



Pharmacy 2030: a professional vision



Introduction

Every health and care profession, every health service provider and every government has been influenced by the Covid-19 pandemic. It has caused everyone to reflect on whether the strategic directions set five or 10 years ago are still right for a post-pandemic future. Pharmacy is no different: it feels like the right time to set out a new professional vision, building on what has been developed previously to create something that describes the new future.

This vision was underpinned by collaboration and co-production. The reason for this is simple: it has to reflect the views of pharmacy teams right across Scotland, so that it is owned by everyone. Surveys were completed and many focus groups held, open to any pharmacist or pharmacy technician in Scotland. Three draft mini-visions were published and consulted on, for the main patient-facing areas of community pharmacy, general practice pharmacy and hospital pharmacy. Views were sought from pharmacy leaders and organisations, non-pharmacy stakeholders, and patients.

Importantly, as part of these collaborative discussions, pharmacists and pharmacy technicians decided to come together. This vision is a joint publication between the Royal Pharmaceutical Society Scotland and the National Pharmacy Technician Group Scotland: it is one vision for all of pharmacy.

Describing a vision for the future is challenging: some pharmacy teams are already pushing boundaries and delivering care that for others seems a distant dream. This vision aims to be realistic and describe a future that is achievable for every pharmacy team in Scotland by 2030. Some parts of this vision will be achieved in the next few years, others will take longer. And some teams will continue to forge ahead and go beyond this vision. What this vision recognises is that everyone is on a journey and it aims to support all of pharmacy to move forward to a new level of professional practice. It is an evolution from where we are now, not a revolution.

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Executive summary

THE FUTURE OF PHARMACY

By 2030, the traditional boundaries between pharmacy sectors will be broken down. Pharmacy will work together, both within pharmacy and with the wider multidisciplinary team, to deliver seamless person-centred care for patients.

Being patient-centred is central to every pharmacist and every pharmacy technician's role. From those working in industry who design the formulation of a medicine to make it easier to take, to those working in education developing the future workforce, to those working in specialist fields such as aseptic services: each is as vital to patient care as those pharmacy professionals who consult with patients. In this vision, we use the terminology "patient facing" to describe the pharmacy team members who have direct personal contact with patients, but we are clear that every pharmacy professional contributes to patient care and can be patient-focused without being patient facing.

In 2030, all of pharmacy will work together to enable patients to get the most from their medicines. They will take a person-centred approach and care will be provided holistically rather than using a condition-specific approach. All pharmacy teams will ensure high quality, safe, effective, cost-effective and sustainable prescribing. They will drive high standards of medicines governance, and ensure every aspect of prescribing and dispensing processes are effective and efficient.

For pharmacists, this will mean being recognised as medicines experts who take leadership of prescribing in all care settings and who optimise therapeutic outcomes for individual patients. There will be a shift away from checking other professionals' work into pharmacists having a clinical, prescribing role to manage the care of individual patients. Pharmacy technicians will lead medicines management processes, both in technical roles focused on the safe and efficient supply of medicines, and in patient-facing roles to support patients' use of medicines.

The breaking down of boundaries between pharmacy sectors will be demonstrated through two key shifts. The first is that seamless patient care will be standard. As a patient moves between care settings, such as at hospital discharge, pharmacy teams will work together to ensure patients' medicines-related care is supported and to avoid duplication of tasks in the patient's journey such as multiple medication reviews. The second shift is that pharmacy will be more dynamic. Many pharmacy professionals are now actively seeking a portfolio career, working across different sectors. By 2030, a core generalist role for both pharmacists and pharmacy technicians will be developed to enable this flexible portfolio working.

This change will be driven by two key factors: digital and technology developments to enable whole-team working, and clear pathways of professional development which apply to all sectors of pharmacy.

KEY ROLES TO ENHANCE THE PATIENT EXPERIENCE



BEING EXPERTS IN MEDICINES

- Ensuring the quality and safety of medicines use through both patient-facing and technical expertise
- Prioritising pharmacist input to complex high-risk situations
- Providing expert advice and education on medicines to other professionals
- Leading the development of drug protocols and treatment pathways



PROVIDING PERSON-CENTRED HOLISTIC CARE

- Consulting with patients, focusing on the patient rather than their condition
- Ensuring shared decision making using a “what matters to you” approach
- Using inclusive communication and addressing inequalities around low health literacy



LEADING MEDICINES GOVERNANCE

- Ensuring robust standardised systems and governance on medicines
- Ensuring consistent implementation of lean processes to achieve efficient and accurate prescribing, dispensing and use of medicines
- Modernising medicines supply, including using technology-assisted accuracy checking



OPTIMISING THERAPEUTIC OUTCOMES

- Prescribing, monitoring, reviewing, adjusting and stopping medicines
- Improving medicines safety, managing risk and reducing medicines waste
- Reducing inappropriate prescribing and unnecessary polypharmacy
- Having regular conversations with patients about medicines, including targeted brief interventions



IMPROVING ACCESS TO CARE

- Providing a Pharmacy First approach to improve access to NHS care for patients
- Improving access to pharmacy services, including how consultations are offered and medicines supplied
- Planning services for needs of local population



LEADING EVIDENCE-BASED PRACTICE

- Developing the research base on medicines and pharmacy practice
- Leading the development of high quality evidence-based prescribing guidance
- Providing strategic clinical leadership across health care to shape services
- Using quality improvement to continually reduce harm, waste and variation
- Sharing best practice

UNDERPINNED BY



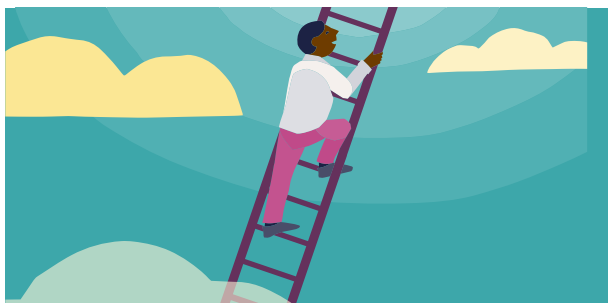
USING DATA TO DELIVER HIGH QUALITY SERVICES

- Using data to make treatment decisions and deliver personalised medicine, including pharmacogenomics and advanced therapy medical products
- Using clinical outcomes data linked with prescribing data to plan, evaluate and improve services
- Using electronic decision support tools including artificial intelligence



HARNESSING DIGITAL TECHNOLOGY AND INNOVATION

- Single shared electronic patient record with read/write access for all professions to transform medicines reconciliation and deliver seamless patient care
- Electronic prescribing, transfer of prescriptions and medicines administration systems in all settings
- Using patient-facing digital services including digital consultations and remote monitoring



DEVELOPING THE WORKFORCE

- Clear professional development pathways and credentialing, aligned to the RPS curricula
- Advanced clinical assessment, consultation and risk management skills, and independent prescribing for patient-facing pharmacists
- Work culture of protected professional development, developing others, mentorship and peer networks for learning and research activities
- Workforce planning tools to identify pharmacy staff required to achieve safe staffing levels



MULTIDISCIPLINARY WORKING TO DELIVER SEAMLESS CARE

- All pharmacy professionals from all sectors working together to deliver seamless care for patients
- Improved skill mix within pharmacy to optimise the roles of all members of the pharmacy teams and maximise the time for clinical care
- Pharmacy integrated with the wider multidisciplinary health and care team, with clear referral pathways

1 Professional roles



1.1 IMPROVING THE SAFE AND EFFECTIVE USE OF MEDICINES

1.1.1 Being experts in medicines

The key role of pharmacy professionals, that distinguishes them from other health care professions, is expertise in medicines.

In 2030, pharmacists will be the clinical lead for safe and effective prescribing within all care settings, recognised as a trusted resource by other professions. The majority of pharmacists will work in patient-facing roles, consulting with patients: assessing, prescribing, monitoring and reviewing medicines for individual patients. They will be autonomous professionals, prescribing in their own right, and managing caseloads of patients who take high risk medicines or who have complex therapeutic needs. Pharmacists will manage some or all of: common clinical conditions, acute presentations and long-term conditions, depending on where they work.

Pharmacists are the third largest single health profession¹. By 2030, pharmacists will be regarded by other health professionals as an essential and equal member of the patient's overall care team. They will receive referrals from other professionals around specific medicines issues, provide joint consultations and develop shared care plans, such as managing changes to medicines following a hospital discharge. These pharmacists will be known as "advanced generalist pharmacists" and will be able to move flexibly between care settings. Some pharmacists will choose to specialise in particular clinical or technical fields, and will become "advanced specialist pharmacists". Some will develop further into consultant pharmacists who have an influence beyond the individual service to lead whole system improvements in medicines at a regional level. Similarly, some pharmacists will work in strategic roles providing expertise to shape services.

1. Royal Pharmaceutical Society. Careers information. Available at: www.rpharms.com/pharmacycareers

As the demand for NHS services increases, pharmacist input must be prioritised to the high-risk situations where it is of most value. Pharmacists have historically spent a lot of time checking other professionals' work: for example, accuracy checking in dispensing, medicines reconciliation, prescription chart review and immediate discharge letters (IDLs). This work undoubtedly delivers improvements in safety but now is the time for these manual checking processes to be radically transformed in order to release pharmacists' capacity to take on more clinical roles. By 2030, this will be achieved through a combination of advances in digital technology, good governance and enhanced roles for other members of the pharmacy team.

