



NHS Clinical
Commissioners
NHS Confederation

The systematisation of medicines optimisation

Why medicines optimisation is a priority for integrated care systems and how it can be improved

September 2021

Ellen Rule
Edward Jones

About

This report sets out proposals for how integrated care systems might improve the use and management of medicines to advance the triple aims of improving health outcomes and improving the quality of care, while also ensuring value.

The NHS Confederation is the membership body that brings together and speaks on behalf of organisations that plan, commission and provide NHS services in England, Northern Ireland and Wales. The members we represent employ 1.5 million staff, care for more than 1 million patients a day and control £150 billion of public expenditure. We promote collaboration and partnership working as the key to improving population health, delivering high-quality care and reducing health inequalities.

NHS Clinical Commissioners, which is part of the NHS Confederation, is the independent membership organisation for clinical commissioning groups. It provides clinical commissioning groups with a strong collective voice and represents them in the national debate on the future of healthcare in England.

About the authors

Ellen Rule is director of transformation and service redesign at NHS Gloucestershire. Ellen has worked for the NHS since 2003, holding a variety of senior positions in commissioning and provider organisations spanning service redesign, assurance, contracting, operational management and strategic planning roles. She holds a master's degree in health economics and policy and is currently working towards a PhD in pharmaceutical economics and policy. Prior to working in the NHS, Ellen was a civil servant in the Cabinet Office and has worked in the private sector in the financial services industry.

Edward Jones is a senior policy adviser at NHS Clinical Commissioners and the NHS Confederation's ICS Network, focusing on medicines, finance and legislative reform policy. He previously spent five years as a policy consultant, working for health sector clients including NHS trusts, royal colleges and industry. Prior to that he worked in the House of Commons as a parliamentary assistant and has a master's degree in public policy and administration from the London School of Economics and Political Science.

Contents

2 About

3 About the authors

5 Key points

7 Recommendations

10 Introduction

12 Defining medicines optimisation

13 The purpose of medicines optimisation

15 Improving health outcomes

16 Reducing avoidable harm

16 Avoiding waste

18 Financial context

22 National policy context

24 The systemisation opportunity

29 Roadmap to systemisation: recommendations from local systems

29 Workforce: one medicines team

34 Governance

39 National leadership

41 Pathways

45 Technology and data

53 Viewpoint and recommendations

58 Acknowledgements

59 References

Key points

- Medicines optimisation aims to improve health outcomes, service quality and sustainability. It is a patient-centred approach to ensuring patients are prescribed and taking their medicines as recommended by guidance, so that they derive the intended benefits and avoid incurring harms. As the most common healthcare intervention in the world and perhaps the one carrying the greatest risk of avoidable harm, optimising medicines use is a priority to improve the quality of healthcare and quality of life.
- Medicines spending consumes a growing share as proportion of the overall NHS budget in England, making it vital to the sustainability of the health service that medicines are managed responsibly and equitably within available resources.
- As the NHS in England undergoes a period of reform, with integrated care systems (ICSs) taking over strategic resource planning responsibilities from clinical commissioning groups (CCGs) and responsibility for collaboration between and the integration of health and care services, this report considers how the systemisation of the NHS can be used to galvanise medicines optimisation, improving both health outcomes and financial sustainability.
- Given that medicines optimisation relies as much on effective governance and collaborative working arrangements across clinical pathways and care settings as they do on technical pharmacy expertise, we have framed medicines optimisation as much as a public management and clinical systems issue as it is a technical and pharmacy issue. Based on expertise of stakeholders across the healthcare system involved in medicines optimisation, from commissioners to providers in

primary, community and acute care settings, the report sets out recommendations across five key areas to enable system-orientated medicines optimisation: workforce, governance, national leadership, pathways, and data and technology.

- With some specialised and community pharmacy commissioning being delegated to ICSs (planned to be fully in place by 2023), systems will have an even greater share of commissioning budgets and ownership of the whole ‘pharmaceutical pathway’ than ever before. Given systems will also be the nucleus of integration, we believe the relationship between ICS, regional and national teams should be seen as a partnership ‘co-commissioning’ approach with clear responsibilities defined across the different tiers of governance.
- In line with the Long Term Plan, ICSs should be the nucleus for tailored medicines optimisation strategies at the system-level to advance national goals, with tactics adapted to local needs at a place-level. This approach hopes to achieve an effective balance between co-ordination and subsidiarity.
- Building collaborative ways of working takes time. New structures can be an enabler of change, but they are not the culmination of change. For many systems, sustained effort and focus on the priorities outlined in this paper can help facilitate the successful systematisation of medicines optimisation, but it may take around three to five years before systems will see real benefits for population health, clinical quality and value.

Recommendations

	Governance tier	Page number
One team: Build ‘one medicines team’ across ICSs, with shared goals, cross-team networks and relationships, rotations and cross-system career pathways.	System	32
Integrated training: Focus on integrated training approaches as appropriate for every part of the workforce involved in prescribing and medicines use, for example – the case study on medicines optimisation in care homes on page 33 describes training for social care as well as across all clinical roles to develop their prescribing skills, support the use of medicines and understanding of prescribing policy.	System	31-32
Defined roles: Define the roles of pharmacy leadership and professionals across the system, creating clear accountability and avoiding duplication. Include medicines optimisation objectives across the wider team so responsibility is shared beyond pharmacy professionals.	System	38
Clear leadership: Ensure clear integrated care board-level leadership of medicines optimisation as a cross-cutting function, with clear capacity within the ICS to deliver, and supported by multi-disciplinary sub-committees.	System/Region/ National	37-38



Local agency: Ensure local ‘agency’ and ownership of strategy and delivery at system, place and PCN level with a clear line of sight to national, regional and local priorities.	Region/National	35
Tiers of governance: Ensure clarity on the roles of different tiers of medicines governance.	System/Region/ National	35
Do it once: Take a ‘do it once’ national approach where appropriate.		39
ICS plans: Develop integrated, single ICS medicines optimisation plans that align with national and local strategy.	System	38
Primary care: Engage primary care (including primary care networks and primary care groups) in leadership roles for delivery, potentially through contractual means if appropriate.	System	39
Single formulary?: Consider and scope whether a single national formulary would have merit for delivery.	National	40
Auto-substitution: Auto-substitute expensive branded medicines for suitable generics and biosimilars on formularies.	National	40
Peer learning: Provide peer-to-peer support to facilitate system learning.	National	36
Best practice: Share best practice case studies across ICSs.	Region	55



National engagement: Provide regular opportunities for engagement between national, regional and system medicines leaders to support coordination.	National/Region	41
Redesign pathways: Involve pharmacists and other medicines optimisation professionals in system-led redesign of pathways, making use of virtual consultations where appropriate.	System	41
Technology: Use technology to share information, such as pharmacy records, across different organisations.	System	45
Virtual meetings: Use virtual meetings to facilitate regular conversations and develop / enhance local relationships.	System/Place	46
Analytics: Enhance the national analytical support offer, including making analytics more 'fit for purpose' such as developing the use of system-level metrics (as opposed to organisation-level metrics) and the use of additional metrics such as measures of deprivation to link medicines optimisation efforts to wider population health management approaches.	National	45
Local flexibility: Innovate and exercise local flexibility in tactical delivery of system medicines optimisation plans.	Place	36

Introduction

Medicines are the most common health intervention in the world today.¹ Approximately half of all of UK adults take at least one prescribed medicine (not including contraception or a nicotine replacement).² Between 5 to 10 per cent of all hospital admissions are medicines related and around two-thirds of these admissions are preventable; 30 to 50 per cent of the medicines prescribed for long-term conditions are not being taken as intended.³

Alongside increasing use and concerns around adherence and polypharmacy, the prescribing bill in the NHS is rising, both in real terms and as a proportion of overall health expenditure. In recent years the growth in medicines expenditure has consistently exceeded the rate of investment growth in the NHS overall, creating a ‘burning platform’.⁴ Optimising medicines usage is therefore both a priority for improving the quality and sustainability of healthcare services, and subsequently health outcomes. For these reasons, national and system leaders must prioritise medicines optimisation as a core priority for the future.

National and system leaders must prioritise medicines optimisation as a core priority for the future.

Since their inception in 2013, clinical commissioning groups (CCGs) have led medicines optimisation efforts at the local level. NHS Clinical Commissioners has sought to capture the scale of their contribution in our report [The Role and Functions of CCG Medicines Optimisation Teams](#).⁵ The transition to ‘system working’, embodied by the development of integrated care systems (ICSs) as statutory organisations which will take over these functions, provides an opportunity to galvanise medicines optimisation efforts, taking advantage of the deepening of integration and collaboration that system working facilitates.

Alongside desk research, this report has been informed by insight from stakeholders involved in medicines optimisation across the healthcare system, from commissioners to providers in primary, community and acute care settings. Their collective wisdom must inform future efforts if we are to be successful. This report therefore sets out proposals for how ICSs might improve the use and management of medicines to advance the triple aims of improving health outcomes and improving the quality of care, while also ensuring ‘value’.

Defining medicines optimisation

“ Before medicines optimisation, the term ‘medicines management’ was used which has been defined as ‘a system of processes and behaviours that determines how medicines are used by the NHS and patients’ (National Prescribing Centre 2002). Medicines management has primarily been led by pharmacy teams. Medicines management is an important enabler of medicines optimisation... Medicines optimisation focuses on actions taken by all health and social care practitioners and requires greater patient engagement and professional collaboration across health and social care settings.”

(NICE 2015)

The National Institute for Health and Care Excellence (NICE) defines medicines optimisation as:

‘a person-centred approach to safe and effective medicines use, to ensure people obtain the best possible outcomes from their medicines’.⁶

Given that the definition to ‘optimise’ is to ‘make the best or most effective use of (a situation or resource)’, there is an inherent implication that to optimise medicines means to make the best use of medicines as a resource.

With the rising costs of medicines as a share of the NHS budget in England, it is reasonable to propose that a more sustainable use of medicines is needed to provide the best care for patients within

the resources available to the population as a whole. This proposal assumes a paradigm that we should strive for cost containment to a point where costs are managed within available NHS resources, and that to do so is a desirable outcome for society. To make this explicit, we propose that the definition of medicines optimisation should now be extended, to be defined as:

‘a person-centred approach to safe, effective and sustainable medicines use, to ensure people obtain the best possible outcomes from their medicines within available NHS resources.’

In practice, this means consistently ensuring patients are prescribed and taking their medicines as recommended by guidance (while taking into account individual need and circumstance) so that they derive the intended benefits and avoid incurring harms, and that this prescribing guidance is designed in the context of the resources available at the population level.

