

The international knowledge base for new care models relevant to primary care-led integrated models: a realist synthesis

Alison Turner, Abeda Mulla, Andrew Booth, Shiona Aldridge, Sharon Stevens, Mahmooda Begum and Anam Malik



***National Institute for
Health Research***

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Declared competing interests of authors: Alison Turner reports membership of the National Institute for Health Research (NIHR) Dissemination Centre Advisory Group. The Strategy Unit (NHS Midlands and Lancashire Commissioning Support Unit) was commissioned to support the Dudley Multispecialty Community Provider (MCP) vanguard, and Alison Turner has been involved in providing evidence analysis in support of the local evaluation of the vanguard. Abeda Mulla reports membership of the NIHR Health Services and Delivery Research (HSDR) Prioritisation Panel (researcher led); The Strategy Unit was commissioned by the Dudley Clinical Commissioning Group (CCG) to deliver a primary care development programme, and Abeda Mulla is involved in providing general practices with service improvement and change support, and evaluating the programme workstreams. The Strategy Unit was also commissioned by NHS England to conduct a rapid research study in the context of General Practitioner (GP) Access, and Abeda Mulla was the technical lead for the project, overseeing all aspects of the analysis and writing the report. Andrew Booth reports being a principal investigator on a NIHR HSDR Evidence Synthesis Centre contract and membership of the NIHR Complex Reviews Research Support Unit Funding Board. Shiona Aldridge works for The Strategy Unit, which was commissioned by NHS England to conduct a rapid research study in the context of GP Access, and she was involved in undertaking the qualitative analysis; she was also involved in providing evidence analysis in support of the local evaluation of the Dudley MCP vanguard. Sharon Stevens reports being involved in providing evidence analysis in support of the local evaluation of the Dudley MCP vanguard and undertaking the evidence review for the NHS England-funded review of managing access in English general practice. Mahmoda Begum reports that, in relation to The Strategy Unit being commissioned by the Dudley CCG to deliver a primary care development programme, she is involved in providing general practices with service improvement and change support, and evaluating the programme workstreams; she was also involved in undertaking the qualitative interviewing and analysis for the NHS England-funded review of managing access in English general practice. Anam Malik reports that, in relation to The Strategy Unit being commissioned by the Dudley CCG to deliver a primary care development programme, she is involved in providing general practices with service improvement and change support, and evaluating the programme workstreams; she was also involved in undertaking the qualitative interviewing and analysis for the NHS England-funded review of managing access in English general practice.

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Abstract

The international knowledge base for new care models relevant to primary care-led integrated models: a realist synthesis

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Background: The Multispecialty Community Provider (MCP) model was introduced to the NHS as a primary care-led, community-based integrated care model to provide better quality, experience and value for local populations.

Objectives: The three main objectives were to (1) articulate the underlying programme theories for the MCP model of care; (2) identify sources of theoretical, empirical and practice evidence to test the programme theories; and (3) explain how mechanisms used in different contexts contribute to outcomes and process variables.

Design: There were three main phases: (1) identification of programme theories from logic models of MCP vanguards, prioritising key theories for investigation; (2) appraisal, extraction and analysis of evidence against a best-fit framework; and (3) realist reviews of prioritised theory components and maps of remaining theory components.

Main outcome measures: The quadruple aim outcomes addressed population health, cost-effectiveness, patient experience and staff experience.

Data sources: Searches of electronic databases with forward- and backward-citation tracking, identifying research-based evidence and practice-derived evidence.

Review methods: A realist synthesis was used to identify, test and refine the following programme theory components: (1) community-based, co-ordinated care is more accessible; (2) place-based contracting and payment systems incentivise shared accountability; and (3) fostering relational behaviours builds resilience within communities.

Results: Delivery of a MCP model requires professional and service user engagement, which is dependent on building trust and empowerment. These are generated if values and incentives for new ways of working are aligned and there are opportunities for training and development. Together, these can facilitate accountability at the individual, community and system levels. The evidence base relating to these theory components was, for the most part, limited by initiatives that are relatively new or not formally evaluated. Support for the programme theory components varies, with moderate support for enhanced primary care and community involvement in care, and relatively weak support for new contracting models.

Strengths and limitations: The project benefited from a close relationship with national and local MCP leads, reflecting the value of the proximity of the research team to decision-makers. Our use of logic

models to identify theories of change could present a relatively static position for what is a dynamic programme of change.

Conclusions: Multispecialty Community Providers can be described as complex adaptive systems (CASs) and, as such, connectivity, feedback loops, system learning and adaptation of CASs play a critical role in their design. Implementation can be further reinforced by paying attention to contextual factors that influence behaviour change, in order to support more integrated working.

Future work: A set of evidence-derived 'key ingredients' has been compiled to inform the design and delivery of future iterations of population health-based models of care. Suggested priorities for future research include the impact of enhanced primary care on the workforce, the effects of longer-term contracts on sustainability and capacity, the conditions needed for successful continuous improvement and learning, the role of carers in patient empowerment and how community participation might contribute to community resilience.

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Glossary

Access A subjective concept, incorporating different aspects of care, including the availability of services (e.g. opening hours), accessibility (e.g. sensitivity to cultural needs) and convenience (e.g. location).

Accountable care organisation An organisational form in which a group of providers agree to take responsibility for providing all care for a given population for a defined period of time under a contractual arrangement with a commissioner. Providers are held accountable for achieving a set of pre-agreed quality outcomes within a given budget or expenditure target.

Advanced nurse practitioner A registered nurse who has acquired the expert knowledge base, complex decision-making skills and clinical competencies for expanded practice, the characteristics of which are shaped by the context and/or country in which s/he is credentialled to practice. A master's degree is usually part of the criteria for entry-level advanced nurse practitioner roles.

Alliance contracting An agreement between a set of providers and a commissioner to deliver services. All providers share the risk and responsibility for delivery and, unlike the lead provider model, are not co-ordinated by a prime contractor. As a result, there is a greater emphasis on internal governance.

Allied health profession Health-care professions that are distinct from nursing, medicine and pharmacy. These include arts therapists, chiropodists/podiatrists, dietitians, occupational therapists, orthoptists, orthotists, paramedics, physiotherapists, prosthetists, radiographers, and speech and language therapists.

Capitation Paying a provider or a group of providers to cover the majority (or all) of the care provided to a specified population across different care settings. The regular payments are calculated as a lump sum per patient.

Care planning An approach to provide people with long-term conditions with an integrated and personalised care plan within a wider context of condition management that promotes risk stratification, targeted care and self-management.

Case management Planning, co-ordinating, managing and reviewing an individual's care. This involves a case manager/team assessing a patient's needs, developing a care plan, organising the required care, monitoring the quality of care and maintaining contact with the patient and carer.

Clinical Commissioning Group An organisation responsible for implementing the commissioning roles as set out in the Health and Social Care Act 2012 (Great Britain. *Health and Social Care Act 2012*. London: The Stationery Office; 2012). It does this by planning and designing local health services in England, then 'commissioning' or buying health and care services, including planned hospital care and urgent and emergency care.

Community A group of people who have common characteristics or interests. Communities can be defined by: geographical location, race, ethnicity, age, occupation, a shared interest or affinity (such as religion and faith) or other common bonds, such as a health need or disadvantage.

Community anchors Independent community-led organisations with multipurpose functions, which provide a focal point for local communities and community organisations, and for community services. They often own and manage community assets, and support small community organisations to reach out across the community.

Community engagement A range of approaches to maximise the involvement of local communities in local initiatives to improve their health and well-being and reduce health inequalities. This includes needs assessment, community development, planning, design, development, delivery and evaluation.

Community resilience A quality or state that produces good outcomes for individuals and communities, despite serious threats to their adaptation or development; these threats may arise both from shocks or emergencies and ongoing daily conditions of life.

Complex adaptive systems A collection of individual agents with the freedom to act in ways that are not always totally predictable, and whose actions are interconnected, so that one agent's actions change the context for other agents.

Co-ordinated care Care organised around 'natural communities' or 'hubs' and delivered by multidisciplinary teams comprising generalists and specialists from the NHS, independent practice, social care, community services and third-sector services.

eHealth Health-care practices supported by electronic processes and communication.

Enhanced primary care An enhanced level of clinical and social support to enable individuals to receive a high level of clinical support while remaining in a community setting. This combines general practitioners, practice staff and community and specialist health staff working together, and includes primary care, community and district nursing, community, mental health services, community therapies, care navigation, social care, third-sector services and voluntary services.

EuroQol-5 Dimensions A standardised instrument for measuring health outcomes.

Feedback loops Feeding back the output of a process, as an input, into the same system.

General Practitioner Access Fund (previously the Prime Minister's Challenge Fund) A development fund helping to improve access to general practice and to stimulate innovative ways of providing primary care services. Schemes are chosen based on testing innovative ways of increasing access and delivering wider transformational change in general practice.

General practitioner with a special interest An 'extended clinical role' largely based on traditional specialty-based areas, such as dermatology or minor surgery. This role was introduced following the NHS plan (Department of Health and Social Care. *The NHS Plan: A Plan for Investment, a Plan for Reform*. London: Department of Health and Social Care; 2000) to improve patient access to specialist care, and reduce waiting times and referrals.

Information governance Management of information through standardised structures, policies, processes and controls.

Informational continuity Information relevant to the patient is made available to the patient and the health-care provider, at the right place and at the right time, to support continuity of care.

Integrated care An approach to an individual's care that aims to address fragmentation in patient services and enable better co-ordinated care and continuity of care to improve patient experience and achieve greater efficiency of health delivery systems.

Integrated care pathways Collaboration between health-care professionals that streamlines patient management with standardised treatment.

Integration This relates to the methods and models at various levels (e.g. clinical, organisational, cross-sector) that aim to align services to improve outcomes. Integration involves collaborative working across services, organisations and sectors.

Lead provider model (also known as prime provider model) One provider is given the responsibility, through a contract for subcontracting to other providers for the various aspects of care, to both deliver care and to ensure that all various aspects of care are fully integrated, bringing together the previously episodic providers of care into a single pathway.

Logic models An outline of the inputs, processes, outputs and outcomes of a programme, presented in an accessible diagrammatic form, typically with accompanying notation and/or explanatory text.

Macro-level integration (also known as system integration) When providers, either together or with commissioners, seek to deliver integrated care to the populations that they serve.

Meso-level integration (also known as professional and organisational integration) When providers, either together or with commissioners, seek to deliver integrated care for a particular care group or populations with the same disease or conditions, through the redesign of care pathways and other approaches.

Micro-level integration (also known as clinical integration) When providers, either together or with commissioners, seek to deliver integrated care for individual service users and their carers through care co-ordination, care planning, the use of technology and other approaches.

Multispecialty community provider A model of care developed as part of NHS England's *Five Year Forward View* (NHS England. *Five Year Forward View*. London: NHS England; 2014) and that is primary care-led and aims to provide more enhanced care, such as diagnostic services and outpatient clinics, in a community setting. Some also incorporate mental health services and social care.

Mutualisation Ownership and accountability that passes from central government to the direct stakeholders of public services – those who work in them and those who benefit from them. There are two ways to do this. The first approach is to convert public services into non-profit enterprises, and the second approach is simply to get the public back into public services.

NHS vanguard site Individual organisations and health and social care partnerships that were chosen by NHS England in 2015 to develop models to support the improvement and integration of services, with the aim of transforming how care is delivered locally.

Outcome-based commissioning Designed to shift the focus from activities to results, and from how a programme operates to the good it accomplishes. The funding is to be given, not in terms of outputs achieved or processes to be followed, but in terms of what outcomes might be expected.

Pay for performance A provider payment model that explicitly seeks to align payment incentives with health system objectives related to quality, care co-ordination, health improvement and efficiency by rewarding the achievement of targeted performance measures.

Physician associate The physician associate is a new type of health professional, who works with the clinical team to provide quality health care across the NHS. Physician associates carry out defined duties under supervision to support, but not replace, doctors.

Practice-based commissioning Front-line primary care service delivery (general practitioners, nurses and other health-care professionals) that holds the commissioning power to 'buy' health services for its population.

Predictive analytics The use of data to make predictions about unknown events.

Primary and acute care system A collaborative approach to improving patient care by creating new partnerships under a variety of frameworks to join up general practitioner, hospital, community and mental health services and provide new models of care delivery.

Programme theory Describes the theory built into every programme, being expressed as 'if we provide these people with these resources it may change their behaviour' (Pawson R. Nothing as practical as a good theory. *Evaluation* 2003;**9**:471– 90).

Quadruple aim Sometimes referenced as the triple aim plus one, this derives from the triple aim, an approach developed in the USA, to describe the ambition to drive improvement across three dimensions of health care: population health, patient experience and cost-effectiveness. The quadruple aim refers to the extension of this approach to incorporate staff/provider experience.

Realist synthesis A theory-driven approach to summarising the literature that seeks to unearth 'the unseen elements of a programme (the mechanisms) that leads to its success or failure' [Rycroft-Malone J, Burton CR, Williams L, Edwards S, Fisher D, Hall B, *et al.* Improving skills and care standards in the support workforce for older people: a realist synthesis of workforce development interventions. *Health Serv Deliv Res* 2016;**4**(12)].

Real-time analytics The ability to use data for the purposes of analysis, as soon as these are available to the system.

Risk- and gain-sharing A management method of sharing risks and rewards between members of a group by distributing gains and losses on a predetermined basis.

Telecommunication Communication involving voice, data and video transmission, using information-transmitting technologies, such as the telephone and the internet.

Teleconsultations A consultation involving a network or video link between the doctor and the patient.

Tele dermatology Telemedicine applied specifically for the subspecialty of dermatology.

Teledermoscopy Telemedicine applied specifically for the subspecialty of dermoscopy.

Telemedicine The use of telecommunications technology for remote diagnosis and treatment.

Telemonitoring The ongoing assessment of a patient with a condition, using data collected remotely.

Telepsychiatry Telemedicine applied specifically for the subspecialty of psychiatry.

Value propositions Long-term ambitions in relation to achieving some form of the triple aim of better health, better care and better value.

Virtual clinics Direct contact with a health-care professional by e-mail, telephone or video.

Virtual health-related community Direct contact with other patients over the internet.

List of abbreviations

A&E	accident and emergency	HMIC	Health Management Information Consortium
ACO	accountable care organisation	HSDR	Health Services and Delivery Research
ACS	accountable care system	MCP	multispecialty community provider
ANP	advanced nurse practitioner	MDT	multidisciplinary team
CAS	complex adaptive system	NHSE	NHS England
CCG	Clinical Commissioning Group	NIHR	National Institute for Health Research
CINAHL	Cumulative Index to Nursing and Allied Health Literature	PACS	primary and acute care system
CMS	Centers for Medicare and Medicaid Services	PDSA	plan–do–study–act
COM-B	'capability', 'opportunity', 'motivation' and 'behaviour'	PPI	patient and public involvement
FYFV	<i>Five Year Forward View</i>	QOF	Quality and Outcomes Framework
GP	general practitioner	RAMESES	Realist And Meta-narrative Evidence Syntheses: Evolving Standards
GPwSI	general practitioner with specialist interests	ROI	return on investment

Plain English summary

Fifty health-care economies in England have received funding and support to provide better ways of joining up or 'integrating' health-care services. These new models of care aim to provide better quality, experience and value for patients and staff in the health-care 'system'. Collectively, the models of care are called vanguards. Although these are new, the underlying efforts to deliver a more integrated model of care are not. Our project focused on the fourteen multispecialty community provider (MCP) vanguards, designed to provide comprehensive integrated care outside a hospital setting.

The aim of this project was to support the people making decisions in MCPs, by combining or 'synthesising' lessons from similar models that had reported findings. As the knowledge base was vast, we worked with MCP leads and public representatives to prioritise three aspects of the MCP model: (1) patient access to integrated care in the community, (2) pooled investment and clearer accountability and (3) a collaborative approach to address issues, such as inequality and growing demand. For each, we used an established approach that asks 'What works, for whom, in what respects, to what extent, in what contexts and how?'

We found that integrated care models that work well are tailored to local needs and constantly evolving. They are also dependent on good connections between local people, communities and health-care staff, especially those that allow learning from one another. In a MCP, there should be:

1. opportunities for all the different staff and service users to be involved
2. a shared view of the benefits of working together, with trust for one another and the organisations that they represent
3. training to support integrated working.

Our findings suggest that, when these three aspects come together, staff and service users can change their behaviours to benefit both themselves and the system.

Scientific summary

Background

The New Care Models programme was introduced to the NHS in 2014 and fifty 'vanguard' sites were selected across five different submodels. One of these submodels was a multispecialty community provider (MCP), and fourteen sites were chosen to pilot these primary care-led, community-based integrated care models. Although the model description is new, there is a legacy of integrated care models that the NHS has already experimented with. Furthermore, the MCP model was also a means of applying the international accountable care organisations (ACOs) model, most notably from the USA, which began its own Pioneer programme in 2012.

NHS England is replicating the Pioneer ACO approach of rapid-cycle evaluation and learning and diffusion for evidence-based best practices for a number of reasons, including increasing the speed of adoption and improving the timeliness of knowledge mobilisation, and has advocated shared learning throughout the vanguard models. As part of this, MCP vanguards were required to set out their long-term ambitions in logic models, articulating them in some form of the triple aim of better health, better care and better value. This triple aim has since expanded to form the quadruple aim, to incorporate staff and provider experience.

In keeping with this need for learning, our evidence synthesis aimed to clarify the underpinning evidence base for MCP-like models, both in the UK and abroad. By using a realist synthesis approach, we wanted to explain which of the mechanisms of action in other models might work in the context of a MCP, and how these relate to quadruple aim outcomes.

Objectives

The aim of this synthesis is to provide decision-makers in health and social care with an 'actionable' evidence base for the MCP model of care. As described in our study protocol [Turner A, Mulla A, Booth A, Aldridge S, Stevens S, Battye F, Spilsbury P. An evidence synthesis of the international knowledge base for new care models to inform and mobilise knowledge for multispecialty community providers (MCPs). *Syst Rev* 2016;**5**:167], we believe that this synthesis can serve as a 'blueprint' with 'active ingredients' to inform the design and delivery of current and future iterations of the MCP model. Specifically, the objectives of the synthesis were to articulate the underlying programme theories behind the MCP model of care, by mapping the logic models of the 14 MCP demonstrator sites, prioritising key theories for investigation to:

- identify sources of theoretical, empirical and practice evidence to test the programme theories
- appraise, extract and analyse evidence, reconciling confirmatory and contradictory evidence
- develop the synthesis, producing a 'blueprint' to explain how the mechanisms used in different contexts contribute to outcomes and process variables
- consult with key MCP stakeholders to validate findings and test applicability to different contexts
- finalise the synthesis, incorporating stakeholder feedback
- disseminate the findings, preparing a series of practical tools to support knowledge mobilisation.

Methods

We employed an iterative process through which we integrated data from the preliminary logic models with insights from stakeholders (an advisory group consisting of MCP leads and service users) and broader findings from the literature to provide a realist understanding of the MCP model of care. We first identified

MCP programme theories, using the logic models generated by vanguards through generating ‘if-then’ statements from each of the MCPs. These statements were assigned to one of the quadruple aim outcomes (i.e. population health, cost-effectiveness, patient experience or staff experience) and one of the domains across the meta best-fit framework. This framework was developed from previous integrated care programme lessons and policy guidance for MCPs. This process generated a number of themes that allowed for flow diagram illustration in a logic model fashion.

These flow diagrams and their narratives were shared with the project advisory group and, following a series of discussions, eight programme theory components were agreed upon. These were:

- R1 – community-based, co-ordinated care is more accessible
- R2 – place-based contracting and payment systems incentivise shared accountability
- R3 – fostering relational behaviour builds resilience within communities
- M1 – collective responsibility improves quality and safety outcomes
- M2 – multidisciplinary teams provide continuity for patients with long-term conditions/complex needs
- M3 – engaged and trained staff expedite cultural change
- M4 – system learning embeds and sustains transformational change
- M5 – proactive population health is dependent on shared and linked data.

The three ‘R’ theory components were prioritised by the advisory group for realist review, and the five ‘M’ theory components were developed as maps. The next stage of our realist reviews involved searching for empirical evidence in order to test and refine our programme theories within a vast and diffuse evidence base with the literature. Each item of evidence extracted was used to test the individual programme theory component and the degree to which studies supported, nuanced or challenged that theory. For each of the five mapping reviews, we started with a core set of documents, followed by ‘pearl-growing’ and ‘citation-chasing’ strategies to follow up citations and references. We then purposively identified reviews from the broader literature. The finalised programme theory components and emerging findings were tested and validated with a wider MCP stakeholder group.

Results

The MCP programme theory components that emerged from extracting ‘if-then’ statements from MCP logic models and their thematic mapping to a metaframework (best-fit framework) encompassed an intricate set of overlapping activities and assumptions, highlighting the inherent interdependencies within such a complex service transformation. The components relate to interventions, such as new contracts, as well as behaviours, such as community involvement. These theory components were notable in their coverage of both interventions (what MCPs will do) and ways of working (how MCPs will design and deliver services). The permutation of activities is shaped by contextual factors that differed across the 14 MCP vanguards, including programme design or a legacy of integrated working. There was recognition within the MCP logic models and associated documentation of enablers of, and barriers to, change, but little explicit reference (with limited exceptions) to what might be referred to, in realist methodology, as mechanisms.