A key enabler in releasing pharmacists' capacity is to enhance the roles of other members of the pharmacy team.

Pharmacy technicians are registered healthcare professionals who work to ensure a safe and effective medicines supply chain, and enable people to get the most from their medicines. By 2030, they will be regarded by other health professionals as an essential and equal member of the pharmacy and multidisciplinary team (MDT).

Pharmacy technicians in 2030 will lead and be experts in safe and secure purchasing, storage, dispensing and supply of medicines. They will work at advanced levels enabled by appropriate pre and post registration education and training supported by a national career pathway. The career pathway will support the development of generic role definitions such as foundation level, advanced and expert level.

Pharmacy technicians working in patient-facing advanced level roles will for example: consult with patients, undertake technical aspects of medicines reconciliation and medication review, triage patients, monitor and review blood results, provide patient education, administer medicines (if enabled by legislation/governance arrangements) and liaise with cross sector pharmacy teams. Medicine supply advanced roles will include leadership, management of services, staff and facilities including monitoring, and providing assurance that all governance related activities are conducted safely and effectively.

A key enabler in releasing pharmacy technician capacity is to enhance the roles of pharmacy support staff.

Although the majority of pharmacy professionals will work in patient-facing roles, the expertise of those working in other areas of pharmacy is as important. In 2030, the value of specialist pharmacy services (such as aseptic services and quality assurance), as well as in research, education and the pharmaceutical industry will be recognised as of equal importance to patient-facing expertise. Training in these roles and exposure to them will start at an undergraduate level and run right through pharmacy careers.

Altogether, the pharmacy team will work together to ensure high quality, safe, effective, cost-effective and sustainable prescribing and medicines management in all settings.

1.1.2 Optimising therapeutic outcomes

Pharmacy teams are already focused on optimising the use of medicines, but by 2030 this will be further enhanced to ensure every patient receives high quality prescribing of new medicines and timely, systematic medication reviews.

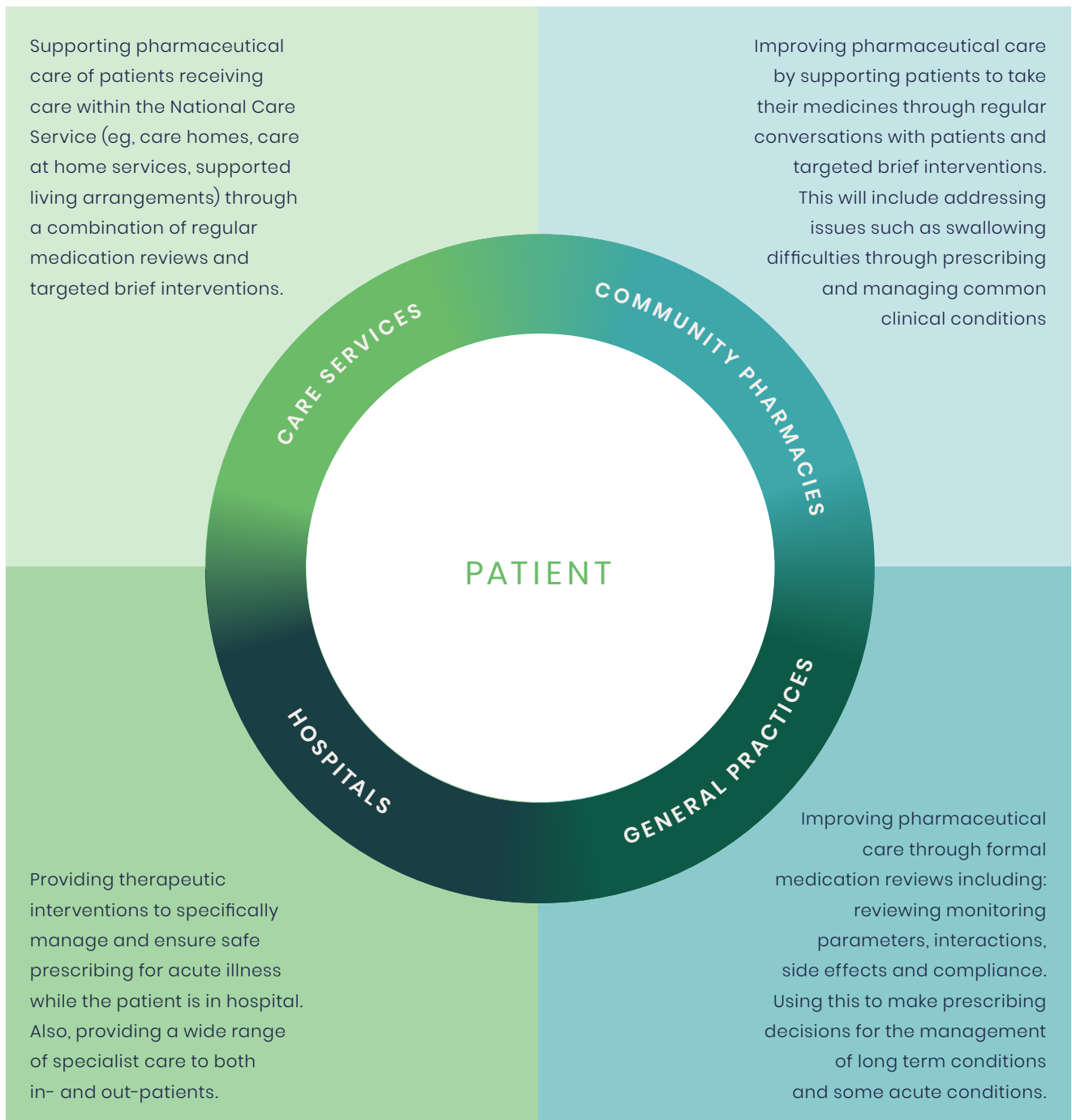
The development of the "timely" element to care is important so that patients receive the right care at the right time and the right place, and also to avoid duplication. For example, a short hospital stay may not be an appropriate time to make a change to a long-term medication. Similarly, there may only be time for a brief intervention rather than a full medication review on collecting a medicine from a community pharmacy. The key point is that all of pharmacy works together, with seamless referral pathways and the right infrastructure (see also section 1.1.4).

Some key stages in a patient's journey and situations when pharmacy input is essential are:

- At the start of a patient's unscheduled stay in hospital when they are most unwell
- At transitions/interface between care teams and settings: supporting appropriate prescribing when care settings change, eg, at hospital discharge, admission to a care home, release from prison and in unscheduled care
- Patients receiving high risk medicines and high risk combinations
- Patients receiving novel and complex therapies

- Patients receiving complex or multiple medicines for long-term conditions at risk of unnecessary polypharmacy
- Patients who are frail, including those who receive care services

It is anticipated that patients are likely to receive the types of care in different settings as shown in the illustration below, but it is important to stress that these are not mutually exclusive and that care should be provided around a patient's needs not location. The pharmacists working in each location could be based there, have portfolio roles or be visiting from another service:



All interventions will be recorded on a single shared electronic patient record so all pharmacy teams are aware of the decisions made by other professionals and the follow up required.

IT'S HAPPENING ALREADY: INDEPENDENT PRESCRIBING

Debbie Smith, a community pharmacist at Davidsons Chemists in Portsoy, started prescribing five years ago for common clinical conditions.

"Portsoy is a small community and I've been here for 12 years, so know the local population well and have a really good relationship with the local GP practice. Skin conditions are what we see the most, but presentations are really varied, including infections, cellulitis, sore throats and ear problems.

"A recent example of the difference we make is a patient who had long-term constipation associated with painkillers. She was being prescribed lactulose by her GP but it wasn't working. I reviewed her diet and fluid intake, then increased the lactulose dose, advising on how to do this safely. A week later she was still constipated so I prescribed an additional stimulant laxative, again advising on how to take it safely. Over the next few weeks, we adjusted the doses until we found a combination where her constipation was resolved. I then sent a report to the GP practice so her repeat prescription could be adjusted to this new regime."

A key part of pharmacy teams' roles will be to prescribe, monitor and adjust medicines. By 2030, these decisions will support the delivery of many more innovative treatments, with approaches currently considered to be novel – including pharmacogenomics, personalised medicines and advanced therapy (interventional) medicinal products (such as gene therapies) – all becoming mainstream. Specialist pharmacist input will be vital around the governance, safe handling and use of these innovative medicines. Pharmacists also have an essential role in ensuring appropriate antimicrobial stewardship in all settings.

Prescribing decisions do not just involve starting medicines. The importance of stopping medicines to reduce inappropriate prescribing, harm and unnecessary polypharmacy cannot be overstated. Similarly, assessing symptoms and providing self-care advice instead of unnecessary prescribing is essential. This will improve safety, help to reduce waste and tackle environmental sustainability. Medicines account for 25% of NHS carbon emissions and have other ecological impacts, so they must be used appropriately.

IT'S HAPPENING ALREADY: OPTIMISING THERAPEUTIC OUTCOMES

In NHS Highland, specialist primary care clinical pharmacists Lucy Dixon and Yvonne MacRae are embedded within integrated teams and work across care boundaries to support frail patients whether they are at home, in care homes or in community hospitals. Both have been active independent prescribers for nearly 10 years, and they hold caseloads of patients who need enhanced pharmaceutical care, for example because they are at risk of hospital admission, are recently discharged or have had a fall. They participate in joint polypharmacy clinics with the consultant geriatrician who describes them as his "force multiplier" and they also ensure decisions made at the clinic such as medication changes are followed up afterwards.