An example of these principles being applied in practice is the development of NICE guidance, which takes account of both the cost effectiveness of medicines as well as the clinical effectiveness. Shared decision-making and evidence-based medicine should inform prescribers; guiding decisions about the care of the individual patient taking into account their needs, preferences and values.⁷ NICE, the Royal Pharmaceutical Society and other bodies provide guidance on medicines optimisation good practice for healthcare professionals in England.^{8,9} NICE, the Royal Pharmaceutical Society and other bodies provide guidance on medicines optimisation good practice for healthcare professionals in England.¹⁰

The purpose of medicines optimisation

The ultimate objective of medicines optimisation as an approach must be rooted in a consistent definition of ‘value’.¹¹ The Institute for Healthcare Improvement (IHI) in the United States has developed a

‘triple aim’ framework – a framework designed to optimise health system performance that focuses on improving the health of the population and patients’ experience of healthcare, while reducing the cost of health care per head.¹²

This definition of value in healthcare underpins the NHS Five Year Forward view (where it was described as the care and quality gap, the health and wellbeing gap and the finance and efficiency gap) and the recent NHS Long Term Plan, and is therefore the appropriate basis to frame the value goals for medicines optimisation. In the context of medicines optimisation, we define value as:

‘Delivering the most health benefit (from medicines) per NHS pound spent.’

To advance the triple aim of improving health outcomes, service quality and sustainable value, we can define the three main objectives of medicines optimisation, each involving different components to achieve them:

1) Improving health outcomes (the health and wellbeing gap)

- Increasing appropriate prescribing (gap between actual and best practice).
- Reducing inappropriate polypharmacy (the combination of multiple prescriptions).

2) Reducing avoidable harm (the care and quality gap)

- Reducing the misuse of medicines.
- Reducing prescribing errors.

3) Avoiding waste (the finance and efficiency gap)

- Reducing wastage of medicines (including non-compliance, intentional non-adherence, unintentional non-adherence, non-preventable waste and preventable waste).

Improving health outcomes

- **Increasing appropriate prescribing:** Medicines are intended to cure, halt or prevent disease; ease symptoms; or help in the diagnosis of illnesses. Healthcare professionals prescribe medicines most appropriate to patients' conditions in accordance with guidance from NICE and other expert bodies, such as royal colleges. In some cases, there may be a gap between cost-effective prescription of medicines recommended in NICE guidelines and real-world practice, where medicines usage can lead to cost-savings further down the pathway, for instance by reducing risk of non-elective hospitalisation, length of stay or postponed elective care. An example of this would be the use of anti-coagulants to reduce the risk of stroke. In such cases, medicines optimisation can support the sustainable use of resources through an increase in appropriate prescribing, albeit that the use of such 'preventative' medicines needs to be carefully balanced against the risk of harms.
- **Reducing inappropriate polypharmacy:** Polypharmacy refers to the 'concurrent use of multiple medication items by one individual'. This can either be 'appropriate' for individuals with complex or multiple conditions, or 'problematic', where multiple medications are used inappropriately or without realising the intended benefit.¹³ The evidence base for using multiple interventions for several conditions in the same patient is invariably poor and is known to increase the risk of adverse reactions, impair medication adherence and negatively impact on quality of life. Rather than attending different clinics for different diseases, managing patients' health through more generalist clinicians and/or multi-disciplinary teams – who can manage patients overall care and take whole person decision about prescribing – has demonstrated potential positive benefits. As the King's Fund states, 'There is a need to develop systems that optimise medicines use where there is polypharmacy so that people gain maximum benefit from their

medication with the least harm and waste. This may include training programmes, improved electronic decision support for clinicians and/or patients, patient-friendly information systems, judicious use of monitored dose systems and clinical audit.¹⁴

Reducing avoidable harm

- **Medication misuse and prescribing errors:** Economic analysis of prescribing suggests that 237 million medication errors occur at some point in the medication process each year in England, costing the NHS over £98m per year, consuming 181,000 bed days and contributing to around 1,700 deaths.¹⁵ Most errors occur in administration (54 per cent), prescribing (21 per cent) and dispensing (16 per cent). Misuse of medicines (accidental as well as purposeful) is associated with the highest number of medicines-related deaths. The rollout of e-prescribing, accelerated during the COVID-19 pandemic, may help reduce administration-related medicines misuse, but will not completely address the issue. Patient adherence and misuse are also problematic issues.

Avoiding waste

- **Waste:** Pharmaceutical waste can be perceived as five types:¹⁶
 - (1) **Non-compliance** – patient does not take medicines as prescribed;
 - (2) **Intentional non-adherence** – patient stops taking medication due to adverse side effects or personal beliefs;
 - (3) **Unintentional non-adherence** – patient stops taking medicine or fails to take at correct intervals due to forgetfulness;
 - (4) **Non-preventable waste** – patient dies and unused medicines are wasted, or a change in treatment means current dispensed medicines are no longer required;
 - (5) **Preventable waste** – patient stockpiles medicines ‘just in case’.All items from repeat prescription are dispensed even if the patient no longer takes the medicine. Currently, NICE estimates

that ‘between a third and a half of all medicines prescribed for long-term conditions are not taken as recommended. If the prescription is appropriate, then this may represent a loss to patients, the healthcare system and society. The costs are both personal and economic.’¹⁷ Overall, it is estimated that at least £300m of NHS-prescribed medicines are wasted each year. ‘This sum represents approximately £1 in every £25 spent on primary care and community pharmaceutical and allied products use, and 0.3 per cent of total NHS outlays. It includes an estimated £90 million worth of unused prescription medicines that are retained in individuals’ homes at any one time, £110 million returned to community pharmacies over the course of a year, and £50 million worth of NHS supplied medicines that are disposed of unused by care homes.’¹⁸ Approaches such as deprescribing, polypharmacy monitoring and medicines optimisation through intervention and consultation have been successfully used to reduce waste in some systems.¹⁹

The delivery of value and quality, improving patient outcomes and reducing health inequalities is at the heart of medicines optimisation. A committed workforce of GPs, pharmacists, pharmacy technicians and other professionals are dedicated to achieving this. While medicines optimisation is about so much more than just delivering cost-savings for the NHS, it is an inescapable fact that an ever-increasing proportion of overall NHS expenditure is consumed by medicines and the level of risk of avoidable harm associated with medicines overuse is significant. Optimising medicines improves quality and outcomes, as well as providing greater value for money.

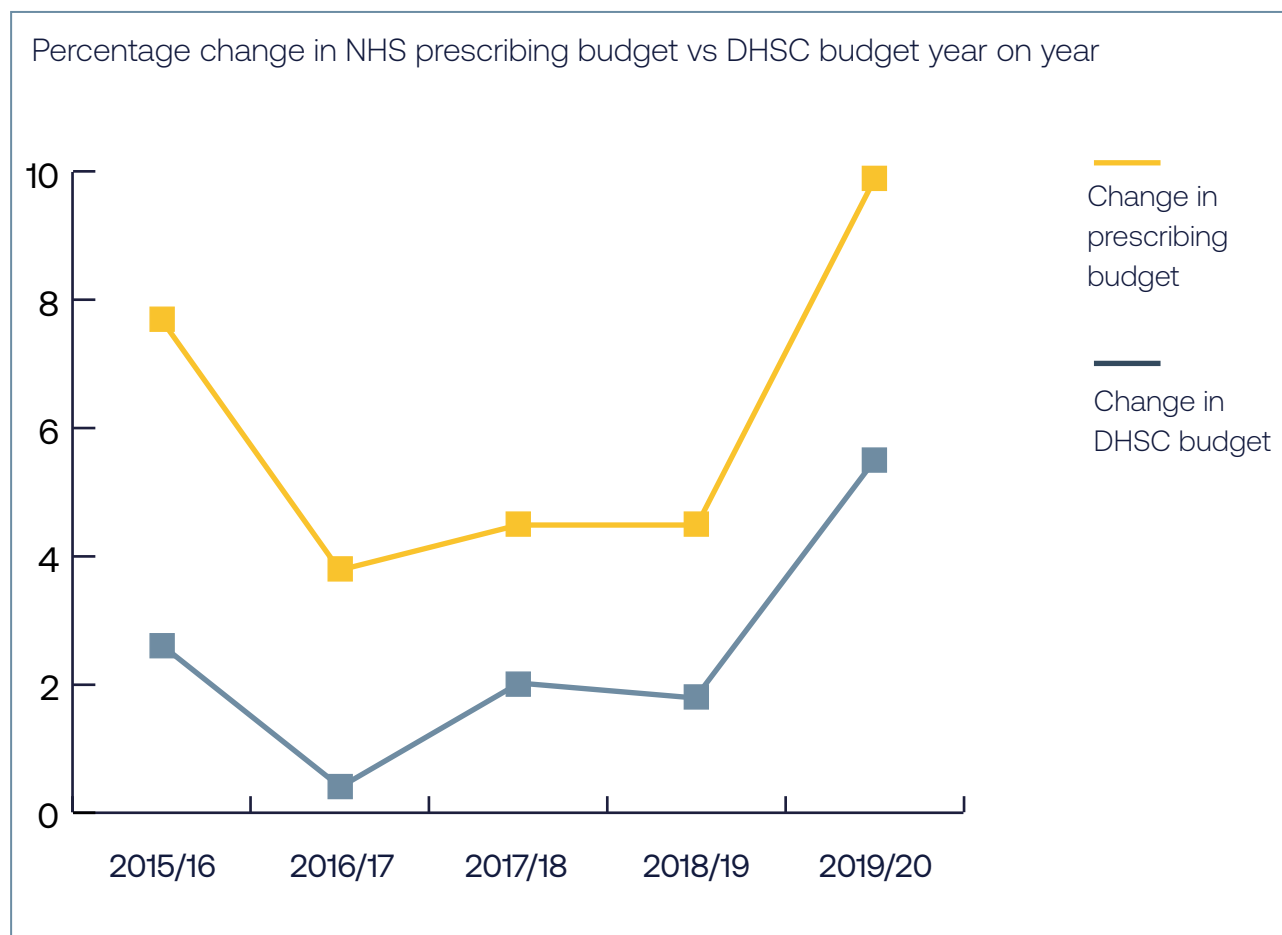
Optimising medicines improves quality and outcomes, as well as providing greater value for money.

Financial context

The NHS faces financial challenges on multiple fronts: investing in people to address workforce shortages, clearing the backlog of elective care caused by the COVID-19 pandemic, keeping pace with clinical innovation and investing in digital infrastructure and new technologies to improve care. Alongside these challenges, the NHS is at risk of becoming a victim of its own success with regards to the huge strides made in recent years to increase life expectancy across a range of conditions, and the development of new sophisticated innovations such as personalised genomic medicines.

