719)*	Coronary Heart Disease *(927)*
Chronic Kidney Disease *(1130)*	Type 1 Diabetes *(166)*	Type 2 Diabetes *(1084)*
Heart Failure *(372)*	Hypertension *(4146)*	Peripheral Arterial Disease *(203)*
	Stroke & TIA *(596)*	

PHA CAL

Level 3

SHIP Dashboard > Medication Reviews > Summary by Practice

Summary - Medication Reviews by Practice:

- There are currently **13528** individuals registered at the following practices with one or more repeat prescriptions active on their practice electronic record.
- This represents **61.1%** of the overall population of these practices.
- **17.6%** of these individuals are overdue* for a medication review.

				Overdue Medication Reviews		
Practice	**List Size**	**Individuals with an Active Repeat Prescription**	**% of List with an Active Repeat Prescription**	**Count Overdue**	**Percent Overdue**	**Individuals with an Active Repeat & Birth Month in May**
Bixter/Walls	1931	1108	57.4%	91	8.2%	133
Brae	2534	1421	56.1%	139	9.8%	124
Lerwick	8607	5447	63.3%	987	18.1%	509
Levenwick	2707	1765	65.2%	397	22.5%	171
Scalloway	3792	2198	58.0%	579	26.3%	197
Unst	595	414	69.6%	68	16.4%	22
Whalsay	1050	537	51.1%	1	0.2%	56
Yell	941	638	67.8%	115	18.0%	68
Totals:	**22157**	**13528**	**61.1%**	**2377**	**17.6%**	**1280**

** **Overdue Medication Review:** patient has at least one repeat prescription that has been active for 15 months or more, who does not have a coded medication review on their record in the last 15 months.*

PRIVATE

Level 4

Home > SHIP Dashboard > SHIP Dashboard - Level 4 - Medication Reviews

Practice: Yell | Birth Month: All | Registered GP: All

Medication Review In Time: Show All | Had at least one repeat item issued in last year: All | Total Active Repeats Group: Less than six,Six or more

1 of 2 ? | 100% | Find | Next

SHIP Dashboard > Medication Reviews > Summary by Practice > Patient Level Details

Count of patients in current selection: 638

	Demographics				Lifestyle				Active Repeat Details						Details of Last Review	Latest Observations & Measurements									
EmisNo	Practice	Registered GP	Birth Month	Age	Special Residential Status	Smoking Status	Drinking Status	Total LTCs	Active Repeats	Serial Repeats	Date First Active Item Prescribed	Date of Last Issue	Issues in Last Year	STU Prescribing Indicators	Date of Last Coded Review	Systolic	Diastolic	HbA1c	Non HDL	eGFR	Height	Weight	BMI	CFS	SPARRA Score
	Yell	Yell Gp Locum		77	Housebound	Ex smoker	Alcohol consumption	4	8	0	16/10/2014	18/07/2025	55	4	03/07/2025	110	70	34		70	172	62.5	21.13	6	71
	Yell	Yell Gp Locum		59	None	Ex smoker	Alcohol consumption	2	23	0	22/05/2023	15/08/2025	108	1	30/12/2024	149	97	92	2.8	> 90	180	116.3	35.9		67
	Yell	Yell Gp Locum		66	None	Ex smoker	Alcohol consumption	4	18	0	14/06/2013	05/08/2025	176	2	19/07/2023	138	73	31	3.91	89	187	96	26.59		66
	Yell	Yell Gp Locum		82	None	Ex smoker	Alcohol consumption	6	20	0	16/01/2012	30/07/2025	70	3	14/06/2024	137	62	32	4.04	24	155.5	69.8	28.87		65
	Yell	Yell Gp Locum		86	None	Ex smoker	Alcohol consumption	6	18	0	02/12/2019	04/08/2025	135	2	12/05/2025	143	72	34	2.26	47	160	74.8	30.62		59
	Yell	Yell Gp Locum		47	None	Rolls own cigarettes	Alcohol consumption	1	5	0	16/01/2012	28/07/2025	35	0	24/04/2025	116	76			72	153.5	106.5	45.62		56
	Yell	Yell Gp Locum		85	Housebound	Never smoked tobacco	Alcohol consumption	6	18	0	21/10/2019	13/08/2025	184	7	25/04/2025	134	60	36	4.01	53	149	80.2	36.12		53
	Yell	Yell Gp Locum		91	Housebound	Ex smoker	Alcohol consumption	6	19	0	16/01/2012	13/08/2025	148	6	19/07/2024	106	56	39	3.29	55	170	97.1	33.6	6	50
	Yell	Yell Gp Locum		87	None	Ex smoker	Alcohol consumption	7	15	0	16/01/2012	23/07/2025	103	1	07/06/2024	124	75	42	2.59	68	149.5	49.4	22.1		49
	Yell	Yell Gp Locum		83	Housebound	Ex smoker	Alcohol consumption	7	17	0	16/01/2012	12/08/2025	114	2	08/05/2025	118	75	38	3.56	57	182	90.8	27.41		49
	Yell	Yell Gp Locum		91	Care Home	Never smoked tobacco	Alcohol consumption	6	14	0	16/01/2012	15/08/2025	73	1	15/05/2025	125	72	53	5.1	27	159	49.8	19.7		46
	Yell	Yell Gp Locum		85	None	Ex smoker	Alcohol consumption	2	8	0	20/05/2015	24/07/2025	77	4	30/08/2024	131	73	39	2.75	88	171.5	75.4	26.11	3	46
	Yell	Yell Gp Locum		74	None	Never smoked tobacco	Alcohol consumption	8	34	0	01/02/2012	17/07/2025	202	4	31/05/2024	127	90	57	3.23	57	150.5	84.4	35.8		45
	Yell	Yell Gp Locum		87	None	Never smoked tobacco	Alcohol consumption	5	12	0	30/05/2017	30/07/2025	90	3	12/07/2024	140	82	40	2.61	40	164	62.2	23.13	5	43
	Yell	Yell Gp Locum		49	None	Cigarette smoker	Alcohol consumption	1	3	0	27/11/2023	20/06/2025	33	1	03/02/2023	140	87	38	3.6	> 90	188	125	35.37		41
	Yell	Yell Gp Locum		97	None	Never smoked tobacco	Alcohol consumption	5	9	0	16/01/2012	29/07/2025	69	5	02/10/2024	127	84	36	4.05	67	169	68	25.24		40
	Yell	Yell Gp Locum		92	None	Ex smoker	Alcohol consumption	6	13	0	29/08/2013	07/08/2025	81	5	29/05/2025	155	87	34	4.04	68	143	44	21.52	7	40

Shetlander's outcomes

Safe, person-first & team-owned

ROYAL PHARMACEUTICAL SOCIETY

Outcomes of the work: Cardiovascular Long Term Care – People Overdue

Practice	October 2024	November 2024	December 2024	January 2025	February 2025
Bixter/Walls	27.30%	29.10%	29.10%	28.90%	28.70%
Brae	43.30%	39.20%	32.70%	27.00%	26.40%
Lerwick	46.20%	42.50%	38.50%	28.90%	28.60%
Levenwick	28.40%	28.70%	26.70%	25.50%	25.40%
Scalloway	24.70%	16.10%	10.40%	6.60%	6.30%
Unst	14.40%	16.90%	16.90%	12.00%	12.10%
Whalsay	30.90%	26.90%	22.80%	19.50%	18.70%
Yell	45.20%	38.40%	38.40%	30.30%	29.80%
Totals:	**36.70%**	**33.20%**	**29.60%**	**23.80%**	**23.50%**

Improvement over time

PHARMOYAL SOLUTICAL

Outcomes of the work: Progress as of Monday!

SHIP Dashboard > Cardiovascular LTCs > Summary by Practice

Summary - All Cardiovascular LTCs:

- There are currently **5564** individuals registered at the following practices with one or more Cardiovascular LTCs coded on their practice electronic record.
- This represents **25.1%** of the overall population of these practices.
- These 5564 individuals have a total of **9506** Cardiovascular LTCs.

				Overdue Invites*		Overdue Appointments^	
Practice	List Size	Individuals with any Cardiovascular LTC	% of List with any Cardiovascular LTC	Count Overdue	Percent Overdue	Count Overdue	Percent Overdue
Bixter/Walls	1930	522	27.0%	165	31.6%	36	6.9%
Brae	2529	631	25.0%	8	1.3%	11	1.7%
Lerwick	8672	2059	23.7%	382	18.6%	387	18.8%
Levenwick	2699	646	23.9%	303	46.9%	115	17.8%
Scalloway	3791	890	23.5%	170	19.1%	32	3.6%
Unst	589	212	36.0%	70	33.0%	10	4.7%
Whalsay	1049	256	24.4%	141	55.1%	19	7.4%
Yell	941	348	37.0%	29	8.3%	43	12.4%
Totals:	**22200**	**5564**	**25.1%**	**1268**	**22.8%**	**653**	**11.7%**

** **Overdue Invites:** patients diagnosed with a Cardiovascular long-term condition at least 15 months ago who have not had a coded invite for a LTC appointment within the last 15 months.*