1.1.3 Providing person-centred holistic care

The core role of pharmacy teams is to provide care for patients holistically, focused on the person rather than their condition or medicines. They will enable person-centred care by having positive conversations with patients and their families/carers, and empowering patients to make decisions about their medicines and health.

“*Realistic Medicine*²” will underpin pharmacists’ approach to prescribing. This means ensuring:

- Shared decision making
- Educating patients about medicines to enable informed decisions
- Taking a personalised approach to care
- Reducing harm and waste
- Reducing unwarranted variation
- Managing risk better

2. Scottish Government. *Realistic medicine*. Available at :www.realisticmedicine.scot

3. Institute for Healthcare Improvement. *What matters to you?* Available at: www.ihl.org/Topics/WhatMatters/Pages/default.aspx

4. Choosing Wisely UK. *BRAN questions*. Available at: www.choosingwisely.co.uk/shared-decision-making-resources

The “what matters to you³” approach will be fully integrated into prescribing decisions, rather than applying population-based guidelines. This will include using the BRAN⁴ questions (benefits, risks, alternatives, nothing) to enable patients to be actively involved in decision making. It will also include the use of non-medicine options such as self-care, social prescribing and referral to third sector/community groups for options such as walking groups and other lifestyle interventions.

A key element of enabling person-centred care is conversations. Pharmacy teams will be trained in effective communication and be more available for patients to seek their advice, in all care settings. This will be underpinned by an improved understanding of health literacy (see section 1.2.1).

A person-centred approach will also be taken in the development of new pharmacy services, so that patients are not only consulted with but are actively involved in the co-design of services.



1.1.4 Delivering seamless care for patients

By 2030, all of pharmacy will work together, removing current barriers created by silo working in community pharmacy, GP practices, hospitals, specialist services and non-patient facing roles. Instead, all pharmacy teams will recognise the skills of their colleagues and work to ensure seamless transitions of care for patients as they move around the health service.

Examples of seamless care will include a hospital pharmacy team asking a general practice pharmacy team to implement a patient's dose tapering plan post-discharge; a community pharmacist identifying deterioration in a patient with dementia and referring to a specialist pharmacist for a home visit; a patient-facing pharmacist speaking to an industrial pharmacist about a specific drug; or a prison pharmacist arranging for a community pharmacy team to support a prisoner with their medicines after release. To achieve seamless care between all settings the implementation of shared patient records to improve communication across sectors will be essential.

IT'S HAPPENING ALREADY: SEAMLESS CARE

Mental health services in NHS Highland have been striving to achieve a more joined up approach, with specialist services working closely with general practice pharmacists to improve patient care. For example, a patient with post-traumatic stress disorder had been prescribed multiple medicines while she waited for psychology treatment. Following successful CBT, specialist mental health pharmacist Karen Macaskill and the patient formulated a plan to reduce the medicines. A crucial element was being able to refer the patient to the general practice pharmacist who could then support the patient through the medicine reduction plan close to home. This seamless care improved the patient's experience.

By 2030, this single profession working will be underpinned by the development of a core advanced generalist pharmacist role. Pharmacists will stop being described by their location but by their skills.

Seamless care extends beyond pharmacy to the wider multidisciplinary health and social care team. By 2030, pharmacy professionals will be embedded in multidisciplinary teams in all care settings and will also have well-established referral pathways in and out of pharmacy services to other health and care professionals. Pharmacy will also play a central role in the new National Care Service to ensure the safe and appropriate use of medicines in care services.⁵

PATIENT JOURNEYS IN 2030: PHARMACY DELIVERING SEAMLESS CARE

Iain has several health conditions for which he takes 13 medicines a day. He comes into the community pharmacy to pick up his medicines which are all on a serial prescription. The pharmacy technician had flagged Iain's prescription as one that needs a routine brief intervention to follow up on some medicines started a few months ago. The pharmacist asks Iain how he is getting on with his medicines. Iain looks a bit apprehensive, so the pharmacist asks if he has time for a quick chat. Iain explains he is struggling to take all this medicines, especially since the two additional ones were added recently. He has begun to miss some out, especially one of the new ones which is making him feel unwell. The pharmacist decides Iain needs a deep dive polypharmacy review and some blood tests and refers Iain to the general practice pharmacist and updates Iain's shared patient record. The general practice pharmacist follows up on the referral, arranges blood tests, has a detailed conversation with Iain and makes changes to ensure Iain's medicines are more manageable.

5. Royal Pharmaceutical Society. A National Care Service for Scotland – RPS position statement. Available at: [www.rpharms.com/Portals/0/RPS%20document%20library/Open%20access/Consultations/2021/RPS%20National%20Care%20Service%20Position%20statement%20\(i\).pdf?ver=1W-beht-qaadG06QBB8uw%3d%3d](http://www.rpharms.com/Portals/0/RPS%20document%20library/Open%20access/Consultations/2021/RPS%20National%20Care%20Service%20Position%20statement%20(i).pdf?ver=1W-beht-qaadG06QBB8uw%3d%3d)

1.1.5 Leading prescribing and medicines governance

Pharmacy teams already play essential roles in medicines governance, focusing on ensuring the safe and effective use of medicines. This will continue in 2030, but the crucial difference between the future and today is that in 2030, this will be seen by others as a leadership role. At the moment, pharmacy teams are frequently expected to define and implement medicines governance processes. In future, they will define and provide education to other members of the health care team, not necessarily implementing the processes themselves. For example, historically other professions have expected pharmacists to deliver medicines reconciliation, production of IDLs and safety checks: by 2030, these will be carried out by a combination of other professions and other members of the pharmacy team, facilitated by advances in technology.

Pharmacists will continue to have an essential role in developing and maintaining local prescribing guidance and treatment pathways that underpin clinical care. These will be based on robust evidence and national guidelines to ensure prescribing is high quality, as well as providing guidance where evidence is lacking, and enable evidence to be applied to individual care decisions. Pharmacists will take the lead in this area while ensuring the multidisciplinary team is fully involved in these development groups.

The pharmacy team will ensure standardised robust work processes, good governance around the supply of medicines and high-quality

evidence-based prescribing are in place. This will be underpinned by quality improvement activities, prescribing audits, and data/cost analyses. Altogether this will result in improved medicines safety, a reduction in unwarranted variation in prescribing and maximising capacity for the pharmacy team.

1.1.6 Leading evidence-based practice

The creation of a recognised evidence base to underpin the use of medicines and pharmacy practice has always been essential and will continue to be so in 2030. By then, most pharmacists and pharmacy technicians will have developed research capability and will be involved in research because it has been identified as one of the pillars of advanced practice (see section 2.3.1). Pharmacists working in academia and industry will play a leading role both in conducting research and in supporting the development of research skills in others.

This evidence will be essential in enabling pharmacists to develop prescribing guidance (section 1.1.5) and how best to deliver care. It will contribute to reducing harm, waste and variation. Pharmacy teams have a long standing role in reducing variation in prescribing and will continue this work through prescribing efficiency audits, monitoring formulary compliance and other quality improvement activities.

Pharmacists also have an important role to play in strategic leadership to shape services and models of care in NHS boards and other organisations, wherever medicines are used.





1.1.7 Supplying medicines

In 2030, the supply of medicines will be modernised. Pharmacy technicians will be the professional leads for the assembly, distribution, and safe and effective supply of medicines in hospital and community pharmacy. Accuracy checking will be automated through scanning technology, releasing pharmacy technicians from a manual accuracy checking process. This reduces workload and increases safety. Further automation via robotics will be used in larger volume dispensaries and hub and spoke models, and drones for transportation.

Pharmacists will continue to have an essential role in the medicines supply process in 2030 through the clinical check. Every prescription for a medicine that is new or has been changed will be clinically checked by a pharmacist, and this will include a conversation with the patient. By 2030, systems will be developed that will enable serial prescriptions to be clinically checked on the first issue with alerts to any changes (such as another medicine being dispensed) that require a further clinical check: routine serial dispensing with no changes will be overseen by pharmacy technicians.

Community pharmacies will offer medicines supply in a variety of ways to meet patients' needs. These will include in-pharmacy collection, delivery services and remote collection. However, in all cases medicines supply will be one part of a professional pharmaceutical care service: patients will have an opportunity to consult with a member of the pharmacy team, including a pharmacist, every time a medicine is supplied. Medicines are not, and never should be, seen as a retail commodity: pharmacy professionals provide an essential role in providing advice about medicines to enable safe and effective use.

Hospital pharmacy services will include supply of medicines to hospital wards and departments. Compliance with local formulary processes and ensuring safe prescribing, including antimicrobial stewardship, will be built in. Some aspects of medicines supply may be centralised within an NHS board and for specific groups of medicines this may include regional responsibilities across several boards. A further element to the centralisation of services will be that NHS boards will take a collaborative approach and share best practice. For example, current Advanced Therapy Treatment Centres work across large regions to deliver advanced therapies based on collaboration. These models may include centralised supply of medicines, but may also be based on local supply with collaboration around practice and processes.