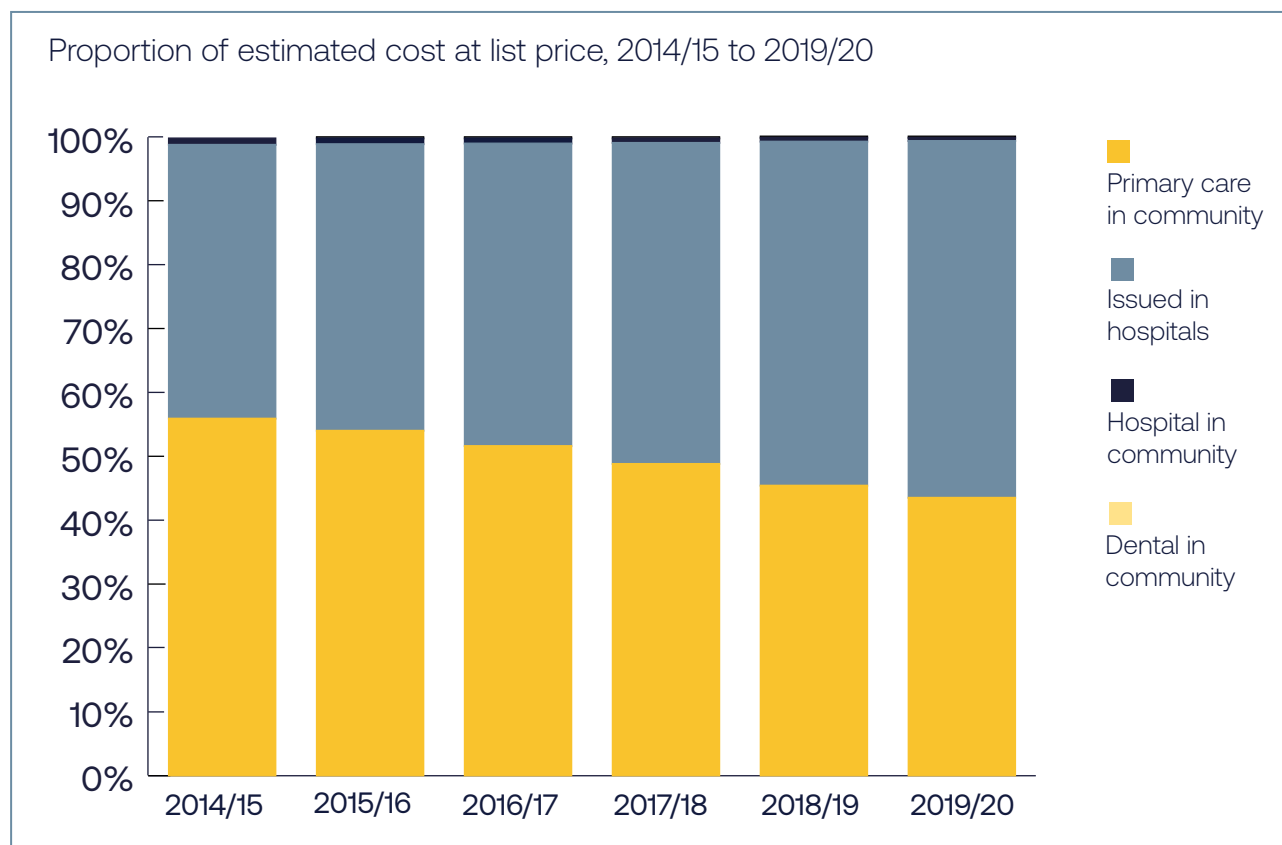
While longer life expectancy is to be celebrated as a great achievement, it does mean that today 86 per cent of demand for healthcare services is from chronic diseases, diseases which often require ongoing long-term medication as a core part of the clinical approach.²⁰ Given the breadth of these demands, it is clear that a sustainable approach to the medicines budget is needed, to ensure any additional funds can be focused on the areas of care where there is the potential to deliver the maximum possible health benefit per pound invested.

Overall, spending on medicines is the second highest in the NHS after staff, with a current spend of approximately £20.9bn per year on medicines (before discounts), an increase of 9.9 per cent from £19.0bn in 2018/19, with a further £10bn per year and rising spend on devices.²¹ Following these trends a little further back, a 2017 report from the King's Fund noted the rising cost of medicines to the NHS in England has grown from £13bn in 2010/11 to £17.4bn in 2016/17 – an average growth of around 5 per cent a year.²² The rate of increase in medicines expenditure outpaces both the past and planned future rises in NHS spending, meaning that accommodating this rate of increase in medicines spending means funds effectively being displaced from other areas to cover the cost (see below).



Historically, NHS spending has increased by 1.4 per cent each year on average (adjusting for inflation) in between 2009/10 to 2018/19, compared to the 3.7 per cent average rises since the NHS was established in 1948.²³ Current and future spending, enshrined by the government in NHS Funding Act (2020), sees NHS expenditure increase by 3.6 per cent in 2020/21, 3.1 per cent in 2021/22 and 2022/23, then 3.4 per cent in 2023/24 (excluding emergency funding for the COVID-19 response). While this increased level of funding growth is of course welcome, this still falls well below both the average 5 per cent annual growth in medicines spend seen year on year.²⁴

Within the medicines budget, the majority of growth in the prescribing budget has been driven by hospital prescriptions. Indeed, in recent years primary care medicines expenditure has remained relatively stable – from £8.7bn in 2014/15 to £9.1bn in 2019/20 – whereas secondary care spending has risen from £6.7bn 2014/15 to £11.7bn 2019/20.



However, with the growth in new medicines such as direct oral anticoagulants (DOACs) coming onto the market and available for primary care prescribing, the stability in primary care spend is by no means guaranteed. Current analysis also indicates that significant unwarranted variation in CCG spending on medicines persists.²⁵

Better integration and comparison of data is still needed to analyse trends, particularly taking into account health inequalities, for instance by weighting prescribing data by local population need (and linking this to population health management data) and deprivation levels as well as per capita prescriptions and spend. As ICSs stand poised to take over the reins on medicines optimisation, this type of analysis could help identify areas of best practice, as well as opportunities for improvement in areas of both over and under use of medicines.

The UK's new trading relationship with the European Union, from where the UK imported £17.7bn worth of medicinal and pharmaceutical products in 2019, and potential changes to NICE

methodology when calculating cost-efficiency, have the potential to create further cost pressures on the NHS medicines budget.²⁶ The expiry of patents on medicines which account for particularly high areas of expenditure may present opportunities for low prices driven by increasing competition from generic alternatives.²⁷ However, horizon scanning of the patent landscape suggests that for the remainder of the five years of NHS expenditure guaranteed to the NHS Funding Act (2021-2025), there is a lower number of patent expiries than in recent years, limiting the ability to generate savings (across primary and secondary care).

To drive efficiency and create sufficient headroom, ‘transactional’ policy initiatives focused on lowering prices and / or reducing expenditure are unlikely to alone deliver the step change needed to put medicines on a sustainable footing. Medicines optimisation remains the fundamental approach, with a need to look at innovative and more challenging opportunities to generate value from medicines and devices and be more systematic in how we identify and realise efficiencies.

National policy context

The 2019 NHS Long Term Plan set the objective of delivering value from the £16bn spent on medicines. To achieve this, it set the following targets:²⁸

- Implementation of electronic prescribing systems across the NHS to reduce errors by up to 30 per cent.
- Improving medicines uptake, promoting self-care and reducing waste for the 50 per cent of patients who do not take their medicines as intended.
- Reducing misuse of medicines, for instance by reviewing use of asthma medication (90 per cent of NHS asthma spend is on medicines).

NHS England and NHS Improvement (NHSEI) then established the Medicines Value Programme (MVP) to improve health outcomes from medicines and ensure the NHS achieves the best value from the NHS medicines budget. The programme is governed by the MVP board, which oversees the Medicines Optimisation Oversight Group (MOOG), which in turn oversees Regional Medicines Optimisation Committees (RMOCs). In 2021, the MVP defined several programme areas for delivering savings of around of £3bn per year in medicines expenditure. These are:

- Medicines optimisation and systematisation
- Strategic category management
- Transforming markets for medicines and devices
- Productivity and systematisation (including model hospital, aseptics review etc.).

NHSEI intends that the seven RMOCs, coterminous with NHSEI regions, will have a central role as the interface between system level and national medicines optimisation efforts, including acting as regional forums for the sharing and replicating of local best practice between systems. RMOCs' objectives are:²⁹

- To improve patient outcomes and ensure the NHS gets the best value for the taxpayer through the provision of timely and credible advice on medicines optimisation issues, for use and implementation by local decision-makers.
- To reduce local and regional duplication and variation by identifying challenges and issues related to medicines optimisation that benefit from a coordinated approach.
- To promote awareness and support regional implementation of national policies and initiatives relating to medicines, including supporting national guidance.

Reflecting on their work to date, there is a view that there is an opportunity for RMOCs to build on what they have achieved and be more effective in driving national and regional medicines optimisation priorities, with a clearer remit and governance and effective programme support, which we discuss later.

The systematisation opportunity

CCG medicines optimisation (MO) teams oversee the optimisation of medicines use in the current healthcare architecture. The NHS Constitution sets out CCGs' wider responsibilities for:³⁰

- ensuring that services commissioned are safe, effective, provide good patient experience and ensure continuous improvement
- securing health services that are provided in an integrated way, working in partnership with the local authority
- actively seeking patient feedback on health services and engage with all sections of the population to improve services
- collaborating with NHS England, support primary medical and pharmacy services to deliver high-quality primary care.

Specifically in relation to medicines, CCGs' role and functions cover medicines commissioning (formularies, pathways and services), medicines finance, medicines safety and quality, and medicines across the system (collaboration, coordination and support). NHS Clinical Commissioners' recent report, *The Role and Functions of CCG Medicines Optimisation Teams*, provides a comprehensive overview of the work that CCG medicines optimisation teams lead in their systems.³¹

CCGs have been well placed to make local decisions about medicines (within the parameters of national guidance and regulations) which are tailored to the needs of the local population. This person-centred philosophy is integral to current definitions of medicines optimisation. At its core, local medicines 'systems' are about local stakeholders (across different care settings) involved

in medicines' usage coordinating their efforts to ensure medicines are used as effectively as possible to maximise health benefits from available budgets. This encompasses: the consultants, pharmacists, GPs and other professionals involved in making prescriptions; to the pharmacists (including general practice pharmacists) and colleagues involved in the administration and dispensing of medicines; and to patients who receive medicines, their families and the healthcare professionals who see that medicines are taken and the consequent health outcomes.

Systemisation of medicines therefore needs the coordination and empowerment of these local stakeholders to ensure medicines are best used. Systematisation efforts may be deemed to have been successful when it is evident that these efforts have been an enabler for local medicines systems.

Following the anticipated passage of new legislation, announced in the 2021 Queen's Speech, which will bring about the shift to an ICS-based NHS architecture, a key consideration is to what extent should medicines optimisation approaches seek to maintain the positive legacy of local decision-making, while also seeking to take advantage of the greater coordination offered by a fully integrated systems approach. Any systems approach needs to balance the trade-off between local responsiveness (based on the principle of subsidiarity) and wider coordination. Working at a more local scale may enable medicines optimisation strategies to be tailored, innovated and adaptive to population needs, whereas larger scale may bring economy of effort and greater consistency of care across care pathways.