The evidence base that pertains to these theory components was, for the most part, limited by initiatives that are relatively new or not formally evaluated (such as enhanced primary care teams, or contracts based on outcomes), particularly in UK settings. A realist methodology therefore allowed for the inclusion of commentaries that, for instance, implicitly referred to mechanisms. The evidence base included limited empirical evidence; there is a limited number of small-scale evaluations comprising uncontrolled before-and-after studies or single-case studies. There are a number of commentaries drawing on experiential evidence. Support for the programme theory components varies, with moderate support for enhanced primary care and community involvement in care and relatively weak support for new contracting models. The limitations of the evidence base related to the long-term impacts of enhanced primary care teams

delivering care closer to home; the heterogeneity of contracting models and variable reporting; and the use of before-and-after methods prone to bias, resulting in a moderate level of uncertainty around the conclusions.

The extraction of data by either realist or mapping approaches allowed for the following summaries.

R1

To deliver new and expanded roles in primary care as part of the provision of specialist care in the community requires trust between professionals, as well as appropriate training and practical tools to trigger professional willingness to adopt new ways of working, such as task-shifting for community-based care. Subsequent embedding of the effective new ways of working has the potential to achieve the outcomes of better management of chronic conditions and a reduction in the number of secondary care referrals. Cost-savings in this context are possible only following sustained implementation and stabilisation of increased demand, and if the costs of training and additional community services provision are included.

R2

The opportunity for clinicians and patients to engage with providers and commissioners for accountable place-based contracting and payment systems requires the alignment of personal, professional and organisational values and incentives. Moreover, sufficient time needs to be allocated to learning and development, agreeing outcome frameworks, and sharing access to robust high-quality information that includes cost and quality data. This will allow the building of trust, collaboration and shared decision-making for accountability across quadruple aim outcomes. Furthermore, through service users and a diverse group of professionals having the confidence to hold providers and commissioners to account, MCP leaders will be spurred to make informed (re)investments based on clear measures of value and appropriate management of financial risk.

R3

The development of mutually beneficial relationships in community settings for co-production purposes requires opportunities for equal and reciprocal engagement for all relevant health-care professionals and the local population. Ongoing training, guidance, feedback and practical support for community-based working needs to be provided, and roles, responsibilities and expectations have to be clearly defined. Together, they can empower individuals with the confidence to contribute to decision-making, or the sharing of experience and knowledge, to inform system priorities, especially for the longer-term aims of preventative and holistic care. Shared community ownership of health can result in improved health behaviours and increased social participation, and engender community resilience.

M1–5

The maps further demonstrate the interdependencies between individual theory components at the individual, organisational and system levels. Professional autonomy and empowerment is critical for driving cultural change that is associated with trust and collaboration, particularly for structural development of multidisciplinary teams and integrated pathways. Cultural change needs to be stimulated through organisational development and system leadership behaviours that promote collaborative, population-based approaches to health care and aligned processes that support delivery. Shared data, in particular, offer the opportunity to improve the co-ordination and continuity of care at the individual and organisational levels, whereas MCP-wide learning can be accomplished through training and feedback loops, built into audit and formative evaluation, to support system learning and improvement.

It is clear that the delivery of a MCP requires inter- and intra-professional and service user engagement from an early stage. Much of this engagement is dependent on the notions of trust and empowerment, at both an individual level and a group level, that is, generated following activities to align values and incentives for an integrated model of care. If successful, this engagement with parallel opportunities for training and development can result in shared decision-making for accountable service users who take responsibility for their own health; accountable communities that manage demand at the most appropriate

setting with high-quality integrated care; and accountable care systems that invest and manage financial risk through agreed contracting and payment arrangements, and embed learning at individual (micro), organisational (meso) and system (macro) levels. Based on our overall findings, we have developed a conceptual model for MCPs that merges the logic model elements with realist mechanisms.

Strengths and limitations

Conducting a review against a backdrop of continual change in a complex system is challenging; we sought to minimise this by (1) exploring transferable lessons from international comparisons and UK legacy models; (2) seeking to identify generic lessons that may be used to explore future care models that seek to achieve large-scale transformational change within complex adaptive systems (CASs); and (3) utilising the embedded status afforded by being a NHS-based team, and maintaining continuous MCP stakeholder engagement, including telephone interviews with key informants throughout the lifetime of the project (and beyond, for mobilising the knowledge gained).

Although the overall review draws on a broad evidence base, it predominantly derives from within the health sector; there may still be valuable learning elsewhere, for example, from other public services or the private sector, in relation to large-scale public-funded procurements. The iterative approach and stakeholder engagement have focused the search on the identification of key sources, but this does not eliminate the risk of confirmation bias.

Conclusions

The overall findings are situated within a framework of CASs theory, providing an emphasis on different levels of connectivity: the micro level (agents, both professional and service users), the meso level (provider and commissioning organisations) and the macro level (the MCP vanguards). The necessary operation at the edge of chaos (e.g. dynamic nature and learning from mistakes) is likely to facilitate innovation; the feedback loops will support system learning and adaptation. For the purposes of theory-driven implementation and knowledge mobilisation, the 'capability', 'opportunity', 'motivation' and 'behaviour' (COM-B) model has been used to describe key findings, alongside a set of 'active ingredients', to inform decision-making and practice within future integrated care systems.

New care models are built on the premise of changing behaviours at the individual (i.e. clinicians, support staff, service users, carers, system leaders), community and wider system levels. Using the best-fit framework as a structure and informed by the COM-B model, the 'active ingredients' describe the conditions and activities that may help to support the development of population health-based models of care.

Study registration

This study is registered as PROSPERO CRD42016039552.

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Chapter 1 Introduction

Multispecialty community providers as new care models

The publication of the *Five Year Forward View* (FYFV)¹ formally introduced the NHS England (NHSE) strategy for delivering new integrated models of care: 'the NHS will take decisive steps to break down the barriers in how care is provided between family doctors and hospitals, between physical and mental health, between health and social care'¹ (contains public sector information licensed under the Open Government Licence v3.0). At the time of publication, the NHS was facing significant financial pressures; in 2013–14 there was a £90.6M deficit across acute trusts and Clinical Commissioning Group (CCGs),² and this increased financial burden was exacerbated with a 6.4% fall in public spending in adult social care between 2009–10 and 2015–16. During this period, the population aged ≥ 65 years grew by 15.6%³ and the health-care costs of managing long-term conditions was forecasted to increase by £5B between 2011 and 2018.⁴

These cost pressures served to add urgency to the migration of English health and social care economies towards integrated care delivery.⁵ The FYFV outlined five pioneering new models of integrated care, to be delivered through a systematic approach of large-scale transformation, with the ambition of providing better quality and experience of health care. These models differed in their involvement of different health and care agencies, but shared one main aim: to reduce the high level of avoidable hospital admissions (20% in 2013),⁶ while offering improved health-care quality, outcomes and patient satisfaction, which were all becoming increasingly challenging to deliver.^{1,7–10}

This evidence synthesis concerns itself with the 14 multispecialty, community-based provider vanguards, that is, the multispecialty community provider (MCP) model of care. The MCP focus was a result of the local health economy context; two MCPs requested support from The Strategy Unit (where all but one of the study authors were based), and MCP programme leads (national and local) expressed interest in participating as advisors for the synthesis to ensure relevance to their needs. We follow NHSE's definition of MCPs:

It is a new type of integrated provider . . . combines the delivery of primary care and community-based health and care services – not just planning and budgets. It also incorporates a much wider range of services and specialists wherever that is the best thing to do.

NHSE. Contains public sector information licensed under the Open Government Licence v3.0¹¹

The model was intended to provide accessible, co-ordinated services for patients through professional integration in community settings: 'one new option to permit groups of general practitioners (GPs) to combine with nurses, other community health services, hospital specialists and perhaps mental health and social care to create integrated out-of-hospital care' (contains public sector information licensed under the Open Government Licence v3.0).¹

The distinction between the primary and acute care systems (PACSS) and MCP new models of care can be characterised by the role of the acute sector; inherent within MCPs was the emphasis on primary care focus and leadership, whereas PACSS, by definition, required acute and primary care collaboration. As such, the MCP vanguards chosen had the necessary focus on general practice, with primary care development being the priority for local health economies to drive the shift towards transformation of primary care services. This transformation included extended primary care services; innovative care delivery; application of digital technologies; new skills and roles; greater community involvement and collaboration with the voluntary sector; and greater convenience for patients. Through becoming 'the focus of a far wider range of care needed by their registered patients',¹ the expectation was that MCPs would eventually

become the providers of out-of-hospital care delivering a patient-focused model¹² within an integrated system that has aligned commissioning and provider incentives.¹³

As the vanguard MCPs started their journey, standard principles for operation were provided with the flexibility to adapt for the local context.¹¹ The emerging care model and contract framework for MCPs¹⁴ described the core features of MCPs and ways of contractually supporting a MCP. This included stipulations to:

- serve the whole population, not just a specific subset (e.g. those aged > 65 years)
- operate at four different tiers: (1) whole population, (2) people with self-limiting conditions, (3) people with ongoing care needs and (4) patients deemed to be at risk of unscheduled care or high utilisation
- deliver the MCP through community 'care hubs', with each hub serving a community of around 30,000–50,000 people
- demonstrate financial integration, potentially through a single, multiyear whole-population budget for all MCP services
- deploy the MCP budget flexibly to reshape the local care delivery system, including incentives and risk-/gain-share agreements.

As a model of care, the emphasis is on system-wide improvement across multiple dimensions of health care,¹⁵ often expressed as the triple aim (improving population health, patient experience and cost-effectiveness) or as the quadruple aim^{16,17} (which also incorporates staff or provider experience). Reflecting the association between staff experience and quality of care,¹⁸ we use the term quadruple aim in this review.

Legacy integrated care models

National policy in England has for some time advocated a stronger role and increased accountability for primary care in delivering integrated care. Most notably, Lord Darzi's *High Quality Care For All. NHS Next Stage Review Final Report*¹⁹ gave rise to integrated care pilots, community-based polyclinics with a primary care function and a renewed focus on practice-based commissioning. The subsequent integrated care and support pioneers were a result of a national partnership, through which an integration plan set out how local structures, such as health and well-being boards, could facilitate health and care agencies to make further steps towards integration.²⁰ Within this, primary care was said to have:

... a key role to play in supporting the local delivery of integrated care, by providing continuity across primary, community and secondary settings, focusing on preventative care and facilitating access to social care, including for carers, through effective coordination of care planning and management and risk stratification.

*National Collaboration for Integrated Care and Support*²⁰

In parallel to the selection of the integrated care and support pioneers, the Better Care Fund programme was launched, providing the means by which pooled budgets could be used to deliver agreed NHS and local government integration plans. Over time, the integrated care and support programme was absorbed by NHSE and is now simply known as NHSE Pioneers.

At the time of the introduction of the new care models, the evidence base on health-system integration was variable, characterised by a lack of consensus on what constitutes integrated care,^{21,22} with no single model or approach to integrated care that was feasible for universal application.^{23,24} However, although a universal model may not exist, the evidence base of legacy integrated care models offers the prospect of important lessons for what might be considered the 'active ingredients' for MCP models of care.^{25–29} The 'critical ingredients' for integrated care had already been identified as relationship management, staff development and staff retention.²⁹ There is also a recognition that understanding integrated care requires a framework of the micro (e.g. clinical integration), meso (e.g. professional and organisational integration) and macro (e.g. system integration).³⁰

Several of the current MCPs began their integrated care journey as pilots, pioneers or GP Access Funds³¹ (previously known as the Prime Minister's Challenge Fund) recipients. Although the integrated care pilots/pioneers specifically followed an integrated care agenda, the GP Access Fund³¹ schemes took a more indirect route to integration, as the focus was 'to help improve access to general practice and stimulate innovative ways of providing primary care services' (contains public sector information licensed under the Open Government Licence v3.0).³² In parallel, in some localities, a more bottom-up approach to community integration developed, such as 'Healthy Villages' in Birmingham,³³ where community partnerships were established with the NHS and the local authority, again as a result of the combined pressures of demographic and financial challenges.³⁴ Lack of formal evaluation, compared with the vanguards, means that the learnings and outcomes are difficult to access.

The evaluation of the UK Integrated Care Pioneers found some convergence of activities towards a similar set of specific interventions, including primary care-centred features of multidisciplinary teams (MDTs) and care navigation.³⁵ It was also noted that these pioneers became less ambitious and more pragmatic in their efforts to achieve horizontal local integration as delivery progressed.³⁵

Table 1 provides some examples of what might be considered to be the main legacy models of MCPs, such as integrated care approaches, either in England or internationally. The models we have listed in Table 1, and described below, were identified to be of interest to MCP vanguards. These models were mentioned in the 'value propositions' that each vanguard was requested to submit with their programme logic models (to request funding from the NHS Transformation Fund in 2016/17).⁴² These legacy or international models were mentioned because they resonated with MCP vanguards in their design or aspirations. The Strategy Unit had access to these materials, as we supported the development of the vanguard logic models, and the new care models team gave permission to further use the materials for the purpose of this synthesis. As such, the international models discussed here are not intended to be an exhaustive assessment by the review authors, but rather a reflection of models that were known to, and thus likely to influence, MCP vanguards.

TABLE 1 The MCP legacy: predecessors and influential models

Name	Location	Timeline	Evaluation/overview
Predecessors to the MCP			
Integrated Care Pilots	England	2008–10	RAND Europe, and Ernst and Young LLP (2012) ³⁶
Integrated Care Pioneers	England	First wave: 2014 Second wave: 2015	Erens <i>et al.</i> (2016) ³⁵
GP Access Funds	England	First wave: 2014 Second wave: 2015	SQW and Mott MacDonald (2016) ³²
Other models of care that have influenced MCPs			
ACO	USA	Pioneers: 2012–16 Next generation: 2018	L&M Policy Research (2016) ³⁷
Alzira	Spain	First 15-year contract in 1999 Second 15-year contract in 2003	de Rosa Torner (2012) ³⁸
Buurtzorg	The Netherlands	Founded in 2006	Gray <i>et al.</i> (2015) ³⁹
Gesundes Kinzigtal	Germany	Founded in 2006	Hildebrandt <i>et al.</i> (2010) ⁴⁰
Nuka	USA – Alaska	Founded in 1999	Southcentral Foundation (2016) ⁴¹

ACO, accountable care organisation.

Accountable care organisations

Of the international models, arguably the key influencer of the new care models was the US accountable care organisation (ACO) approach. ACOs were introduced in 2012, following new legislature for health-care reform in the USA, which directed the Centers for Medicare and Medicaid Services (CMS) Innovation Centre to develop and test new payment and service delivery models through the *Patient Protection and Affordable Care Act*.⁴³ ACOs are described as a group of providers that are contractually responsible to a commissioner to provide all of the care for a given population over a defined period of time, and to uphold pre-agreed quality outcomes within a given 'capitated' budget or 'fee-for-service' agreements.⁴⁴ The programme theory for ACOs is that *if* providers have an opportunity to share in financial rewards (or face penalties), *then* ACOs will reduce fragmentation and duplication in medical care. It is suggested that the improved communication and co-ordination across providers, physicians and patients will improve the quality of services and reduce spending.⁴⁵ The Pioneer ACO programme started in 2012, with 32 pioneer sites chosen by the CMS to participate, and ended in 2016 with eight organisations.⁴⁵ Forty-four next-generation ACOs have been selected by the CMS and will begin the programme in 2018.⁴⁵

Gesundes Kinzigtal

Gesundes Kinzigtal (meaning 'healthy Kinzigtal' – the town in south-west Germany where the model was introduced) is an accountable network of physicians, partnering with a health-care management company, driven by the needs of multimorbid patients requiring co-ordinated care.⁴⁶ Long-term contracts were put into place in 2006 with two German non-profit sickness funds to integrate health and care services for their insured populations. The integrated system covers a population of 60,000, of which Gesundes Kinzigtal is in charge of the health-care budget of 31,000 'assureds'.⁴⁰ It has a responsibility to deliver regionally integrated health and care services, covering all age groups and care settings, with the explicit triple aims of improving the health of the population, enhancing the patient care experience and reducing the per capita costs of care. To date, improved population health outcomes,⁴⁰ potential cost-effectiveness,⁴⁷ more appropriate access (decline in overuse, underuse and misuse of health care) and an increase in health-care quality have been reported. In early 2017, the lessons from Gesundes Kinzigtal were applied to the launch of a new integrated care model in a city in northern Germany, which was designed to improve access to health services in two of Hamburg's disadvantaged suburbs: Billstedt and Horn. We discuss the underpinning evidence around access in integrated systems in *Chapter 4*.

Alzira

The Spanish 'Alzira' model (named after the town where the model was first implemented) is akin to the financially led model of the US ACOs. However, it has a unique feature of private and public contracting, such that the private sector finances the construction and operation of the health-care infrastructure and delivers clinical services through a capitation fee. This reduces the public sector partner role to that of commissioner of health care.⁴⁸ The regional government entered into a long-term contract in 1999 for 15 years, and cost-effectiveness benefits were widely reported.³⁸ Acerete *et al.*,⁴⁹ however, dispute some of the claims, stating that 'the precise level of cost savings achieved has never been subject to public scrutiny and remains controversial, with a true like-for-like comparison impossible'.⁴⁹ The financial innovations of both the ACO and the Alzira models have influenced the vanguards' contracting and budgeting mechanisms, and we explore this further in *Chapter 5*.

Nuka

The Nuka System of Care⁵⁰ is built on the premise that the relationship between the primary care team and the patient/customer-owner is the single most important tool in managing chronic disease, controlling health-care costs and improving the overall wellness of a population. It was developed in the late 1990s by the Southcentral Foundation, a non-profit health-care organisation serving a population of around 60,000 Alaska Native and American Indian people in Southcentral Alaska.⁴¹ The accountability for improved health outcomes in Nuka lies with the partnership of providers and people in the Native Alaskan community, who changed from being the 'recipients of services' to the 'owners' of their health system, so that they could co-design services and oversee implementation. The Southcentral Foundation's annual progress report documents outcomes that include increased patient satisfaction and significant reductions in the use of

specialist and hospital-based treatment.⁵¹ The key to the success of this model of integrated care is suggested to be the transfer of the partnership 'power' to the recipients of services.⁵¹ We explore partnerships for integrated care further in *Chapter 6*.

Buurtzorg

The Dutch Buurtzorg (neighbourhood care) not-for-profit model was born out of a desire to improve the staff experience of community nurses delivering integrated home care. It aimed to provide an accountable partnership with social innovation, 'humanity over bureaucracy', at its core,⁵² by attempting to shift the care delivery mindset from managerial protocols and administration to clinical autonomy and accountability.⁵³ Buurtzorg Nederland was founded in 2006, with a small team of professional nurses, and following 10 years of operation, the model has extended to encompass 10,000 nurses in 850 teams in towns and villages all over the Netherlands, and has spread to a further 24 countries.^{54,55} In response to criticisms of 'cherry-picking' of patients in its reporting of cost-effectiveness, the Dutch Ministry of Health, Welfare and Sport commissioned the consulting firm Klynveld Peat Marwick Goerdeler (KPMG; Amstelveen, the Netherlands) to compare Buurtzorg with other home-care providers. This evaluation showed that, even after controlling for differences in patient characteristics, Buurtzorg remained a low-cost provider of home-care services; the addition of patients' total costs (nursing home, physician and hospital costs) resulted in Buurtzorg's total per-patient costs being around average for the Netherlands.³⁹ Moreover, the quality of care was deemed efficient, as demonstrated by patient satisfaction⁵⁶ and a high level of staff experience, as shown by Buurtzorg being named the best national employer in 2010–12.³⁹ *Chapters 4–6* provide further support for the inclusion of staff experience as a health-care aim.

Multispecialty community provider progress

As a result of reductions in agency/locum staffing at trusts and commissioner underspends, the *Next Steps on the NHS Five Year Forward View*⁵⁷ reported a context of 'improved financial grip' in 2017 compared with 2014. A further contributor was the deployment of funding to manage local emergency activity pressures. Here, the MCP and PACS were highlighted as having lower growth in emergency hospital admissions and emergency inpatient bed-days than the rest of England, in the period of January–December 2016, compared with the October 2014–September 2015 vanguard baseline. Of the MCP vanguards, Principia Partners in Health reported absolute reductions in emergency admissions per capita.⁵⁷

The *Next Steps on the NHS Five Year Forward View*⁵⁷ notes that sample sizes and the duration of implementation may limit the applicability of the results. The same document suggests that vanguards, in particular, are expected to 'earn their passage' and take clearer financial accountability for reducing emergency hospitalisation growth in their area, in order to be deemed a success and earn accountable care system (ACS) status.⁵⁷ Thus, the definition of vanguard 'success', and a more general pressure to report a positive impact, through the measurement of emergency hospital admission growth in the short term, was noted by some commentators to signal a change from a model that is 'coherent, patient-centric and focused on prevention', which takes time towards delivering a more tangible measure of success, to one which has to justify central investment.⁵⁸ The scaling-down of ambition – 'the original Forward View vision of PACS and MCPs, as embodied by the vanguards, is still relevant but its collision with reality has produced a more modest set of ambitions and a less all-encompassing definition of success'⁵⁸ – resonates with the previous assessments of integrated care pioneers.³⁵

However, this might not be the case for all vanguards; those that are more established and moving from being experimental to business as usual – 'A few areas (particularly some of the MCP and PACS vanguards) in England are on the road to establishing an ACO, but this takes several years'⁵⁷ (contains public sector information licensed under the Open Government Licence v3.0) – may become more ambitious, with the formation of ACSs initiating 'the biggest national move to integrated care of any major western country'.⁵⁷ The first eight candidates for ACSs were announced in June 2017,⁵⁹ with the remit to retain existing health

and social care structures (this is different from ACOs), to deliver integrated care with increased financial accountability, negating the need for burdensome annual transactional negotiations.^{57,60}

Aim and objectives

The aim of this synthesis was to provide decision-makers in health and social care with an 'actionable' evidence base for the MCP model of care. We believe that this synthesis, based on realist principles, can serve as a 'blueprint' with 'active ingredients' to inform the design and delivery of current and future iterations of the MCP model.⁶¹

Specifically, the objectives of the synthesis were to:⁶¹

- articulate the underlying programme theories of the MCP model of care, by mapping the logic models of the 14 MCP vanguards, selecting and prioritising significant theories for investigation
- identify sources of theoretical, empirical and practice evidence to test selected programme theories
- appraise, extract and analyse evidence, reconciling confirmatory and contradictory evidence
- develop the synthesis, explaining how the mechanisms used in different contexts contribute to outcomes and process variables
- consult with key stakeholders to validate the findings and to test their applicability to different contexts
- finalise the synthesis, incorporating stakeholder feedback
- disseminate the findings, preparing a series of practical tools to support knowledge.