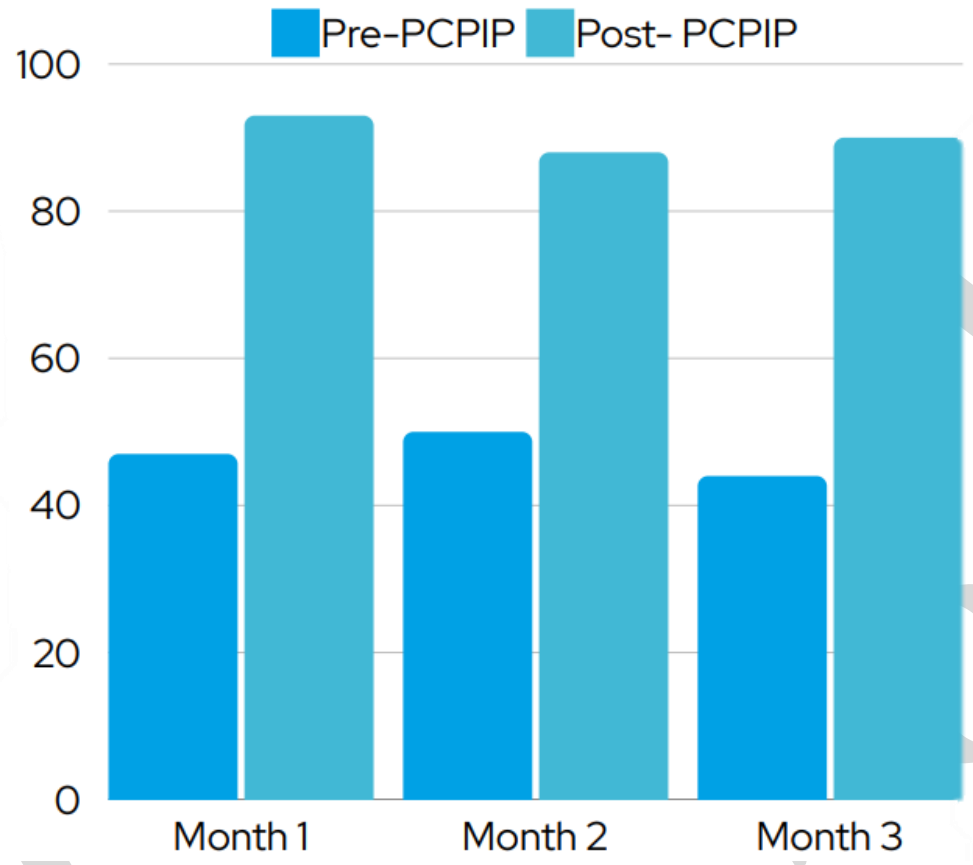
*^ **Overdue Appointments:** patients diagnosed with a Cardiovascular long-term condition at least 15 months ago who have not had a coded LTC appointment within the last 15 months.*

40%~ -> 11.7%

PHARMACEUTICAL

Outcomes of the work: Access to Medication Review

Figure 1. % patients with medication review complete three months pre and post implentation



SHIP Dashboard > Medication Reviews > Summary by Practice

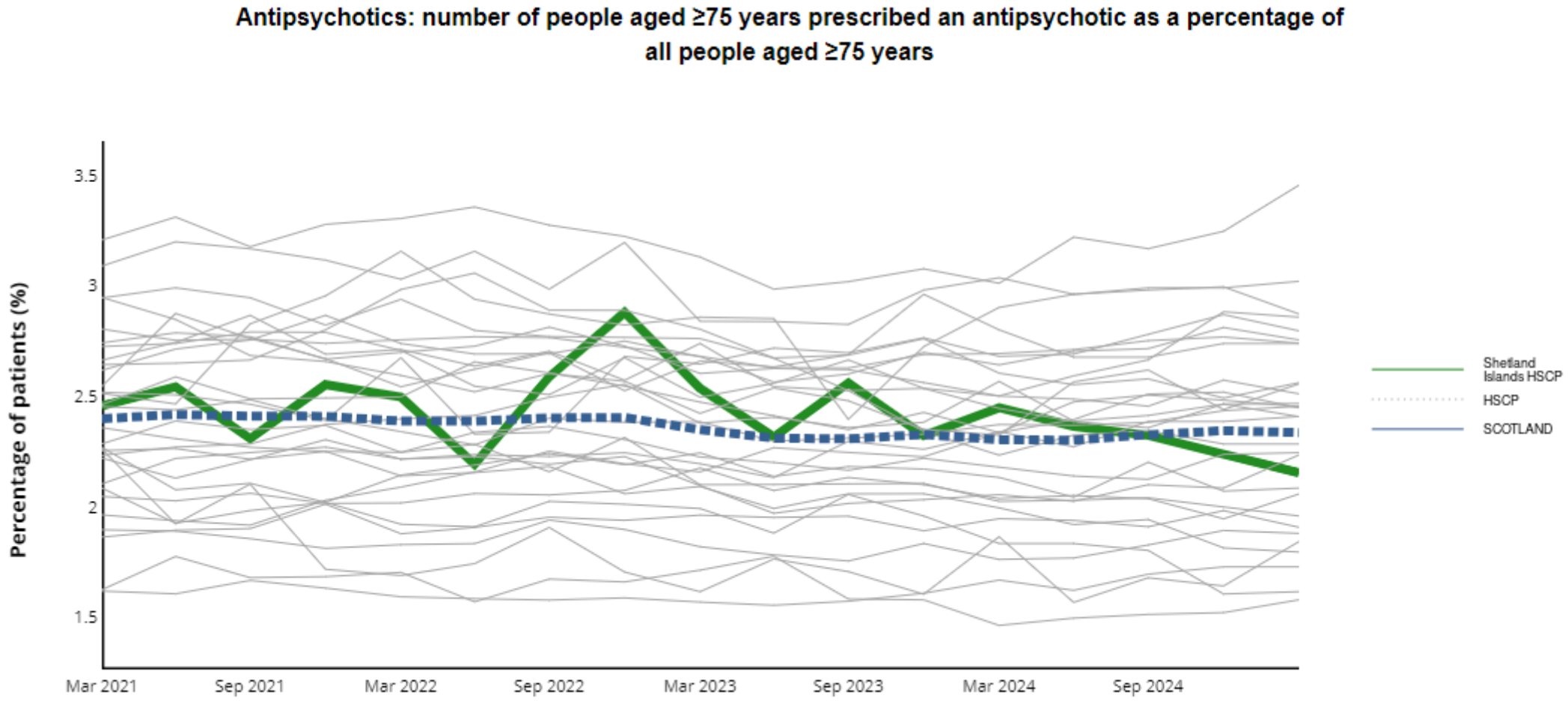
Summary - Medication Reviews by Practice:

- There are currently **13447** individuals registered at the following practices with one or more repeat prescriptions active on their practice electronic record.
- This represents **60.6%** of the overall population of these practices.
- **15.6%** of these individuals are overdue* for a medication review.

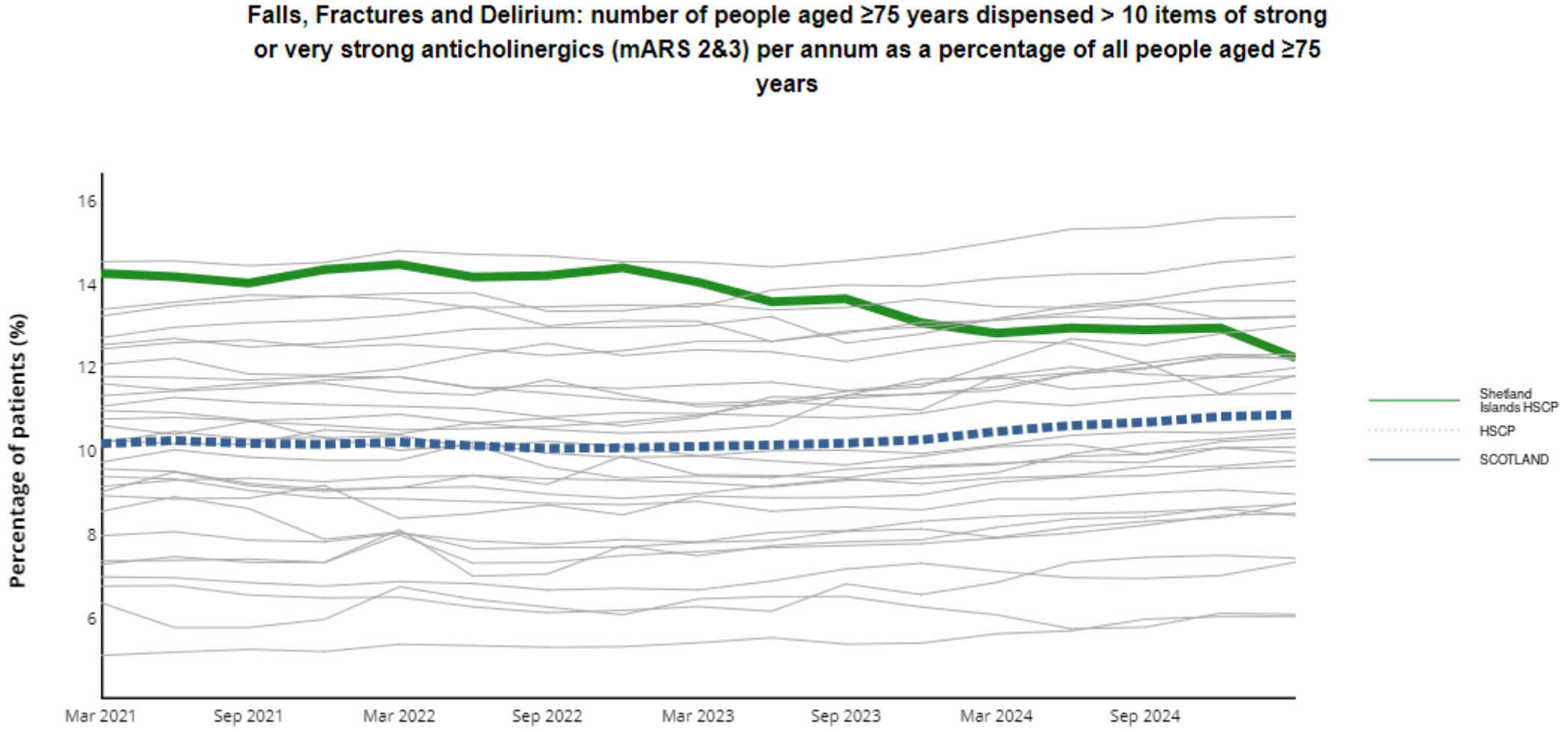
				Overdue Medication Reviews		
Practice	List Size	Individuals with an Active Repeat Prescription	% of List with an Active Repeat Prescription	Count Overdue	Percent Overdue	Individuals with an Active Repeat & Birth Month in July
Bixter/Walls	1930	1108	57.4%	109	9.8%	109
Brae	2529	1430	56.5%	115	8.0%	126
Lerwick	8672	5442	62.8%	1027	18.9%	517
Levenwick	2699	1711	63.4%	322	18.8%	147
Scalloway	3791	2186	57.7%	399	18.3%	199
Unst	589	410	69.6%	54	13.2%	36
Whalsay	1049	525	50.0%	0	0.0%	49
Yell	941	635	67.5%	74	11.7%	60
Totals:	**22200**	**13447**	**60.6%**	**2100**	**15.6%**	**1243**