The integration of care systems may help to provide a more holistic view of the impact of healthcare interventions on the whole of the patient pathway. Systemisation offers new opportunities to integrate pathways across different care settings and improve guideline compliance, ensuring patients are treated with the medicines they need at the optimal point in time without organisational boundaries getting in the way.

However, with multiple layers of medicines governance (national, regional, systems, place, individual organisations), the premise that a systems-led approach will deliver benefits is not a given. Care and consideration need to be given to the potential bureaucratic burden, and the ability of local systems to innovate and respond to their local population needs must be preserved. The wider systemisation of the NHS – set out in the NHS Long Term Plan (2019) and Integration and Innovation white paper (2021) – provides an opportunity for ICSs to improve and integrate medicines management across all care settings in each system’s geographical footprint, managing prescribing around patients rather than component parts of the system. We propose that such an approach needs an effective and collaborative governance framework across different tiers of care – neighbourhood, place, system, region and nation – which enables ‘bottom-up’ approaches as well as ‘top down’ to be replicated and shared across the system.

Evidence suggests that opportunities for medicines optimisation rely as much on effective governance and collaborative working arrangements across clinical pathways, as they do on technical pharmacy expertise. Perspectives on medicines optimisation should therefore be broadened to reflect the fact that medicines optimisation is as much a public management and clinical systems issue as it is a pharmacy issue. Pharmacists’ work is at the heart of medicines optimisation, but ‘isolating’ medicines optimisation efforts within the pharmaceutical workforce is unlikely to be sufficient to address the scale of the challenge.³² The NHS Long Term Plan and DHSC’s Integration and Innovation white paper seek to organise the NHS around the principle of collaboration to improve health outcomes and efficiency.³³ This report proposes that medicines optimisation should be at the heart of efforts to collaborate across care pathways.

The benefits of collaboration are supported by a review of relevant academic literature. Hood (1976) describes how a lack of coordination results in ‘multiorganisation suboptimisation’ as

different organisations with their own remits and boundaries address their subjective priorities and continue differing behaviours to the detriment of a collective goal.³⁴ On the other hand, coordination can ‘bring together a proper or required relation to ensure harmony of effective operation’, improving both process and outcomes. In the case of medicines, the value ‘goal’ is to both improve health, quality of care and financial outcomes, with financial savings consistently reinvested to further health outcomes, thereby creating a continuous virtuous improvement cycle.

As previously indicated, managing medicines at different levels of the health or pharmaceutical system may come with pros and cons as the locus of governance decisions can materially affect the scope for local innovation, bold system action, and the degree of external engagement in decision-making. Both the Long Term Plan and white paper see ‘system’ and ‘place’ levels as the key units for collaboration for the future NHS.

Positioning leadership for medicines optimisation at a systems level would therefore be in keeping with the national direction of travel, providing an opportunity to achieve the best balance of bold, collaborative action with local autonomy and innovation. The wider relationship with national and regional bodies would then be one of coordinated effort and synergy, where national action is taken on matters of policy that are complementary to local systems efforts. Examples could include where wider scale purchasing power can deliver better value for systems or where there is an opportunity to bring new innovations to the NHS exploiting new commercial access arrangements at the national scale.

Our view is that systemisation should be the vehicle for a more coordinated ‘co-commissioning’ approach between ICSs and NHSEI, based on a balance of accountability to, and flexibility from, regional and national governance through aligned objectives, pooled decision-making and a responsiveness from national and regional architecture to the needs of integrated care systems, and vice versa.

To consider how to maximise the opportunity that systematisation of medicines optimisation may present, we pose the following questions:

- What conditions are needed to allow ICS pharmaceutical systems to thrive, collaborating to optimise medicines usage in their footprints?
- What approaches can be taken to support systemisation?
- What role should different tiers of NHS governance (national, regional, system, place, network, PCN and organisation) play in an optimal medicines management regime?

Roadmap to systematisation: recommendations from local systems

To explore the opportunities presented by the systemisation of medicines optimisation, NHSCC conducted a series of workshops with both CCG medicines optimisation leads and NHS colleagues involved in all aspects of medicines management, from commissioning to prescribing, from primary and secondary care. The intention was to ensure a broad range of views were represented and a holistic view across the system of medicines optimisation was taken.

All participants agreed with the premise that the transition to ICS working provides an opportunity to support and improve medicines optimisation, shifting medicines management teams' work from a potentially overly transactional approach to a more transformational and person-centred contribution to commissioning, addressing issues such as medicines supply, the optimisation of medicines within care pathways and minimising wastage and avoidable harm due to over-prescribing. The following sections set out the main themes we heard through these discussions, illustrated by case studies to bring these themes to life.

Workforce: one medicines team

A strong recurrent theme from participants across all the workshops was the extent to which the strength of the local team directly correlates to the success of medicines optimisation efforts in systems, and that systematisation is only possible if local

teams are working effectively. Stakeholders involved in medicines optimisation across different organisations were clear: ICSs must build 'one system medicines optimisation team' across their systems, reaching across old boundaries and ensuring a joined-up approach.

This includes not just clinical patient-facing roles, but also the essential non-clinical and 'back of office' roles of commissioners, aseptic staff, medicines supply times and social carers. One medicines team across the system must not supplant the often-repeated view that responsibility for medicines optimisation should be everyone's business. The following factors were highlighted as being key success factors:

Relationships – Good working relationships between staff in different organisations are critical to systems working, but take time and investment to build. Misprescribing issues should not be blamed on the initial prescriber but seen as everyone's problem to address collectively. This requires a cultural shift away from transactional approach, building common cause between different organisations with everyone having 'skin in the game'. Stakeholders reported that in their view strong working relationships often take around three years to develop.

Rotations – Staff rotations offer an important route for building the 'one medicines team' by widening the experience of pharmacists and clinicians across care pathways facilitating shared learning. Some areas have moved acute pharmacists into primary care, helping them to understand opportunities for improving the discharge process. Other examples described community nurses working across into acute sites, supported by a joined up clinical record that included prescribing data from secondary and primary care; and acute pharmacists working collaboratively with PCN colleagues on structured medication reviews. Taking this approach requires clear governance frameworks, support networks and expectations and willingness from often more junior staff to work in different and potentially quite challenging ways.

Professional development – Building ‘one medicines team’ requires workforce development across community, PCN and acute pharmacy professionals and indeed there are benefits of including all clinicians engaged in prescribing and the use of medicines. Some ICSs have set up a pharmacy workforce development group, with a view to this sitting under the ICSs’ system workforce group. Other areas are exploring standardising pharmacist pay-bands across trusts and PCNs to foster a more integrated approach to pharmacy career development. Organisations are being encouraged to support the development of their own pharmacists at more junior level. System stakeholders suggested that a national mentorship programme for PCN pharmacists would support workforce development.³⁵

Role definition – Defining the roles of pharmacists in different parts of the system can help promote understanding between organisations and different professionals leading to a more integrated, systems approach. Many stakeholders reported this is best considered locally at a place. To highlight this point, contrary examples where a lack of role definition can create friction were cited by several members of the workshop groups. Improved role definition should complement collaborative working and seek to avoid siloed working.

Skills – Clinicians should not prescribe treatments for which they lack confidence or skills to prescribe. To support clinicians to prescribe the optimal medicines, systems should invest in training for prescribers and ensure capacity is in place to take on new responsibilities. This aligns with optimised pathways, providing capacity and knowledge to prescribe in the optimal care setting.

Community pharmacists – Community pharmacists reported often feeling like they are just ‘at the end’ of medicines pathway and not really considered in local pathways. As dispensers, community pharmacists reported that they often observe significant waste from hospitals and care homes. By establishing effective relationships and communications channels with acute

care providers and social care, community pharmacists could play a greater role delivering clinical interventions to improve outcomes. This includes providing a feedback loop on specific patients' medications, joining up monitoring of medicines usage, dispensing and amendments to prescriptions.

That said, community pharmacists reported that they do often already work with their colleagues in CCGs to manage prescription of prescribing areas, such as nutritional supplements and reduce medicines wastage in primary care prescribing. Community pharmacists are governed by NHS England's pharmacy contract – there may be opportunities to adapt the contract to further support integration efforts by making sure it reflects the duty to collaborate within the ICS. This could involve taking on a greater role in working with local PCN pharmacy teams or being contracted to work in care homes to support medicines management, as well as other settings.

'In-house' medicines management – A one-team approach to medicines optimisation should be supported by investment in time within primary and secondary care to deliver medicines optimisation, rather than relying on colleagues, such as CCG pharmacists, coming in to review medicines usage. Including the requirements for GPs to review unwarranted variation between practices in PCN contracts offers a mechanism to support this.

Social care – Social carers are often closest to patients and can play a key role in supporting adherence with prescriptions and avoiding wastage. To integrate medicines management with social care, some areas have provided training on medicines management for carers, for example using the free domiciliary care e-modules on PrescQIPP website for carers.³⁶

Case study: Sussex CCGs – A ‘one team’ approach to medicines optimisation in care homes

Sussex ICS Medicines Optimisation for Care Homes (MOCH) Service provides pharmacy and medication support to care homes. The MOCH service is fully embedded in the PCN multi-disciplinary teams and also networks well with the other pharmacy services from across the system (such as CCGs medicines management teams, PCN/practice pharmacists, secondary care pharmacists and community pharmacists). Support is provided to care homes including:

- facilitating medication supply to care homes, including end-of-life medication
- supporting care homes with medication queries, and facilitating their medicines needs with the wider healthcare system (for example, through medicines ordering, medicines management systems and process reviews, provision of medicines management templates such as medicines policy, covert administration etc)
- delivering structured medication reviews to care home residents via video, telephone, or face-to-face consultation, where appropriate
- supporting medicines optimisation reviews of new residents or those recently discharged from hospital.

The service carries out around 6,500 medication reviews annually, saving around £140 per patient reviewed, a total saving of £895,720 from the prescribing budget which funds the service. More importantly, the reduction in inappropriate polypharmacy leads to a reduction in patient harm and an increased quality of life.



The team has built up successful relationships with care home providers and community teams. This has meant that they have been in a position to deliver more complex medicines optimisation projects in the care home setting, such as:

- training and implementation support for care homes to implement homely remedies policies and promote self-care where appropriate
- delegated administration of insulin administration to care home staff to free up community nursing time.³⁷

For further information, please contact eileen.callaghan@nhs.net at Sussex CCGs.

Governance

Holistic approach to medicines – Colleagues reported that they often feel that their medicines optimisation teams are quite isolated within their organisations, and that their agenda can lack broader system oversight and ownership. Given medicines are prescribed, administered and the impact assessed across different organisations and different stages in care pathways, systems must bring about a culture change so that medicines are no longer seen as the responsibility of just one team, but the whole system – a collective responsibility and ‘medicines in all pathways’ approach.