Chapter 2 Review methodology: stakeholder engagement, programme theory elicitation and analysis of the literature

On initiation, the review team registered a review protocol with the PROSPERO database and published an expanded version within a peer-reviewed journal.⁶¹ This chapter first describes how we analysed existing logic models to identify programme theories and then engaged with stakeholders in order to verify and elucidate these potential programme theories. Subsequently, we conducted a systematic search of the relevant literature, supplemented by further purposive explorations for evidence, underpinning each programme theory component. Key to the review strategy was our realisation that we needed to prioritise programme theory that could most inform the current development of MCPs. A two-level approach was used to populate, first, full programme theory reviews (R1–3), and then, second, a larger range of programme theory maps (M4–7), which seek to identify the key evidence underpinning additional important programme theory components prioritised by the stakeholders. Just as an intervention may have multiple intervention components, each triggering one or more mechanisms, so too a programme theory can be seen to have multiple theory components, each engaging with one or more mid-range theories. In actuality, when a programme is delivering against the intended outcomes, all of the programme theory components operate synergistically and interactively. However, for evaluation purposes, theory components are best dissected as separate entities and explored, in this report, via either programme theory reviews or programme theory maps. By programme theory component, we therefore refer to the most meaningful level of granularity for the overarching programme theory to be examined, by mapping and assembling the literature.

This chapter seeks to follow the reporting standards advocated by the National Institute for Health Research (NIHR)-funded Realist And Meta-narrative Evidence Syntheses: Evolving Standards (RAMESES) project.⁶² We describe how we carried out our review, following the steps outlined in comparable projects.⁶³ We have found it helpful to follow Pawson's⁶⁴ time and task template for a realist synthesis. Specifically, with regard to searching for evidence, we have broadly followed the six principal elements identified in a forthcoming chapter on the 'realist search'.⁶⁵

As stated in the previous chapter, the aim of our realist synthesis was to provide decision-makers in health and social care with a practical evidence base relating to the MCP model of care.

Justification for the choice of a realist/best-fit framework synthesis

Best-fit framework synthesis

We took the innovative approach of using a best-fit framework synthesis as a means of organising and mapping data, as a prequel to a formal realist synthesis. A best-fit framework synthesis offers a rapid tool by which to facilitate data extraction and analysis, and thus maximise the value of the interpretive synthesis in a way that is amenable to the production of practical recommendations.⁶⁶ Framework synthesis is considered 'especially suitable in addressing urgent policy questions where the need for a more fully developed synthesis is balanced by the need for a quick answer'.⁶⁷ A best-fit framework synthesis offers a pragmatic variant of framework synthesis. Instead of spending a disproportionate amount of time in developing a definitive conceptual framework with stakeholders, a best-fit framework synthesis uses the best-available conceptual or instrumental frameworks as a starting point for extracting and analysing the data. In doing so, it harnesses 'the recognised strengths of both framework and thematic synthesis'.⁶⁸ Furthermore, in this project, we specifically sought frameworks with 'practitioner credibility' with those working within a rapidly developing area of models of care. Framework synthesis was thus selected as a vehicle for the future dissemination of findings. A best-fit framework synthesis was subsequently combined with a synthesis following realist principles, which is particularly suited to exploring what works, when, for whom and in what circumstances.

The realist principles used in this project derive from the need to use methods that acknowledge the inherent complexity within programmes of change and their evaluation.⁶⁹ Although the initial development of the realist methodology focused on realist evaluation, using purposely collected and readily available primary data, Pawson⁶⁴ subsequently identified the need for, and documented, a corresponding process within the emerging science of reviews. The realist synthesis approach has been consolidated and explored more fully, as demonstrated by Rycroft-Malone *et al.*⁷⁰ in 2012. Particularly influential is the trend to combine elements of realist evaluation and synthesis in order to optimise relevance and transferability. The realist approach acknowledges that interventions do not necessarily transfer easily from one setting to another, and offers deeper insights into the contextual factors involved in change. Realist approaches have been demonstrated as having particular utility within the NIHR's Health Services and Delivery Research (HSDR) programme-funded projects.^{63,71,72}

Programme theory development and refinement requires undertaking a series of activities. These activities do not necessarily take place sequentially, and are typically iterative. However, we present them serially for transparency and ease of understanding. We undertook the following activities, reinterpreted from Pawson⁶⁴ and others in a forthcoming book chapter (due for publication in June 2018).⁶⁵

- formulating specific questions as lines of inquiry⁷³
- exploring a proposed area of research to identify previously published research and, if necessary, refining the research question (the background search)⁶⁴
- identifying theories as hypothetical explanatory accounts (initial programme theories) of how an intervention works (the search for programme theories)⁶⁴
- identifying empirical evidence to test and refine the initial programme theory (the search for empirical evidence)⁶⁴
- responding to new information needs that emerge during testing and refining the initial programme theory (the final search to refine programme theories)⁶⁴
- documenting the search process in an explicit and transparent manner.^{62,74}

A realist synthesis is theory driven and seeks to unearth 'the unseen elements of a programme (the mechanisms) that lead to its success or failure'.⁷² Configurations of contexts, mechanisms and outcomes are mapped to show how particular contexts or conditions trigger mechanisms to generate outcomes. Multiple mechanisms may be activated within each intervention, each representing a 'pathway from resource to reasoning and response'.⁷⁵ The reasoning and response may derive from the perspectives of the receivers, the organisers or those delivering the programmes.⁷⁶

Programme theory 'describes the theory built into every programme',⁶² being expressed as 'if we provide these people with these resources it may change their behaviour'.⁷⁷ A strength of realist synthesis is its facility to accommodate diverse sources of evidence when 'reconstructing' programme theories. It draws from a systematic process that includes stakeholder engagement, an overview of relevant extant theory⁶² and close examination of primary research.⁶⁴ Such an approach faces three challenges: (1) many commentaries may not articulate a programme theory, or at least may not make a particular programme theory explicit; (2) programme theories may be expressed in a variety of forms and formats, making translation and comparison problematic; and (3) the non-standardisation of format makes it difficult to prioritise theories for further exploration.

However, important adaptations from the classic realist approach acknowledge our ready access to an explicit source of programme theory (i.e. the logic models produced by the local MCP teams). Although programmes of change (i.e. New Care Models programmes) may be considered to be 'theories incarnate',⁶⁹ these theories truly 'take on flesh' when realised within the structure of logic models. In this review, we developed a theory by analysing the definitive published logic models, along with their associated narratives, as a source of articulated theories about 'what works' in MCP models and the conditions that might result in the achievement of programme success.

For the purposes of this review, a MCP was considered to be ‘a new type of integrated provider’ that ‘combines the delivery of primary care and community-based health and care services’ with the result that ‘services previously based in hospitals’ (e.g. outpatient clinics, diagnostic, day surgery, etc.) may be delivered in the community. It may also involve the integration of ‘mental and physical health services and, potentially, social care provision, together with NHS provision’ [adapted from NHSE (2016);¹¹ contains public sector information licensed under the Open Government Licence v3.0].

As this definition implies, successful implementation and transformational change are contingent on diverse factors that must be acknowledged within a review approach that accommodates complexity and contingency. As a consequence, we selected a theory-driven approach to evidence synthesis, underpinned by the realist philosophy of science and causality.⁷⁸

Review questions

Our original review questions were as follows:⁶¹

- What are the foremost theories of change inherent within the MCP model of care?
- What seem to be the ‘active ingredients’ that should inform the design of MCP models of care?
- What are the social and cultural conditions that influence (enabling and blocking) change within MCP models of care, and how do these mechanisms operate in different contexts?
- What are the key knowledge gaps and uncertainties in relation to the design, implementation and evaluation of MCP models of care?

Changes to the review process

No major changes to the review process were made subsequent to the publication of the review protocol.⁶¹ However, to maximise the utility of the realist synthesis for project stakeholders, and to enhance its value for NIHR, we decided to complement our approach to full realist reviews of key programme theory components with a broadly analogous process of ‘mapping’ for other components identified during the identification of a programme theory.

This mapping approach combines elements of the realist review process,⁶⁴ rapid realist review approaches⁷⁹ and features utilised in systematic mapping.⁸⁰ Specifically, rapid realist methodology seeks to incorporate the theory specification of a realist review,⁶⁴ with the boundary clarification aim of a scoping review.⁸¹ In contrast to a systematic review, systematic mapping does not aim to answer a specific question. Instead, it ‘collates, describes and catalogues available evidence (e.g. primary, secondary, quantitative or qualitative) relating to a topic of interest’.^{80,82} Included studies are used to develop a greater understanding of concepts and to identify knowledge gaps and knowledge clusters. Systematic mapping aims to share the same characteristics of being systematic, explicit and reproducible that are possessed by systematic reviews, but can be used to address open-framed questions on broad topics. Systematic mapping is particularly valuable for broad, multifaceted questions, as revealed by our identification of programme theory components, whereby a topic of interest is not considered suitable for systematic review.

Identification of programme theories

A ‘classic’ realist synthesis begins with the identification of opinions and commentaries as a source of programme theories for which evidence is later sought.

Multispecialty community providers as new care models represent complex social programmes, involving multiple stakeholders or actors, structures and organisations. We were able to harness a ready source of programme theory, in the form of logic models developed by 12 of the 14 MCPs. These logic models were

submitted to NHSE as part of its programme documentation in the first year of new care model funding. Although falling short of a standardised format, all were informed by the conventions of logic model presentation.⁸³ Logic models 'outline the inputs, processes, outputs and outcomes of a programme'⁸⁴ in an accessible diagrammatic form, typically with accompanying notation and/or explanatory text. The logic models developed by the vanguards typically follow the model recommended in *The Magenta Book: Guidance for Evaluation*,⁸⁵ which lends itself to the CIMO (context, intervention, mechanisms, outcomes)⁷³ framework within which we planned the search strategy.

An initial rapid desk-based analysis of the MCP vanguard applications identified that multiple interventions and mechanisms are being developed at the micro, meso and macro levels [e.g. extensivist primary care, multidisciplinary community teams, social prescribing (interventions), community assets and social capital (mechanisms)]. Resources can be 'material, cognitive, social or emotional'.⁷⁷ Resources identified within NHSE's *MCP Framework: Working Document*⁸⁶ include design, evaluation, integrated commissioning, patient and community empowerment, technology, workforce, leadership and engagement.

Formulating specific lines of inquiry

In many realist reviews, the research team needs to 'surface' programme theories from interviews with stakeholders, and from the published literature and more ephemeral contributions, such as blogs and newspapers. Our access to the formal logic model submissions submitted by vanguards as a requirement for applications for funding allowed us to explore a full spread of interventions, as identified by the vanguards, against a backdrop of different contextual characteristics. The selection of vanguard sites holds an inherent advantage in offering a form of 'intensity sampling'. However, from a methodological point of view, the concept of a 'vanguard' holds an inherent risk of selection bias (i.e. the likelihood that sites have been selected according to their readiness for new care models). So, although we sought to explore the implementation of new care models across a diverse sample of care providers, the total sample itself had been preselected. Such caution is particularly important when looking to apply review findings to roll out and sustainability for 'failed' vanguard applications and for those sites that could not aspire to a vanguard application. Nevertheless, existing MCP vanguards represent significant diversity of both contexts and target populations, as acknowledged in our choice of an approach that emphasises 'what works for whom under what circumstances',⁶⁹ and offer the potential to identify context-specific issues and constraints at a particular level, even where a general pattern of successful implementation appears to prevail. Under these conditions, it becomes particularly important to implement a series of validation checks and balances within the strategy for data synthesis.

Strategy for programme theory identification

The extraction and articulation of programme theories offers a foundation for the entire realist synthesis project. We analysed all available MCP logic models (12 of the 14 sites), supplemented by related documentation available in the public domain (via vanguard websites and the NHSE website). We worked systematically through all of the available logic models, extracting causal links in the form of 'if-then' statements.⁸⁷ We then grouped these if-then statements thematically within a spreadsheet (*Table 2*) and sought to reconstruct the causal pathways into an aggregated logic model that represented the integrated programme theory from across multiple sites (see *Chapter 3*).

When causal links were incomplete, an attempt was made to verify these links from the logic model of an alternative source. When this was not possible, these orphan links were 'parked' for later review and rationalisation. Logic models are sometimes criticised for being 'rigid' and for not making explicit the causal pathways through which change occurs.⁸⁴ Closer examination of our data source confirmed these complexities – sometimes nodes or links between logic model components were imperfectly articulated; in other instances, intermittent links were omitted, resulting in incomplete causal pathways.

An investigation of the full set of available logic models was intended to reveal the diversity of the different programme theories underlying MCPs, while also uncovering fundamental local differences in approach or emphasis. The resultant set of programme theories was compiled for discussion with the advisory group.

TABLE 2 Illustrative if-then statements

Statements	
If ...	Then ...
Commissioners fund new community facilities	Community services will increase capacity
Commissioners fund new community facilities	Acute services will discharge patients to community facilities (step-down)
Commissioners fund new community facilities	Health-care professionals will treat more patients closer to or at home
Commissioners fund new community facilities	Practitioners can support the patients most likely to need acute care
Commissioners fund paramedic practitioner roles to support home visiting	Fewer patients will attend A&E departments
Commissioners fund paramedic practitioner roles to support home visiting	GPs will refer fewer patients for emergency admissions
Commissioners fund paramedic practitioner roles to support home visiting	Commissioners will negotiate disinvestment in acute beds
A&E, accident and emergency.	

At the same time, team members were sensitising themselves to different interpretations of the new care models initiatives through official documents, local guidance, independent commentaries and blogs and current awareness services, such as the *Health Service Journal*, *The Commissioner Newsletter* and NHSE's *New Care Models Bulletin*. Broader exploration of the wider historical and political context also took place; for example, via the literature on large-scale transformation.^{42,88}

As a model of care comprising a broad range of interventions, the MCP model generated multiple programme theory components. The richness of the data is significant – we extracted, in total, 1394 if-then statements. All statements were coded using the agreed best-fit framework and then grouped into themes that emerged from the data. This allowed us to compare the MCP programmes in terms of context, mechanism and outcome configurations efficiently and rapidly within the subsequent realist synthesis.⁷⁹

We developed twelve draft theories:

1. innovative services deliver sustainable care
2. community-based, co-ordinated care is more accessible
3. collective responsibility improves quality and safety outcomes
4. multidisciplinary teams provide continuity of care
5. local MCP contracting delivers ACOs
6. pooled budgets incentivise integrated care providers
7. fostering relational behaviours builds resilient communities
8. integrated care navigators increase workforce capacity
9. engaged and trained staff lead cultural change
10. new ways of working enable staff resilience
11. evaluation activities sustain transformational change
12. information-sharing enables effective collaboration.

By cataloguing the different programme theories underlying MCPs, as identified from the logic models (reported in *Chapter 3* of this report), we were able to identify underpinning mechanisms by which different programme components achieve their effect, as perceived by those actively involved in designing and implementing the New Care Models programmes across the vanguard sites.

Agreeing the focus of the review

To agree the focus of the review, we presented our initial programme theory components and a basic overview of constituent if-then statements at a 1-day stakeholder meeting. Our stakeholder event included the following people:

- an academic, who was the chief investigator of another HSDR programme-funded New Care Models project (reference number 15/77/10)
- the accountable officer/chief clinical officer of a CCG, which was a MCP vanguard site
- the chief officer of a CCG, which was a MCP vanguard site
- a communications consultant and fellow
- the Director of Primary Care in a CCG
- an evaluation lead in NHSE
- an executive director of a MCP vanguard site
- a regional manager of the New Care Models programme in NHSE
- two patient and public representatives
- the Director of Strategy of a community health-care foundation trust.

We presented our initial programme theorising as ‘propositions about how new care models are intended to work’, and invited participants to comment on these ideas and refine, extend and prioritise them.

Contribution of the project advisory group

A detailed assessment of the area under study identified a lack of a single appropriate framework. In June 2016, the project advisory group was briefed on the aims, objectives, scope and approach of the study, with a specific focus on the best-fit framework synthesis approach, sharing with them a tentative framework with which the review team intended to support the realist synthesis. The discussion proved to be extremely fruitful, as the review team were made aware of a forthcoming framework from NHSE.

Working with the advisory group allowed us to test the proposed approach and programme theories with key stakeholder groups. It also made us aware of relevant work within the New Care Models programme and the vanguard sites. For example, the review team secured early sight of an implementation matrix being developed by NHSE, which sets out the key characteristics and expectations of new care models.

Creation of a metaframework

Subsequently, we identified five existing frameworks to cover the various aspects relevant to the MCP model of care. These were derived from three relevant guidance documents for MCPs (a, b and e) and two integrated care frameworks (c and d):

- (a) the eight enablers of transformation in *The Forward View into Action: New Care Models: Update and Initial Support*⁸⁹
- (b) *MCP Framework: Working Document*⁸⁶
- (c) *Framework on Integrated, People-Centred Health Services*⁹⁰
- (d) *System Leadership: Lessons and Learning from AQuA's Integrated Care Discovery Communities*⁹¹
- (e) *The Multispecialty Community Provider (MCP) Emerging Care Model and Contract Framework*.¹¹

Finally, a sixth quadruple aim framework was identified to capture the intended outcomes, namely, patient experience; the health of the population; health-care costs; and staff experience.¹⁷ The chosen frameworks each contributed unique elements, and so we followed the approach, previously reported by Carroll *et al.*,⁶⁸ of merging the six frameworks into a single metaframework. Essentially, the best-fit framework provided an additional analytical lens for the data, separate from the realist terminology and principles, and offered resonance with the world view of the stakeholders. By combining the six frameworks within a single metaframework, we constructed both a conceptual map and a vehicle for the organisation and extraction of data (Figure 1).

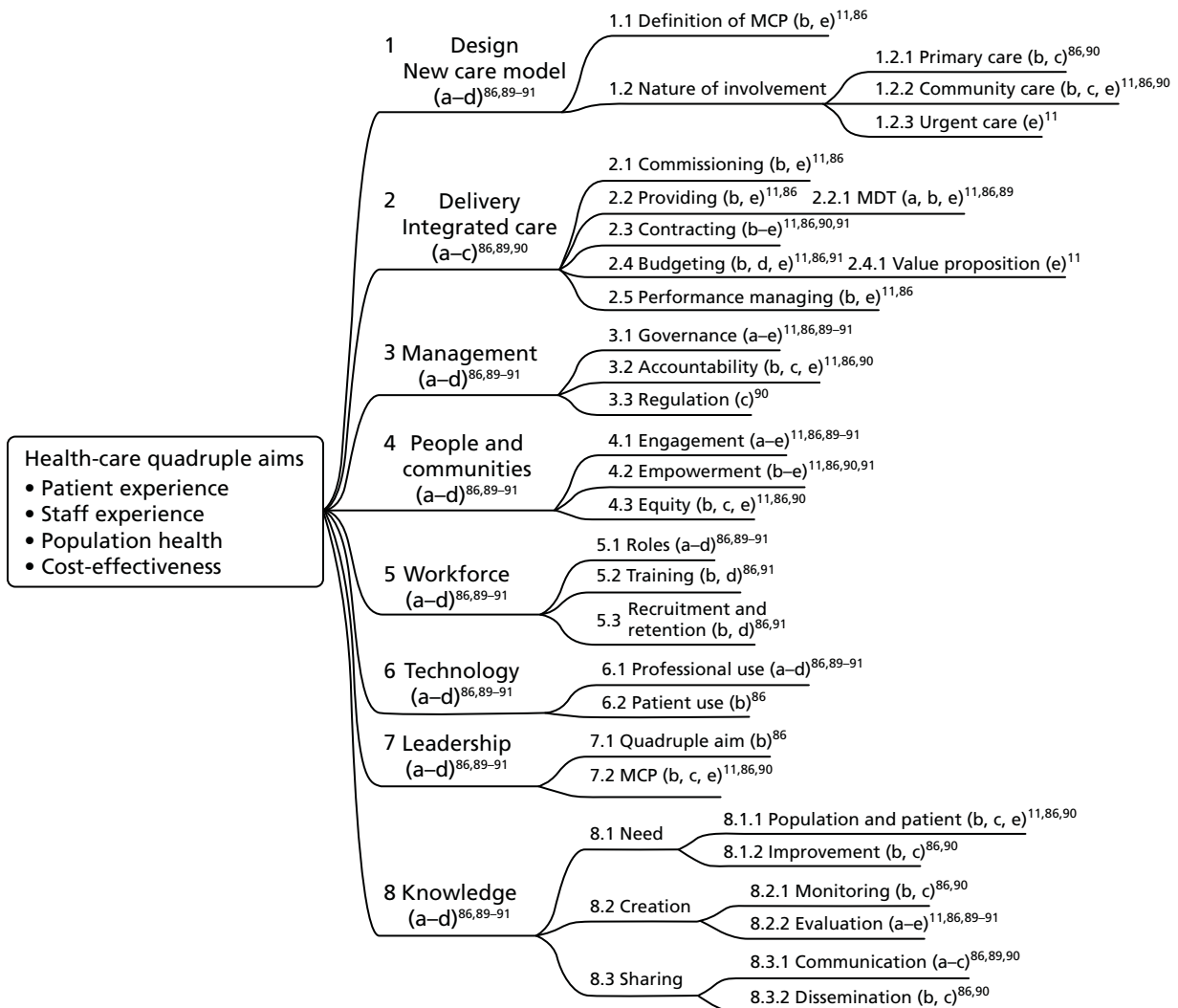


FIGURE 1 Best-fit framework.