IT'S HAPPENING ALREADY: SUPPLYING MEDICINES

In NHS Greater Glasgow & Clyde, patients are being discharged from hospital to a community pharmacy for medicines supply, reconciliation and review, as part of a 12-month pilot which began in September 2021.

The supply pathway is supported by an agreed NHSGGC Patient Group Direction (PGD). Pre-project work included medicines reconciliation training package and resource development for community pharmacists, as well as service specification agreement.

In the initial wave, 50 patients were safely discharged from nine medical wards in Glasgow Royal Infirmary to pharmacies in the North East locality of Glasgow Health & Social Care Partnership (HSCP) for medicines supply and reconciliation. The pilot was then spread to the North West locality of Glasgow HSCP and East Dunbartonshire HSCP.

The first 50 patients going through the pathway were discharged an average of 103 minutes earlier than those not accessing the pathway but requiring medication on discharge. The project is ongoing: it aims to reach 2,000 patients by September 2022 and is enabling the barriers to a national discharge service to be identified and addressed.

The supply of hospital discharge medicines will be transformed before 2030. In order to reduce waiting times for discharge, where appropriate, discharge medicines will instead be supplied by the patient's community pharmacy. Resources required for this will include clinical information (which must be via a single shared patient record), legislation to allow legal supply of medicines, referral pathways and appropriate financial support. It is anticipated that digital solutions will be essential to this.

All pharmacy teams will support patients with medicines compliance with tools such as reminder tools. The use of monitored dosage compliance aids will be reduced, and more effective tools used instead.

PATIENT JOURNEYS IN 2030: MANAGING COMMON CLINICAL CONDITIONS

Wendy has been suffering from a painful ear for a few days which hasn't responded to standard painkillers. The pharmacist takes a full history and performs vital signs tests and an ear examination. They discuss diagnosis and treatment options, and the pharmacist writes a prescription, provides self-care advice, and agrees to review in a few days. The pharmacist records the consultation on the patient's single shared record.



1.2

ADDRESSING HEALTH INEQUALITIES AND WELLBEING

Health inequalities have always been present in Scotland, but they have been exacerbated by the Covid-19 pandemic. A key role for all pharmacy teams in 2030 will be to reduce health inequalities and improve wellbeing for patients.



1.2.1 Shared decision making

Health inequalities can arise when patients have a lack of information about how to manage their condition or how to take medication safely, and where patients are not enabled to make decisions about their care. They can result in both under- and over-prescribing. Pharmacy teams will be alert to these potential inequalities and will evaluate and champion solutions to optimise drug therapy.

In all consultations with patients, pharmacy professionals will enable patients to make informed decisions about their medicines, encouraging them to take responsibility for their health and to decide which medicines are right for them. This means finding out what matters to patients and providing the right information in the right way to empower patients to make informed choices. Low health literacy is a significant barrier to shared decision making. Pharmacy teams will be aware of this and take actions to reduce this barrier. This means modifying their communication to enable patient participation, such as using simple language without medical jargon. It also means ensuring conversations are meaningful, recognising that some people with low health literacy are less willing to ask questions or participate in decisions because of beliefs that the health professional “knows best”. Pharmacists and pharmacy teams will ensure this imbalance is addressed so that shared decision making can take place and deliver inclusive communication standards.

PATIENT JOURNEYS IN 2030: PERSON-CENTRED CONSULTATIONS

Fraser is a 20-year old student with severe eczema. He has been supported by a specialist dermatology team for three years. He is currently experiencing a worsening flare but says he would prefer not to attend a hospital clinic because he does not want to tell his friends about his skin condition. The dermatology team arranges for a multidisciplinary appointment by Near Me video with the pharmacist and consultant, which Fraser can attend from his own room. The team examine Fraser’s skin and suggest additional treatment is needed. The pharmacist talks through the options, explaining the benefits and risks of each one. Fraser says what is most important to him is to remain

at university with as little disruption as possible, which rules out treatments he would need to attend hospital to receive. They agree to try an oral medicine and arrange a prescription to be sent to Fraser's community pharmacy, blood tests at Fraser's community treatment service and a follow up appointment with the dermatology team.

1.2.2 Ensuring equity of access to services

Before 2030, all pharmacy teams will proactively offer services in a way that delivers equity of access. They will identify vulnerable patients who need specific support and adapt services for them, such as those who are housebound, live in remote and rural areas, have cultural or language barriers, hearing impairment, or lower health literacy. Approaches taken will include using alternative formats for information, creating psychologically informed environments to reduce stigma/enable consultations, providing outreach services and using technology to make care more accessible. People in prisons will be provided with more patient-facing pharmacy services and options to self care to avoid the risk of becoming institutionalised and support the transition after release.

By 2030, pharmacy services will be planned alongside wider NHS clinical service provision to ensure equitable access to pharmacy services is achieved across the 7-day period. This does not mean that a full pharmacy service is needed in all settings 24/7 but that patients requiring immediate care, particularly in hospital and out of hours services, are not disadvantaged by the day of the week they access services. This needs to be planned alongside the wider clinical service provision in hospitals and Health and Care (Staffing) (Scotland) Act 2019.

More generally, access will be improved by enabling consultations in the way patients want. There is little doubt that there is a public appetite for all services to be more convenient, accessible from home or work, and available outside normal working hours. The rise of internet shopping and delivery services has demonstrated this, and data in Scotland from a nationwide public engagement exercise on Near Me[®] video consulting showed the public demand for remote access to health services. By 2030, pharmacy teams will have embraced this agenda and developed services

that patients can access how and when they want. Pharmacy teams will routinely offer remote consulting, asynchronous consultations and other digital services. Importantly, patients will be given the choice of how they want to access care.

Delivery services will be a key component of pharmacy services but, in 2030, all delivery and remote collection options such as vending machines will automatically enable patients to speak to a pharmacy professional remotely.

Equity of access also includes making population-based, as well as individual patient, decisions. By 2030, the population across Scotland will have equitable access to pharmacy services. However, services will not necessarily be identical in each location: data must be used to plan services and prioritise pharmacy resources in response to local needs, such as deprivation and rurality, to ensure consistent but not uniform services. Importantly, pharmacy teams will co-produce services with people with lived experience and will undertake training to better understand the human factors that influence health behaviours.

PATIENT JOURNEYS IN 2030: IMPROVING ACCESS TO CARE

Edith has been prescribed a new medication for arthritis by her GP. Edith is elderly, has several medical issues and struggles to get out of her house, so uses her local pharmacy's delivery service. Her new medicine is delivered to her and she also receives a message to her smart TV inviting her to have a video consultation with the pharmacist. During this remote consultation the pharmacist discusses the various aspects of Edith's new medicine with her and also takes the opportunity to check on her wellbeing and how she is managing with her other long-term medical conditions and associated medication. Edith reveals she has a sore area of broken skin on her lower leg, so the pharmacist updates her single shared patient record to flag this as a concern and electronically refers the case to the GP and nursing team so they can arrange a home visit.

6. Scottish Government. Video consultations – public and clinician views: consultation. Available at: www.gov.scot/publications/public-clinician-views-video-consultations-full-report/pages/2/

1.2.3 Place in communities

Community pharmacies are located at the centres of communities right across Scotland, from city centres to remote islands. This accessibility will continue to be crucial in 2030 and is important to deliver the current strategic focus of community-based services. In addition to location, the general accessibility of community pharmacies is also important for services where some patients have perceived stigma about using a service, such as those for addiction and mental health. However, there are gaps in community pharmacy services in some locations and by 2030 these gaps will be addressed by local NHS organisations including through the use of digital services.

A service of particular importance in improving access to care both now and in the future is the NHS Scotland Pharmacy First service: the public's first port of call for common clinical conditions. By 2030, the vast majority of community pharmacists will be independent prescribers, enabling the Pharmacy First service to be further developed to include additional conditions. As more and more pharmacists develop into advanced generalist roles, they will use their skills to expand the scope of the Pharmacy First service even further. Pharmacy First will also have been extended into populations who cannot currently access it, such as prison populations.

By 2030, some community pharmacies will be used as local healthcare hubs where people can access other NHS services. Community pharmacies already have consulting rooms. By 2030, they will be used by the pharmacy team, visiting health professionals and also by patients to have a remote consultation with an NHS professional using digital technology. This will reduce the number of people having to travel for appointments and help reduce digital exclusion where patients do not have their own device for digital consultations or digital skills to use it. To deliver these changes, by 2030, community pharmacy premises will have a more clinical and less retail focus. This will change current public and professional perceptions to understand that community pharmacists are clinicians not shopkeepers.

Finally, it should be recognised that community pharmacies in themselves can help address inequalities by providing employment (including job training) in locations where there may be limited job opportunities. For example, pharmacies can train people locally to become pharmacy support workers and pharmacy technicians, both of these roles offer rewarding careers with ongoing opportunities for further development.



IT'S HAPPENING ALREADY: PLACE IN COMMUNITIES

Lauren Clarke, a community pharmacist in Forfar, NHS Tayside, explains how her pharmacy is providing a hepatitis C screening and treatment service:

"All of our patients receiving opioid substitution therapy at the pharmacy are offered screening. This involves dry blood spot testing which takes place in our consultation room, managed by one of our pharmacy assistants. The samples are sent to the local NHS laboratory for analysis and, with the patient's consent, I can access the NHS Tayside clinical portal to obtain the results electronically.