Cross-cutting MO teams in ICSs – As set out in NHSCC’s report into medicines optimisation in CCGs, CCG medicines optimisation teams already play a key coordinating role across systems, but there is significant variability in local arrangements. Across different systems, medicines optimisation is located in different parts of local structures, sometimes sitting with finance teams, sometimes with clinical teams and sometimes with quality and safety teams.

This reflects the fact that medicines optimisation is a cross-cutting function which has a delivery remit across every aspect of the ‘triple value’ aim, simultaneously serving quality, outcomes and value improvement – it does not sit neatly within one box.

To enable these teams to be effective in an ICS landscape, NHSCC members have been clear that CCG medicines optimisation teams should “follow the money” and transition into ICSs’ structures as CCGs are abolished, ensuring continued focus at the system level on medicines optimisation with oversight all the way up to ICS board level (although there were a range of views about how this board oversight should best be achieved).

Tiers of governance – Stakeholders from different organisations across the system – from primary through to acute care and CCGs – have emphasised that solely “top-down approach doesn’t work”. While stakeholders were keen for decisive national leadership on particular issues, there was a clear demand for greater agency for systems to build locally tailored strategies, within a clear governance framework.

The future system will need to ensure that there is clarity between different vertical tiers of medicines leadership on the one hand, and an optimal balance between the ability to forge horizontal cross-organisational and cross-disciplinary at a local level at another.

Local agency – National bodies should set objectives for medicines optimisation, taking a lead on specific national issues where systems benefit from a ‘do it once’ approach. Apart from such specific national issues, to realise national objectives, ICSs should be empowered to devise and deliver locally tailored strategies, agreed and set at the system level, which all their stakeholders are bought into.

A central challenge ICSs will face will be working at the scale of a system footprint, which varies between systems. ICSs will face variation between the scale and number of legacy CCG

footprints, some with more providers, and variable numbers of primary care networks. Many examples were shared of good collaborative working at a place and PCN level, with flexibility for places and PCNs to take a leadership role within their local area to both tactically deliver and ‘upwardly influence’ system strategies, working within an environment that permits local nuance to account for local circumstances, will be an important enabler to ensure medicines optimisation efforts are successful.

Regions – RMOCs are intended to act as a route to joining up national and systems strategies and sharing best practice between systems. Reflections in the workshops indicated that the work done by RMOCs around developing consistent guidance for some areas of secondary care prescribing have, to date, been perceived to be the most effective; with interactions at CCG level felt to have been more limited in impact to date.

If RMOCs are to be an effective channel between national and system medicines policy governance in the future, it was proposed firstly that a multi-disciplinary composition of RMOCs is important, ensuring all those involved in care pathway can contribute to deliberations. And secondly, that the committees are ‘owned’ by ICSs as collaborative commissioning committees with clear and agreed delegated responsibilities (from ICSs) to develop commissioning policy on their behalf. This will also help RMOCs develop their role as peer support network for medicines optimisation teams between systems to accelerate improvement and medicines optimisation.

Other supra-system bodies, such as the NHS Confederation’s ICS Network and the Royal Pharmaceutical Society, will continue to play a key role in facilitating peer network and nurturing professional leadership.³⁸

Accountability – Systems recognise that there is accountability for medicines optimisation at the system level for the delivery of national and regional priorities. There is a preference that

where possible these priorities are expressed in terms of the outcomes that should be achieved, recognising that these may span financial, quality or patient-level outcomes, thereby allowing systems the agency and freedom to determine how best to get there in the context of their current performance, outcomes and local conditions. Stakeholders noted that confusion in clinical accountability arising from cross-system working can be a significant barrier to collaborative models of care, which in turn can inhibit the experience of care for patients. For example, challenges in improving access to blood tests and barriers to sharing results across different care settings within systems was noted by several systems as being a major area of contention.

Shared care arrangements, such as for medicines prescribed in secondary care (sometimes by out-of-area providers) with an expectation of ongoing prescribing being managed in primary care was also cited as an issue that regularly causes problems. The solution may be enhanced ownership of these issues at a system level that will come with the advent of the ICSs, with supra-system pathways issues being an area where consideration and guidance by national bodies and RMOCs would be of benefit (particularly where shared care protocols are required between providers at the specialist / tertiary level and local clinicians).

Board-level lead – To ensure ownership, accountability and prioritisation within the wider systems agenda, it was agreed by all the workshop groups that the medicines optimisation agenda should be ‘sponsored’ by a senior figure on the integrated care board (ICB). This lead will help ensure the high profile of medicines optimisation in the ICS and support the visibility of MO teams. It is hoped that this will help to ensure that the MO agenda is considered earlier in various aspects of the ICSs work, such as pathway design, to improve outputs. The ICB lead for medicines optimisation will have overall accountability for the workstream and should be picked as most locally appropriate.

It was agreed that the senior system sponsor does not necessarily need to be a pharmacist, given that the technical and detailed work on developing and delivering an integrated systems medicines optimisation strategy will be done at a sub-board level – where pharmacy professionals' contribution is essential – and the need to ensure membership of the ICB remains at an effective size. A collaborative, peer leadership approach will be needed to bring together multi-disciplinary stakeholders on the medicines optimisation sub-committee with clearly defined roles, with the nominated lead acting as a facilitator rather than leader.³⁹ Updates and proposals will likely be escalated to ICBs for approval where necessary, via the board-level lead.

Integrated plan – Every ICS should have a system-wide medicines optimisation plan, setting out how different constituent organisations will work together to optimise medicines usage, improving health and financial outcomes. Recognising the time it takes to deliver successful system working, plans should formulate multi-year expectations for outcomes.

Contracting – Currently, as with the wider NHS systematisation agenda, medicines system efforts rely to a significant degree on goodwill. Leaders need to ensure that there are clear expectations for all partners within the system to deliver on this agenda. The transition to integrated care systems will require a system-level lead to bring leaders together, but also could provide an opportunity for ICSs to build medicines optimisation commitments into contracts with providers and PCNs, focused on outcomes rather than transactional measures, to ensure ownership of the system plan at every level.

Role definition – Focusing at a more local system level brings challenges of scale. Clarity on roles within the system and place will help to reduce duplication and maximise efficiency. Drawing on input from NHSCC members, it is proposed that any national guidance should provide clarity on roles of the various regional and

national stakeholders involved in medicines management across the system, to help reduce duplication and ensure a more effective approach.

Programme support – It was identified that MO teams need more support in some areas of transformation where they are not specialists, such as engaging with community pharmacy or in wider pathway redesign. Such programme support should be coordinated at a system level, alongside support from programme management, data and business intelligence.

Principles – Given the ‘reach’ of medicines optimisation within a system and the broad range of stakeholders who have an interest, ensuring engagement in the decision-making process about local MO priorities will be key to ensuring system partners have a voice and are bought into decisions made. Effective governance requires a balance between wide engagement and smaller units for discussion and decision-making.

Primary care – With around 50 per cent of CCGs’ medicines spending in primary care, ICSs will need to ensure collaborative relationships with PCNs locally are in place to co-manage primary care prescribing within a care pathways approach. ICS structures need to ensure clear accountability for spending on prescriptions, with some local examples cited of CCGs already using primary care local enhanced services to directly contract with PCNs or practices to undertake medicines peer reviews or specific improvement initiatives related to medicines optimisation programmes in their local area.

National leadership

Do it once nationally – For much of this agenda, ensuring local agency in devising and delivering medicines optimisation strategies to achieve national goals is key. However, system stakeholders noted the clear benefits of doing some things once and at scale,

nationally, to avoid replication and allow local teams to focus on delivering their priorities. This benefit was particularly noted for ‘at scale’ transactional initiatives, such as price negotiations on key products, where the benefits of doing this once and at a national scale (with greater purchasing power) were clearly seen.

Members also recognised the potential transformational national role for NHSEI on issues such as setting national priorities in key areas for improvement (focused on outcomes); ensuring nationally set contracts (such as for primary care contractors) do not contain perverse incentives; providing data insights to help identify areas of system data variation; and supporting local systems to improve through insights, expertise and encouraging the sharing of best practice. Local stakeholders noted they would welcome a greater coordination of guidance publication between national and regional bodies.

Single national formulary? – Stakeholders noted that, at present, patients with similar conditions might have different eligibility for the same medicines depending on which CCG footprint they live in. This creates administrative challenges, not to mention ethical issues associated with disparities in care in a universal healthcare service. Although certainly not a uniform view, some stakeholders suggested creating a single, national formulary – as is being attempted in Scotland – may release local capacity to collaborate and reduce variation in access to medicines. While this may create challenges both in terms of scale and ensuring that such a formulary evolves over time, does not become a ‘bottle neck’ and benefits from local input, a single national formulary for England may be worth further consideration and deliberation with local stakeholders.

Auto-substitution – Another area suggested where national efforts could help accelerate improvement was the promotion of automatic substitution, for example, of biosimilars on formularies and registers, holding systems to account on their conversion to use of biosimilars (which offer the potential for significant financial

savings). Automatic substitution could also be applied to branded medicines, removing them from formularies and replacing them with generics when they become available. This aligns with the Long Term Plan's aspiration to 'use digital technology to ensure that... generics are used where possible'.⁴⁰

Culture and engagement – Members said that enabling systematisation needs national leaders to encourage local initiative and agency, rather than a culture of “what is the national team telling us to do?” While efforts during the COVID-19 pandemic have aided local collaboration, systems need to re-adapt after the centralised approach taken during the pandemic. Although national and system leadership and planning are crucial, delivery of systemisation of medicines optimisation relies on the effort, culture and behaviour local prescribers and health and care workers in different care settings.

Stakeholders noted and valued the regular engagement with national pharmacy leadership during the COVID-19 pandemic, including regular calls, to support alignment between national goals and local delivery and challenges. Continuing with this approach outside of the pandemic would provide a welcome opportunity to better link up systems with national governance and priorities in a collaborative commissioning approach.

Pathways

Redesigning pathways around the patient – Medicines are a core component of patient pathways. Ensuring medicines are prescribed at the optimal point and in the optimal setting can improve patient outcomes and reduce medicines wastage. Systematisation provides an opportunity to review where medicines can be most effectively prescribed to optimise the use of those medicines. Participants told us that one of the key benefits of systematisation is the opportunity to ensure the most effective medicines pathway between system partners, with the

opportunity to move past traditional system boundaries that have often hampered efforts to design pathways from a fully patient centred perspective.

Multi-disciplinary design – System stakeholders recognise the importance of using multi-disciplinary teams to design pathways, while stressing that pharmacists should not be seen as just “someone you bring in at the end to sort out the medicines.” Pharmacists should be part of a multi-disciplinary approach working on pathway design involving patients, ensuring that medicines are considered at the earliest opportunity. Reconsidering the optimal treatment and best delivery model may offer the potential for radical redesign of pathways. This potential will be lost if medicines are left as an afterthought. A systems approach to pathway design should also involve patients in prescribing decisions, as advised in NICE’s principles for involving patients in decisions about prescribing.⁴¹

Care closer to patients – With many more appointments now taking place at home (either virtually or with visits), rather than acute outpatient appointments in the hospital, it no longer makes sense for acute hospitals to deliver some prescriptions, which are better dealt with closer to the patient. To manage this transition, ICSs need a plan to organise optimal patient-centred ways of physically delivering medicines to patients, with appropriate shared care arrangements and resourcing in place to enable this.