Strategy for prioritisation and finalisation of the candidate programme theories

Following the stakeholder workshops, we held a review team meeting to reflect on the issues raised and to agree the focus of the review. We chose not to utilise a formal method of prioritisation, recognising that our stakeholder event had not been organised on representation principles; instead, stakeholders offered valuable perspectives on the 12 individual programme theory components and the composite programme theory (Figure 2). It was interesting to observe a strong consensus on priorities across professional and lay representation, even when more overtly public- or patient-focused programme theory components featured in the candidate list.

As a result of the stakeholder event, the review team:

- merged several related programme theory components in which synergies were identified
- refined the wording of several programme theory components to make them more accurate or salient
- prioritised several theory components for full realist review, while allocating the remaining theories to a broad focused mapping approach (see Box 1).

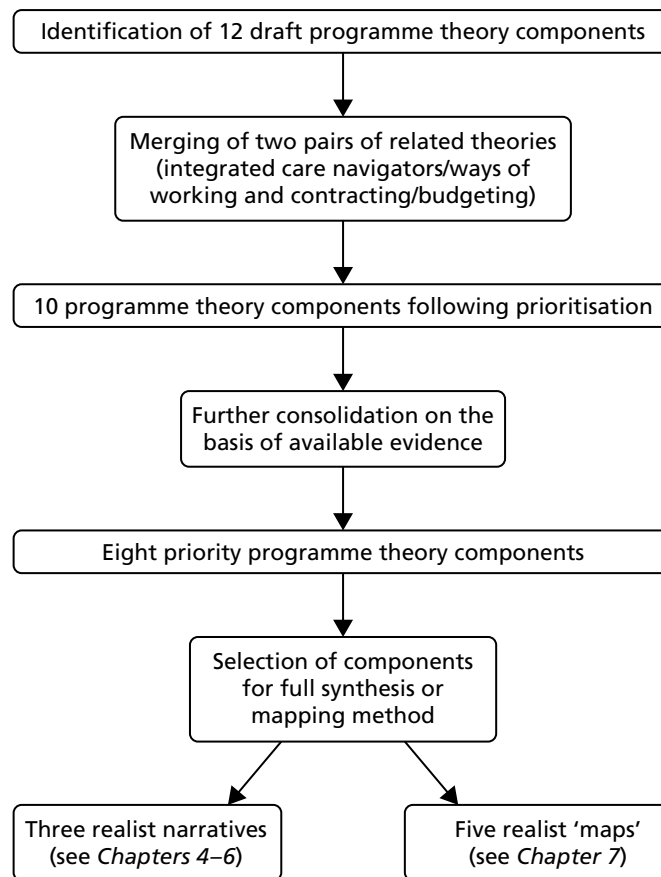


FIGURE 2 Identification and prioritisation of programme theories.

The stakeholder group had also initiated an informative discussion on the possible unintended consequences of specific elements of the MCP model; for example, how moving diagnostic services into the community might stimulate increased locality demand with a consequent effect on false positives, referrals and admissions.

A flow diagram and narrative was developed for each draft theory (see *Chapters 4–7*), which were reviewed with the project advisory group in October 2016. The group was asked to validate theories and to prioritise those appropriate for realist review. This conversation was supplemented with telephone interviews with each of the three MCP leads on the advisory group. From working with the group, we were able to merge two of the theory components (integrated care navigators and ways of working) into one and prioritise three theory components for realist review (see *Chapters 4–6* and *Figure 2*). The group opted to prioritise theory components that represent the more innovative aspects of the MCP model, typically those for which coverage by existing reviews is more limited. We proposed to conduct mapping reviews for the remaining theory components (see *Chapter 7*) to provide realist-oriented overviews of the key review literature.

We subsequently merged the two theories relating to contracting and budgeting, resulting in 10 theories (four prioritised for realist review, with the remaining six subject to mapping review; see *Figure 2*). Finally, a detailed examination of the respective evidence bases underpinning the programme theories indicated further commonalities in arriving at the following programme theories (*Box 1*) for exploration through the theoretical literature and the empirical evidence (three for review and five for maps).

The draft conceptual model was verified with key stakeholders from within the MCP vanguards and NHSE via individual follow-up telephone interviews (February to March 2017). Advisory group members and wider contacts were thus used to ensure that the model was fit for purpose and meaningful to decision-makers and practitioners.

BOX 1 Final list of the programme theory components for exploration through the theoretical literature and empirical evidence

Programme theory component reviews

R1: community-based, co-ordinated care is more accessible

If primary care providers grow (new/expanded roles, additional services, hubs, extended hours) to deliver place-based services, then patients will access more specialist care within community settings.

R2: place-based contracting and payment systems incentivise shared accountability

If commissioners award place-based contracts (incorporating new accountability and governance models, capitated budgets and risk-sharing), then providers will adopt integrated working.

R3: fostering relational behaviours builds resilience within communities

If commissioners and providers develop mutually beneficial relationships and co-produce services (with patients, the public, the voluntary sector, community groups, local businesses and other public services) within local communities, then health and care services will support local communities to build resilience.

Programme theory component maps

M1: collective responsibility improves quality and safety outcomes

If providers share a collective responsibility for outcomes through standard integrated pathways, then providers will improve the quality and safety of care.

M2: multidisciplinary teams provide continuity for patients with long-term conditions/complex needs

If primary care providers deliver care via MDTs (organised around natural communities), then patients with long-term conditions/complex needs will experience better continuity of care.

M3: engaged and trained staff expedite cultural change

If commissioners and providers train and fully engage staff in service transformation, then staff will drive the cultural change that underpins new ways of working.

M4: system learning embeds and sustains transformational change

If MCPs learn and adapt quickly using evaluation/monitoring loops and knowledge-sharing, then MCPs will sustain transformational change.

M5: proactive population health is dependent on shared and linked data

If MCP staff are not able to access shared/linked data, then patients will continue to experience fragmented care.

The methodology we employed offered a systematic vehicle for harnessing the exploratory potential of the realist lens within an accelerated time scale for practitioner benefit. Thematic coding against the best-fit framework allowed us to synthesise the underlying programme theories behind the MCP model by building up causal chains. This was followed by the identification of theoretical, empirical and practice evidence with which to test the programme theories, and appraisal, extraction and analysis of evidence, to include reconciling confirmatory and contradictory evidence.

Identifying and searching for abstract theories

Once the candidate programme theories were finalised, the next step was to seek to make connections between these lower-level service-based theories and higher-level, more abstract theories. This allowed us to develop a series of hypotheses that would be testable against empirical studies identified from systematic searching. More importantly, the level at which such theories operate would make it possible to produce transferable lessons about how, and in what circumstances, new care models produce their intended outcomes.

To identify the abstract theories, we pursued references from within the relevant literature, in particular analyses, commentaries and opinion pieces. This required looking beyond the actual programme theory to identify more specific mechanisms that might be activated by a MCP component (e.g. governance and control, local identity and place, collective ownership). In doing this, we sought to answer such questions as ‘how might we typify this intervention?’, ‘what core underlying idea is at work here?’ and ‘what other interventions are underpinned by similar ideas?’. Several key ideas underpinned more than one of the prioritised programme theories:

- (a) demand management
- (b) shared accountability
- (c) community ownership and resilience.

Abstract theories also emerged from the search for empirical evidence, as described below (see *Table 3*). Programme theory-related searches do not distinguish between empirical and theoretical literature, so it is efficient to look for examples of each when reviewing identified items. Our systematic approach, utilising Publish and Perish 5.23.9 software [(Harzing.com, Hendon, UK) see *Data extraction, quality assessment and synthesis for the realist reviews*] represents an improved and more auditable strategy than that used in comparable projects, such as screening the first five pages of Google Scholar (Google Inc., Mountain View, CA, USA) results.⁶³

Searching for empirical evidence and selection of studies

The next stage of our realist synthesis involved searching for empirical evidence in order to test and refine our programme theories. Following initial validation and prioritisation of the programme theories, we translated key concepts into a search strategy for four core bibliographic databases: MEDLINE, Health Management Information Consortium (HMIC), Cumulative Index to Nursing and Allied Health Literature (CINAHL) and EMBASE (for a sample MEDLINE search strategy, see *Appendix 2*). A systematic search was conducted to identify research- and practice-derived evidence produced between January 2000 and December 2016. Given that we were unable to identify a specific date from which the forerunners of the MCP model became apparent, any date cut-off point should be considered arbitrary. We therefore sought to achieve a balance that captures the historical legacy of a variety of MCP models, but which focuses on contemporary evidence. We considered that the team would be able to implement a cut-off date of 2000 in a more consistent manner than by calculating a 15-year cut-off date. The bibliographic databases searched included MEDLINE, PreMEDLINE, CINAHL, EMBASE, HMIC and The Cochrane Library, together with grey literature sources, such as The King’s Fund and the Nuffield Trust.

A search strategy was developed by qualified information specialists within the review team to identify published studies against which to test our theories (see *Appendix 2*). Candidate search terms were identified by analysing documentation, including logic models, from the MCP demonstrator sites. Terms were reviewed by the review team, with particular support from The Strategy Unit colleagues involved in supporting new care models. Further input came from the advisory group set up to support the synthesis.

The strategy covered all four prioritised theories, to avoid potential duplication from running separate searches. Results were screened and supplemented with searches of grey literature sources (see *Appendix 3*).

Test screening of a single set was initially performed independently by both screeners for 25% of the included records (*Table 3*). Regular debriefing sessions were held after each batch of records (e.g. after the first 100) to ensure ongoing consistency and identify any systemic reasons for disagreement. As the review team became more sensitised to the types of evidence available, this figure was downgraded to 20% for the remaining batches. Once acceptable agreement was reached, screening proceeded on an individual basis. Test screening was undertaken in batches to check consistency first. Disagreements were referred to one of the principal investigators.

Data extraction, quality assessment and synthesis for the realist reviews

To address the study questions, we sought a recognisably vast and diffuse evidence base with literature comprising four main types:

1. before-and-after studies or interrupted time series from previous or current initiatives [i.e. MCPs or forerunners, such as ACOs (in the USA)]
2. descriptive reports/case studies of current MCP initiatives, offering contextual detail and programme theory
3. commentaries, editorial and opinion pieces on the characteristics and rationale of MCPs and their forerunners
4. policy documents (e.g. from NHSE).⁶¹

For all types of evidence, we focused on their theoretical or contextual contribution, recognising that formal quality assessment of such heterogeneous items would be of little value. For conceptual and contextual types of evidence, we employed a reflexive approach to locate the contribution of each item within the overall body of evidence and to assess its specific contribution.

Our quality procedures were strengthened by an iterative, purposive search for additional confirmatory or disconfirming evidence. Our overall method for quality assessment therefore acknowledged the trade-off between relevance and rigour.⁷¹ In doing this, we sought to clearly identify whether materials had been selected for rigour, for context or for conceptual contribution. In addition, the quality and relevance of the evidence was assessed during the synthesis process, as each lead author weighed up how each individual item contributed to the development of the overall narrative account and to the review question and aims. This approach, which contrasts with the processes of formal quantitative study appraisal, is common within more interpretive synthesis methodologies.⁹²

TABLE 3 Allocation of screenings

Broad themes	Number of records screened	Test screening percentage	Screeners
Access	7965	25% (<i>n</i> = 1992)	Three pairs/six screeners
MCP	2230 (2160 from searches, plus 70 additional records)	25% (<i>n</i> = 558)	One pair/two screeners
Community	8772	20% (<i>n</i> = 1755)	Two pairs/three screeners
Contracting	2695 [original total of 2741, but identified 46 duplicates in Microsoft Excel® (Microsoft Corporation, Redmond, WA, USA)]	20% (<i>n</i> = 540)	Three pairs/three screeners
Ways of working	8843	20% (<i>n</i> = 1770)	Three pairs/three screeners

Literature of interest could pertain more widely to large-scale transformation as effected by, for example, ACOs (see *Chapter 1*), or broadly to the different new care model initiatives launched under the FYFV,¹ or it could relate specifically to the MCPs. We anticipated generic difficulties with searching for complex social phenomena,⁹³ together with specific difficulties in searching for terms associated with integrated care,⁹⁴ and thus placed particular emphasis on following up reference lists and conducting forward citation-searching to identify additional evidence. We also anticipated a limited literature examining UK-based MCPs and, therefore, sought to broaden the usefulness of the review by exploring the 'intellectual heritage' of the MCP model⁶¹ as identified in *Chapter 1*. In interpreting 'evidence', we adopted Williams and Glasby's⁹⁵ definition from the management domain, comprising empirical evidence from research; practice-based and experiential evidence from service delivery; and theoretical evidence. Consequently, our search strategy sought to include research studies (trials and reviews), service evaluations and case studies, in addition to thought-leading papers.

For the full realist reviews, we grouped studies together by programme theory. Each item of evidence was used to test the individual programme theory component and the degree to which studies supported, nuanced or challenged that theory. Each review was written up as a narrative account, following the example offered in previous commissioned realist syntheses.⁶³ As described in *Strategy for prioritisation and finalisation of the candidate programme theories*, this provides a transparent and auditable account of how each study contributed to theory testing, while allowing the reader to engage with the study findings and our interpretations of them. This process also allowed us to assess the quality of studies supporting, or contradicting, each programme theory component. We offer a summary of the theories in the next chapter before proceeding through each of the realist reviews and realist mapping reviews in turn, in the subsequent sections of the report.

We were aware that relatively few papers within our wider systematic search of related literature looked specifically at the characteristics of MCPs.

The development of the search strategy was iterative; as further keywords were identified within the accompanying narrative, each programme theory component lead ran supplementary search strategies to identify further relevant material. Materials were sifted by each reviewer, and references were privileged, first by relevance (e.g. UK based and contemporary), and then by their reach and significance (i.e. systematic reviews, multiple case studies to increase generalisability). As this was an interpretative and theory-testing review, the emphasis was on indicative evidence that could offer insights, rather than a comprehensive and exhaustive identification of the literature.

Our preferred pragmatic approach to data extraction was to use Google Forms (Google Inc., Mountain View, CA, USA), rather than NVivo (QSR International, Warrington, UK), which has been used by comparable teams.⁶³ This enabled us to collate, categorise and code information more rapidly, using drop-down categories in recognition of the specific mapping role of these reviews. This approach allows for a formative assessment of review categories and the contributions of literature extracted to date, and identifies gaps for further purposive searching. This approach also enabled us to itemise mechanisms and outcomes, and to map the papers that address these mechanisms and outcomes. A prototype form was developed and tested, incorporating the data extraction logic of 'confirming/negating/modifying evidence' from a previous comparable review.⁷⁰ One form was completed for each paper.

Data extraction, quality assessment and synthesis for the mapping reviews

For each of the four mapping reviews, we started with a core set of documents (step 1). We then used accepted 'pearl-growing' and 'citation-chasing' strategies⁹⁶ to follow up citations and references (step 2). As the intention was to describe and engage with relevant bodies of literature, illustrated by substantive contributions, rather than analysing and interpreting the findings, we did not seek to be comprehensive.

We accept that other relevant items could be identified, but we believe that our focus on reviews, overviews and key empirical studies offers a structured foray into these contiguous fields. This interpretive process was selected to correspond to the underlying intent of the overall review methodology and, therefore, contrasts with the more familiar aggregative search procedures utilised by a systematic review. Nevertheless, the search procedures were designed to be auditable, reproducible and 'systematic', utilising structured search software (the use of Publish and Perish is described later in this section).

Finally, as particular themes or intervention components were identified, we sought to purposively identify reviews from the broader literature (step 3). Given that the separation of the overarching programme theory into component programme theories and the relative emphasis of review and mapping approaches was decided on primarily pragmatic and logistic grounds, we sought to be as parsimonious and efficient as possible (e.g. when a paper contributed to multiple component theories, one person read it and extracted data for the benefit of the other analytical subteams).

We used a formalised process for searching Google Scholar using the freely available Publish or Perish software to identify, capture and document citation patterns. This process augmented the necessarily limited searches of title and abstract that characterise systematic reviews. We had already identified in our protocol the need for broad full-text searching to identify concepts otherwise buried within journal articles, books or reports. An exemplar for M7 is shown in *Table 4*.

Papers identified from the new care models systematic searches (see *Table 3*), together with the results of individual forays into the literature (pursuing references, citation searches and full-text Google Scholar searching), were initially mapped to any of the component theories identified by the review team. For data extraction, in contrast with the extraction approach used for the reviews, our realist mapping methodology looked for the presence of key contributions to the programme theory, either in supporting or contributing additional insights or nuances (e.g. around the influence of context), or by negating or challenging the theory. A sample data extraction form can be found in *Appendix 4*.

Follow-up to realist reviews and realist maps

Once a preliminary analysis had been undertaken for a substantive proportion of the realist reviews and maps, the team convened a stakeholder event in Birmingham in May 2017. This small group event targeted MCP vanguard sites, together with the project advisory group members.

TABLE 4 Exemplar strategy for Google Scholar supplementary strategies

M7 system learning embeds and sustains transformational change			
<i>If MCPs learn and adapt quickly using evaluation/monitoring loops and knowledge-sharing, then MCPs will sustain transformational change</i>			
Concepts	Concept 1	Concept 2	Number of references
MCPs	Training		31
MCP	Training		59
MCPs		Transformational change	59
MCP		Transformational change	33
MCPs		Organisational learning	22
MCP		Organisational learning	61
Total before removal of duplicates			264
Final total			99

In accordance with the NHS Health Research Authority's statement on public involvement, members of the public/NHS staff were involved in the research process as part of the planning and design of this review. They helped to co-produce the findings, rather than the event being to/for/about them. Our focus group was conducted with members as 'part of an advisory group, providing valuable knowledge and expertise based on their experience'⁹⁷ and thus, their involvement did not require ethics approval. This was confirmed by the Health Research Authority's decision tool assessment.⁹⁸

We invited advisory group members, MCP vanguard teams and other stakeholders who had been in contact with the project via related communication activities. On the day, 11 attendees participated, in addition to seven members of the core project team. Of these, two individuals were patient and public involvement (PPI) representatives; three represented commissioners; three came from MCP sites; two were communications specialists; and one was a NHSE lead. We chose a central Birmingham venue because of its accessibility and convenience for many of the 14 MCP vanguards.

The purpose of this event, using focus group methodology, was to explore three key questions:

1. Can community-based, co-ordinated care manage demand?
2. Can place-based contracting and payment systems incentivise shared accountability?
3. Can partnerships with community groups, local small and medium-sized enterprises and other public services build community resilience?

Designed in the format of a focus group and influenced by the realist interviewing technique,⁹⁹ this stakeholder event offered an opportunity to test and validate the finalised programme theory components and emerging findings with key stakeholder groups. On the day, the project lead and other core team members delivered an introduction to the project (aims/objectives/progress to date) and then walked attendees through the emerging findings for each of the three theory components (R1–R3). Participants were then invited to join a discussion on a relevant theory component. Permission was obtained to record the three discussions, subject to good data management procedures and the lead for each theory component then summarised the group's responses to the articulated theory and emerging findings (i.e. whether or not these were complete and accurate and whether or not findings resonated with their experience in their various contexts).

As a result, the team was able to collect and analyse a broad range of insights from participants, including decision-makers and operational staff from current and planned MCPs; research and support services staff; and PPI representatives.

Chapter summary

In this chapter, we have described the iterative process through which we integrated data from the preliminary logic models with insights from stakeholders and broader findings from the literature. In following the RAMESES guidelines,⁶² we have sought to make the process as transparent as possible. We have explained our reasons for selecting a realist review methodology, and described how we searched for programme theories, how we selected our programme theories, how we identified and selected papers and how we synthesised the papers.

Chapter 3 Programme theory

In *Chapter 2*, we set out the methodology for deriving the eight programme theory components (*Box 2*). In this chapter, we describe our understanding of these final refined programme theory components (see *Box 2*), illustrated by selected quotations from MCP vanguard logic models. These components have been gleaned from the analysis of individual logic models to capture causal links, through if-then statement extraction, followed by reconstruction of causal pathways, according to common themes. The logic models prepared by the MCP vanguards varied greatly in terms of the granularity and depth of detail, perhaps reflective of the maturity of the transformation programmes; those which were building on a legacy of earlier initiatives, such as GP Access Funds³¹ (previously known as the Prime Minister's Challenge Fund), typically comprised multiple models to represent key activities.

The MCP programme theory components encompass an intricate set of overlapping activities and assumptions, highlighting the inherent interdependencies within such a complex service transformation. It is important to note that this complexity is evident in the design of the MCP vanguards and is described in the logic model narratives. For example, the Principia MCP describes the engagement of patients in self-care as a strategy for reducing demand on community-based services, with the aim of releasing capacity within community services, to accommodate a shift from hospital-based to community-based care, and within hospitals to build excellence within core services.¹⁰⁰

Dudley CCG's approach reflects the different needs of different groups, but with a common focus on access, co-ordination and continuity of care, advocating a central role for primary care in driving integration of care across services.¹⁰¹

The programme theory components are notable in their coverage of both interventions (what MCPs will do) and ways of working (how MCPs will design and deliver services). The components relate to interventions, such as new contracts, as well as behaviours, such as community involvement. The permutation of activities is shaped by contextual factors, which differ across the 14 MCP vanguards. The documentation associated with MCP logic models recognises enablers of, and barriers to, change but makes little explicit reference, with limited exceptions, to what might be referred to, in realist methodology, as mechanisms.