** **Overdue Medication Review:** patient has at least one repeat prescription that has been active for 15 months or more, who does not have a coded medication review on their record in the last 15 months.*

What access to review means (to March 25)



What access to review means (to March 25)



The System’s outcomes

The foundations that make results repeatable

ROYAL PHARMACEUTICAL SOCIETY

The system wins that make the outcomes repeatable

Care & Person	System & Delivery	Ecosystem & Partnerships
Better care & better outcomes	**Pathways delivered reliably** (right work, right time)	**Industry:** co-design patient-held information (“thinware”)
Model interventions with precision & accuracy	**Shared system understanding** (one picture, many users)	**Academia:** research & evaluation partnerships
Built around the individual, not the service silo	**Improved collaboration** across teams & settings	Reusable methodologies we can **scale** safely

PHARMACEUTICAL SOCIETY

More info on SHIP is here, and outcomes it drives will be within the NHS Scotland December Primary Care Phased Investment Programme Report

NHS Shetland

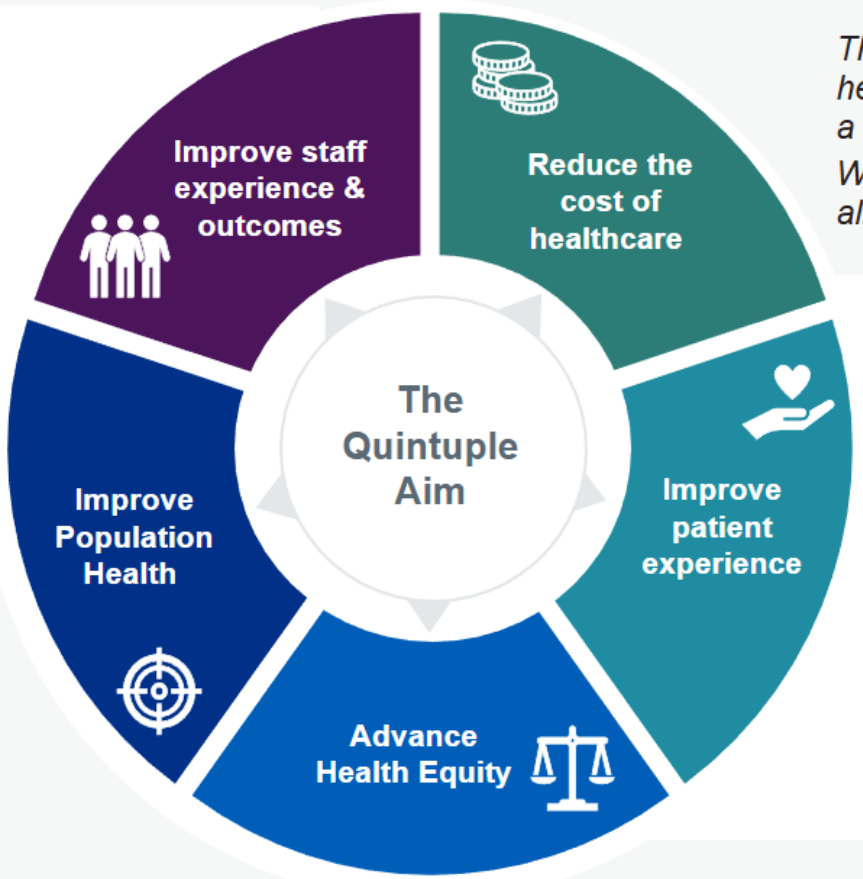
PRIVATE PHARMACY

ROYAL PHARMACEUTICAL SOCIETY

Transforming Population Health: The Role of Pharmacy, Data, and AI in Person-Centred Care

Dr Alec Price-Forbes
National Chief Clinical Information Officer,
NHS England

Digital Transformation is the only scalable lever for driving sustainable system-wide change in the NHS



*The **Quintuple Aim of Healthcare** provides a globally recognised framework for health system transformation. It defines the outcomes we must achieve to create a sustainable, equitable, high-performing NHS.*

*Wholesale **Digital Transformation** can drive meaningful improvements across all five components of the Quintuple Aim*

- **Reducing the cost of healthcare** – Automates routine tasks, reduces duplication, and streamlines care pathways. Enables more efficient use of resources.
- **Improve patient experience & outcomes** – Improves communication, access and care coordination, giving patients more control and visibility over their care journey.
- **Advance Health Equity** – Enables tailored outreach and inclusive design based on data and user needs. Expands access to services in underserved or remote areas through digital channels.
- **Improve Population Health** – Supports proactive care and early intervention, through population health management tools, predictive analytics and integrated care records.
- **Improve staff experience & outcomes** – Reduces administrative burden and enables more time for direct patient care. Simplifies workflows with better digital tools.

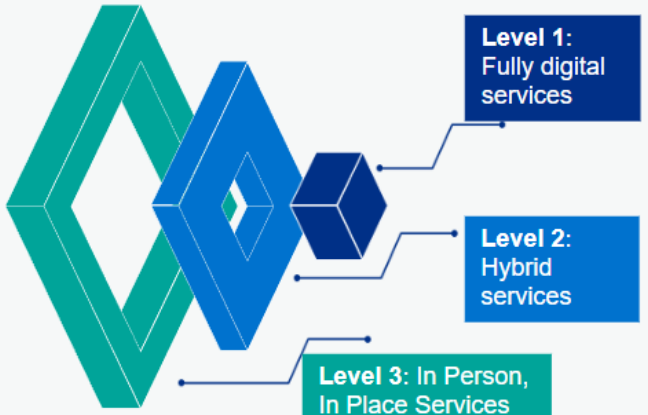
Currently, most NHS services are locally commissioned and are delivered face to face, and in place. This shift will enable (a) service delivery at a lower unit cost, (b) services that are easier to scale, reducing variation in the adoption of innovation across the system

	THEMES	RATIONALE	PRINCIPLES
	**Person-centred, digital first access**	Transform the relationship between the patients and staff, by providing tools that make healthcare more transparent, accessible, and tailored to individual needs.	• Inclusive design is used to support accessible and user-centred services • Access to NHS services is digital by default • All communication will be electronic first • Real-time status updates for NHS waiting times are available • The NHS communicates with people in their preferred language.
	**Data-driven and evidence-based systems**	Ensure decisions and operations are grounded in robust, accessible, and ethical use of data, while safeguarding privacy and equity.	• All health information is recorded and accessible • Anonymised health information is available by default, for research purposes • There is parity in the measurement of digital and face-2-face services, and appropriate cyber security standards are adopted by all services • Every interaction with the NHS improves the NHS's understanding of the patient, allowing for more personalised and effective care.
	**Connected and interoperable systems**	Overcome system fragmentation and enable seamless integration, making the NHS more cohesive, efficient, and effective.	• There are standardised and centrally set data structures for health information, simplified. • Commissioning is based on principles of a consistent data architecture and set functions. • Technology is integrated across all channels and settings
	**Smart automation to maximise clinical time for care**	Free up resources and capacity, maximising the impact of staff efforts, and enable focus on higher-value activities.	• High-volume, lower-value tasks will be automated • Clinical validated AI tools support decision making • Automation enables remote monitoring of patients and proactive targeted follow-ups. • Transparent, ethical, regularly audited, representative and inclusive datasets are used to train AI models

PRELIMINARY

'Digital by default' defined: The primary way people access, receive care and communicate with the NHS is through digitally enabled or wholly digital services. Rather than embed digital tools into traditional services and pathways, we see a fundamental reimagining of how care is designed, delivered and experienced to empower patients to own and co-manage their health.

There are three archetypal service model options; people start their journey digitally and migrate to physical if their care needs demand



Fully Digital

Fully digital services, delivered nationally.