Case study: Gloucestershire ICS – Pain Clinical Programme

The Living Well with Pain Programme has changed the way people with persistent pain are supported through a whole-system pathway transformation approach. Opioid prescribing for long-term pain is a priority for medicines optimisation efforts. As outlined in the Public Health England review of use of ‘dependence medicines’ in the NHS, too often this prescribing falls on the wrong side of the harms versus benefits balance.⁴²

Gloucestershire ICS identified a significant cohort of people being prescribed opioids or opioids in combination with other medicines in a way that risked patients deriving more harm than benefit from their prescribed medicines. The ICS has taken a whole-system approach to improving the understanding and management of chronic pain across Gloucestershire. Some examples from the whole pathway approach delivered by this system are:

- **Risk mitigation:** The pain medicines risk mitigation plan identified patients who may be at risk from their medication and instigated multi-disciplinary clinical review in primary care. This was coupled with a wide range of masterclass activities for system-wide professionals to promote safer prescribing. Significant change in prescribing including reducing high dose opioid prescribing from 76th to 37th national decile levels. The initiative is now launching virtual MDTs to continue developing the approach and dialogue with teams.
- **Formulary:** Agreed and published a system-wide joint formulary for pain prescribing, including sections on differences between acute and chronic pain, limitations of medicines for chronic pain, hazards of dependency and other harms, non-pharmacological resources to support patients with pain and bibliography resources.



- **It's your move:** A partnership approach to increasing physical activity with people in persistent pain using non-clinical fitness instructors. 87 per cent of people involved in the pilot reported reduction in pain severity and 62 per cent improved mood and reduced anxiety.
- **Artlift:** Arts-based psycho-social offer to engage those who were not accessing the traditional services supporting self-management techniques and increased self-esteem.
- **Play It!:** A musical social prescription for children and young people living with persistent pain. The Music Works partner takes a personalised approach with elements of music playing, song writing, music production, singing and rapping. Supported self-management education elements are included so that the young person develops strategies to take home and use.

This approach was designed and delivered by a fully integrated system programme team including clinical leads from acute, primary and community services, medicines optimisation and patient and public representation. Looking at the issue holistically and integrating the medicines optimisation into wider pathway redesign was key to the success of the programme. As a result, there has been a positive measurable improvement in prescribing of total morphine and high dose morphine at the population scale, with significant financial savings. The system's workforce is reporting feeling more positive and enabled to manage chronic pain. The evidence base is now contributing to the NHSEI National Commissioning Framework on prescribed drug dependence and NHSEI response to PHE review on dependence medicines. The CCG can reinvest savings to support the introduction of several new and innovative services to support people in our community to live well with pain.

G-Care, Complex or persistent pain pathway, January 2018.

Technology and data

Improving analytics – Scrutinising data at a larger, system level has the potential to offer new insights in terms of opportunities for improvement in value, outcomes and quality of care.

Operating at an ICS level, it is possible that (if data quality can be ensured) a national NHS informatics systems could provide more sophisticated benchmarking of medicines. This would support ICS population health management efforts, such as weighting spend by deprivation levels, population headcount and linking up data sets across acute and primary care, with analysis such as the model hospital and commissioning for value joined up to provide a one system view. However, stakeholders noted concern about the multitude of organisations involved in data analysis and the potential for it to create more work if data quality is an issue.

ICSs need shared data strategies at the system, accounting for the needs of medicines optimisation, with clear direction and leadership and which overcome data blockages. While national analytics programmes already provide some support and new initiatives (such as the Model Health Systems) are in the pipeline, local stakeholders sometimes find it difficult to navigate the support which exists to find the right option which caters to local needed and allow fair comparisons across disparate populations. Continued engagement with systems is needed to ensure national analytics offers are well-understood and informed by the requirements of local systems.

Shared data – As with many areas of systematisation beyond medicines, technology is a key enabler for shared data and access to data. Access to patient records, medicines history and discharge information has been a key platform in some areas to enable a systems approach. This includes read/write functionality. While shared electronic patient records are a key pillar of the NHS Long Term Plan which many systems are already working on, some systems, such a Devon ICS (see case study below) have found ways to share information relevant to medicines without having a

full shared record system in place. The functionality for pharmacists to edit, not just access, such records has been a key ingredient of success.

Forum for discussion – Many agreed that use of virtual meeting software during the pandemic has helped to bring together colleagues across often large system geographies, providing a forum for discussion to explore and devise collaborative arrangements, and breaking down barriers between teams. Given the pressure on healthcare services and the size of many systems' geographies, it was reflected that the continued use of virtual meetings will remain an important component of the work of stakeholders involved in medicines optimisation. Virtual consultations also facilitate safe engagement with patients who may be shielding, self-isolating or who are unable to travel to a physical care setting, a practice which should be continued where appropriate for individuals.

Electronic prescribing – Progress is already being made to deliver the Long Term Plan's goal of implementation of electronic prescribing systems across the NHS to reduce errors by up to 30 per cent. This has been accelerated during the COVID-19 pandemic, which has encouraged use of digital solutions. Electronic prescribing can also be complemented by electronic repeat dispensing, led by community pharmacy, reducing pressure on pharmacists and increasing ease of access for patients.

Case study: Devon ICS – Sharing of records to enhance medicines optimisation

East Devon Community Services provides integrated care to around 380,000 patients across 1,000 square miles, urban and rural. The Royal Devon and Exeter NHS Trust (RD&E) community services pharmacy team is a micro service comprising seven pharmacists and six pharmacy technicians who provide a service to community hospital inpatient units and a domiciliary pharmacy service. There are 11 PCNs in the patch and the service engages with patients across the majority of these.

The service aims to reduce medicines-related harm in our patient caseload, while maximising patient independence in their own homes, through improved concordance with medication regimes. The domiciliary caseload comprises housebound patients, usually elderly and frail with unmet pharmaceutical needs or issues. Referrals are received from GPs, community nursing and social care staff, community pharmacies, hospital pharmacy and medical staff. The team supports patients with:

- poor management of long-term conditions despite optimal prescribed therapy
- recently discharged with significant medication alterations
- where an admission was caused in part by medicines non-compliance
- evidence of not coping with regime
- problematic polypharmacy.



Historically, staff within the trust's own acute and community divisions would not have visibility of community services pharmacy records without access to GP records. If patients were admitted into hospital, seen in an outpatient clinic or by another team within the community, staff would not be aware of the reasoning for any recent medication alterations this team were involved in.

In October 2020, RD&E NHS Trust went live with MyCare, an electronic patient record and prescribing system. This has improved patient care by enabling integrated care delivery by trust-employed staff across acute and community settings.

Medicines optimisation decisions made by the community services pharmacy team are explicitly documented and there is clarity on what interventions are in place. Staff across different care settings can see concurrent appointments, recent treatment decisions and strategies or when a patient is re-admitted to hospital. Acute colleagues have insight into the patient's home circumstances and how community teams are helping overcome recognised barriers to taking medicines as prescribed.

Community teams have visibility of when a patient has been admitted to hospital and clarity over the current location of a patient and key clinicians involved. Staff can communicate directly with the acute pharmacy and medical team about specific scenarios at home and identify if there are outstanding issues to be aware of when the patient transfers back out into the community. The inpatient teams can send electronic referrals to the community team outlining these needs as part of the discharge process. External communications have improved as electronic discharge summaries are sent to the PCNs and a named community pharmacy is informed if the new discharge medicines service criteria are met.



Evolving understanding of the significance of this system was key to success. The team has developed an understanding of the benefits collaborative working brings to improved patient safety. The service is hoping to see a reduction of re-admission rates as information on medication alterations during the hospital admission is clearer for all. For patients that are admitted to hospital, there is greater clarity on the current personalisation of all aspects of care.

For further information about this case study, please contact suzanne.bidwell@nhs.net at the Royal Devon and Exeter NHS Foundation Trust.

Case study: Derby and Derbyshire CCG (formerly Hardwick CCG) – Appliance project for stoma and continence patients

Hardwick CCG (now part of Derby and Derbyshire CCG) deployed the Appliance Project, undertaken by a CCG pharmacist and pharmacy technician, to improve prescribing of stoma and continence appliances after the CCG identified several issues:

- The CCG was a regional outlier in terms of prescribing spend and items/1000 patients of stoma and continence appliances.
- Patients were receiving inappropriate quantities of stoma and continence products.
- Dispensing appliance contractors (DACs) were initiating and dispensing products without prescriptions.
- Patients were prescribed incorrect appliance products.



- Patients were using equipment for longer than recommended.
- The CCG did not know how many patients were using continence equipment or how many had been reviewed in the last 12 months.⁴³
- Annual reviews, if completed, were not recorded on the clinical system.
- The CCG had no intelligence on how patients' lives were affected by inadequate continence equipment/advice.

The Appliance Project aimed to improve patient safety and quality of life while decreasing prescribing spend. Third party ordering of appliances was stopped, patients were empowered to order their own appliance prescriptions and GP practice staff trained to handle requests appropriately. Patients were directed to order appliances online through their GP practice website or app; by visiting the practice in person or via the CCG medicine order line – a service that allows patients to telephone a dedicated trained call handler who can access prescription records and process appliance requests. EPACT searches identified the DACs and community pharmacies being used, after one month's written notice to stop operating a third-party ordering system was then issued. The CCG policed future appliance requests that came into the practices after this deadline.

The success of the project relied on practices consistently managing future requests and providing a consistent message. Based on an initial pilot an audit tool was created. A total of 1,050 patients were audited resulting in the following examples of actions taken. As a result of the project:

- Patients with 'red flags' (for example, continence patients with numerous UTIs and patients using more products than



usual indicating leakages and poor skin management) were identified. These patients were signposted to available services such as the Derbyshire continence service for review and support from specialist continence nurses, or to the specialist stoma nurses if there were issues with stoma products.

- Patients who were currently unhappy with the service provided were given the option of ordering direct at the surgery or via the medicine order line.
- Patients who were suitable for formulary switches in line with the CCG formularies were switched to formulary choices.
- Appliances that were not recommended for prescribing in line with the CCG formularies were taken off repeat following patient discussion.
- Issue durations and quantities were amended in line with the CCG formularies and after a discussion with the patient regarding usage.
- Correct items were moved onto repeat to facilitate accurate ordering from the patient. Switches could also be maintained this way and savings accounted for reliably.