As described in *Chapter 1*, the new care models formed an integral part of the FYFV vision,¹ signalling a more explicit shift towards system-wide and place-based transformation. As implementation progresses, commentators have advocated a focus beyond integration to a more cohesive approach to population health.^{102,103}

BOX 2 Programme theory components

- R1: community-based, co-ordinated care is more accessible.
- R2: place-based contracting and payment systems incentivise shared accountability.
- R3: fostering relational behaviours builds resilience within communities.
- M1: collective responsibility improves quality and safety outcomes.
- M2: MDTs provide continuity for patients with long-term conditions/complex needs.
- M3: engaged and trained staff expedite cultural change.
- M4: system learning embeds and sustains transformational change.
- M5: proactive population health is dependent on shared and linked data.

In this chapter, the underlying logic of each theory component is described further and depicted in a logic model representation, with an accompanying narrative. These were originally developed for stakeholder engagement activities during the study. From MCP vanguard documentation, it is clear that thinking has been influenced, to an extent, by legacy models within the NHS and international models of care; we have indicated models we believe to be pertinent to the various programme theory components.

R1: community-based, co-ordinated care is more accessible

If primary care provision is enhanced (new/expanded roles, additional services, hubs, extended hours) to deliver place-based services then patients will access more specialist care within community settings, rather than the hospital.

Programme theory component 'R1' articulates the hypothesis that co-ordinated care is more accessible if it is located closer to home, and will lead to improved health and service outcomes. This theory component describes primary care-led delivery, with accountability/duty of care for patients organised around registered lists. Co-ordinated care is organised around 'natural communities' or 'hubs' and delivered by MDTs comprising generalists and specialists from the NHS, independent practice, social care, community services and third-sector services. The intention is that a stronger community focus will encourage people to access more services closer to home; the expectation is that accessible co-ordinated care delivered closer to home will help to manage demand, improve patient and staff experience, and improve the efficiency of services. Improved access with features of timeliness, virtual interactions, self-management and joined-up care will contribute to achieving quadruple aim outcomes. *Figure 3* shows the logic model and *Figure 4* the narrative developed by the project team for the focus group.

An enhanced capacity to deliver primary care services, through the creation of new roles (such as practice-based pharmacists) and the expansion of existing roles [such as advanced nurse practitioners (ANPs)], is a key element of the MCP model. This is demonstrated by Principia MCP's vision for better deployment of clinicians to enable more prompt management of acute conditions and improved quality of care for long-term conditions.¹⁰⁰

The Stockport Together MCP aims to improve the interface between primary and secondary care, via the 'Consultant Connect' service, which enables GPs to consult secondary care clinicians for specialist advice by telephone.¹⁰⁴

Several vanguards anticipate a significant impact of the expanded primary care model on reducing the GP workload, for example: '50% of work done by GPs could be carried out by more cost-effective resource'.¹⁰⁵ Implicit assumptions to the creation of such a team include that these additional roles can be filled, and demand for GP consultations can be shifted to other clinicians, with an associated potential unintended consequence whereby more desirable roles or areas create a market effect.

The MCPs differentiate within their models between the approaches to delivery of acute episodic care and care for complex and long-term conditions; for example, the Connected Care MCP describes an approach to improve access and capacity within primary care, through interventions such as electronic triage and proactive care.^{106,107}

Although the models share a common ambition to improve accessibility through care closer to home, with many sharing features of extended general practice opening hours or a single point of access to MCP services, local innovations include the concept of the 'Apple Store-style kiosks' within practices¹⁰⁸ to improve care navigation and reduce the need for receptionists. The Encompass MCP describes a model of working with paramedics to provide urgent home visits with the aim of preventing hospital admissions, now being replicated elsewhere.^{109,110} However, such a model is vulnerable to pressures on the 999 service

R1: community-based co-ordinated care is more accessible

If primary care provision is enhanced (new/expanded roles, additional services, hubs, extended hours) to deliver place-based services
then patients will access more specialist care within community settings, rather than the hospital

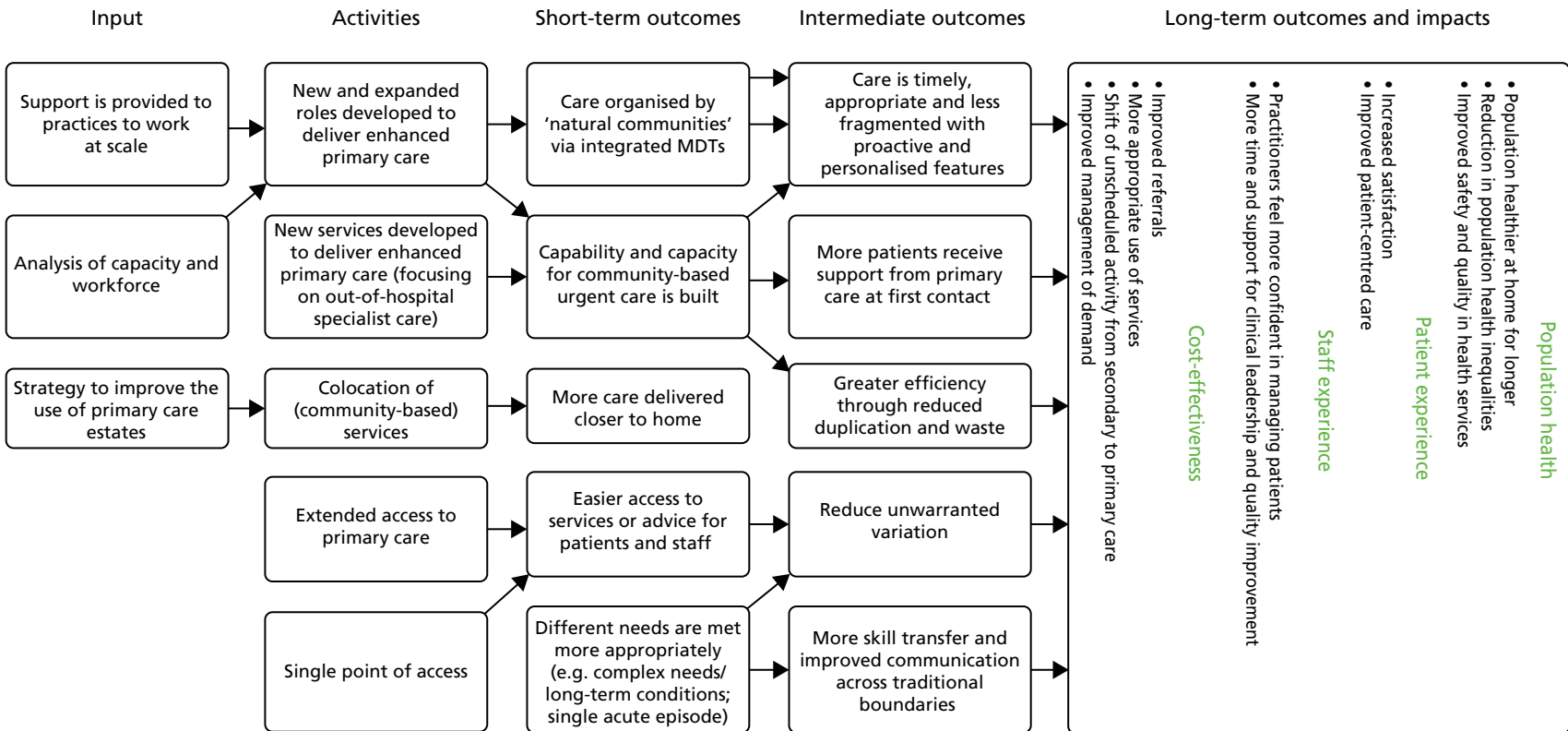


FIGURE 3 Programme theory component R1: logic model.



FIGURE 4 Programme theory component R1: narrative. A&E, accident and emergency; ANP, advanced nurse practitioner; GPwSI, general practitioner with specialist interests; HCA, health-care assistant.

to answer calls in time, which can lead to subsequent withdrawal of the service and increased demands on local GP home-visiting services.¹¹¹

The vision of enhanced primary care is not new to the New Care Models programme, and several of the MCP vanguards are building on earlier experience, as participants in earlier initiatives (see *Chapter 1*), including Darzi centres,¹¹² the GP Access Fund³¹ (formerly the Prime Minister's Challenge Fund) and the Integrated Care Pioneers.¹¹³ Influences from international models of care (see *Chapter 1*) are also evident in the documentation relating to the MCP model; examples include New Zealand's experiences of transforming primary care;¹¹⁴ Buurtzorg's model of neighbourhood care¹¹⁵ and the Esther model of co-ordinated care from Sweden.¹¹⁶

R2: place-based contracting and payment systems incentivise shared accountability

If commissioners award place-based contracts (incorporating capitated budgets and risk-/gain-sharing) then providers will share accountability for population health, cost-effectiveness, patient experience and staff experience.

This programme theory component is predicated on the development and deployment of 'hard' levers for change.¹¹⁷ The need for these hard levers to facilitate integrated care was recognised early on in the New Care Models programme.¹¹ Earlier attempts to integrate services¹¹⁸ had identified barriers; learning suggested that levers were needed to improve outcomes and encourage place-based accountability. These were capitation, risk- and gain-sharing, differential outcome-based payments and payments for performance incentives.^{119,120} Such levers are reflected in early thinking encapsulated in the MCP vanguard logic models, demonstrated by Principia's intention to develop a single system-wide budget to enable system-wide transformation and delegated decision-making.¹⁰⁰

NHS England has subsequently worked with a subset of six MCP vanguards to develop a contracting framework¹¹ and draft contract documents.¹⁴ Dudley¹²¹ was the first of these MCP vanguards to commence formal procurement, in June 2017.

Figure 5 shows the logic model and *Figure 6* shows the narrative developed by the project team for the focus group.

NHS England's framework outlines three different contract options for establishing a MCP model of care:¹¹

1. a virtual MCP contract
2. a partially integrated MCP contract
3. a fully integrated MCP contract.

The different contract options available present a different mix of risks and benefits. For example, the fully integrated contract results in primary care services being reprocurd. NHSE acknowledges that these contracts may mean more disruption and potential additional complications for local leaders in return for more freedom to redesign care. The partially integrated contract offers GPs the flexibility to enter alliance agreements with the option to return to General Medical Services/Personal Medical Services contracts. The virtual contract offers the benefit of minimum disruption balanced against the risk of limited freedom to change structures.

A key feature of the MCP contract framework is the population-based budget:

R2: place-based contracting and payment systems incentivise shared accountability

If commissioners award place-based contracts (incorporating capitated budgets and risk-/gain-sharing)
 then providers will share accountability for population health, cost-effectiveness, patient experience and staff experience

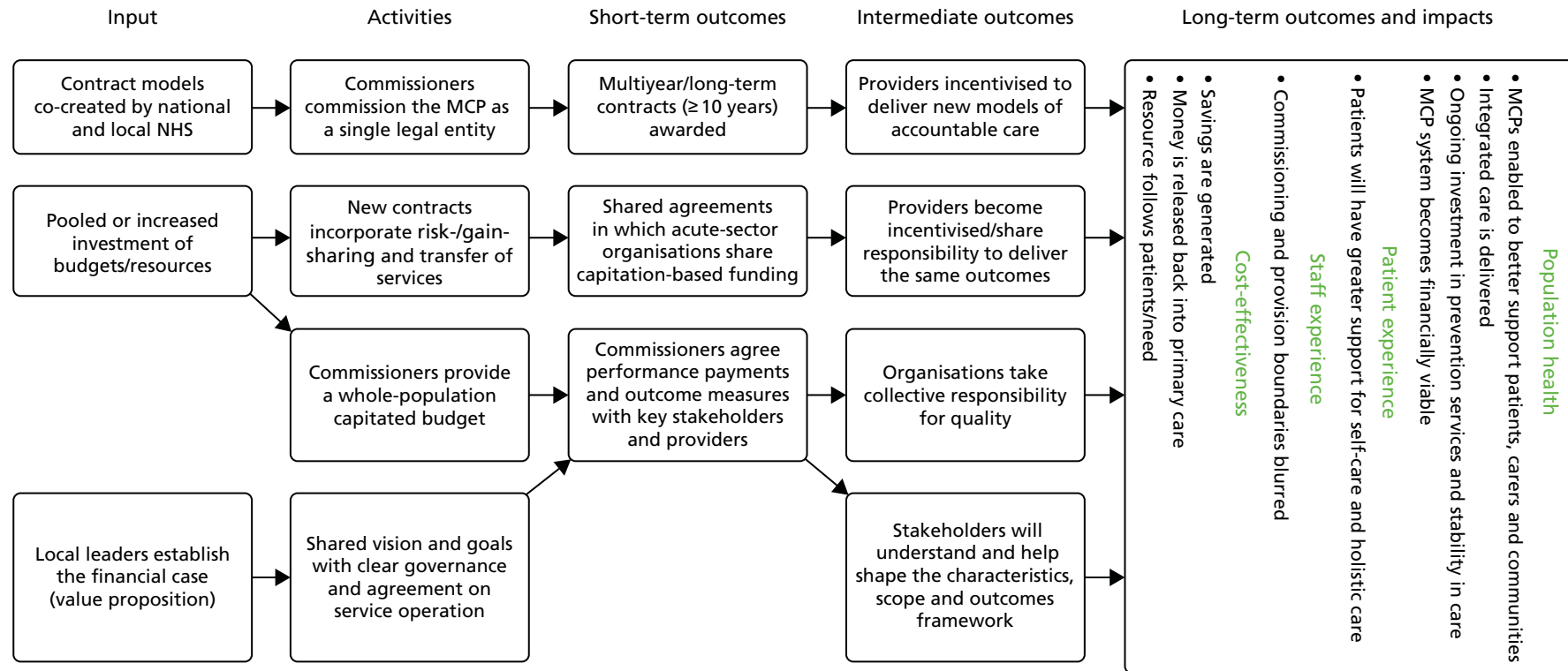


FIGURE 5 Programme theory component R2: logic model.



FIGURE 6 Programme theory component R2: narrative.

Merging separate existing funding streams into a single payment made to the MCP should allow for more flexible allocation of resource, directed towards the areas in which the funds will have the greatest impact on population health care.

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In recognition of the risks involved in capitation, the contract also incorporates risk- and gain-sharing agreements 'to ensure that the payment system does not inhibit the path to transformational, system-wide change' (contains public sector information licensed under the Open Government Licence v3.0).¹¹ The framework has been developed to enable commissioners and primary care providers to determine the scale and pace of change, and, depending on local contextual factors, to develop a contracting solution that works for them.¹¹

The built-in flexibility enables GP practices to determine their relationship with the MCP – either as an alliance partner or as an employee.¹²²

The contract frameworks not only build on the lessons from legacy models (see *Chapter 1*) within the NHS, such as the Better Care Fund¹²³ and the Integrated Care Pioneers¹²⁴ models, but also the experiences of delivering the Quality and Outcomes Framework (QOF)¹²⁵ and joint commissioning. Looking beyond the NHS, lessons may be harvested from relevant international models (see *Chapter 1*), such as the ACO model¹²⁶ in the USA, *Gesundes Kinzigtal*¹²⁷ in Germany and the *Alzira* model¹²⁸ in Spain.

R3: fostering relational behaviours builds resilience within communities

If commissioners and providers develop mutually beneficial relationships and co-produce services (with patients, the public, the voluntary sector, community groups, local businesses and other public services) within local communities, then health and care services will support local communities to build resilience.

This programme theory component reflects a shift towards a system-based approach to transformation, based on collaboration, to develop a more holistic approach to health and well-being. *Figure 7* shows the logic model and *Figure 8* shows the narrative, developed by the project team for the focus group. This longer-term view, encouraged by the New Care Models programme¹¹ is reflected in the design of MCPs, many of which set out an early ambition to work with local communities to tackle issues, such as social isolation and public health issues. A key characteristic of these relational behaviours is the emphasis on partnership working – with other public services, third-sector organisations, community groups and local businesses. One example is the Schools App Challenge,¹²⁹ which is part of a range of prevention interventions targeted at different groups intended to encourage lifestyle changes, with the aim of improving health outcomes and reducing harmful behaviours in the long term.¹⁰⁵ As part of the same programme, HealthPods (pop-up facilities that offer health checks, well-being advice and assessments, which are aimed at reaching groups that may be missed by current services)¹⁰⁵ are being used to target higher-risk and hard-to-reach groups.

The emphasis on prevention signals a shift in the relationship between health services, patients and communities, reflected in Dudley CCG's emphasis on collective ownership and responsibility.¹³⁰ Many MCP logic models refer to building social capital, leveraging community-based assets and recruiting volunteers and peer-support workers to take on both patient-facing and non-patient-facing roles. The Erewash MCP explains how social capital contributes to the theory of change by reducing social isolation and increasing participation in health choices, leading to lower use of secondary care services.¹³¹ Recognising that some patients have increased access to information through mobile technologies, the MCPs describe the expectations around patients' personal responsibilities, outlining a more active role in decisions about their health care and about local health services.

This ambition for a new relationship with local communities reflects a gradual direction of travel within public services and earlier initiatives, such as the Integrated Care Pioneers¹²⁴ and Expert Patient programmes, may offer valuable learning.⁴ *Vanguards* have also referenced experiments, such as the social prescribing programme in Rotherham¹³² and Nesta's People Powered Health¹³³ programme, reflecting the uptake of learning from experiments around the UK within the New Care Models programme.

M1: collective responsibility improves quality and safety outcomes

If providers share collective responsibility for outcomes through standard integrated pathways, then providers will improve the quality and safety of care.

R3: fostering relational behaviours builds resilience within communities

If commissioners and providers develop mutually beneficial relationships and co-produce services (with patients, the public, the voluntary sector, community groups, local businesses and other public services) within local communities, then health and care services will support local communities to build resilience

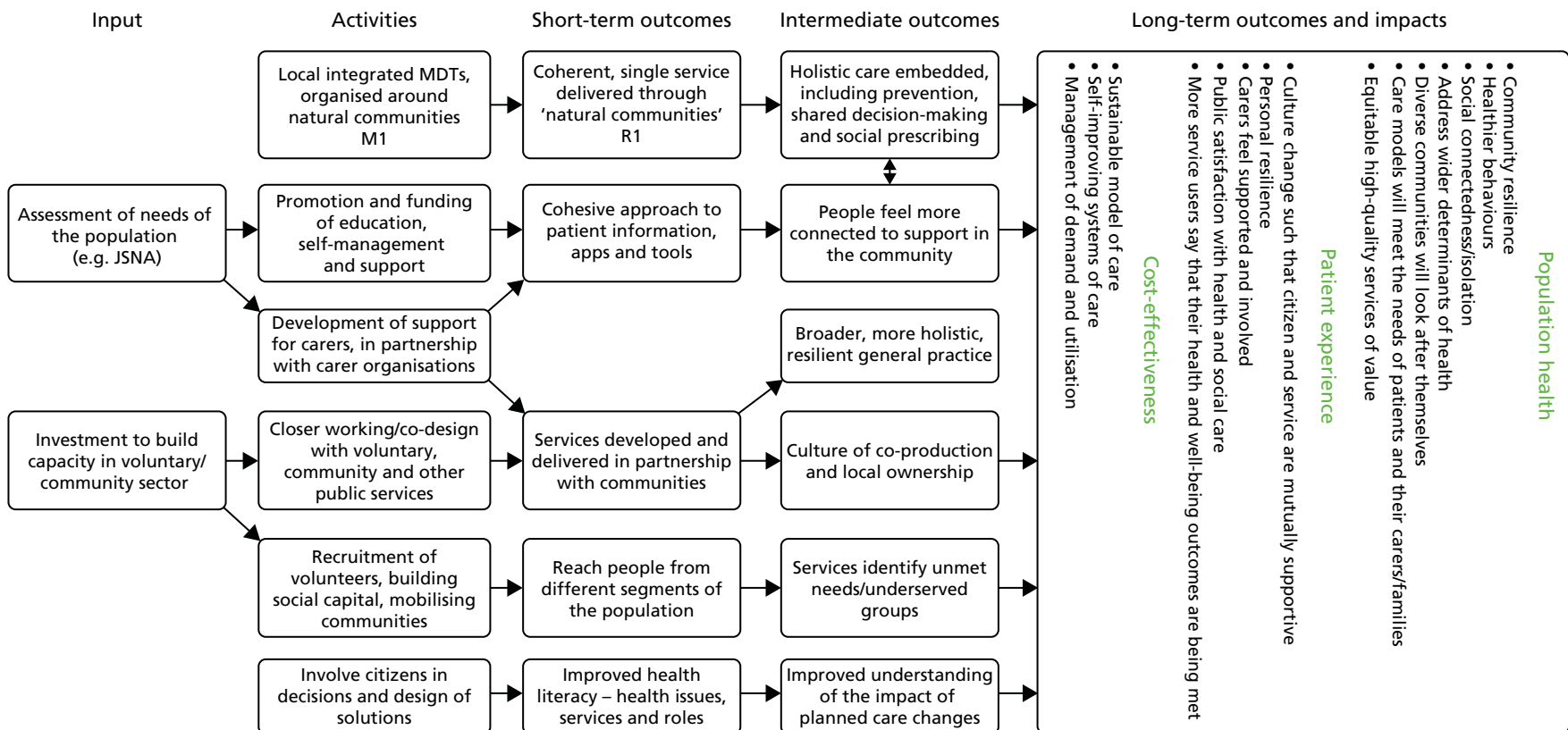


FIGURE 7 Programme theory component R3: logic model. JSNA, Joint Strategic Needs Assessment.



FIGURE 8 Programme theory component R3: narrative.