- Services make a full switch to digital services, aiming to make digital the default mode of service delivery.
- Nearly every non-emergency interaction with the NHS begins on a national digital platform (e.g., the NHS App, NHS.uk)

Hybrid

A nationally-provided offer of hybrid services

- Where digital-only services are insufficient, we should move to digitally-enabled national services – a blend of nationally provided digital services, and 'Locally Commissioned, Nationally Powered'

Analogue

Locally commissioned, in person services

- Locally commissioned services should become the third line of defence, rather than the default, focusing resources where local variation is justified and necessary.
- The digital capabilities, infrastructure and standards which will enable the digital and hybrid models, will also improve the quality of analogues services.

- Lower Unit Cost
- Easier to Scale
- Reduced Variation

- Higher Unit Cost
- Harder to Scale
- Increased Variation

PRELIMINARY CRITICAL

Relvar Ellipta	184/22	Asthma (1 puff per day)
Gaviscon	10mls	Anti acid (as needed)
Lercanidipine	20 mg	Blood Pressure (1 daily)
Losartan	100 mg	Blood pressure (1 daily)
Atorvastatin	40mg	Cholesterol (1 daily)
Mometasone Furoate	50microg	Clear nose 2 puffs (1 daily)
Metformin Mod Release	1.5 gm	Diabetes (3 X 500 mg tablets daily eve
Montelukast	10mg	Asthma (1 per day)
Easy haler Salbutamol	100 microg	Asthma use as required
~~Doxazosin~~	1mg	Blood pressure (1 daily)
Azithromycin	250mg	Throat sensitivity (1 tablet mon, wed, fri)
Cholecalciferol	1.5 gm	Calcium (1 daily)
Prednisolone	5 1 mg	PMR (1 mg tablets daily after bkfast
Famotidine	20 mg	Stomach Acid (1 or 2 twice daily
Alendronic Acid	70 mg	Bone Density (1 tablet weekly)
Forxiga(Dapagliflozin)	5mg	Blood Sugar (5mg per day at break

What is the future of the UK's National Health Service?

We have set out a 10 Year Plan for the NHS, focusing on improving user experience and care quality through technology.



"…care should happen as locally as it can: digitally by default, in a patient's home, if possible, in a neighbourhood health centre when needed, in a hospital if necessary"

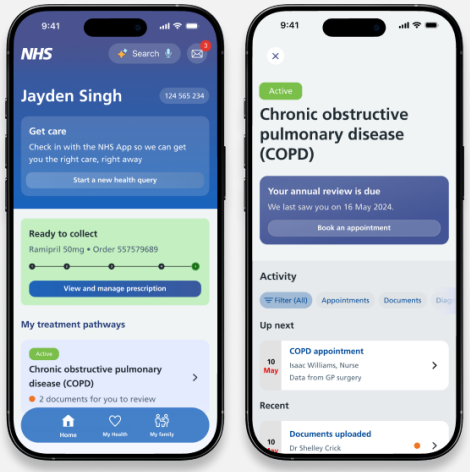
A major shift in focus to technology-driven service transformation, meaning:

- Improved user experience
- Improved productivity
- Improved care quality

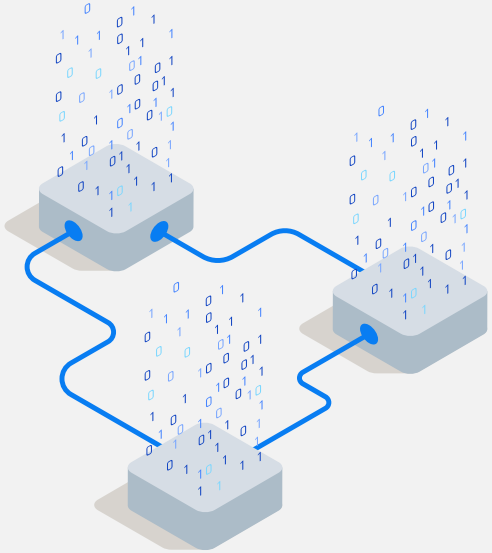
PHARMACEUTICAL SOCIETY

How we get there: capabilities & technologies

Patient enablement – NHS App

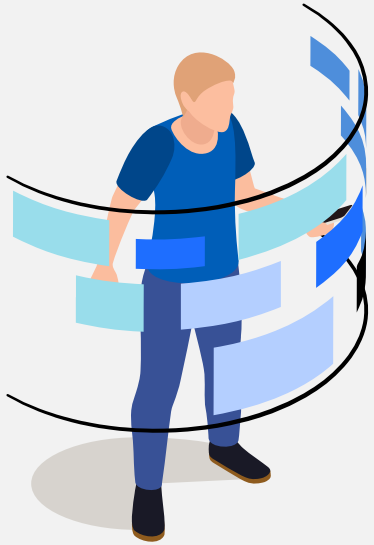


Connecting the NHS – Single Patient Record



Data driven decision making

NHS Federated Data Platform



Health Data Research Service (HDRS)



Our 5 big bets

AI to drive productivity supporting patient choice and liberating staff

Wearables to make care 'real time' and become standard in preventative, chronic and post-acute treatment



Data to deliver impact, flowing seamlessly and securely to enable earlier diagnosis and better health research

Genomics and predictive analysis for pre-emptive, personalised care starting at birth

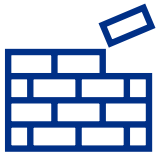
Robotics to support precision, transforming patient care from surgery to rehabilitation

Where AI supports transformation in the NHS

Ambient Voice Technologies will enhance clinical workflows and workforce productivity.

These products involve tools that use speech technologies to convert spoken words to text and other outputs without the need for use intervention (e.g. Speech-to-Text + LLM).

Governance and safety: We launched an AVT self-certified registry to support NHS organisations to rapidly identify which technologies meet the baseline requirements. All products must be registered as at least MHRA Class I medical device.





The introduction of the **Single Patient Record** will make information visible across different care settings enabling clinicians to better understand contextual as well as clinical information.

The single patient record will be the stepping stone to make **data actionable** and will strengthen clinical decision making. AI can strengthen its implementation by supporting personalised assessments

All hospitals will **be fully AI-enabled** and AI becomes every healthcare professional's 'trusted assistant' within the lifetime of the 10-year health plan.

Starting in 2027, there are plans to roll out validated AI diagnostic tools. By 2035, AI will be seamlessly integrated into most clinical pathways.



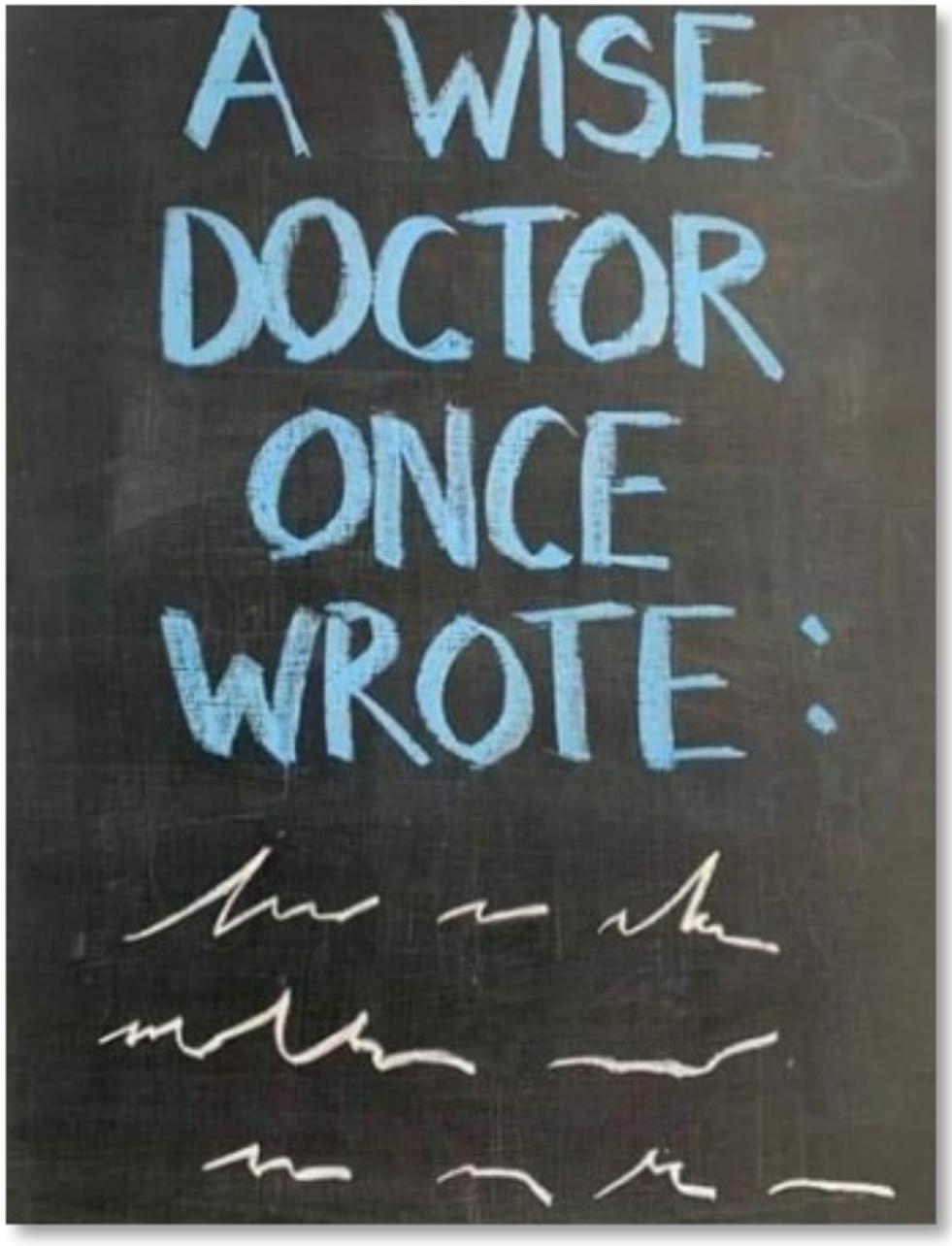


Digital triaging and navigation via the NHS App will be key to deliver faster patient access to the right care and reduce pressure on services. AI enhancements will personalise consultations and guide patients dynamically. The AI Health Coach will become a digital healthy lifestyle companion in partnership with the NHS App.