"For patients who test positive for hepatitis C, we provide a treatment service. With their consent, I check whether they have had recent blood tests to confirm treatment is safe for them and, if not, arrange for a phlebotomist to visit the pharmacy. I then ask the NHS Tayside hepatitis team to provide a prescription. We provide daily supervised treatment for 12 weeks. At the end we carry out another dry blood spot test to check they have been cured.

"Patients tell us it's much more convenient for them than going to a hospital clinic because they are coming to the pharmacy every day anyway for their opioid substitution therapy. It is also more reassuring for them to come to a familiar place and be supported through their treatment by a team they know well."

1.2.4 Prevention of ill health

In 2030, pharmacy teams will have essential roles in preventing ill health by taking a holistic approach to care that goes beyond medicines. This will include the provision of lifestyle advice including using a social/green prescription approach, as well as referral to other services such as link workers and third sector organisations.

Health improvement services provided by pharmacy teams will include some or all of the following, determined by local population needs:

- Harm minimisation to reduce drugs deaths – substitution therapy (oral and injectable), naloxone provision, harm reduction services, health improvement for drug users including help with access to services such as hepatitis C treatment and mental health; identifying and addressing dependence on prescribed medicines; providing public health campaigns around dependence on prescribed and over the counter medicines; providing education on drug dependence for professionals
- Support to stop smoking
- Brief interventions to reduce alcohol use
- Mental health support – advising patients on initiating new medicines, monitoring, titrating doses up and down, working with specialist teams to follow up patients after specialist appointments/ inpatient stays, linking with community pharmacy teams to support patients' management
- Women's health services – providing advice and prescribing medicines for contraception, menstrual health and the menopause
- Brief interventions to prevent infections, for example, hand hygiene, cough etiquette to prevent respiratory infections and maintaining hydration to prevent urinary tract infections
- Weight management
- Chronic Pain services – enabling appropriate use of opioids and other medicines used for managing pain through monitoring and review, titrating doses and using lifestyle interventions as alternatives to medicines where possible. And working with specialist pain services to provide follow up prescribing, and referral to other services such as physiotherapy and mental health

- Supporting services to improve screening for and early detection of a range of long-term conditions including heart disease, diabetes and cancer
- Vaccination services – routine involvement with national NHS vaccination programmes
- Hepatitis C services – provision of blood tests and antivirals
- Medicines advice to patient groups, such as on inhaler technique to COPD groups
- Patient education on medicines management for long-term conditions

IT'S HAPPENING ALREADY: PREVENTION OF ILL HEALTH

In NHS Greater Glasgow and Clyde, the hospital-based specialist hepatitis C pharmacy team has developed new models of care to enable patients to access specialist medicines in community settings rather than having to come into hospital clinics. This has reduced barriers to care.

A bi-monthly pharmacist clinic within the local drug court was set up to facilitate rapid access to hepatitis C (HCV) treatment for patients who were previously difficult to engage in traditional settings. In the new clinic, patients with HCV infection are assessed for liver disease and HCV treatment by the pharmacist while they are attending the drug court. This initiative was part of a wider service that used point of care testing to increase screening and treatment. It extended the role of the HCV clinical pharmacy technician team who were trained to carry out point of care testing for HIV antibody testing and dry blood spot testing, as well as to discuss risk factors for HCV transmission and treatment options.

These initiatives contributed to significantly increased HCV screening with almost all patients tested and minimised drop off from HCV treatment with over 95% of patients with known HCV treated. In addition, the team has started to use tele-medicine consultations which has been successful for patients with a prior high rate of not attending appointments and was found to be highly acceptable for patients.



1.2.5 Environmentally sustainable pharmacy services

By 2030, all pharmacy teams will be delivering greener, more environmentally sustainable services. At an individual patient level, pharmacy teams will use a person-centred approach to reduce medicines waste by only prescribing medicines a patient has agreed to take. They will also consider the environmental impact of medicines when prescribing and reviewing medicines, switching to lower impact options when appropriate.

In order to support sustainability in decision making, pharmacy professionals will have an essential leadership role in prescribing governance by ensuring that the environmental impact of different pharmaceuticals is included in NHS Formularies. This will impact not just on pharmacists' prescribing decisions but on all health professionals who prescribe.

Reducing medicines waste is a significant way to reduce the environmental impact of medicines. Medicines waste can result from:

- Patients not taking the medicine as prescribed (not taking it at all, or at the incorrect dose/time)
- Medicines causing harm such as side effects, so the patient stops taking them

- Over-ordering of prescriptions, either intentionally (stockpiling) or non-intentionally due to ineffective prescription ordering processes
- Over-prescribing of medicines, such as prescribing medicines that are not necessary or the patient does not want to take.

Therefore, alongside the shared decision making highlighted above, pharmacy teams will also tackle medicines waste by educating patients about not stockpiling or overordering medicines, and adjusting medicines causing harm.

In terms of the wider infrastructure in pharmacy, by 2030, plastic packaging will have been reduced for both pharmaceuticals and sundries. Delivery vans will be electric, and travel will be reduced through the use of remote consultations and meetings. Paper medicines administration charts and prescriptions will have been removed through the introduction of electronic systems. Ordering, supply processes and procurement will be more efficient to minimise waste. The pharmaceutical industry will use greener production processes such as reducing use of solvents.

More information can be found in the RPS Sustainability Policy.⁷

7. Royal Pharmaceutical Society. Pharmacy's role in climate action and sustainable healthcare. Available at: www.rpharms.com/recognition/all-our-campaigns/policy-a-z/pharmacies-role-in-climate-action-and-sustainable-healthcare



**IT'S HAPPENING ALREADY:
ENVIRONMENTALLY SUSTAINABLE
PHARMACY SERVICES**

NHS Lothian has a vision to have green health prescribing embedded across the system and targeted at people who can benefit the most. This will result in reduced health inequalities, stronger communities and valued green spaces. It also encourages a Realistic Medicine approach to treatment as well as greater public awareness of non-pharmacological options.

Stewart McNair is an Advanced Clinical Pharmacist in primary care in NHS Lothian. He works across two GP practices and has a special interest in the promotion of sustainable healthcare in particular Green Health Prescribing and is an early adopter of the scheme.

Green Health Prescribing in NHS Lothian uses the interaction between people and health and care services to identify those who could benefit most and connect them with nature. Nature based activities are prescribed or advised to support physical and mental health and wellbeing.

The activities can take many forms from suggesting a walk in the park to referral to a therapeutic programme. Exercising in and enjoying open spaces and nature has a proven benefit on people's mental and physical health. The social connection that happens also has a benefit.

Stewart has also worked with other organisations with an interest in Green Health Prescribing to produce tools and materials to promote this as a treatment choice.



1.3

SKILL MIX IN PHARMACY TEAMS



1.3.1 Skill mix

By 2030, all pharmacy teams will have appropriate skill mix and staffing levels. Skill mix will ensure staff are undertaking roles at the top of their capabilities to get the best from the workforce, motivate staff and deliver optimal, safe care for patients.

Teams will be comprised of pharmacists, pharmacy technicians, pharmacy support staff, administrative support and potentially other health professional staff. Pharmacists have overall clinical and medicines governance responsibilities within pharmacy teams, as set out in medicines legislation. All future roles should be in line with the current legislation at that time. The main role of pharmacists will be to lead prescribing and optimise therapeutic outcomes for individuals. The main role of pharmacy technicians will be to lead medicines management processes to ensure patients receive a safe and effective supply of medicines.

Pharmacists and pharmacy technicians are registered professionals and are accountable for meeting the standards set by the General Pharmaceutical Council. The roles described below are the core skills expected in 2030, but these must be interpreted alongside the most recent GPhC standards⁸. Some pharmacy professionals will need to undertake professional development to deliver some of these roles, some will already be achieving these, and some will exceed them before 2030.

8. General Pharmaceutical Council. Standards for Pharmacy professionals. Available at: www.pharmacyregulation.org/standards/standards-for-pharmacy-professionals

IT'S HAPPENING ALREADY: PHARMACISTS PROVIDING COMPLEX CARE

In NHS Fife, Stephanie Hart, senior clinical pharmacist in rheumatology, is already an advanced practitioner providing complex care.

Once a patient has been diagnosed with rheumatoid arthritis, Stephanie takes over the patient's management, working alongside medical consultants as a colleague. She has a case load of patients, providing holistic reviews including examination and advanced assessment of joints using techniques such as ultrasound. She makes decisions to start treatment, and prescribes, monitors and adjusts biologic therapies.

Stephanie's case load includes patients who have acute illness in hospital as well as ongoing management for outpatients. In addition to her patient-facing role, she also trains other professionals on rheumatology using a teach and treat model. Altogether Stephanie's role is an autonomous practitioner in complex care.