Responding to the complexity of health service transformation, the MCP vanguards acknowledge that shared responsibility will improve outcomes and tackle perverse incentives. The suggestion is that a collective approach by providers of MCP care will help to tackle issues of quality, for example, unwarranted variation. *Figure 9* shows the logic model and *Figure 10* shows the narrative, developed by the project team for the focus group.

The need for a co-ordinated and collective provider responsibility is being formalised by new contracting forms.^{11,122} Key to the shift towards collective responsibility is the development of shared outcomes, with several vanguards committing to co-produced outcomes to ensure that what matters to patients is measured. The prior information notice to procure a MCP for Dudley references a new outcomes framework,¹²² replacing the QOF,¹²⁵ to be supported by systems and processes to ensure standardisation in care delivery and data collection. This particular aspect of the MCP model depends on new contracting arrangements and cultural change to adopt a system-oriented, rather than an organisation-oriented, approach:

A multi-disciplinary approach to developing shared care will ensure that specialists and generalists are working together in the shared interests of their patient; and patients will be clear how the different clinicians are working together with them, providing clear continuity of care, to contribute to the management of their condition.

Dudley CCG¹³⁴

This highlights the interdependencies inherent within the MCP model and the acknowledgement that change is dependent on a variety of mechanisms. Integrated pathways provide a focal point for bringing together processes, people and technology, and MCPs are learning from the experience of earlier NHS policy initiatives from the 2000s,²⁴ and international models, such as Alzira¹²⁸ in Spain and Esther¹¹⁶ in Sweden (see *Chapter 1*).

M2: multidisciplinary teams provide continuity for patients with long-term conditions/complex needs

If primary care providers deliver care via MDTs (organised around natural communities), then patients with long-term conditions/complex needs will experience better continuity of care.

The MDT is a core element of many of the vanguard MCP models, with teams taking on responsibility for planning care within agreed neighbourhoods. The MDT – which comprises different combinations of GPs, nurses, social workers, link workers, pharmacists, physiotherapists and others – is tasked with identifying high-risk populations and developing care plans with patients. A primary care-led model is thought to increase the continuity of care.¹³⁵ *Figure 11* shows the logic model and *Figure 12* shows the narrative developed by the project team for the focus group.

Many of the MCP vanguards describe a more holistic role for MDTs, through prevention and working with public health and community groups to address wider determinants of health, social isolation and general well-being issues, through interventions such as social prescribing. A social prescribing programme has also commenced in Encompass MCP, enabling the voluntary-sector umbrella organisation Red Zebra¹³⁶ to start to build a MCP-wide database of voluntary and community services that service users and practitioners will be able to access via the social-prescribing service team.¹⁰⁹

Described as ‘teams without walls’,¹³⁰ MDTs are empowered to deliver more proactive care, thus contributing to the overall goal of managing demand and service utilisation. It is expected that the multidisciplinary approach will be key to achieving the quadruple aim, as exemplified by the extended primary care teams in the Southern Hampshire MCP, set up to support patients with complex needs.¹³⁷

Multidisciplinary working carries an implied interdependency with broader community relationships (see *Chapter 3, R3: fostering relational behaviours builds resilience within communities*), for example, additional

M1: collective responsibility improves quality and safety outcomes

If providers share collective responsibility for outcomes through standard integrated pathways then providers will improve the quality and safety of care

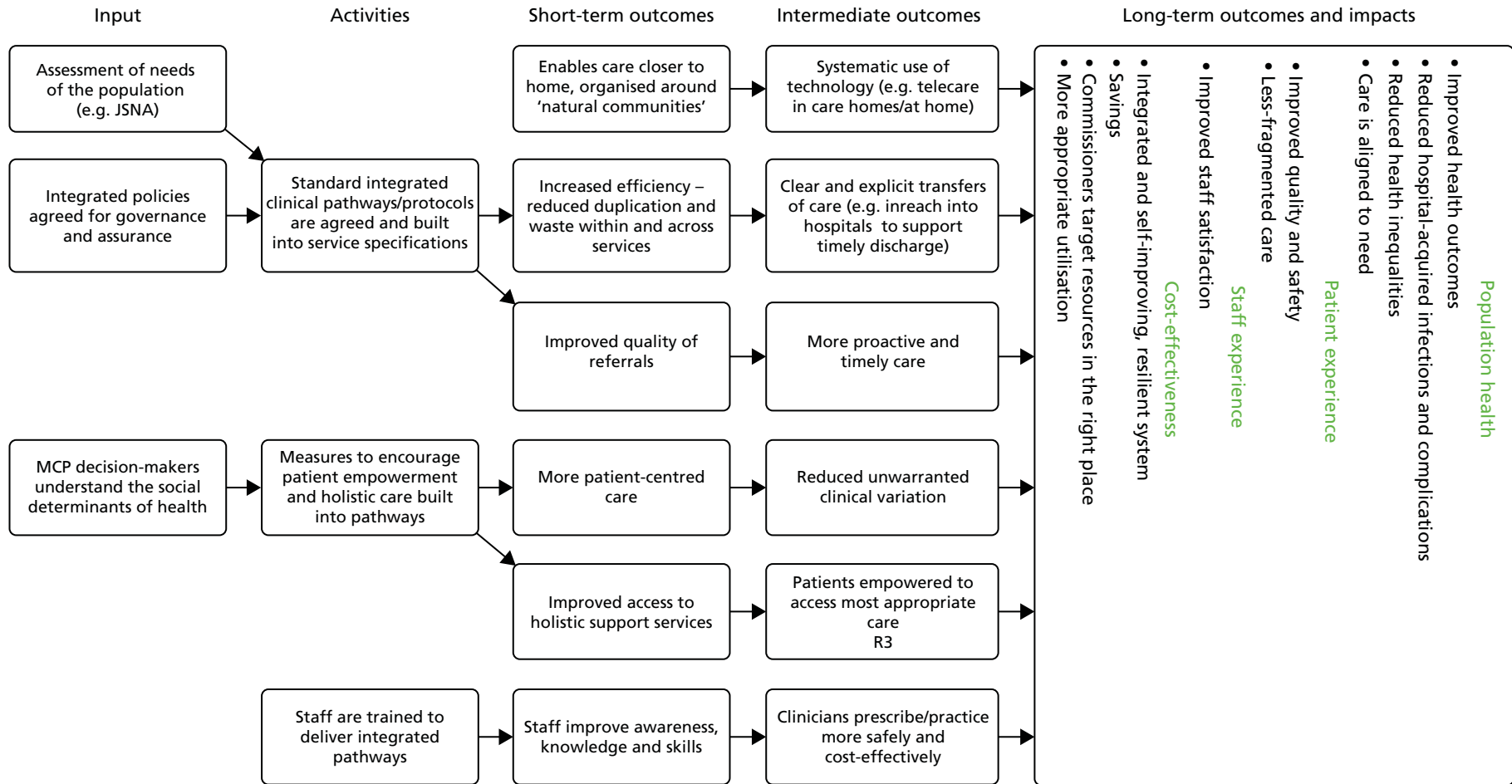


FIGURE 9 Programme theory component M1: logic model. JSNA, Joint Strategic Needs Assessment.

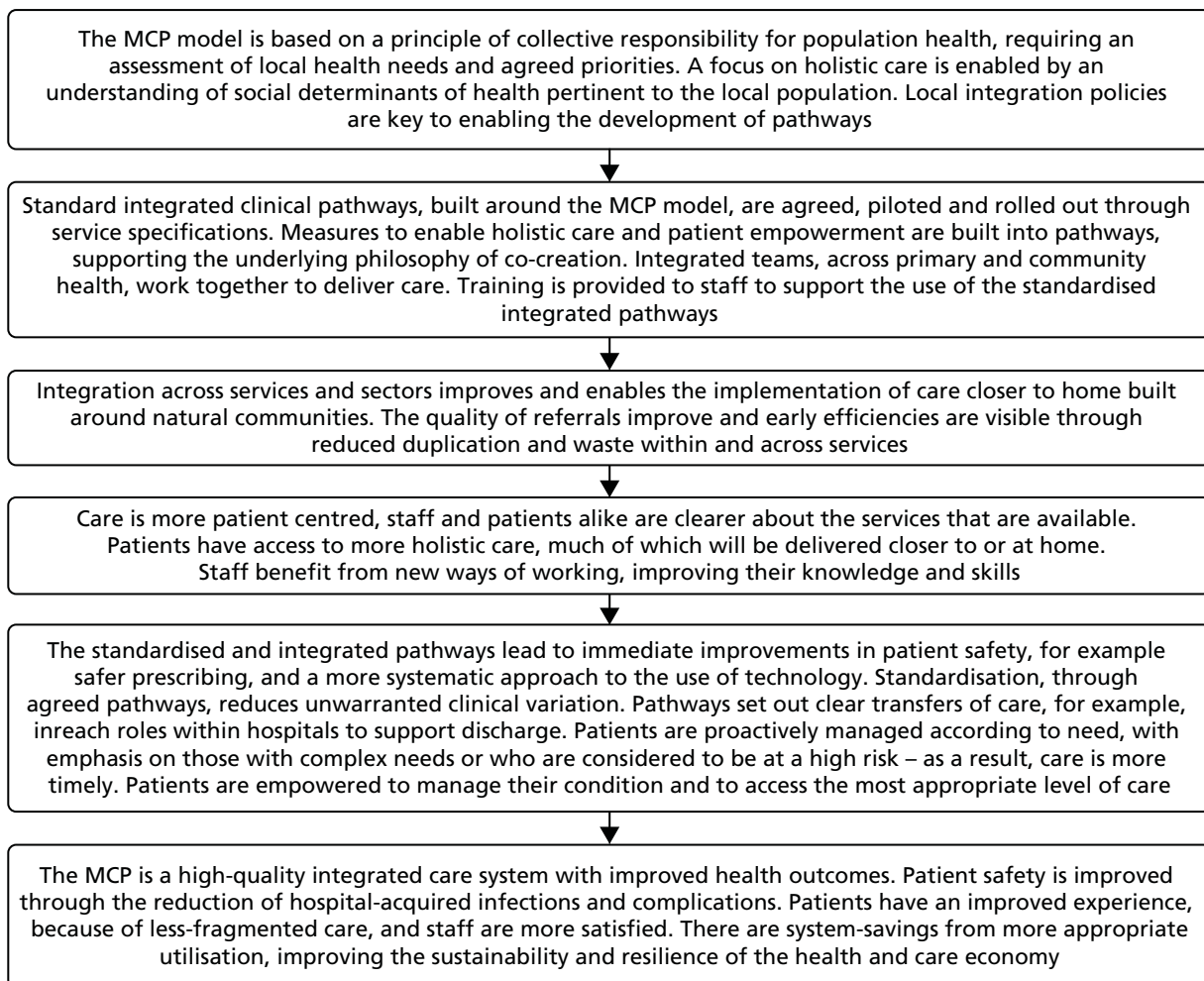


FIGURE 10 Programme theory component M1: narrative.

capacity through the use of volunteers. Voluntary link workers are often perceived as unrestricted by specialism, which enables a more holistic view of an individual's needs beyond medical conditions.¹²²

Multidisciplinary teams feature as a key element of the Integrated Care Pioneers³⁵ and in many other models internationally (see *Chapter 1*), including ChenMed¹³⁸ and the Nuka model in Alaska,¹³⁹ suggesting a broad and varied evidence base to inform the MCP model.

M3: engaged and trained staff expedite cultural change

If commissioners and providers train and fully engage staff in service transformation, then staff will drive the cultural change that underpins new ways of working.

This programme theory component reflects a common thread running through the planned interventions and innovations of MCPs; that is, the pervasive recognition that service transformation is dependent on empowered and engaged staff to initiate and maintain service change:

The success of an MCP depends on how it grows and deploys its assets. [...] And it empowers and engages staff to work in different ways by creating new multi-disciplinary teams; by redesigning jobs so that they are more rewarding, sustainable and efficient; and by implementing newer professional roles.

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M2: multidisciplinary teams provide continuity for patients with LTCs/complex needs

If primary care providers deliver care via MDTs that are organised around natural communities
 then patients with LTCs/complex needs will experience better continuity of care

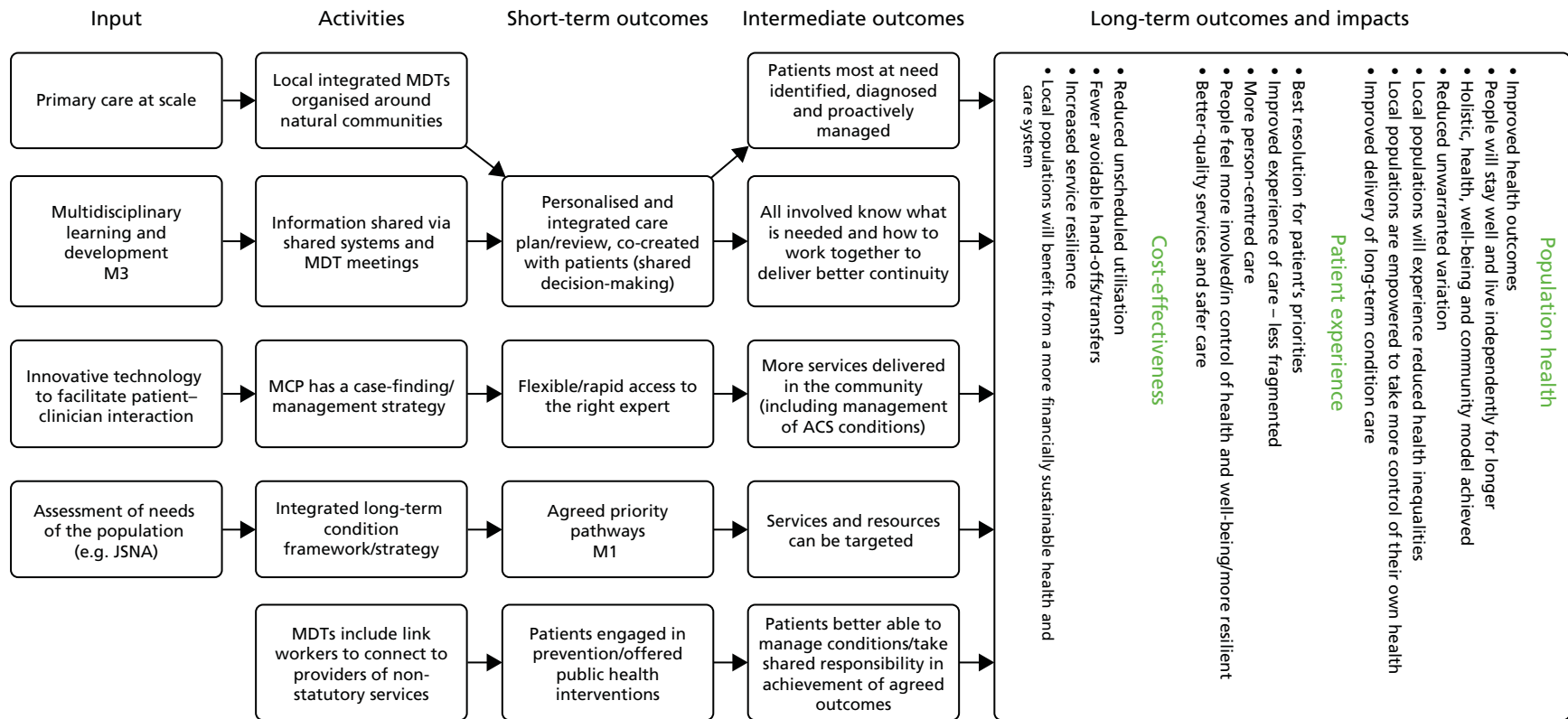


FIGURE 11 Programme theory component M2: logic model. JSNA, Joint Strategic Needs Assessment; LTC, long-term condition.



FIGURE 12 Programme theory component M2: narrative.

Figure 13 shows the logic model and Figure 14 shows the narrative developed by the project team for the focus group.

Investment in training and development is recognised as being important to the development of new and expanded roles and integrated roles, in particular, opening up leadership development to a wider audience and skills development for all those involved in delivering care closer to home.¹⁴⁰ This represents a vision in which staff development contributes to shared accountability, demonstrating the interdependencies between new contractual levers and cultural change. A focus on staff empowerment encourages individuals and teams to take responsibility for performance and outcomes, and to hold each other to account.

It is noticeable from the logic models and associated documents that vanguards recognise the importance of multidisciplinary development ahead of formal integration to prepare staff for new ways of working. This is evidenced by Stockport MCP, who held a series of engagement events with social work and district nursing staff to prepare for integrated working.¹⁰⁴

M3: engaged and trained staff expedite cultural change

If commissioners and providers train and fully engage staff in service transformation
then staff will drive the cultural change that underpins new ways of working

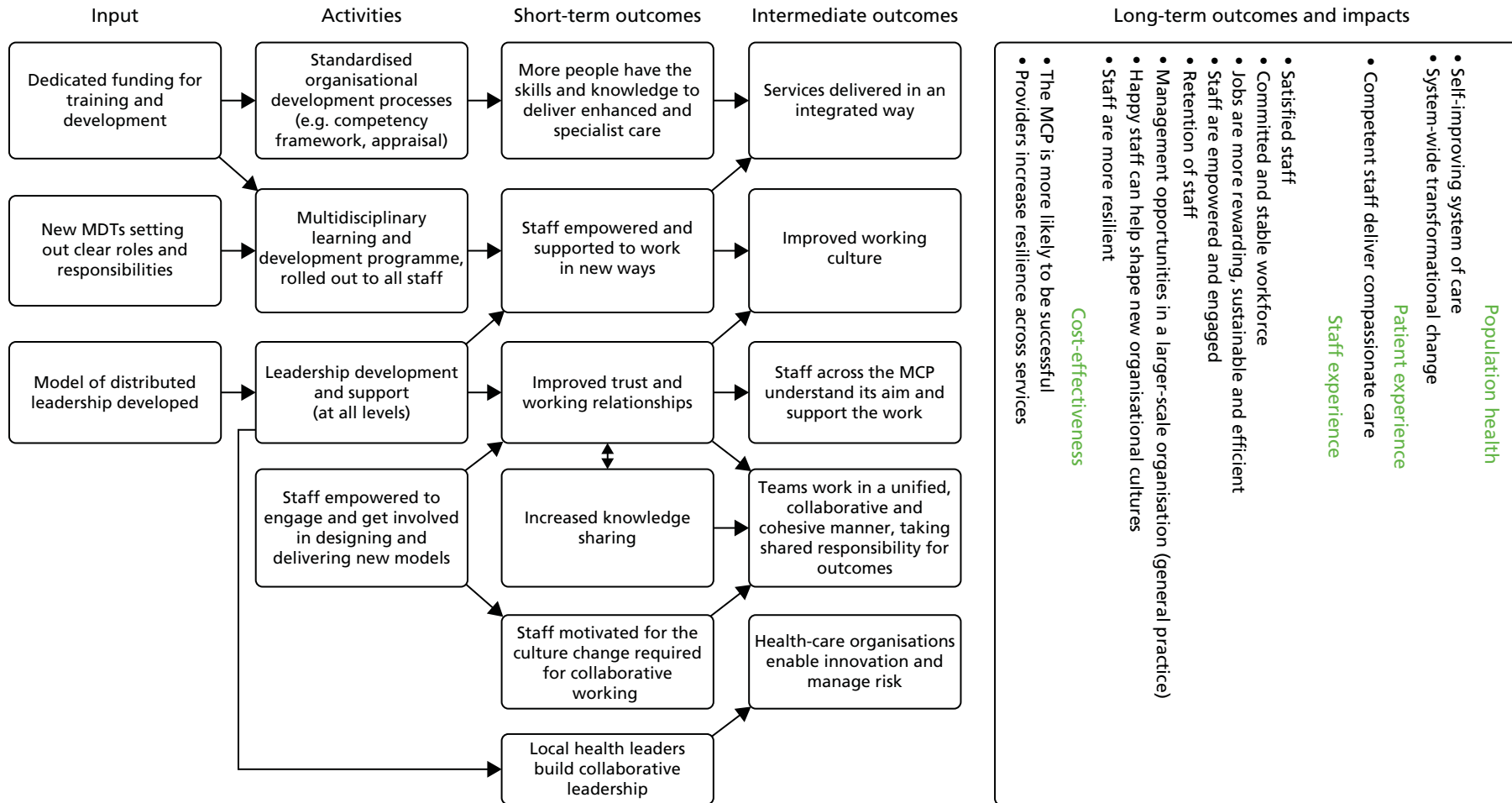


FIGURE 13 Programme theory component M3: logic model.