This change was received well by patients: out of the 1,050 patients reviewed, only two letters of complaint were received. A total of £65,625.95 savings were made against the prescribing budget over a 14-month period. As a result of this project, third party ordering has continued to be stopped and is planned to be rolled out to all Derbyshire practices that join the medicine order line service. This project was the inception of the medicine order line Service in North Derbyshire which has now been expanded to cover all types of prescription requests and is currently accessible to over 800,000 patients across Derbyshire.



The medicine order line service is being rolled out across the whole ICS, with an ambition to be in place at all eligible practices by spring 2022, the MOL has been well received by patients. For example, a gentleman who used the CCG medicine order line for the first time after having his records audited as part of the appliance project and had previously been ordering his stoma products through a DAC stated, “Over the last eight months, they [DAC] have been getting the order wrong but since speaking to you it has been spot on and they ordered it [via CCG MOL] Monday and came Wednesday” which exceeded their expectations. He described it as the “Best Service NHS has offered as yet!” For more information see [PrescQIPP, ‘Appliance Project for Stoma and Continence patients’ \(2020\)](#).

For further information about this case study, please contact kateneedham@nhs.net at the NHS Derby and Derbyshire CCG.

Viewpoint and recommendations

This report feels timely given the scale of the challenge put forward by the NHS England Medicines Value Programme (MVP) to improve ‘value’ and save money in the use of medicines across the NHS. In this section, we outline proposals for how we believe the ‘systematisation of medicines optimisation’ can be best achieved, which have been informed by the membership of NHSCC. It is intended to share knowledge and learning on the evolving role of medicines optimisation in systems and to inform both NHS England’s approach to national policy-making and CCG and ICS colleagues in their local systems’ transition.

In the existing healthcare architecture, CCGs direct a significant amount of energy towards innovation and collaboration at system and place level to support medicines optimisation efforts. Their collective wisdom must inform future efforts if we are to be successful. Establishment of new statutory ICSs provides a future opportunity for a deepening and strengthening of integration and co-ordination. This aligns with NHSEI’s broader approach in the NHS Long Term Plan to integrate care to maximise population health outcomes across an ICS footprint.

Accordingly, we believe that ICSs should be responsible for devising and delivering strategic plans at a system level to meet agreed national objectives and local objectives expressed in terms of population health outcomes. This will help to build ‘one medicines optimisation team’ across different organisations within the system. Place and PCN-level leadership should take responsibility for tactical delivery of systems’ strategies – this is important to facilitating and enabling innovation.

Many of the challenges for the systematisation of medicines optimisation are shared with challenges of wider transformation agenda. Addressing such ‘enabling’ challenges (such as joined-up care records, digital transformation and workforce transformation) at a system-level will support learning and synergy across different spheres of ICSs’ work. ICSs should be responsible for system-wide strategy and delivery plans for medicines optimisation. Duplication of ICSs’ work at different tiers of governance should be avoided. Reflecting on the lessons learnt from the research, we have conducted to support this paper, we propose the following enabling conditions are important to support successful delivery.

Enabling conditions

- **Agency** – local stakeholders are empowered to try new approaches to optimise medicines use.
- **Forum for dialogue** – local forums exist for effective communication to ensure new approaches are effective across different care settings and the patient pathway.
- **Aligned incentives** – different parts of the system are all striving towards the same objective and hold a shared concept of medicines optimisation.
- **Clear accountability** – clearly defined leadership and accountability for decision-making is well understood and an appropriate and effective local governance structure in place to scrutinise activity.
- **Capacity** – local stakeholders have the time to innovate and deliver optimisation efforts within their multiple responsibilities and pressures.

We believe there is a careful balance to be struck between national, regional and local partners’ roles in medicines optimisation

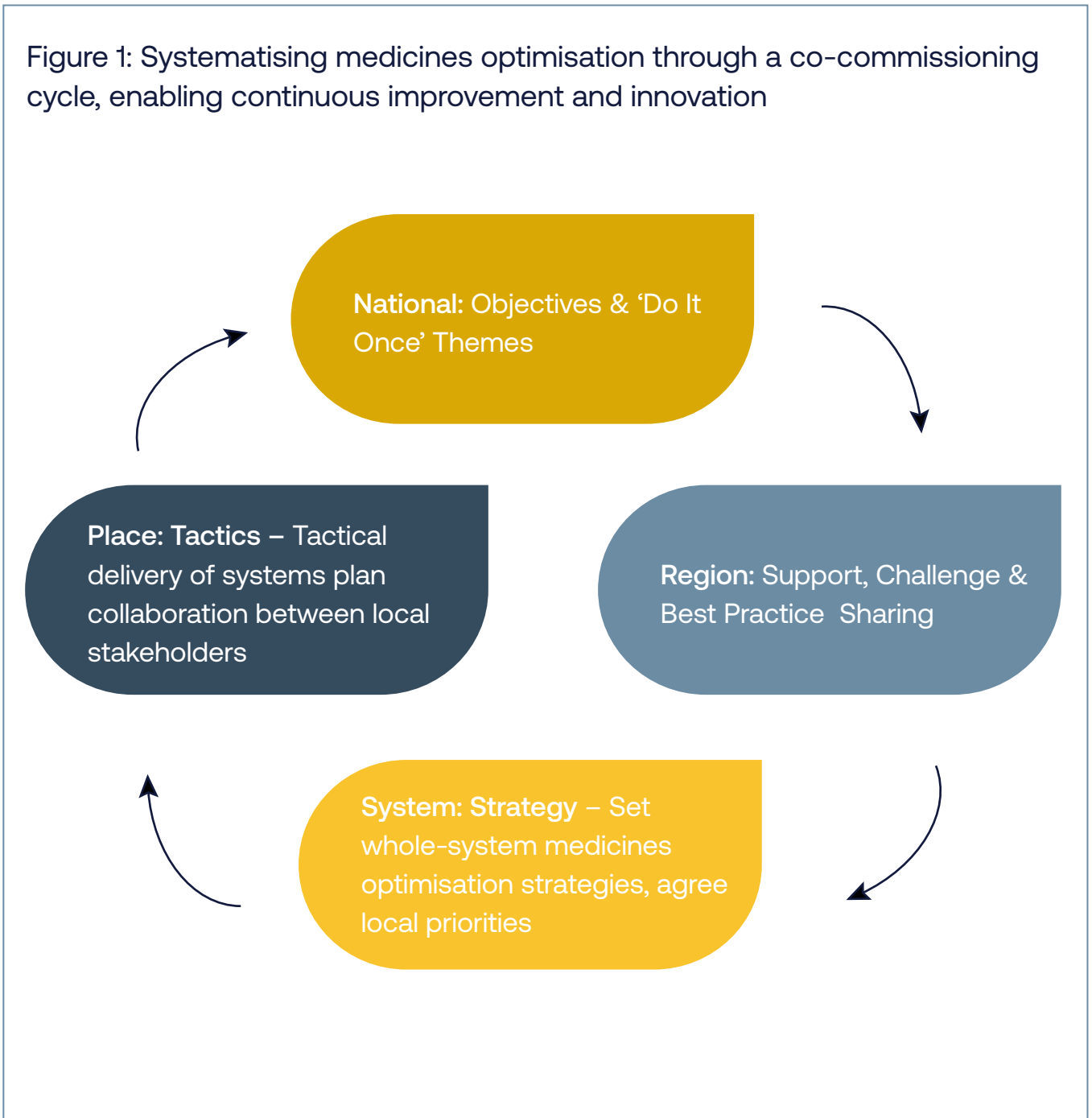
programmes with an ethos of collaboration and shared ownership of delivery driving the approach. With some specialised and community pharmacy commissioning being delegated to ICSs (planned to be fully in place by 2024), systems will have an even greater share of commissioning budgets and ownership of the whole ‘pharmaceutical pathway’ than ever before. Given systems will also be the nucleus of integration, we believe the relationship between ICS, regional and national teams should be seen as a partnership ‘co-commissioning’ approach with clear responsibilities defined across the different tiers of governance.

To support coordinated medicines management based around system governance, we propose that different tiers of NHS leadership will be most effective if they assume the following roles:

- **National: Objectives and ‘do it once’ themes** – National medicines optimisation goals set and framed in terms of health outcomes (where possible). Delivery of priority projects which will deliver value across all systems, using national leverage and ‘purchasing power’ to deliver value for the NHS at scale in identified areas.
- **Region: Oversight and best practice** – Regions, through RMOCs and regional teams, support systems and act as a forum to share best practice and learning to accelerate improvement and medicines optimisation. To deliver this effectively, strong ownership of the RMOCs agenda and constituency by ICSs will be key to ensuring success.
- **System: Strategy** – Set whole-system medicines optimisation strategies, agree local priorities. Build ‘one medicines optimisation team’ across different organisations within the system with visible leadership at the system level.
- **Place: Tactics** – Tactical delivery of systems plan through collaboration between local stakeholders, with leadership at place and PCN levels.

We suggest that we can achieve the most when these roles work effectively together in a continuous improvement cycle, which we describe as a co-commissioning cycle represented in the following diagram:

Figure 1: Systematising medicines optimisation through a co-commissioning cycle, enabling continuous improvement and innovation



To summarise, this report has set out a range of proposals and best practice case studies which, if adopted, we believe will drive the successful systematisation of medicines optimisation. April 2022 is the deadline for establishing ICSs as statutory entities but is not the deadline for developing our ways of working together to deliver systems working, which we believe will take several years to really become effective. System and national leaders must recognise that building collaborative ways of working takes time. New structures can be an enabler of change, but they are not the culmination of change. For many systems, we believe that with sustained effort and focus on the priorities we have outlined in this paper, facilitating the successful systematisation of medicines optimisation will take three to five years to deliver real benefits for population health, clinical quality and value.

Although national and system leadership and planning are crucial, ultimately delivery of systemisation of medicines optimisation will rely upon the work of thousands of local prescribers and health and care workers in different care settings across the country. The clinical workforce must feel empowered and be encouraged to exercise clinical leadership at all levels to drive this agenda forward. Systemisation, in medicines and other areas of care, is a cultural and behavioural goal, a dynamic we must not lose sight of as the sector enters a new era.

Acknowledgements

The authors would like to thank Kate Day for her support in editing the report as well as all those local leaders based across different care settings who contributed to the ideas in this report through participating in our workshops and providing feedback on various drafts.

We would also like to thank the medicines policy team at NHS England and NHS Improvement for their positive engagement.