1.3.2 Roles of pharmacists

- Recognised as medicines experts who lead prescribing in all care settings
- Autonomous decision makers as part of the wider multidisciplinary team
- Providing patient-facing care to optimise therapeutic outcomes: clinical assessment, providing advice, and prescribing, reviewing and monitoring medicines
- Providing technical expertise on the design, production and use of medicines
- Focusing on high-risk situations and more complex care, stretching across acute care and common clinical conditions, as well as long-term conditions
- Leading the development of newer therapeutic areas, such as pharmacogenomics
- Having overall responsibility for medicines governance, and leading medicines management and prescribing governance policies
- Developing the evidence base for pharmacy practice and medicines use through research

activities and innovation/development of practice

- Providing strategic clinical leadership within the wider health care team to shape, improve and transform services and models of care
- Developing the pharmacy workforce through education and mentoring, both through pharmacists working in education/academia and a general culture of supporting education
- Providing advice and education on medicines and prescribing to other professionals and patients in both health and social care
- Involvement in prescribing efficiency and quality improvement work

IT'S HAPPENING ALREADY: CONSULTANT PHARMACISTS

Consultant pharmacists provide expertise and strategic leadership both within their specific service and at a much wider system level to transform services and improve models of care. In October 2021, the first five pharmacists in Scotland were credentialed through the RPS consultant pharmacist curriculum process. One of them is Paul Forsyth, Lead Pharmacist Clinical Cardiology at NHS Greater Glasgow & Clyde. Paul's clinical expertise is in cardiology, particularly heart failure.

At a system level, he developed the first pharmacy Teach and Treat model that provided cross-sector pharmacist-led clinics for patients with left ventricular systolic dysfunction after myocardial infarction. This improved medication optimisation for secondary prevention across large populations of Scotland and has been cited in two Scottish Government strategies. Further system-level work includes leading the development of UK-wide heart failure competency frameworks for pharmacists and the wider multi-professional team, developing national cardiology training resources for pharmacists, publishing research, co-authoring a European guideline on peripartum cardiomyopathy and publishing two textbook chapters on heart failure. Paul also contributes to various national strategic cardiology and advanced practice committees, is a guest lecturer at the University of Strathclyde, and supports the professional development of a number of pharmacists through supervision and mentorship.



1.3.3 Roles of pharmacy technicians:

- Recognised as experts in the purchasing, storage, distribution and dispensing of medicines
- Leading prescription management processes and pharmacy workflow
- Accountable professionals who are responsible for their own accurate and safe practice as part of a pharmacy team where pharmacists have overall clinical and medicines governance responsibilities
- Providing patient-facing care, where enabled by scope of practice, to optimise therapeutic outcomes including clinical assessment, and reviewing and monitoring medicines
- Leading medicines supply chain services and associated medicines governance policies
- Developing the evidence base for pharmacy practice through research activities
- Developing the pharmacy workforce through education and mentoring
- Providing advice on education on medicines to other professionals and patients
- Involvement in prescribing and workflow efficiency, and quality improvement work
- Supply and administration of medicines, if enabled by legislation/governance arrangements

IT'S HAPPENING ALREADY: PHARMACY TECHNICIAN-LED HUBS

Pharmacy technician-led hubs have been created in several NHS Boards. One example in NHS Greater Glasgow & Clyde is a hub which covers three GP practices of around 24,000 patients. Within this hub, pharmacy technicians complete medicines reconciliation for discharge and outpatient letters, deal with special request prescriptions and answer medicines related queries. Pharmacy support workers carry out non-clinical medicine administrative activities under protocols. These include triaging Medicines Care Review treatment summary reports, printing serial prescriptions if set criteria are met, and auditing patients for suitability for serial prescriptions.

Linda Henderson, Lead Pharmacy Technician Primary Care at NHS GGC, said: "This hub model has enabled the most suitable professional group to deliver the level of work suited to their knowledge and skills. Due to this, Pharmacy technicians have gained a higher level of clinical knowledge leading to a pilot medication review service for antidepressants."

1.3.4 Roles of pharmacy support staff

- Dispensing and preparation of medicines
- Stock management in pharmacies and clinical settings, including reducing medicines waste
- Supporting prescription management and pharmacy workflow, especially at transitions of care
- Providing non-clinical medication review and medication history, underpinned by protocols and supervised by pharmacy technicians/pharmacists
- Providing non-clinical prescribing administration support
- Supporting education and training on policies and processes relating to medicines
- Dealing with medicines supply issues
- Assessing patients' own drugs for use and compliance
- Providing advice and education to patients about medicines
- Supporting pharmacy technicians with improvement work

IT'S HAPPENING ALREADY: PHARMACY SUPPORT WORKERS

Nicola Lyons is a pharmacy support worker at the Newton Stewart health centre in NHS Dumfries & Galloway. She describes how her role has developed: "The role of pharmacy support workers has changed dramatically even over the last couple of years. Every day varies, I spend a lot of time triaging tasks and prioritising our workload to ensure nothing is missed. Some of my everyday tasks include carrying out level 1 medication reviews, undertaking housekeeping of patient records and looking for issues with compliance and over-ordering.

"I look after one care home and one nursing home and issue requests made by the homes for medication. I issue home delivery products for stoma and nutrition which helps tackle waste in these areas. I am also responsible for issuing serial prescriptions and I identify suitable patients through the level 1 reviews. Four hours a week is dedicated to the care at home service, and I work with health and social care staff to promote the safe administration of medicines. This helps reduce hospital admissions due to poor medication compliance.

2 Underpinning infrastructure



2.1

USING DATA TO DELIVER HIGH QUALITY SERVICES

2.1.1 Electronic prescribing systems

By 2030, electronic prescribing systems and electronic patient records will be fully implemented in all care settings and the resulting data will transform pharmacy services. These systems will enable full medication histories to be available for all pharmacy teams, allowing a seamless patient medication journey. This will remove the need for time consuming and sometimes complicated medicines reconciliation. Patient safety will be significantly improved because of the reduction in transcription errors and the ready availability of patients' medicines information.

These electronic systems will also transform the information going out from pharmacy teams, improving the timely sharing of accurate information with all those involved in the patient's care. Changes to medication will be able to be seen immediately. For example, on hospital discharge, all parties will be notified with an electronic copy of the patient discharge letter detailing current medication. This improved communication will reduce the risk to patients as well, ensuring they can focus on their recovery rather than organising their medication.

Electronic systems will also underpin the recording of administration of medicines in all relevant care settings, including hospitals, care homes, care at home services and prisons, and this information will be available as part of the patient's record for pharmacy professionals.

By 2030, Hospital Electronic Prescribing and Medicines Administration systems (HEPMA) will support triaging of patients to allow clinical pharmacists to target those high-risk patients who need pharmaceutical input as a priority. Furthermore, it will enable prescribing to be undertaken on the ward, stock ordered automatically from pharmacy, and dispensed and delivered to the ward without the need for paper processes: this will release pharmacy staff time to concentrate on clinical roles.

2.1.2 Clinical outcomes data

In 2030, a national data set will be used to demonstrate the effectiveness and quality of pharmacy services in all settings. Data will be collected automatically by electronic systems, which will mean the focus will be on using and responding to the data rather than manual data collection.

Data on prescribing, review and administration of medication will all be readily and easily available. Importantly, clinical outcomes measures will be developed, linking patient outcomes with prescribing and administration data. This will enable the impact of pharmacy services on improving population health to be determined, rather than collecting proxy process measures on the number of interventions provided. For example, data on the number of high-risk medicine combinations reduced during medication reviews should be linked with hospital admissions data for adverse events. The importance of local interpretation of data will also be understood. In short, pharmacy teams will move beyond using solely prescribing-focused data to looking at the use of medicines in the wider context of patient care.

Data on errors and near misses will be evaluated and root cause analysis carried out, and further reviewed by learning from multiple incidents using thematic analysis. With a more advanced system giving access to more real-time data rather than retrospective reports, medicines safety will be improved.

By 2030, there will be well developed systems for obtaining continuous feedback from patients and colleagues about pharmacy teams' performance. This, along with the new national clinical outcome measures, will be used to drive continuous service improvement. They will be used to demonstrate population-level improvements delivered by pharmacy teams across Scotland but also be clearly connected to measurements at an individual pharmacy level to make them tangible. This will mean pharmacy teams can see how improvements they make directly contribute to overall population-level changes, as well as enable monitoring the performance of individual pharmacies.

2.1.3 Using data for decisions

By 2030, pharmacy teams will use data routinely to provide personalised care and medicines for patients. This will include both prescribing data and population health data.

Pharmacists will be recognised as clinical leads for pharmacogenomics. They will make prescribing decisions based on pharmacogenomics, including changing medicines and adjusting doses, to deliver a true patient centred medication service. They will also support other health professionals to understand pharmacogenomics as well as advanced therapy medical products

Decision support software will be used routinely to improve the quality of prescribing. By 2030, decision support tools will be improved so that they enable shared decision making with patients by representing data in ways to help patients participate. They will also use data in more intelligent ways to achieve personalised decisions about medicines. This will include the use of artificial intelligence (AI) which has potential in predicting outcomes, targeting intervention and decision support.

Clinical data will also be used to target pharmacy interventions. For example, pharmacy teams will use hospital admissions and discharge data to identify individual patients who need medicines related support. Biochemical monitoring parameters will be used to identify patients who may need medicine dose adjustments. Similarly, data on people with specific diseases or risk factors will be used to prioritise pharmacy input.

Finally, data will be used to make population-based decisions to plan services and prioritise pharmacy resources in response to local needs. This will include clinical data and workforce planning data, which will be used at both NHS board and GP cluster level to support the service planning process.