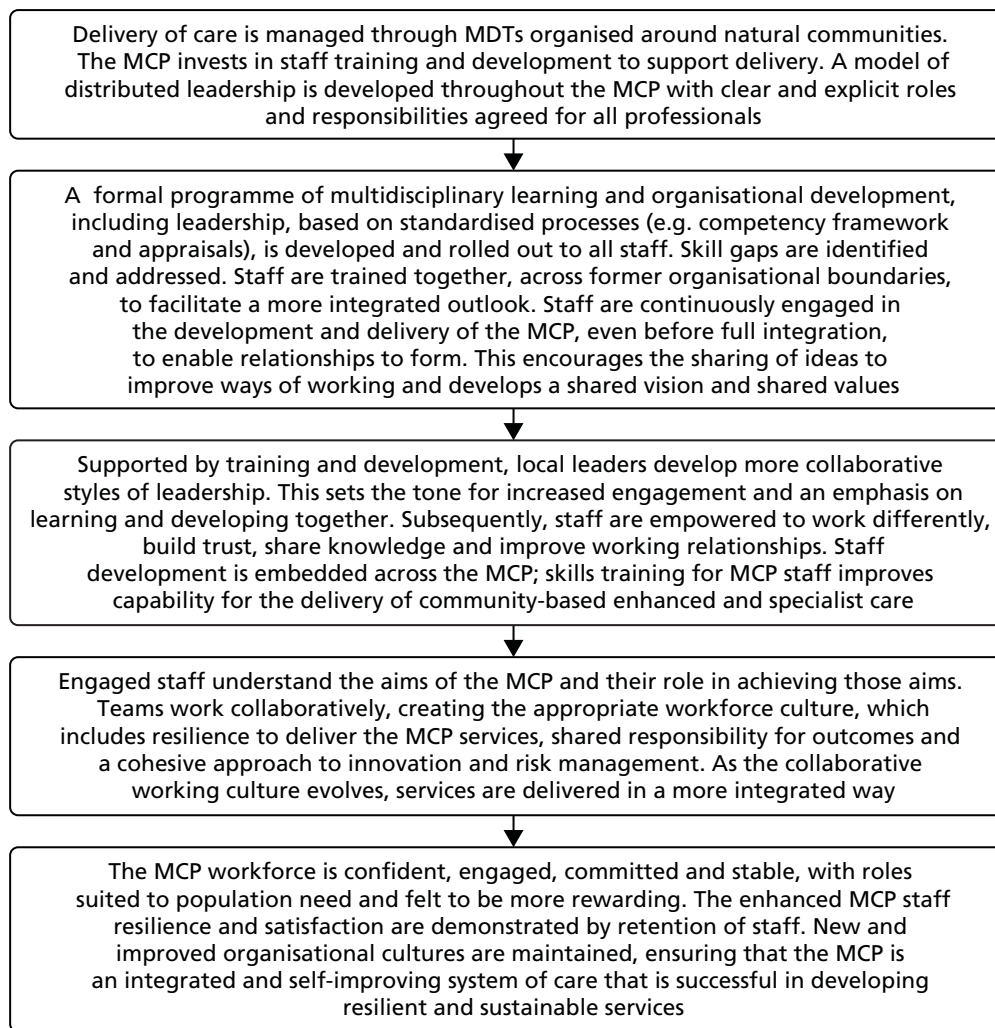


FIGURE 14 Programme theory component M3: narrative.

The vanguards are building on a history of integration programmes that are likely to offer learning on organisational development and cultural change to support transformation.

M4: system learning embeds and sustains transformational change

If MCPs learn and adapt quickly using evaluation/monitoring loops and knowledge-sharing then MCPs will sustain transformational change.

This programme theory component derives from the emphasis on the iterative and experimental approach of the MCP vanguards, with formative evaluation and system learning featuring prominently in vanguard plans. Recognising the level of ambition and complexity inherent within the New Care Models programme, NHSE has emphasised the importance of organisational learning and knowledge-sharing, in recognising that knowledge-sharing and organisational learning have not always been prioritised in earlier change programmes.⁸⁹

Figure 15 shows the logic model and Figure 16 shows the narrative developed by the project team for the focus group.

M4: system learning embeds and sustains transformational change

If MCPs learn and adapt quickly using evaluation/monitoring loops and knowledge sharing
then MCPs will sustain transformational change

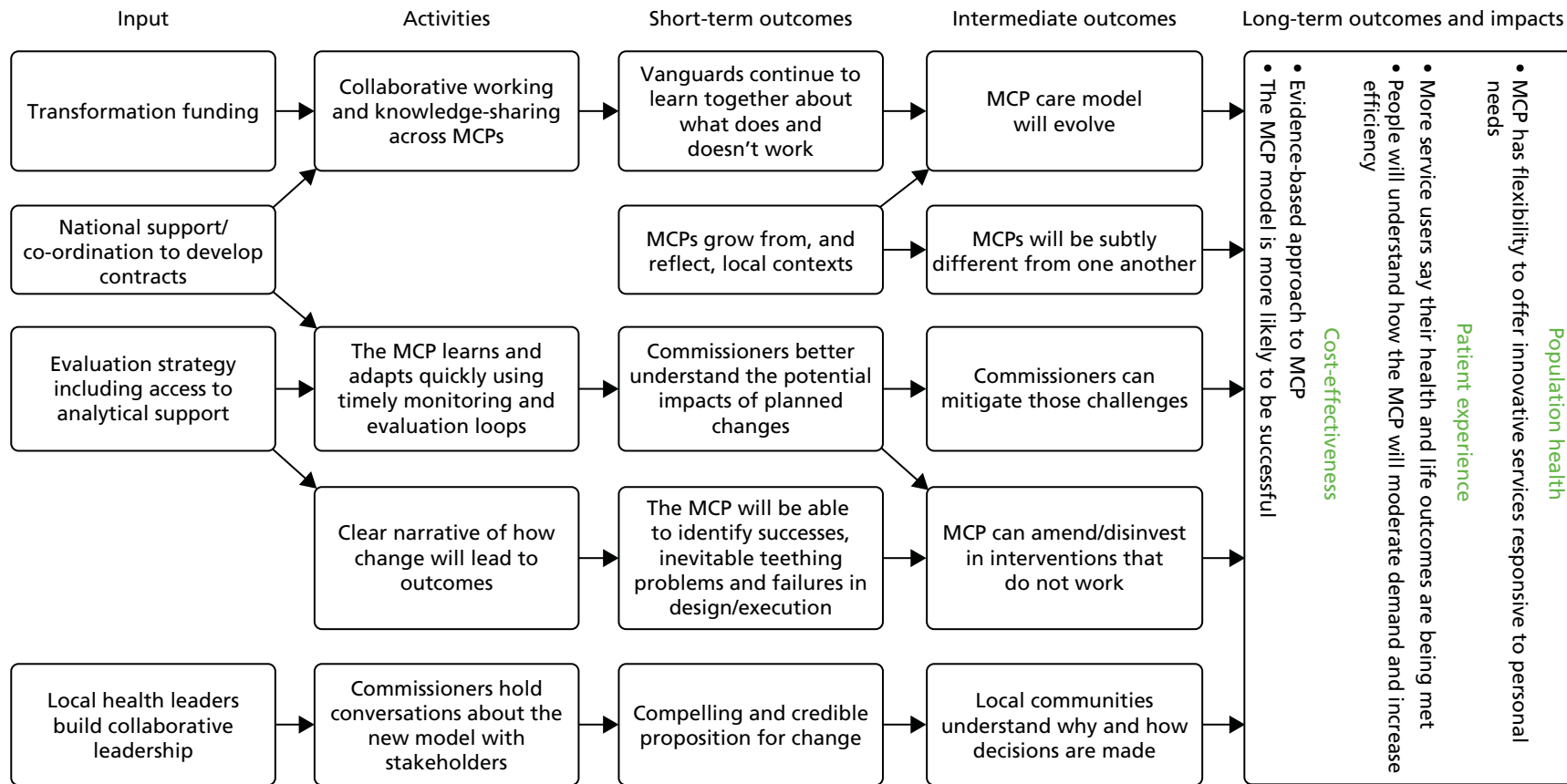


FIGURE 15 Programme theory component M4: logic model.

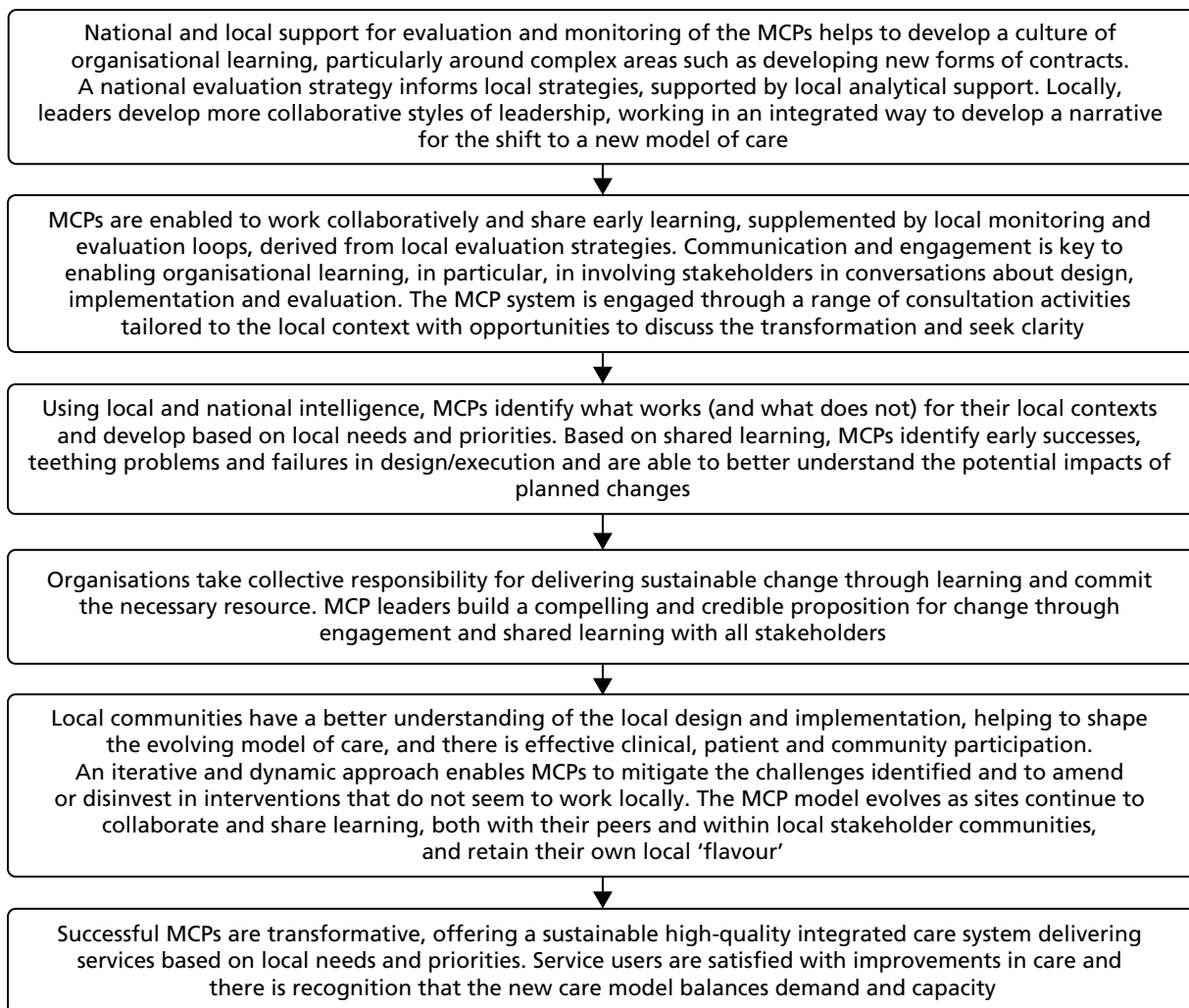


FIGURE 16 Programme theory component M4: narrative.

All vanguards are required to undertake local formative evaluation with the aim of informing local design and implementation, as well as future MCP models.⁸⁹ Rapid learning cycles and feedback loops are utilised to inform a more iterative approach to service design, implementation and evaluation.¹⁴¹ Some models embody ambitions to develop as self-improving or learning health-care systems, working towards the creation of a self-improving system, to sustain a culture of improvement and innovation in a complex and uncertain environment.¹³⁰

In *Chapters 7 and 8*, we show that although complexity theory has influenced earlier service transformation,^{88,142} the emphasis on evaluation and shared learning in the New Care Models programme is relatively new to national policy.¹⁴³ As such, although there may be learning from earlier integration and transformation programmes, it is likely that this theory component will be informed by the international literature base.¹⁴⁴

M5: proactive population health is dependent on shared and linked data

If MCP staff are not able to access shared/linked data then patients will continue to experience fragmented care.

A key aim of the MCP model is to improve the co-ordination of care, notably through MDTs (see *R1: community-based, co-ordinated care is more accessible* and *M2: multidisciplinary teams provide continuity for patients with long-term conditions/complex needs*) working in 'natural communities'. The delivery of this aim is dependent on systems and processes that enable information-sharing – a common thread in the design of MCP models. Shared and linked data could be seen as not merely enablers to integrated working, but as prerequisites.¹⁴⁵ The NHSE framework notes the importance of data in driving transformational change:

[The MCP model] is reliant on using high-quality business intelligence systems, with data that is [are] as real time as possible. Without these, an MCP is 'flying blind'.

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Several MCP vanguards have prioritised the use of information systems to support decision-making at both the patient and the population levels. Infrastructure becomes critical to enable information-sharing at the point of care and decision-making, with several MCPs describing information hubs; for example, Wakefield MCP's¹⁰⁵ hub is situated within a Response Centre, thus acting as a conduit across the local health and care system to enable predictive modelling and proactive care for patients at a high risk of hospital admission. This concept has evolved further to explicitly support MDTs through:

groups of staff known as 'fusion cells' whose job will be to pull together the threads of information about people and services in the area, including health and care services but also the West Yorkshire Fire and Rescue Service and police, for example.

NHS Confederation, NHS Providers, Local Government Association and NHS Clinical Commissioners¹⁴⁶

In *Chapter 7*, we show that information-sharing represents a prominent theme of earlier integration efforts, such as the Integrated Care Pioneers programme,¹⁴⁷ which has employed risk stratification, shared records and linked data to inform patient- and population-level decision-making.¹²⁶

Figure 17 shows the logic model and *Figure 18* shows the narrative, developed by the project team for the focus group.

Chapter summary

In summary, this chapter expands on the eight programme theory components, providing a graphical representation, brief narrative and summary of the underlying theories of change as represented by the MCP vanguards and NHSE. For each of the theory components, we have indicated the relevant legacy models, offering experiential learning from within a NHS context, and from international models of care, offering transferable lessons.

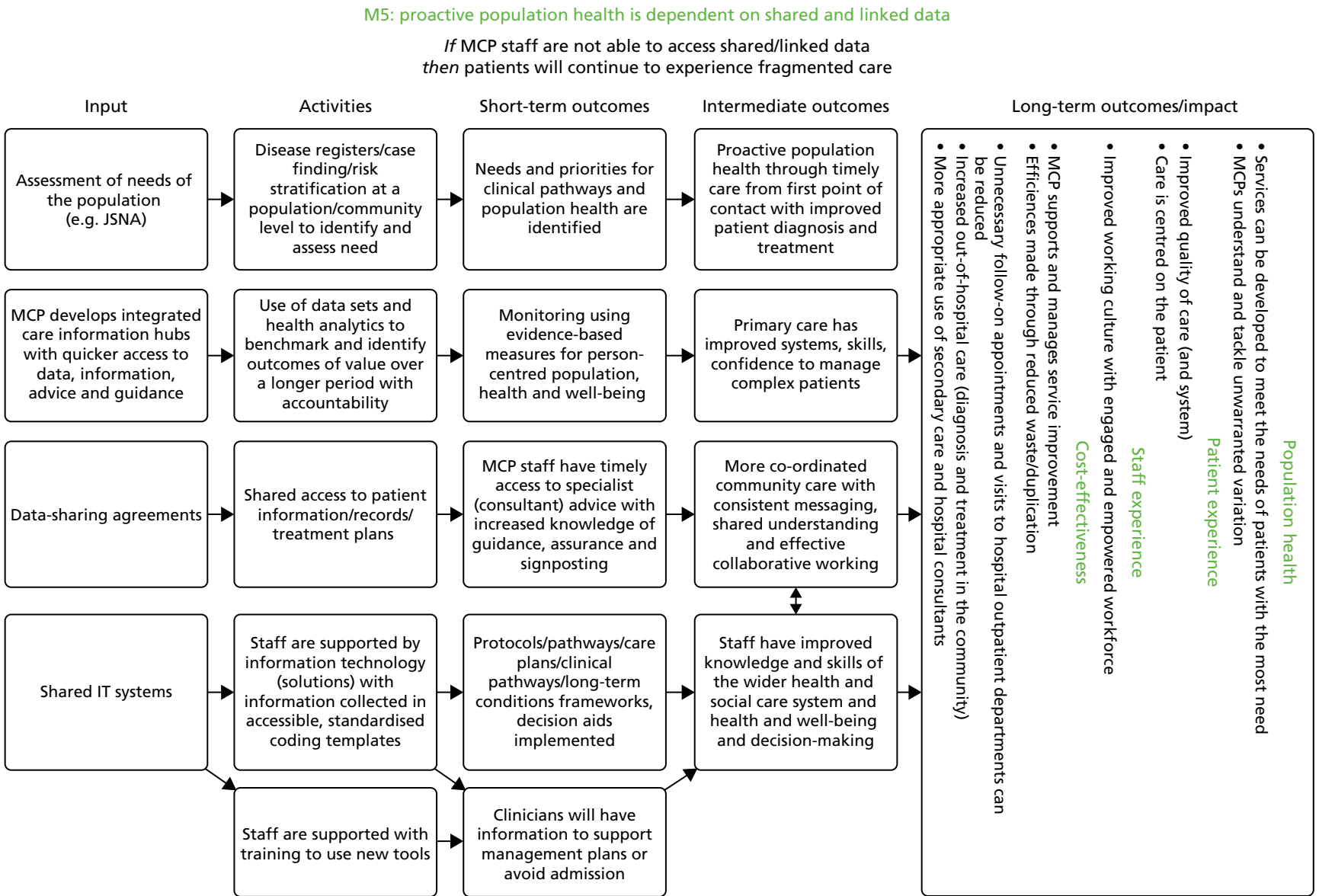


FIGURE 17 Programme theory component M5: logic model. IT, information technology; JSNA, Joint Strategic Needs Assessment.



FIGURE 18 Programme theory component M5: narrative. IT, information technology.

Chapter 4 Community-based, co-ordinated care is more accessible

Introduction

This chapter examines the first of three theory components that were prioritised for realist review purposes:

If primary care provision is enhanced (new/expanded roles, additional services, hubs, extended hours) to deliver place-based services, then patients will access more care within community settings, rather than the hospital.

It begins by setting the evidence scene for the *if* statement, that is, the characteristics of enhanced primary care provision and its delivery in place-based settings. It then assesses the *then* statement in the literature, by describing access to care in community settings. Next, a brief description of the state of the evidence is provided for R1, which precedes the section for outcomes, delineated by the quadruple aim and unintended consequences. Subsequently, we describe the mechanisms as resources (of the intervention) and reasoning (stakeholder volition)⁷⁶ for the patient, staff and system. When possible, we juxtapose the resources of the mechanisms with the context within which the theory component operates, together with the specific intervention outcomes. Finally, we provide a brief overview to capture the key aspects of R1.

Characteristics of community-based care and primary care access

The initiatives to enhance primary care provision in community settings, and to provide improved access to those services, have developed as a response to the 'crisis'¹⁴⁸ in general practice, characterised by the pressures of an increasingly complex and intense workload, recruitment difficulties and a drive for care closer to home.¹⁴⁹ Such challenges may be addressed through the enhancement of primary care, by which the system offers greater access to health and social care in community settings through:

1. creating new and expanded roles to increase the ability of primary care teams to deliver care^{150,151}
2. increasing the provision of specialist care in community settings by providing direct care in the community or by supporting other staff in the extended primary care team¹⁵¹
3. care navigation to steer patients to appropriate care with the least number of contacts¹⁵⁰
4. extending opening times at general practices to improve access to primary care¹⁵⁰
5. increasing the use of technology to provide alternatives to face-to-face consultations.^{150,151}

In examining this theory component, we concentrate on points 1–3, given that points 4 and 5 are less relevant to the delivery of co-ordinated care. *Chapter 7* and the theory component M5 also map some of the evidence around co-ordinated information systems, and upcoming research findings will shed more light on the potential benefits of alternative types of consultations.^{152,153}

To date, efforts to expand the primary care workforce have focused on upskilling the non-medical workforce, such as nurses^{32,154–157} and pharmacists,^{32,155,158–160} to substitute or supplement GP consultations. Other innovations in the UK include self-referral to allied health professionals, such as physiotherapists in community settings^{32,161,162} and paramedics undertaking home visits.^{32,163} Expansion of primary care through the development of new roles in the UK is currently limited to the development of the physician associate role, borrowing from the physician assistant role in the USA.^{164–166} This chapter focuses on medical roles, whereas *Chapter 7* and theory component M2 provide more information on the expansion of primary care roles to include professionals contributing to social or holistic primary care services.

Access is subjective, determined by an individual's priorities;¹⁶⁷ however, three criteria have been identified as influencing a patient's preferences for accessing primary care: (1) the ability to see a preferred GP or nurse,¹⁶⁷⁻¹⁶⁹ (2) the availability and proximity of care¹⁷⁰ and (3) the timeliness of care.^{170,171} We adopt the definition by Collaborations for Leadership in Applied Health Research and Care (CLAHRC) Greater Manchester, which characterises access to primary care by the responsiveness of primary health-care services to the needs of the population and the subsequent empowerment of individuals to use and benefit from health-care services.¹⁷²

Earlier models of providing specialist care in the community include interventions that involve the transfer of services where primary care substitutes for secondary care [e.g. GPs with specialist interests (GPwSIs)^{171,173,174} or the relocation of services from secondary care to primary care settings].¹⁷⁴⁻¹⁷⁸ More recently, the ways in which specialist care is being implemented in primary care go beyond the 'drag and drop' approach of simply relocating a hospital outpatient clinic into a community setting; instead, methods that put education at the core alongside the redesign of the patient pathway and/or the role of the professional are becoming more established.¹⁷⁹ Examples included in a recent The King's Fund report, *Specialists in Out-Of-Hospital Settings: Findings from Six Case Studies*,¹⁷⁹ are outreach clinics jointly staffed by hospital consultants and other health-care professionals, consultant-run e-mail and telephone helplines, consultant participation in MDT meetings, consultant-run education sessions and consultants supporting staff to work in extended roles.