AI and Ambient Voice Technologies



ROYAL PHARMACEUTICAL SOCIETY



PHARMACEUTICAL

Why AVT – the case for change

The NHS faces rising pressures from increased patient demand, workforce shortages, and unsustainable clinical workloads.

Clinicians spend up to 50% of their time on documentation, diverting attention from direct patient care. AVT offers a transformative solution by enabling real-time, AI-assisted clinical documentation—capturing and structuring consultation data passively as clinicians speak.

This technology can reduce administrative burden, enhance care quality, and improve staff wellbeing.

Evaluation completed across nine London sites (17,000 patient encounters, including A&E, GPs, mental health, ambulance shows:

–8.2% appointment length

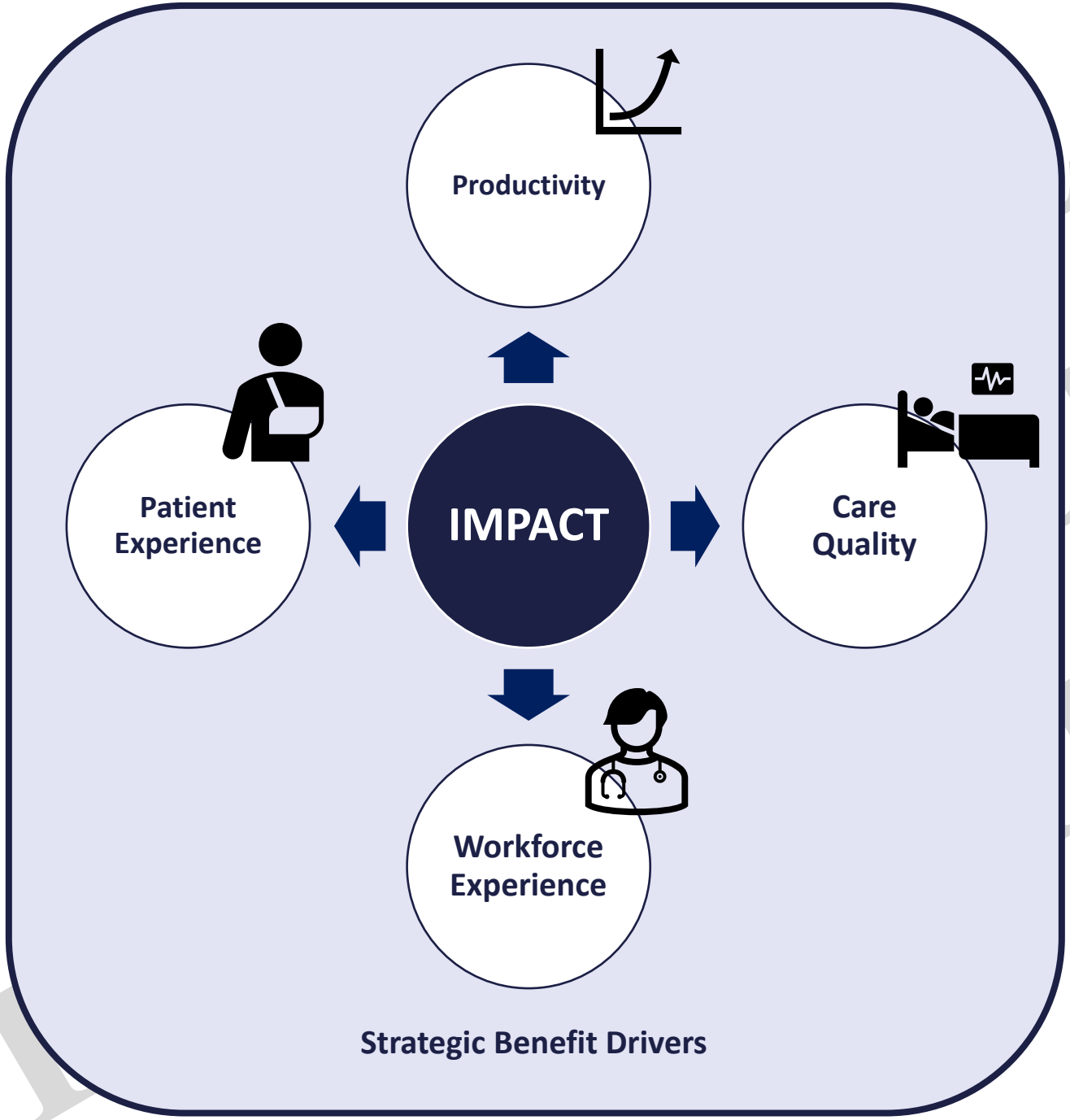
+23.5% direct patient interaction time

A&E: +13.4% patients seen per shift

Clinicians reporting 35% reduction in feeling overwhelmed by documentation

Scaling across all A&Es in England would enable an additional 9,259 patients to be seen each day

ROYAL PHARMACEUTICAL SOCIETY



Use Case Approach

- Evidenced use cases for scale
- Future use cases

A System Wide Solution

- Harmonising frontline capabilities, standards, levers, incentives and commercial models
- Building common capabilities for the provision of Integrated Care
- Defining the role of national leadership and “do once” functions
- Empowering regions to provide oversight and assurance of digital services
- Enable ICB wide commissioning of core digital infrastructure

Productivity

Capacity in current teams to help manage growth in activity on medicines optimisation

Safety

Safer care through a reduction in avoidable medication errors

Patient experience

Greater access to information and control of their medicines, allowing them to self-manage better

opportunities for improvement



Digital Medicines

Digital medicines encompasses a set of initiatives which promote the adoption of the appropriate technology and the use of medicines data to improve productivity, safety and patient experience.

making a difference for healthcare professionals and patients through:

Data

Improving the quality, availability and use of medicines data

Technology

Using connected technology to manage medicines

Workforce

Developing digital capabilities across pharmacy professionals

Patients

Giving patients more control to get the best from their medicines

Activities

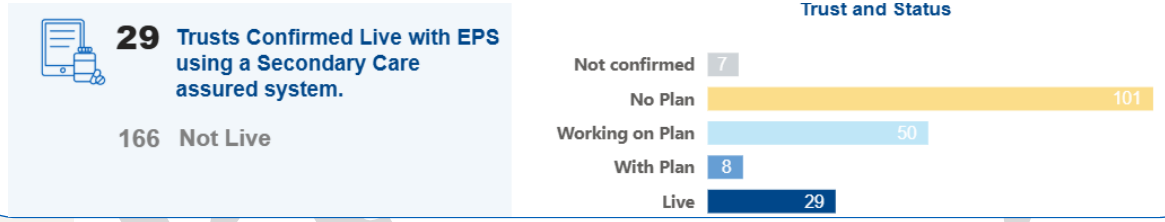
- EPMA Data Collection
- Medicines Terminology dm+d and SNOMED CT
- E-Prescribing including EPS
- Medicines interoperability
- Digital Networks
- Pharmacy Digital Workforce
- NHS App – Prescriptions and Medicines

Electronic Prescription Service

Strategic Goal: Driving the adoption of Electronic Prescription Service (EPS) across all care settings for all prescriptions to enable new prescribing and dispensing models. Building on what has been achieved in primary care over the years, this will give clinicians and patients the ability and choice to have their medicines issued through a single dispensing network following virtual or in-person consultations.

Progress to date

- Hospitals can now send prescriptions electronically to a patient's chosen community pharmacy
- Proof of concept underway for EPS use to support hospital homecare
- Improvements to supplier onboarding including AI chatbot
- Significant cyber resilience and modernisation developments
- Prescription tracker for healthcare staff developed



Focus for 25/26

- Increase the number of IT systems with assured EPS functionality available for secondary care
- Increase the percentage of secondary care providers live with EPS or with a firm plan in place
- Reduce the number of dispensing suppliers that are yet to move onto the EPS FHIR API
- Rollout new prescription tracker for healthcare staff
- Modernise the underlying EPS infrastructure to enable future improvements

ROYAL PHARMACEUTICAL SOCIETY

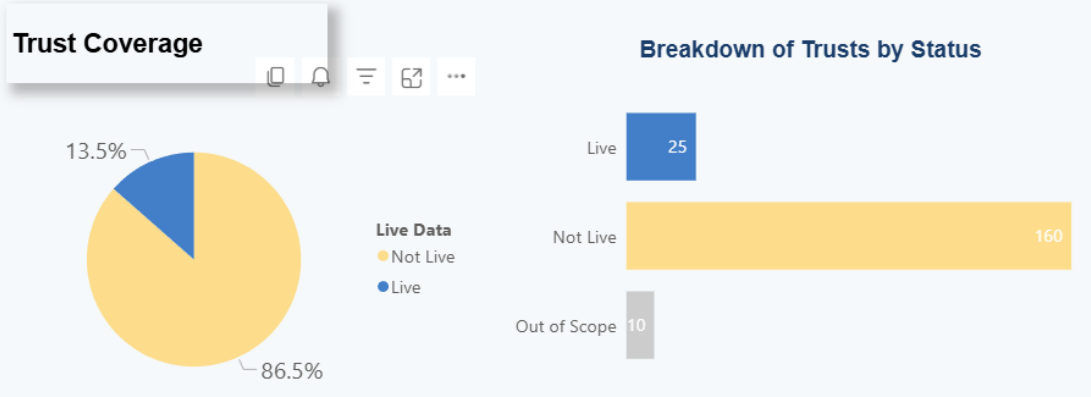
SM

Medicine Data

Strategic Goal: Making medicine information available for routine use to improve clinical decision making and support research and development. Building on isolated medicine data assets and clinical information of medicines to make it more accessible, to improve real time clinical decision making and contribute to life science and innovation by demonstrating real world outcomes from medicines use.