References

1. Cameron A et al. (2011), The World Medicines Situation: Medicines Prices, Availability and Affordability, World Health Organisation, https://www.who.int/medicines/areas/policy/world_medicines_situation/WMS_ch6_wPricing_v6.pdf, accessed September 2021.
2. NHS Digital and Office of National Statistics (2017), Health Survey for England 2016, <https://files.digital.nhs.uk/pdf/3/c/hse2016-pres-med.pdf>, accessed September 2021.
3. NHS England, Medicines Value Programme, <https://www.england.nhs.uk/medicines-2/value-programme/>, accessed September 2021.
4. The Kings Fund (2021), The NHS Budget and How it has Changed, <https://www.kingsfund.org.uk/projects/nhs-in-a-nutshell/nhs-budget>, accessed September 2021.
5. Angus L (2021), The Role and Functions of the CCG Medicines Optimisation Teams, NHS Clinical Commissioners, <https://www.nhsconfed.org/publications/role-and-functions-ccg-medicines-optimisation-teams>, accessed September 2021.
6. NICE (2015), Medicines Optimisation: the Safe and Effective Use of Medicines to Enable the Best Possible Outcomes, <https://www.nice.org.uk/guidance/ng5/resources/medicines-optimisation-the-safe-and-effective-use-of-medicines-to-enable-the-best-possible-outcomes-pdf-51041805253>, accessed September 2021.

7. Antoñanzas F, Terkola R and Postma M (2016), The Value of Medicines: A Crucial but Vague Concept, *PharmacoEconomics* (2016) 34: 1227–1239, <https://link.springer.com/article/10.1007/s40273-016-0434-8>, accessed September 2021.
8. NICE (2015), Medicines Optimisation: the Safe and Effective Use of Medicines to Enable the Best Possible Outcomes, <https://www.nice.org.uk/guidance/ng5/resources/medicines-optimisation-the-safe-and-effective-use-of-medicines-to-enable-the-best-possible-outcomes-pdf-51041805253>; Royal Pharmaceutical Society (2013), Medicines Optimisation: Helping Patients to Make the Most of Medicines Good Practice Guidance for Healthcare Professionals in England, <https://www.rpharms.com/Portals/0/RPS%20document%20library/Open%20access/Policy/helping-patients-make-the-most-of-their-medicines.pdf>; both accessed September 2021.
9. Ibid.
10. Royal Pharmaceutical Society (2013), Medicines Optimisation: Helping Patients to Make the Most of Medicines, Good Practice Guidance for Healthcare Professionals in England, <https://www.rpharms.com/Portals/0/RPS%20document%20library/Open%20access/Policy/helping-patients-make-the-most-of-their-medicines.pdf>, accessed September 2021.
11. Antoñanzas F, Terkola R and Postma M (2016), The Value of Medicines: A Crucial but Vague Concept, *PharmacoEconomics* (2016) 34: 1227–1239, <https://link.springer.com/article/10.1007/s40273-016-0434-8>, accessed September 2021.
12. Jabbal J and Lewis M (2018), Approaches to Better Value in the NHS Improving Quality and Cost, The King’s Fund, https://www.kingsfund.org.uk/sites/default/files/2018-10/approaches-to-better-value-october2018_0.pdf, accessed September 2021.

13. Duerden M, Avery T and Payne R (2013), Polypharmacy and Medicines Optimisation Making it Safe and Sound, The King's Fund, https://www.kingsfund.org.uk/sites/default/files/field/field_publication_file/polypharmacy-and-medicines-optimisation-kingsfund-nov13.pdf, accessed September 2021. Also see Royal Pharmaceutical Society, Polypharmacy: Getting Our Medicines Right.
14. Ibid.
15. Elliott et al (2021), Economic Analysis of the Prevalence and Clinical and Economic Burden of Medication Error in England, *BMJ Quality and Safety* (2021) 30: 96-105, <https://qualitysafety.bmj.com/content/30/2/96.citation-tools>, accessed September 2021.
16. Hazell B and Robson R (2015), Pharmaceutical Waste Reduction in the NHS, NHS England, <https://www.england.nhs.uk/wp-content/uploads/2015/06/pharmaceutical-waste-reduction.pdf>, accessed September 2021.
17. NICE (2009), Medicines Adherence: Involving Patients in Decisions about Prescribed Medicines and Supporting Adherence, <https://www.nice.org.uk/guidance/cg76/resources/medicines-adherence-involving-patients-in-decisions-about-prescribed-medicines-and-supporting-adherence-pdf-975631782085>, accessed September 2021.
18. Truman et al (2010), Evaluation of the Scale, Causes and Costs of Waste Medicines, York Health Economics Consortium and School of Pharmacy University of London, <https://discovery.ucl.ac.uk/id/eprint/1350234/>, accessed September 2021.
19. Hazell B and Robson R (2015), Pharmaceutical Waste Reduction in the NHS, NHS England, <https://www.england.nhs.uk/wp-content/uploads/2015/06/pharmaceutical-waste-reduction.pdf>, accessed September 2021.

20. Holman HR (2020), The Relation of the Chronic Disease Epidemic to the Health Care Crisis, *ACR Open Rheumatol.* (2020) 2(3):167-173, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7077778/>, accessed September 2021.
21. NHS Digital (2020), Prescribing Costs in Hospitals and the Community 2019-2020, Prescribing Costs in Hospitals and the Community, <https://digital.nhs.uk/data-and-information/publications/statistical/prescribing-costs-in-hospitals-and-the-community/2019-2020>, accessed September 2021.
22. Ewbank et al (2018), The Rising Cost of Medicines to the NHS: What's the Story?, The King's Fund, <https://www.kingsfund.org.uk/sites/default/files/2018-04/Rising-cost-of-medicines.pdf>, accessed September 2021.
23. The Kings Fund (2021), The NHS Budget and How it has Changed, <https://www.kingsfund.org.uk/projects/nhs-in-a-nutshell/nhs-budget>; Legislation.gov.uk, NHS Funding Act 2020, <https://www.legislation.gov.uk/ukpga/2020/5/contents/enacted/data.htm>; both accessed September 2021.
24. Comparison of King's Fund data in The NHS Budget and How It has Changed, <https://www.kingsfund.org.uk/projects/nhs-in-a-nutshell/nhs-budget> and NHS Digital data in Prescribing Costs in Hospitals and the Community 2019-2020, <https://digital.nhs.uk/data-and-information/publications/statistical/prescribing-costs-in-hospitals-and-the-community/2019-2020>; both accessed September 2021.
25. Open Prescribing, Prescribing across the NHS in England, <https://openprescribing.net/national/england/>, accessed September 2021.

-
26. Ward M (2020), Statistics on UK-EU trade, Briefing Paper 7851, <https://commonslibrary.parliament.uk/research-briefings/cbp-7851/>; NICE, Changes We're Making to Health Technology Evaluation, <https://www.nice.org.uk/about/what-we-do/our-programmes/nice-guidance/nice-technology-appraisal-guidance/changes-to-health-technology-evaluation>; both accessed September 2021.
 27. Moon J et al (2010), Getting Better Value from the NHS Drugs Budget', BMJ (2010) 341:6449, <https://www.bmj.com/bmj/section-pdf/186177?path=/bmj/342/7787/Analysis.full.pdf>, accessed September 2021.
 28. NHS England (2019), NHS Long Term Plan <https://www.longtermplan.nhs.uk/wp-content/uploads/2019/08/nhs-long-term-plan-version-1.2.pdf>, accessed September 2021.
 29. NHS England, Regional Medicines Optimisation Committees Operating Model, <https://www.england.nhs.uk/wp-content/uploads/2020/02/rmoc-operating-model-v2.pdf>, accessed September 2021.
 30. Department of Health and Social Care (2015), The NHS Constitution for England, <https://www.gov.uk/government/publications/the-nhs-constitution-for-england>, accessed September 2021.
 31. Angus L (2021), The Role and Function of CCG Medicines Optimisation Teams, NHS Clinical Commissioners, <https://www.nhsconfed.org/publications/role-and-functions-ccg-medicines-optimisation-teams>, accessed September 2021.
 32. Also see Royal Pharmaceutical Society, A Systems Approach to Medicines Optimisation and Pharmacy, Royal Pharmaceutical Society, Medicines Optimisation Hub, <https://www.rpharms.com/england/nhs-transformation/system-leadership-resources>, accessed September 2021.

33. NHS England (2019), NHS Long Term Plan <https://www.longtermplan.nhs.uk/wp-content/uploads/2019/08/nhs-long-term-plan-version-1.2.pdf>; Department of Health and Social Care (2012), Integration and Innovation: Working Together to Improve Health and Social Care for All, <https://www.gov.uk/government/publications/working-together-to-improve-health-and-social-care-for-all/integration-and-innovation-working-together-to-improve-health-and-social-care-for-all-html-version>, both accessed September 2021.
34. Hood C (1976), The Limits of Administration.
35. The Royal Pharmaceutical Society also provides its own mentorship programme, <https://www.rpharms.com/development/mentoring>, accessed September 2021.
36. PrescQIPP, E-learning with PrescQIPP, <https://www.prescqipp.info/learning/prescqipp-e-learning/>, accessed September 2021.
37. Erwin Castro et al., A Collaborative Approach to Insulin, <https://diabetesonthenet.com/Journal-diabetes-nursing/a-collaborative-approach-to-insulin-delegation-a-pilot-to-drive-system-change/>, accessed September 2021.
38. Royal Pharmaceutical Society, A Systems Approach to Medicines Optimisation and Pharmacy, <https://www.rpharms.com/england/nhs-transformation/system-leadership-resources>; Royal Pharmaceutical Society (2021), Medicines Optimisation Hub, <https://www.rpharms.com/resources/pharmacy-guides/medicines-optimisation-hub>

39. Also see NHS England and Improvement (2018), Integrating NHS Pharmacy and Medicines Optimisation into Sustainability and Transformation Partnerships and Integrated Care Systems, <https://www.england.nhs.uk/publication/integrating-nhs-pharmacy-and-medicines-optimisation-into-sustainability-and-transformation-partnerships-and-integrated-care-systems/>, accessed September 2021.
40. NHS England (2019), NHS Long Term Plan, p. 106, <https://www.longtermplan.nhs.uk/wp-content/uploads/2019/08/nhs-long-term-plan-version-1.2.pdf>, accessed September 2021.
41. NICE (2020), Medicines Adherence: Involving Patients in Decisions about Prescribed Medicines and Supporting Adherence (2020), <https://www.nice.org.uk/Guidance/CG76>; NICE, Shared decision making NG197, <https://www.nice.org.uk/guidance/ng197>; both accessed September 2021.
42. Public Health England (2019), Dependence and Withdrawal Associated with Some Prescribed Medicines: an Evidence Review, <https://www.gov.uk/government/publications/prescribed-medicines-review-report> accessed September 2021.
43. Department of Health (2000), Good Practice in Continence Services, [https://www.nhs.uk/chq/documents/2015 uploads/dh - good practice in continence services.pdf](https://www.nhs.uk/chq/documents/2015%20uploads/dh-good-practice-in-continence-services.pdf), accessed September 2021.

18 Smith Square
Westminster
London SW1P 3HZ

020 7799 6666
www.nhsconfed.org
@NHSConfed

If you require this publication in an alternative format,
please email enquiries@nhsconfed.org

© NHS Confederation 2021. You may copy or distribute this work, but
you must give the author credit, you may not use it for commercial
purposes, and you may not alter, transform or build upon this work.

Registered charity no. 1090329