2.2

HARNESSING DIGITAL TECHNOLOGY AND INNOVATION

2.2.1 Technology within pharmacy processes

The biggest digital change that will have transformed health care by 2030 is the introduction of a single shared electronic patient record across all health and care services in Scotland. This will be a universal patient record held in a data cloud into which every professional both reads and writes information, using their existing clinical system as the entry point. Each professional group will have a different view, according to what is appropriate for their role, but the key point is that all professionals will be viewing the same set of data.

The single patient record will be transformative for pharmacy. There will be no need for the technical aspects of medicines reconciliation: everyone will see and amend the same medication record. Information will be timely and accurate, it won't be lost at interfaces, and patients will have access to the record and be able to add information. Discharge prescriptions generated in hospital will be instantly accessible for primary care and community pharmacy. Information sharing from community/primary care colleagues will also help hospital pharmacists make prescribing decisions. Ultimately the single shared record will release clinicians' capacity, improve safety and enable the provision of better care for patients.

Full electronic prescribing and transfer of prescriptions will take place across all care settings, removing the need for paper prescriptions (see section 2.1.1) and dispensing will be modernised (see section 1.1.7). Technology will also be used to improve medicines safety. For example, it could be used to enable a remote second clinical check on some prescriptions written by pharmacists as independent prescribers. It will also improve the safety of medicines administration, for example enabling remote second checks on doses for high-risk medicines and providing alerts for time-sensitive medicines.

Before 2030, electronic communication between health professionals will be used routinely. This will be maximised for clinical benefit, to support seamless care between settings. Multidisciplinary

working, team meetings and shared care across sectors will be underpinned by digital communication. Digital technology will also transform professional development, enabling pharmacy teams to be involved in multi-disciplinary training, supervision and education events remotely: both to learn and as providers of education.

Importantly, to ensure good governance and effective use of technology, pharmacy professionals will be appointed to clinical leadership roles within eHealth teams in NHS boards. Their role will be to plan for system changes, manage the associated clinical risks and oversee transitions.



2.2.2 Patient facing digital technology

Patients have stated clearly that they want the NHS to embrace technology, and pharmacy needs to respond to this. Some pharmacy teams are already using remote monitoring and consultations, and by 2030 this will be routine – when it is both clinically appropriate and appropriate for an individual patient.

Use of video consulting via Near Me, as well as telephone consulting, asynchronous communication, and submitting high resolution photos for clinical review, has increased dramatically during the Covid pandemic. This has improved access to care for patients in general

practice and hospital in particular. A key benefit of Near Me is that it enables 3, 4 or even 5-way multidisciplinary team consultations through which pharmacists can remotely play a greater role in supporting patient care.

Remote patient monitoring is less well developed but there is some use throughout Scotland, and by 2030 it will be commonplace. Technology will enable patients to monitor their condition remotely and for the results to be seen remotely by health professionals. This will include wearable devices to collect data on lifestyle factors, monitoring parameters and compliance with medicines. Additional clinical remote monitoring will range from specific parameters (eg, blood pressure) to devices such as home dialysis, all of which will be used by pharmacy professionals to make decisions on patients' care.

In some cases, technology will be needed to support patients' compliance with taking medicines, especially for reminders to take medicines. Pharmacy teams will have an essential role in advising on the use of such technology solutions, ensuring appropriate use and avoiding overuse of compliance aids.

However, with all digital services, it is essential to recognise that some people are digitally excluded. This can be for a variety of reasons including inability to use digital services, not being able to afford the equipment required to access digital services and inadequate internet connectivity. Pharmacy teams need to be aware of this and consider non-digital options or support patients to use digital services. Similarly, all pharmacy teams need to have access to the technology (reliable internet connections, equipment) to be able to use it successfully.



2.3

DEVELOPING THE WORKFORCE

2.3.1 Career and professional development

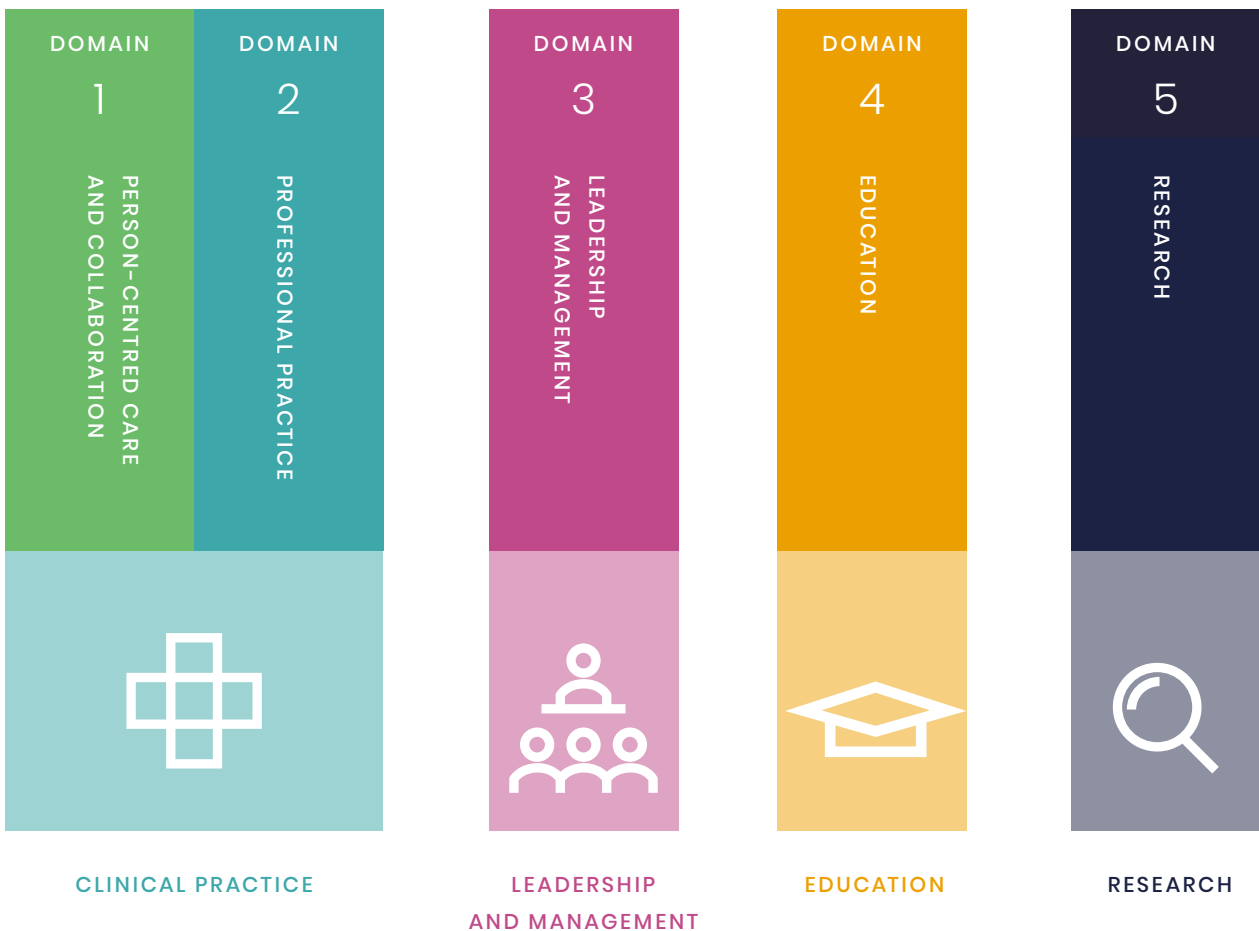
By 2030, career development pathways will be in place for all members of the pharmacy team. These pathways will support professional development, enabling people to flourish and feel fulfilled in their roles, whether these are exclusively in one area of pharmacy or as part of a portfolio career.

For pharmacists, professional development will be aligned to the RPS curricula for foundation, advanced and consultant practice⁹. Pharmacists will progress through the career stages defined in these frameworks and the associated credentialing. These frameworks encompass professional practice, collaborative working, leadership and management, education and

research skills (see figure below: the Four Pillars of advanced practice). Alongside this, some pharmacists will choose to complete higher degrees which will be essential for supporting evidence-based practice. Pharmacists in all roles will have equal access to post-graduate education to support their career development.

For pharmacy technicians, professional development will be shaped by a suite of frameworks similar to those for pharmacists and other professions in the multidisciplinary team. Pharmacy technicians will progress through career stages defined in the frameworks while evidencing experiential learning. This will lead to commonality in the language being used to describe roles and responsibilities in both pharmacy professions. Pharmacy technicians will undertake recognised accredited qualifications to underpin the frameworks to further support the development of their role. Pharmacy technicians will have equal access to advanced education to support their career development.

9. Royal Pharmaceutical Society. *Credentialing: setting the standards for pharmacy*. Available at: www.rpharms.com/development/credentialing



2.3.2 Pharmacy workplace culture

By 2030, the pharmacy workplace culture will be inclusive, celebrate diversity, create a sense of belonging and be supportive of team members' wellbeing. All pharmacy organisations will have signed up to and taken action to deliver the RPS Inclusion and Wellbeing Pledge¹⁰. Pharmacy professionals will have rest breaks during the working day, protected learning time, flexible working options including portfolio careers, access to wellbeing services and a proper work-life balance. This is described in the RPS Scotland workforce briefing¹¹.

Across both pharmacy professions, there will be a cultural shift to a system that is committed to continual professional development with the infrastructure and resource to enable this. The work culture will mean that education, supervision, teaching, mentoring and supporting others to learn at all stages of career development pathways will be a key part of all pharmacy professionals' daily work by 2030.