Progress to date

- Mandated patient level prescribing data from hospitals is now being collected nationally to enable new analysis and insights in prescribing patterns.



Focus for 25/26

- Supporting Trusts to establish the flow of data
- Ensuring the pseudonymised data is available in an accredited Secure Data Environment so that it can be accessed for research and analysis for approved use cases

PHARMACEUTICAL SOCIETY

NHS App – Medicines and Prescriptions

Strategic Goal: Supporting patients to self-manage their medicines and access their medication record via the NHS App. Building on the use and functionality of prescription services with the NHS App, there is an opportunity to make this the single portal for all medicines related management for patients, including sophisticated ordering and tracking of all prescription medicines and accessible features to support patients to get the best from the medicines they take

Progress to date

- **Request Repeat Medicines**: Patients now have greater control over their medications, with a significant increase in repeat prescription requests through the NHS App - rising from 1.7M to 4.8M requests or 1.4M to 4M unique users in the last three years. The app hit a record 6M requests last month.
- **Prescription tracking**: For the first time, 9M patients can now track the status of their prescriptions digitally, reducing the need to call GPs or pharmacists - this is expected to grow exponentially over the next six months as part of the national rollout.

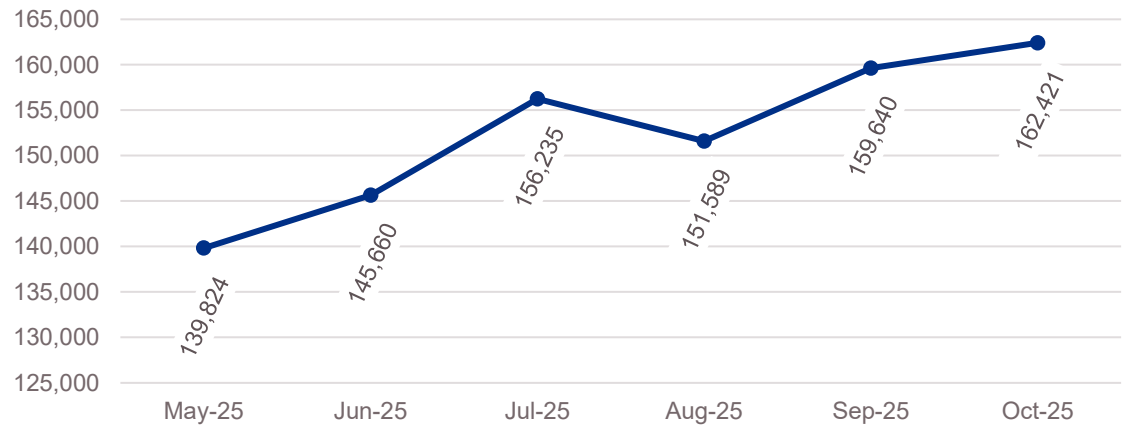
Focus for 25/26

- Increase uptake and utilisation of prescription tracking
- Rollout has commenced for patients to receive an NHS App notification when a prescription is ready to collect (Dec 25/ Jan 26)
- A trial is underway for a feature that enables patients to set a reminder to request their repeat medicines via NHS App (March 26)
- A trial is underway for proxy access to view and track prescriptions (March 26)

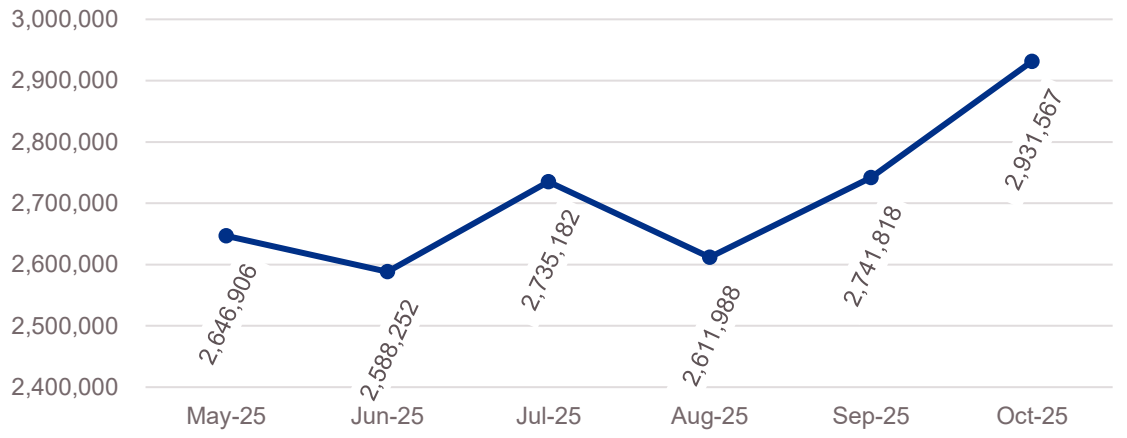
ROYAL PHARMACEUTICAL SOCIETY

Data Monthly Update – October

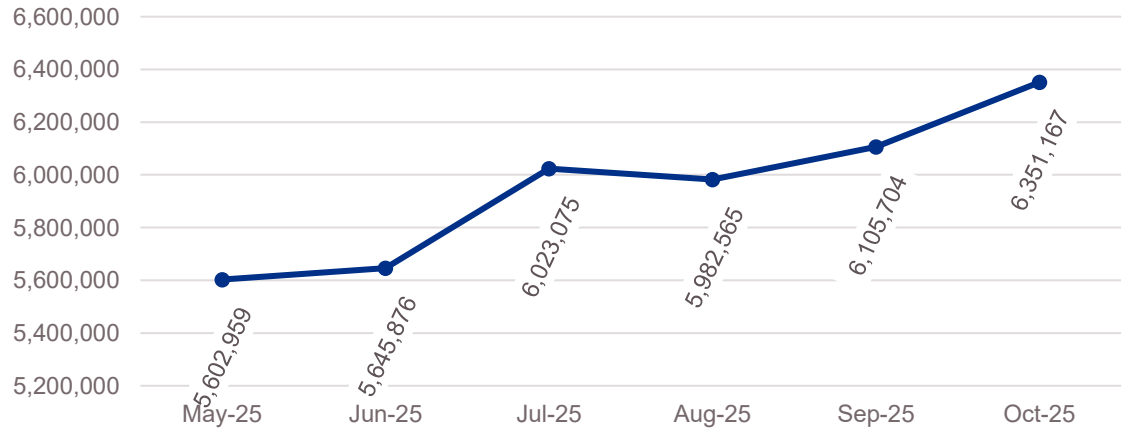
Pharmacy Nominations



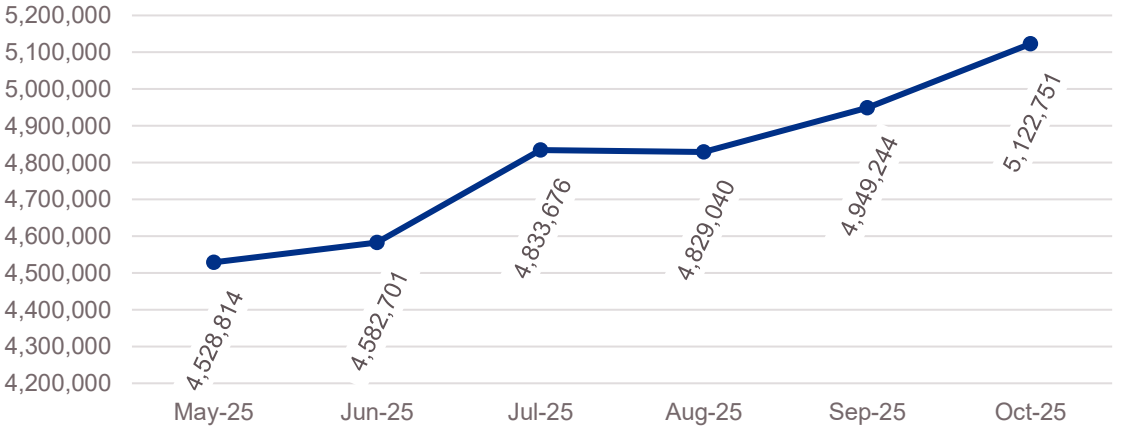
Prescription Barcode Views



Repeat Medication Orders



Unique patients Ordering Medication



PRINCIPAL

ePRaSE
Electronic Prescribing and Safety Evaluation

NHS

What have we learned so far?

This is the fourth release of ePRaSE. Findings from 2024 showed that, on average, only **48% of high-risk prescribing events** were being effectively mitigated across 71 trusts. Some systems were still unable to prevent serious risks, such as inappropriate daily prescribing of methotrexate.

What's new in this version?

A new **module for paediatric prescribing safety**

Assessment of multiple different adult inpatient prescribing systems by a single trust

Next steps:

15th October ePrescribing Masterclass - Launch presentation

Users register at eprase.nhs.uk **from 30th October**

Access requires an NHS email and HSCN connection for English trusts. (For devolved nations, arrangements are being progressed —please contact the ePRaSE team if this applies to you.)

Further information https://eprase.info

Additional support contact nuth.eprase@nhs.net

Sign up to 'go live' email notifications by scanning the QR code and submitting your details

Digital Prevention

Behind the scenes

Health and non-health sources of data, integrated in one national infrastructure

Wider (linked) determinants

Genomics

Behavioural

Clinical

Data is used for care and planning, while patients can opt into Health Data Store

Data flows to form

Single Patient Record

A single-source of truth for patients and health professionals throughout a care journey

Data flows to inform

Cohorting

Risk detection

Messaging

Predictive AI

Automated eligiblity

A suite of processing components that enable predictive targeting and outreach at a national, local and individual level

Outcomes feed into the system and enable continuous learning

Healthy behaviours are rewarded via NHS Health Points

Components enable a personalised prevention platform with a range of joined-up services

Digital (online)

NHS services

Relevant non-NHS services

Support delivered in the setting where people want it

AI Tools

Data infrastructure lays the foundations for AI tools, such as Health Coaches, for prediction and patient support

Data used to direct users towards

User experience

Behaviourally informed support & advice

At home testing & results

Appointments

Health assessments

Vaccinations

A National Perspective

Transformation is a collective endeavour



"Great things are rarely done by one person, they are done by teams of people"

STEVE JOBS

65

ROYAL PHARMACEUTICAL SOCIETY

Digital Transformation

Tahmina Rokib
Clinical Lead (Digital Primary Care),
NHS England



NCRS

SCR



Barcode scanning

Hub and Spoke dispensing

Electronic Prescription Service

GP Connect Update Record and Access Record

Automation and Robotics

NHS.net

Digital Token

NHS App



Prescription Tracker



Profile Manager
Find a Service

NHS111 online



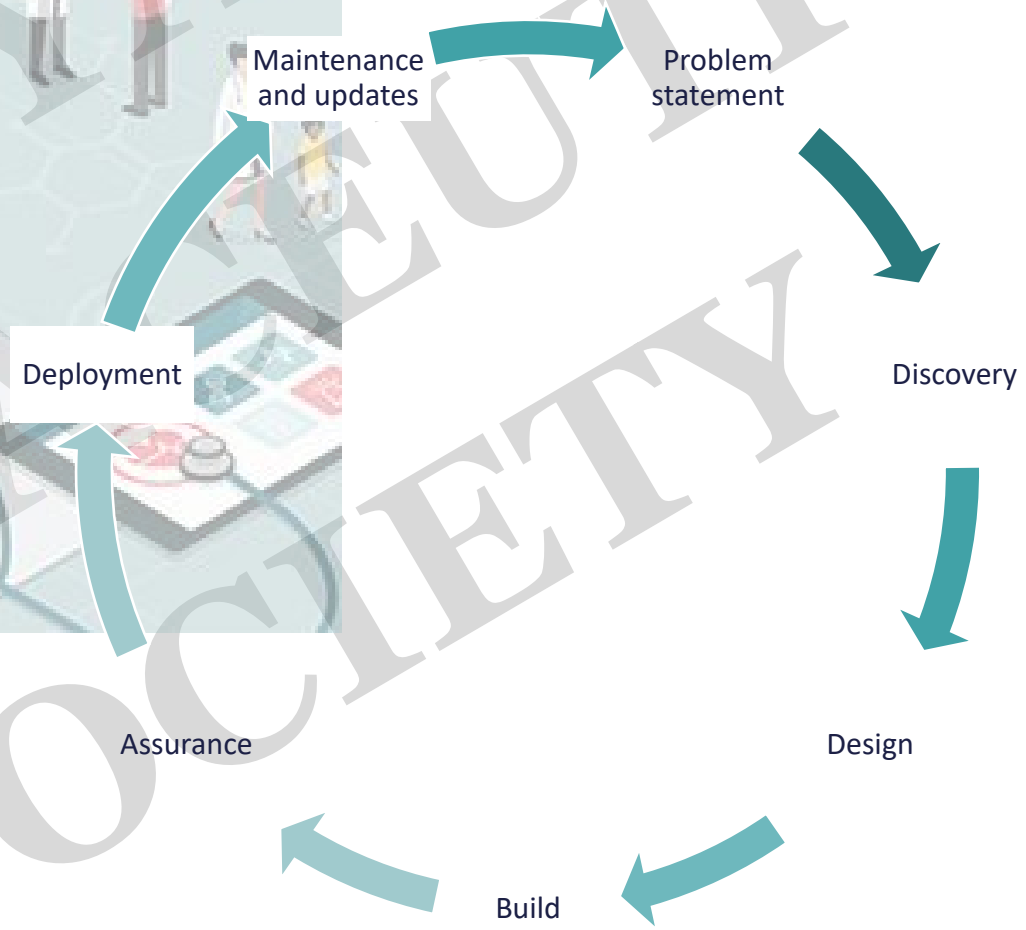


Video consultations

Community Pharmacy has been on a journey of digital transformation

PHARMACEUTICAL SOCIETY





Digital product development

PHARMACEUTICAL SOCIETY ROYAL

What does it take?

- Clear vision
- User centred design
- Interoperability
- Digital readiness and workforce capability
- Scalable technology
- Stakeholder management

How will outcomes be measured?

ROYAL PHARMACEUTICAL SOCIETY

ROYAL PHARMACEUTICAL SOCIETY

Finding balance in a digital world: The impact of digital developments on pharmacist wellbeing