Workforce planning will be carried out across Scotland to ensure that the right skill mix is present in every pharmacy team. Before 2030, national workforce planning tools will be in place to enable NHS employers to identify the numbers of pharmacy staff needed to achieve safe staffing levels for the services of the future. Action will be taken to address any gaps identified. The specific

roles of each team member will be supported by effective job planning, using nationally agreed templates.

Organisations will work together to enable pharmacists and pharmacy technicians to have wider development experiences, such as placements in different locations/settings. This will especially be the case at pharmacist post-registration foundation level, where training will have changed significantly by 2030, and will enable pharmacists to undertake longer placements in multiple pharmacy settings. As a result, all pharmacists will have a far better understanding of the roles of pharmacists working in other settings, which will improve collaborative working as one pharmacy profession to achieve seamless patient care.

2.3.3 Training and development for pharmacists

By 2030, all patient-facing pharmacists will have advanced clinical capabilities. This will include advanced clinical assessment and consultation skills, triaging, clinical reasoning, decision-making and risk management skills. All patient-facing pharmacists will be independent prescribers. Some pharmacists will develop specific areas of practice in addition to their core, generalist role to meet the service needs identified by the local NHS board.

Pharmacists' skills will be developed via a combination of practice-based learning and academic learning at both undergraduate and postgraduate stages. Professional development will be structured around the RPS frameworks for advanced and consultant practice. The underpinning clinical knowledge to enable advanced practice will be supported by higher

10. Royal Pharmaceutical Society Pledge.
Available at: www.rpharms.com/pledge

11. RPS Scotland workforce statement.
Available at: [www.rpharms.com/Portals/0/RPS%20document%20library/RPS%20Scotland%20Workforce%20Briefing%20November%202021%20\(i\).pdf?ver=6jJLDmjd9_6Lo43WgMRfaw%3d%3d](http://www.rpharms.com/Portals/0/RPS%20document%20library/RPS%20Scotland%20Workforce%20Briefing%20November%202021%20(i).pdf?ver=6jJLDmjd9_6Lo43WgMRfaw%3d%3d)



education institutes providing modules that can form part of a pharmacists' portfolio of evidence as well as contribute to higher degrees.

Protected learning time and peer support networks (both intra and inter-professional) will enable professional development and underpin reflective practice. Multidisciplinary learning will help improve understanding of the whole team's contribution to patient care and delivery of seamless care. Professional development support will be in place for locums to ensure that appropriate backfill is available for all roles, including enhanced roles.

All pharmacists will have a role in supporting the education and development of others, both within pharmacy and for other health professionals. Pharmacists who work in education and academia will continue to play essential roles in teaching, research and knowledge exchange. Their expertise will be vital to support all pharmacists to be able to take on supervision of others.

Leading and participating in research will be a normal professional activity for the majority of pharmacists by 2030. This will require the further development of research skills through postgraduate structures and research networks, and the link with academic pharmacists is essential in developing these skills. Pharmacists will have an awareness of ongoing research and bring this to the multidisciplinary team for consideration in evidence-based decisions.

2.3.4 Training and professional development for pharmacy technicians

By 2030, all pharmacy technicians will have access to post-registration training and development which enables them to practice at an advanced and expert level. This will include management, leadership, project management, advanced clinical knowledge and consultation skills, triaging, clinical reasoning, decision-making and risk management skills. Some will develop specialist areas of practice in addition to their core, generalist role to meet the service needs identified by the local NHS board.

Pharmacy Technician skills will be developed via a combination of practice-based learning and academic learning at both pre and post registration level.

Protected learning time and peer support networks (both intra and inter-professional) will enable professional development and underpin reflective practice. Multidisciplinary learning will help improve understanding of the whole team's contribution to patient care and delivery of seamless care.

Pharmacy technicians will have a role in supporting the education and development of others, both within pharmacy and other health professionals.

Pharmacy support staff will have a core SVQ qualification relating to their role and a modern apprentice route with accredited training will enable career progression for pharmacy support staff. This will enable those who meet the essential criteria to go on to train as a pharmacy technician.

2.3.5 Training and professional development for the whole team

All members of the pharmacy team will have wide-ranging training to support the new models of care, including practical elements of service delivery and clinical skills.

Two areas of increasing importance to meet future service needs are digital skills and health inequalities. Digital training will allow new systems to be implemented and used to their full capacity to improve processes. Data management skills, informatics and quality improvement training will also be in place for the whole general practice team. On health inequalities, the whole pharmacy team will undertake training in neurodiversity, disability awareness and protected characteristics to identify and address inequalities.

3 Additional Information

3.1.1 Acknowledgements

We are hugely grateful to all the pharmacists and pharmacy technicians across Scotland who contributed to this vision by participating in focus groups, and sharing their views through surveys, emails, phone calls and meetings. We are also grateful to the pharmacy and non-pharmacy stakeholders who met with us through the consultation period and commented on numerous drafts. This vision was shaped by every single person who was involved: it could not have been created without them and this final version belongs to them all.

3.1.2 Strategic links

To make this vision relevant to the strategic direction of travel in Scotland, documents produced by Scottish Government, NHS Scotland and other stakeholders were referenced. The section below highlights some key quotes from some of these documents:

Achieving Excellence in Pharmaceutical Care¹²

“The evolving focus of pharmacy practice to ensure that people have an understanding of what to expect from their medication requires an acknowledgement that people and their carers rightly wish to be active partners in treatment options.”

“Pharmacy resource can be targeted through a triage model focusing on high risk and complex cases.”

“Hospital discharge can be a difficult time to support people with adherence to new medication regimens. There is a role for pharmacists and pharmacy technicians in supporting this transition by taking on a greater part in managing care prior to and during discharge.”

12. Scottish Government. Achieving Excellence in Pharmaceutical Care: a strategy for Scotland. August 2017. Available at: www.gov.scot/publications/achieving-excellence-pharmaceutical-care-strategy-scotland

Scotland's National Clinical Strategy¹³

"The contribution of pharmacists can be considerably enhanced, with their expertise in ensuring that people with complex medication regimes have their care optimised, and the potential for side effects or harmful interactions reduced."

Health care teams should "provide care that is person centred rather than condition focused".

NHS services must "collect and use more information on outcomes, especially those that matter most to patients, rather than clinical data such as biochemical or other surrogate markers".

Chief Medical Officer's 2020-21 annual report¹⁴

"While medicines can bring great benefit, they can also cause significant harm. Older people tend to experience worse side effects or consequences of treatment. That is why we should strive to actively manage risk associated with polypharmacy by regularly reviewing and rationalising our patient's medications."

"Serious harm can result if we don't listen to the people we care for, and if they are not given the information and support they need to make informed decisions about their care."

"NHS Scotland is a significant contributor to the climate emergency. It emits a large amount of greenhouse gasses, consumes huge amounts of resources and produces copious amounts of waste. We have a moral obligation to help tackle the greatest threat to human health by reducing our impact on the environment. Responsibility rests with us all."

The ALLIANCE's report on Health and Wellbeing priorities for the future¹⁵

Care should be "flexible, person-centred which recognises the holistic nature of individuals" and that "being involved in the decision-making process and treated as an expert in their own life circumstances and care" is of the utmost importance to people.

"For many people the innovative and accelerated implementation of virtual services improved access, made it quicker and supported more choices for the individual. People have welcomed the use of this technology and its wider implementation and use should continue."

The NHS Scotland recovery plan 2021-26¹⁶

"We will design services so that we minimise unnecessary travel and increase the focus on 'net-zero' approaches."

"We will continue to support the move to more health care being provided in the community and closer to home."

"We will design a new sustainable system, focused on reducing inequality and improving health and wellbeing outcomes, and sustainable communities."

"We will develop and introduce a new pharmacy woman's health and wellbeing service through our public health services."

"We will also establish a community pharmacy hospital discharge and medicines reconciliation service to help speed up the process for people being discharged from hospital."

"We are investing in developing new digital solutions such as ePrescribing and eDispensing to make the prescribing process paperless."

Scottish Polypharmacy Guidance¹⁷

"With up to 11% of unplanned hospital admissions being attributable to harm from medicines and over 70% of these being due to elderly patients on multiple medicines, there are significant opportunities to reduce this burden by timely and effective interventions."

13. Scottish Government. A National Clinical Strategy for Scotland. February 2016. Available at: www.gov.scot/publications/national-clinical-strategy-scotland

14. Scottish Government. Recover, restore, renew. Chief Medical Officer for Scotland Annual Report 2020-2021. Available at: www.gov.scot/publications/cmo-annual-report-2020-21

15. The ALLIANCE. Health, Wellbeing and the Covid19 pandemic: Scottish Experiences and Priorities for the Future. February 2021. Available at: www.alliance-scotland.org.uk/blog/news/health-wellbeing-and-the-covid-19-pandemic-our-findings

16. Scottish Government. NHS recovery plan 2021-26. Available at: www.gov.scot/publications/nhs-recovery-plan

17. Scottish Government. Polypharmacy Guidance: Realistic Prescribing, 3rd edition, 2018. Available at: www.therapeutics.scot.nhs.uk/wp-content/uploads/2018/04/Polypharmacy-Guidance-2018.pdf