Danielle Hunt
Chief Executive,
harmacist Support

PHARMACIST SUPPORT

Finding Balance in a Digital World

The Impact of Digital Developments on Pharmacist Wellbeing

ROYAL PHARMACEUTICAL SOCIETY

PHARMACIST
SUPPORT



PHARMACIST SUPPORT



A Balance of Benefits and Challenges

L
UTICAL
IETY

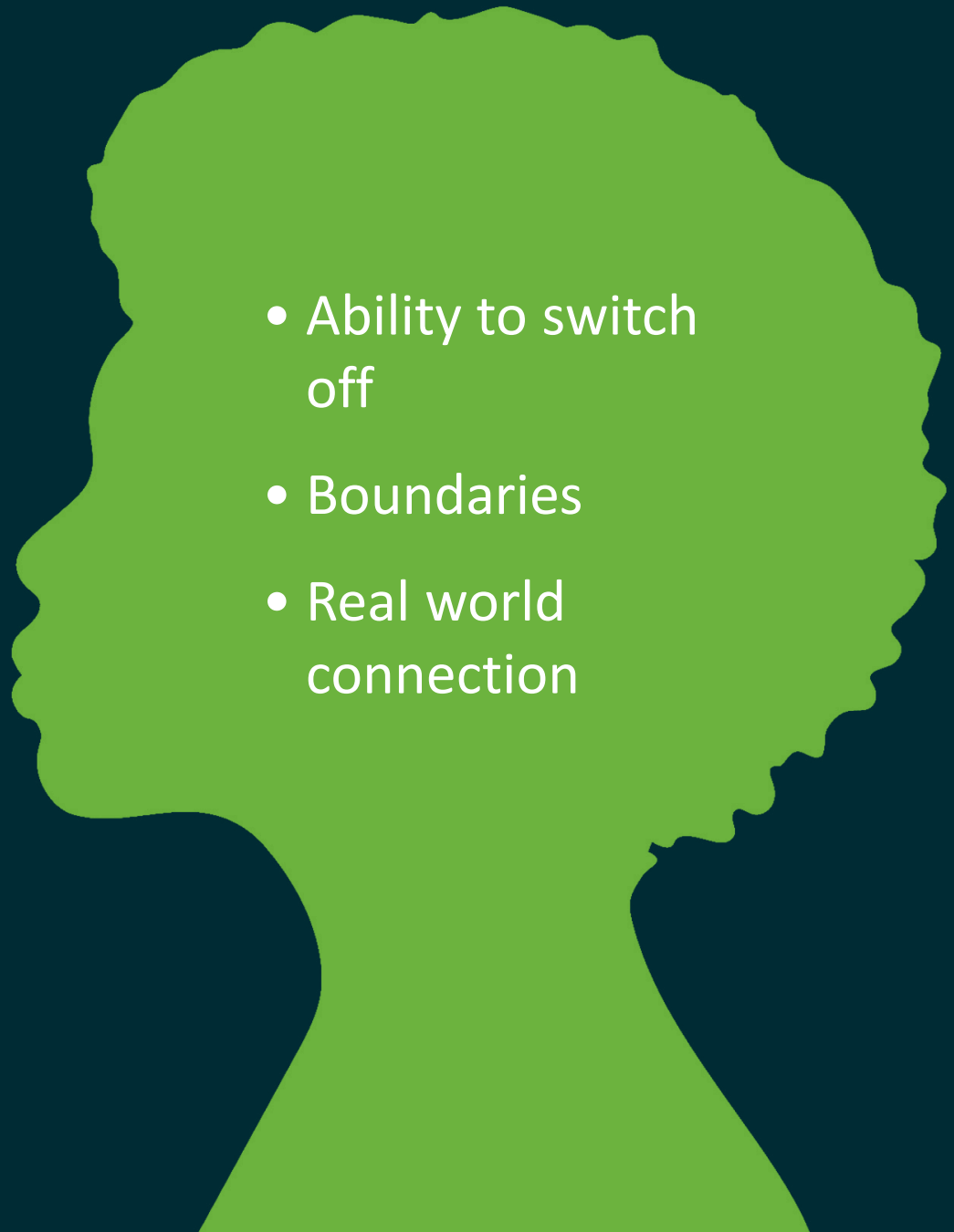
PHARMACIST SUPPORT

Benefits of new technologies



PHARMACIST SUPPORT

Needs created by technology



- Ability to switch off
- Boundaries
- Real world connection

PHARMACIST SUPPORT

The challenge in our workplaces

ROYAL PHARMACEUTICAL SOCIETY



PHARMACIST SUPPORT

The Need for Strong Leadership

PHARMACIST SUPPORT

The Impact of Workplace Culture



ROYAL PHARMACEUTICAL SOCIETY

PHARMACIST SUPPORT

Impacts of remote working

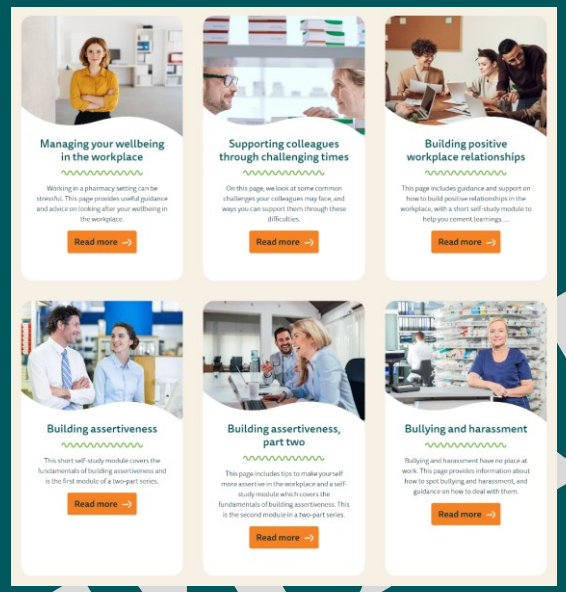


PHARMACIST SUPPORT

Digital opportunities to enhance wellbeing

ROYAL PHARMACEUTICAL SOCIETY

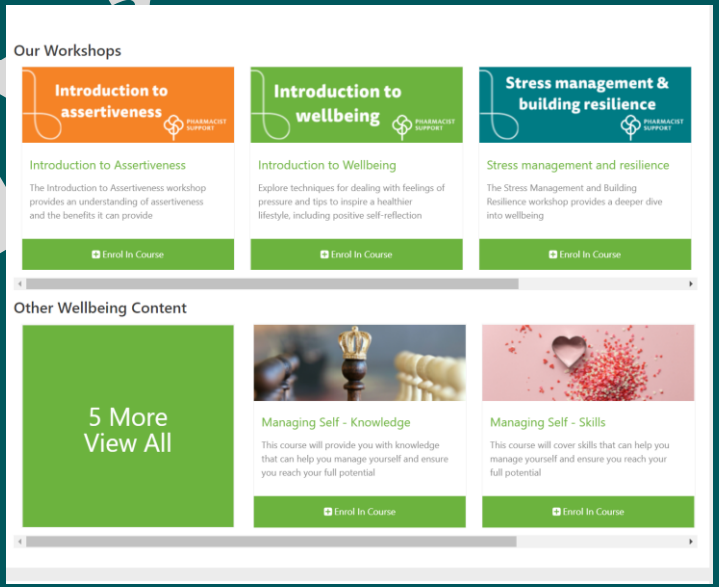
Pharmacist Support website



Team wellbeing workshops



Wellbeing Learning Platform



PHARMACIST SUPPORT

Artificial Intelligence and mental health support



CLINICAL

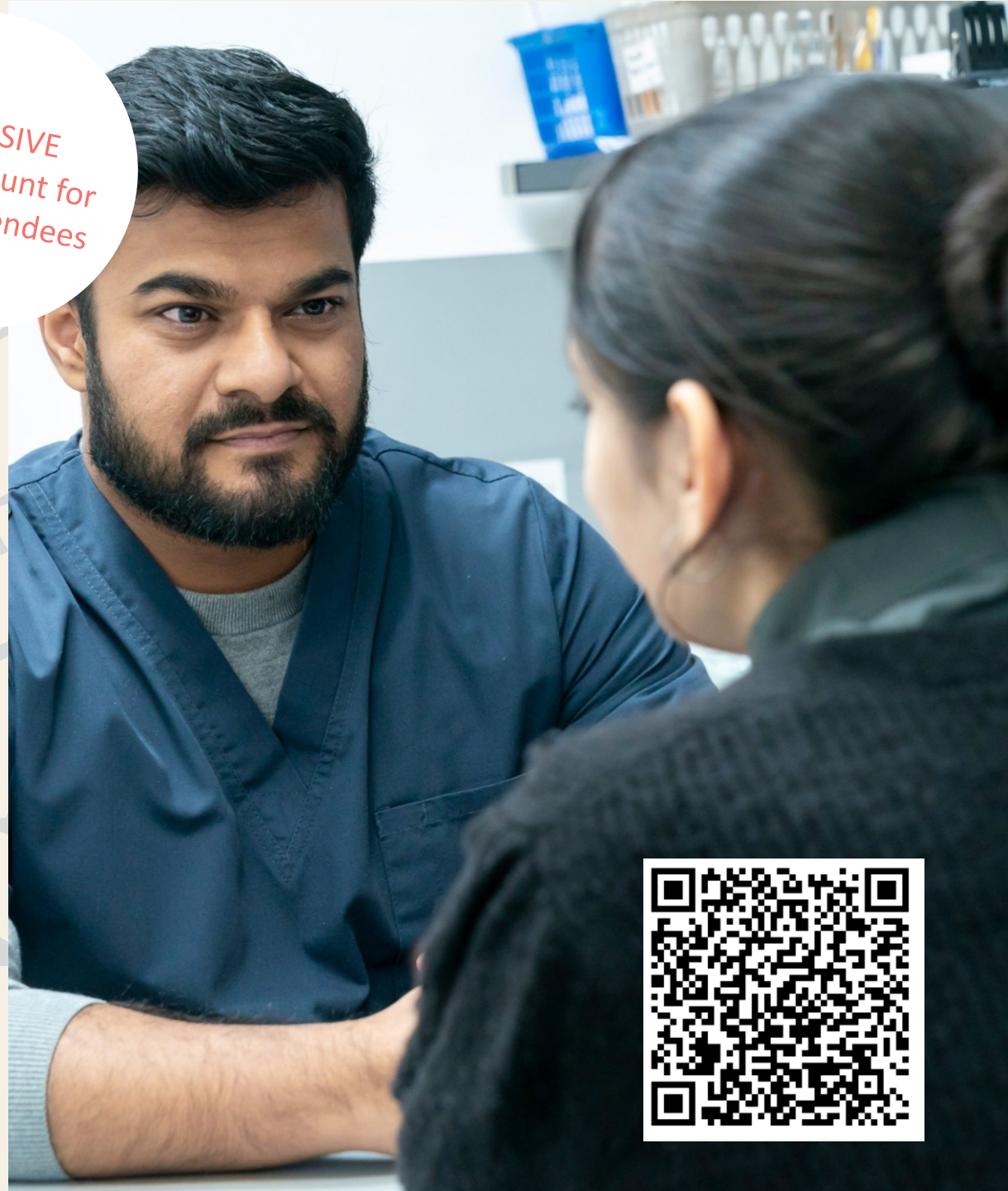
Embracing a Workplace Wellbeing Culture

EXCLUSIVE
20% discount for
event attendees

A new course from Pharmacist Support for managers and leaders to help you make practical and positive changes in your workplace and how you manage and support employees.

Modules you will cover:

1. Introduction to wellbeing in the workplace.
2. Understanding mental health and wellbeing.
3. The role of the manager in creating a positive workplace culture.
4. Communication tools to support team wellbeing.
5. Workplace adjustments and structures to support team wellbeing.
6. Building resilience and a growth mindset in your team and across the organisation.



PHARMACIST SUPPORT

ROYAL PHARMACEUTICAL SOCIETY

PHARMACIST SUPPORT

Free & Confidential Support

Information & Enquiries:

0808 168 2233

info@pharmacistsupport.org

Website: pharmacistsupport.org

Facebook: /PharmacistSupport

Twitter: @PharmaSupport

Instagram: @PharmaSupport

Scan me to sign up to our e-news!

PHARMACIST SUPPORT

Support us

As demands upon the profession increase, the demand for our assistance is growing. We rely on the generosity of pharmacists and pharmacy organisations to be able to continue our work.

To donate £5, text **PHARMA20** to **70970.**
To donate £10, text **PHARMA20** to **70191.**

Thank you.

ROYAL
PHARMACEUTICAL
SOCIETY

Together,
we are pharmacy.