The evidence base

The evidence base for this theory component, R1, included limited review evidence and mainly consists of a limited number of small-scale evaluations comprising uncontrolled before-and-after studies or single-case studies (see *Appendix 5*). The review is based on four systematic reviews (including two with meta-analysis), eleven reviews, one realist review, one pragmatic randomised controlled trial, four mixed-methods studies, four qualitative studies, two observational studies, one cohort study, eight case studies, one briefing and one framework. Support for this component can therefore be considered to be moderate. Limitations of the evidence base mainly relate to the long-term impacts of enhanced primary care teams delivering care closer to home, resulting in a moderate level of uncertainty around the conclusions. Literature from the UK has been prioritised for relevance; when international examples are used, we have given precedence to countries with a similar primary care model to the UK, most notably in having a gatekeeper role.¹⁸⁰ Many studies are descriptive and focus on the implementation with limited sound evidence about effectiveness, and a few studies provide anticipated outcomes.

Outcomes

Population health

A systematic review¹⁵⁴ of the substitution of physicians by nurses in primary care found inconclusive evidence on the effects of nurse-led care on quality-of-life measures for patients; the authors note that interpretation was difficult because of heterogeneous outcome reporting, valuation of resources and the small number of studies. The review¹⁵⁴ did find nurse-led care to be associated with lower overall mortality, particularly when providing routine care and non-urgent visits. However, earlier reviews^{154,156} did not find mortality rates between physician and nurse-led care to differ, but did find demonstrable improvements in clinical parameters of chronic conditions by nurses compared with physicians. Similarly, interventions in which pharmacists supported GPs to optimise prescribing or patient medication use were reported to show a limited effect or no effect on outcomes related to quality of life; however, improvements in the management of chronic conditions and the attainment of health goals were observed.¹⁵⁸

Expanded primary care roles have been found to demonstrate an acceptable level of patient safety or better. Nurses have been reported to show no difference in appropriate diagnosis and prescribing in primary care compared with physicians,¹⁵⁶ whereas pharmacist interventions in general practice clinics have been shown

to improve the quality of prescribing and medication appropriateness.¹⁵⁸ The introduction of a self-referral pathway for physiotherapy has been reported to be clinically effective compared with usual care, and has been deemed to be safe.¹⁶² The evidence about the appropriateness of care provided by physician associates is weak; however, where evidence exists, it is reported positively.^{164,181} In general, studies reporting on the transfer of care from secondary to primary care have reported that the quality of care achieves an acceptable standard.^{71,173,174} The safety of diagnostic services transfer is equivocal; a literature-mapping exercise¹⁷⁵ found evidence that the quality (including diagnostic accuracy and the appropriateness of test ordering) and safety of diagnostic service provision in the community is mixed.

Cost-effectiveness

Evidence on the effect that expanded primary care roles have on health-care service use is underdeveloped, with most evidence reported in case studies including anecdotal claims. Reviews looking at the upskilling of non-physician clinicians, such as nurse practitioners^{154,156} and pharmacists,¹⁵⁶ and the contribution of physician associates in primary care,¹⁸¹ report a dearth of economic data. Furthermore, much of what does exist is based on direct costs only (e.g. resource use, follow-up consultations, length of consultations and salary costs), with inconsistent evaluation approaches used across studies.¹⁵⁴

Single studies and case studies have painted a more positive picture. A cost-effectiveness analysis of the introduction of a self-referral pathway for physiotherapy reported that the service was cost-effective as a result of a reduction in the average number of patients attending and the wasted appointments by patients who do not initiate or actively commit to treatment.¹⁶¹ The use of physician associates in UK settings has been found to have lower consultation costs than GPs, albeit with limitations, as costs considered only the time spent in consultation and no other factors, such as support time from GPs.¹⁶⁴ Case studies reporting on pharmacists working in general practice have shown some reduction in primary and secondary health-care usage when pharmacists work in general practice,³² and cost-savings through reduced locum costs.¹⁸² Case study reports of paramedics working in primary care provide a more mixed picture.¹⁶³ Although a lower conveyance rate than for other paramedics has been reported, other accounts conclude that the cost-effectiveness remains uncertain, given the supervision time required and longer appointment times.¹⁶³ Many authors warn that the provision of care in the community may not be cheaper than outpatient services, and, in some cases, services may actually lead to increased costs.^{174,183,184}

Few economic evaluations exist regarding the transfer of services. Pawson *et al.*⁷¹ conclude that there is little solid evidence that GPwSIs have reduced the outpatient workload, in regard to anecdotal claims of this reported in the literature. Furthermore, the evidence on cost-savings from the use of GPwSIs is mixed and based on inconclusive data.⁷¹ This view is supported by a scoping review by Winpenny *et al.*,¹⁷⁴ who confirm inconclusive cost-effectiveness findings, with several studies suggesting that interventions might increase the cost of care provision. Reviews exploring the use of GPwSIs report that the higher cost of GPwSIs can be justified only if the increased cost can be offset against the benefit in improved access to health.^{173,174}

Similarly, shifted outpatient models are likely to be more expensive than hospital-based outpatient clinics,¹⁷⁴ with the 'drag and drop' model that replicates the hospital model in different settings being an inefficient use of time and resources.¹⁷⁶ Few formal evaluations have been reported on more recent innovations, such as attaching a specialist to primary care, so that education is at the core of the model;^{174,179} however, currently, such services may appear to be costly.¹⁷⁴ Early evaluations of a specialist paediatric outreach clinic (monthly joint clinics between GPs and hospital-based general paediatricians) and MDT meetings held in GP practices are showing promising results.¹⁸⁵ Outpatient referrals have been reduced by avoiding appointments altogether through MDT discussions and improved care co-ordination, or by shifting the appointment from the hospital to the GP practice.¹⁸⁵ Furthermore, the joint GP consultant clinics have reduced the follow-up rate, which is attributed to the presence of the GP in the consultation, allowing a joint plan to be agreed, and the awareness of easy connectivity for further paediatric input, should it be needed.¹⁸⁵

Improved connectivity to specialist advice through the use of e-mail or telephone has shown a substantial opportunity to reduce the number of patients who are seen in outpatient clinics,^{174,186} support the GP's management of the patient in primary care and identify potentially unnecessary referrals.¹⁸⁶ Similarly, where consultants have supported staff to work in extended roles through training sessions and ongoing support (telephone and by e-mail), a decrease in referrals has been reported, returning to pre-pilot levels after the pilot had finished.¹⁸⁷ Specialist advice can also help to guide the referral to the most appropriate specialist for patients who are not suitable for community-based care, assisting the patient in getting to the right professional first time, saving duplicate appointments.¹⁸⁶

Patient experience

In general, expanded primary care roles are associated with higher patient satisfaction for nurses,¹⁵⁴ physician associates,¹⁶⁴ self-referral physiotherapy services^{32,161} and pharmacists working in general practice.¹⁸² A systematic review focusing on pharmacist services provided in general practice clinics found limited or no effect on outcomes relating to patient satisfaction; however, the included studies focused on interventions aimed at optimising prescribing and/or medication use, and may therefore not represent a direct substitution of the care received by GPs.¹⁵⁸ Patient experience in relation to the transfer of services from secondary care to primary care is consistently reported as being positive for receiving care closer to home,^{179,187} improved access and convenience,¹⁷⁸ and a better overall experience (e.g. less intimidating than the hospital).^{178,179} There may, however, be some instances that require a trade-off between the convenience of community-based care and the patient experience for some patient populations; for example, families with small children who enjoy the excitement and exclusivity that the children's hospital provides, and where the absence of medical technologies decreases confidence in the quality of care provided.¹⁷⁸ This may be particularly noticed during symptomatic illness and the need for reassurance of a medical environment with immediate access to investigations.¹⁷⁸

Patient acceptance is generally high for nurses¹⁵⁷ and physician associates^{164,181} used as substitutes for doctors; however, both alternatives report conditions for which patients would prefer to see a doctor.^{157,181} Case study experience from pharmacists working in primary care in Cornwall has shown how pharmacists have been accepted with some patients, who now specifically book directly to see a pharmacist for medication issues.¹⁸²

Nurses more frequently provide advice and information to patients and can improve access to health-care services and treatments.¹⁵⁶ The introduction of a self-referral pathway for physiotherapy has also been reported to improve access by reducing waiting times,^{161,162} as has the introduction of GPwSIs.^{71,173} However, evaluations of both services acknowledge that it is possible that times increase with longevity of the service,⁷¹ or expansion of the service without substantial resources.¹⁶¹

Experience from the GP Access Fund pilots has found that patients of hub practices have benefited more from extended-access initiatives than those in other practices.³² The introduction of specialist paediatric community care in London was reported to increase attendance because of decreases in 'did-not-attend' rates;¹⁸⁵ however, a controlled evaluation of a relocated paediatric outpatient clinic in Birmingham found that higher attendance was associated only with shorter travel distance.¹⁷⁷ Children living in the most deprived areas were more likely to miss appointments.¹⁷⁷

Staff and provider experience

Both staff undertaking new roles and their colleagues have reported increased satisfaction. Case study accounts from a paramedic practitioner pilot found that paramedics were enthusiastic about career progression and development;¹⁶³ however, it should be noted that paramedic practitioners offer a new way of working that is characterised by the development of a career framework.¹⁸⁸ Physicians and nurses also report consistently high levels of satisfaction in response to pharmacists¹⁵⁹ and physician associates^{166,181} working in primary care, and GPs using consultant e-mail advice highly value the ease of access and efficiency of the response.¹⁸⁶ Physician associates have also proved to be a flexible workforce resource to cover the work of nurses in the case of absence.¹⁸⁹

The expansion of the primary care workforce might also help to relieve the pressure of GPs and free up time as shown in the case of pharmacists,¹⁸² nurses,³² paramedics^{32,163} and direct referral to a physiotherapist via trained care navigators.³² Although the use of physician associates has been reported to have the potential to increase physician or practice productivity, it carries the associated risk that they will increase the workload of some staff, given the need for supervision and prescribing support in the UK.¹⁸¹

Unintended consequences

The main reported unintended consequences of R1 are the loss of continuity, increased inequity, the burdening of the wider workforce, increased demand and cost, and workforce challenges.

If continuity of care is defined as 'seeing the same health care provider every-time',¹⁵⁵ then the evidence suggests that practice-size expansion to include enhanced and/or new roles could potentially disrupt relational continuity.¹⁵⁶ Although some patients may value the new forms of access that larger-scale primary care can bring, others have expressed concerns over losing an ongoing, trusted relationship with their own GP and their own practice. Continuity of care is likely to be more important for elderly patients, those with long-term conditions and those with multiple morbidities, whereas patients with episodic or minor problems value access more highly.^{168,169} Analysis of the 2009/10 English General Practitioner Patient Survey¹⁶⁸ has, however, highlighted 'the difficulty for practices in offering speedy access and continuity of care simultaneously'. Rosen *et al.*¹⁹⁰ warn that the benefits of larger-scale primary care need to maintain the expert generalist skills of general practice. New roles in primary care might best concentrate on areas where workload is high, such as acute 'same-day' workload in general practice, so that doctors can focus on complexity in their caseload. This has been demonstrated by physician associates¹⁸¹ and pharmacists.¹⁸² Experience from a Child Health GP Hub system in west London found that, for economies of scale in the reductions in secondary care usage to be achieved, hubs must operate at a sufficiently large capacity of at least 15,000–20,000 people in the practice population and to engage enough professionals,¹⁸⁵ while avoiding detrimental access to primary care. Imison *et al.*¹⁸⁴ point to evidence demonstrating that access to primary care is more sensitive to distance than the use of outpatient or acute services; therefore, more accessible outpatient services would insufficiently compensate for primary care access. A hub-and-spoke model, where the polyclinic acts as a central resource base in a co-ordinated network of practices,¹⁸⁴ is proposed as a better strategy to provide equitable access. The subsequent experience of GP Access Fund pilots suggests that practices operating as a hub can offer more extended-access benefits than independent practices.³²

The opportunity for existing general practice staff to enhance their skill set is appreciated. However, without the ability to change their original role, the additional activity of the enhanced role makes it difficult to balance workload,³² in some cases leading to staff using their own time,¹⁸⁷ which is ultimately unsustainable.¹⁷² The appeal of an enhanced role may lead staff to pursue a specialist career and leave their original role,¹⁸⁷ or lead to a depletion of their source professional role;¹⁶³ in both cases, succession-planning is required, such that enhanced roles are within an overall career ladder.¹⁶³ Experience from Canada found that physician and nurse practitioners were reluctant to fully integrate the pharmacist's role during the first year, when the service was referred to as a pilot project and the funding to support the service was therefore not permanent, as a result of concerns that they may become dependent on a new service that might not remain available the following year.¹⁵⁹

Introducing new services has the potential to induce demand,⁷¹ or there is potential for the new service to address a previously unmet need, if, for example, incentives encourage procedures that had not previously been available.¹⁷⁴ New or transferred services have the tendency to become supplementary rather than a substitute service.^{151,163,172,174} This can create a situation in which the wrong case mix is addressed; staff may misuse new services and refer patients who ordinarily would have been managed by GPs,^{71,187} or patients seen in the new community-based services might then need to be referred to hospital¹⁷⁴ or seen again in primary care.¹⁵¹ In addition to increased demand through supplementary services, money might also be needed to backfill traditional posts if necessary.¹⁸⁷

Other reasons for the increase in service delivery costs include time spent supervising (including signing prescriptions for non-prescribing staff)^{154,163,164,166,181} or supporting staff;^{174,191} longer appointment lengths for new roles;^{156,164,192} more frequent patient contact;^{149,192} lower case mix;^{71,181} fewer patients seen than traditional services;¹⁷⁴ loss of economies of scale;¹⁷⁴ increased cost of staff, as they take on tasks that might traditionally be delegated;^{174,176} set-up costs, such as indemnity costs for new posts;^{32,163} and Care Quality Commission registration for hubs and federations.³² These, along with administrative support and resources to ensure that protocols can be reliably followed, are aspects of cost that must be factored into any service confirmation.^{174,187}

Experience from the UK has shown that some of these new ways of working face challenges in their demands for the new and extended roles required by the workforce. A critical shortage of ANPs, coupled with a short time frame of the GP Access Fund pilots to train ANPs, meant that they faced challenges with recruitment and, subsequently, implementation.³² Similarly, the low numbers of currently qualified physician associates in the UK is a limitation to the scope of use.^{163,189} The capacity of some workforce groups may also be reduced as they face competing priorities, such as consultant 7-day working.^{163,189}

The pay of staff also needs to be considered; if it is too low in comparison with other specialties or primary care physicians, then recruitment of staff might also be difficult,¹⁵⁵ and, conversely, where it is too high or 'virtually the same as a GP', this may affect commissioners' decisions about the potential benefits.¹⁷²

Mechanisms

We have identified several mechanisms for R1 from the evidence base. In the following section, we categorise these as patient, staff and system factors, and make distinct the resource and reasoning aspects of mechanisms.⁷⁶

Patient factors

Improved utilisation of community-based health services (outcome) is dependent on the location of such services (resource); location is tailored to the characteristics of the population (context) with respect to travel distance, deprivation and ethnicity¹⁷⁷ and how the care provided in community settings 'fits into their lives', meaning that there is consideration of patients' or carers' place, space and time and their emotional connection ('at homeness') with the location (reasoning).¹⁷⁸

Provided that patients are made aware of services (resource) involving new roles or ways of working in primary care (context), such as practice-based pharmacy and paramedic practitioners,¹⁶³ and that they have sufficient time to experience this care or envisage it^{181,185} to build confidence (reasoning) to use this service in the future,¹⁸⁵ they will accept the care from an alternative clinician (outcome).¹⁸²

Staff factors

Where new roles or ways of working are introduced (context), resources such as clinical champions of innovation,^{159,174,176,177,179,182} regulatory frameworks,^{156,163} training and development,^{156,179} clearly defined roles and responsibilities,^{156,176,179} an explicit case for change¹⁷⁶ and dedicated change-management staff^{32,156,191} assisting with regular communication and engagement,^{32,191} can be facilitative. In turn, these resources can motivate professionals (reasoning) to embrace change through a better understanding of the new scope of their role, practice and organisation^{163,176} and an enhanced perception of the credibility, legitimacy and sustainability of new posts.^{159,163,174,176} This results in enthusiasm and willingness to adopt new ways of working, including clinical buy-in,¹⁹¹ and combats resistance to change (outcome).¹⁷⁹

Embedding the new and expanded roles within primary care settings (context) requires time and/or funding (resources) to develop the role¹⁶³ and upskill, as relevant, through training and education.^{155,191} For example, hospital specialists can train clinicians in primary care to manage complex patients in the community.¹⁷⁹ Funding will also provide diagnostics in the community where necessary.¹⁸⁷ As for adopting

new roles, the ability to embed new roles and the resources of funding and training provide primary care professionals with both the experience¹⁴⁹ and the confidence (reasoning)^{179,186} to diagnose or treat more complex patients themselves in primary care, without onward referral to a hospital (outcome).^{179,187} Similarly, notwithstanding limited evidence on care navigation in community-based settings, receptionists who are trained in care navigation (resource) and have increased awareness and knowledge of alternative services (reasoning), could facilitate a direct referral to new services, avoiding a GP consultation (outcome). This has been demonstrated in practice through the use of care navigators in the implementation of a 'PhysioFirst' service,³² and through the inclusion of consultations with pharmacists for telephone triage of same-day appointments.¹⁸²

Building staff confidence and empowerment can also lead to greater job satisfaction. Job satisfaction can be improved further (outcome) if regulations of the roles allow for greater autonomy and enhancement of the scope of the role (resource), so that professionals are empowered in their position (reasoning). This has been demonstrated by pharmacists working in a general practice who can prescribe,¹⁸² and also, conversely, through the inability of physician associates to currently prescribe as per the exclusion of physician associates from the regulatory framework for health-care professionals.¹⁸⁹

System factors

In the earlier section, *Staff factors*, we reported a dependency on staff willingness to adopt new ways of working and subsequent training to empower them to take on new tasks. In this section, we move on to consider the task-shifting phase. 'Task shifting requires both willingness to give up tasks on physicians side as well as the ability and capacity to perform these tasks on non-physician health professionals side'.¹⁵⁵ A systematic review on the substitution of physicians by nurses in primary care found GPs unwilling to give up tasks, as demonstrated by a low level of clinical autonomy in nurses.¹⁵⁴ Similarly, Pawson *et al.*,⁷¹ in their realist review on demand management, note 'the lack of success of General Practitioners with Specialist Interests (GPwSIs) initiatives due to reluctance to let go by consultants'.

Where new ways of working are introduced (context), resources such as the negotiated division of labour,⁷¹ clearly defined roles and responsibilities,¹⁵⁴ protocols that define practice boundaries¹⁵⁵ and communication and engagement with the wider workforce¹⁷⁹ can facilitate task-shifting (outcome). These resources, in turn, create an agreed and accepted case mix of patients to be treated in the community.^{71,190} Preconceptions and attitudes of what professional roles entail are eliminated,^{154,179} enabling professionals to better understand and appreciate the role of each team player,^{155,159,193} which helps to diminish a fear of losing control or professional insecurities^{160,163,193} (reasoning).

With the introduction of new roles (context), resources such as co-location,^{159,193} electronic medical records¹⁹³ and meetings¹⁹³ can be facilitative. These resources, in turn, enable professionals to develop collaborative relationships and improve communication, trust and respect,^{159,185,190} resulting in improved delivery of community services (outcome). For instance, improved trust (context) will determine the level of support that staff in new roles receive (resource) as consultants accept the new service (reasoning),⁷¹ improving the safety and efficacy of the community-based services (outcome).¹⁷⁴

Mechanisms summary

From a patient perspective, improving the utilisation of community-based services can be enhanced if service locations are tailored to patients' emotional connections, as well as developing patient confidence through greater awareness and experience.

From a staff perspective, overcoming resistance to change and the willingness to adopt new ways of working, along with maintaining new ways of working, are key considerations. In order to create a culture receptive to change, structured processes (e.g. regulatory frameworks, training and development programmes) need to be incorporated to develop staff confidence in the new way of working. Once staff have been encouraged to adopt new ways of working, investment is needed to embed such roles, so that primary care professionals

have both the experience and the confidence to maintain the new way of working. Staff can further be empowered through autonomy and enhancement of the scope of the role, increasing staff resilience.

From a wider staff perspective, the introduction of new ways of working needs to be done in a structured systematic way, so that all stakeholders have confidence in the new way of working. Collaborative relationships and the promotion of new services will encourage their use.

Chapter summary

Of the characteristics of interest to this theory component (see *Characteristics of community-based care and primary care access*), some initiatives are relatively new, particularly in UK settings, and need further evaluation. Furthermore, a paucity of research data has also been noted for the more established enhanced primary care roles, such as advanced nurse or physician associate roles.¹⁵⁶ Upcoming evaluations, such as the second phase of the GP Access Fund,¹⁹⁴ will help to develop the evidence base, as well as future evaluations of pilot programmes, such as the 3-year Clinical Pharmacists in General Practice phased pilot.¹⁹⁵

Notwithstanding the limited evidence base, we conclude that delivering new and expanded roles in primary care as part of the provision of more care in the community requires trust between professionals, alongside appropriate training and practical tools to trigger professional willingness to adopt new ways of working, such as task-shifting for community-based care. Subsequent embedding of the effective new ways of working has the potential to achieve the outcomes of better management of chronic conditions, a reduction in the number of secondary care referrals, improved health-care accessibility for patients and higher staff satisfaction for individuals performing new roles, as well as others benefiting from reduced pressure in the system. Cost-savings in this context may only be possible following the sustained implementation and stabilisation of increased demand, where the costs of training and additional community service provision are included.

Chapter 5 Place-based contracting and payment systems as a means to incentivise shared accountability

Introduction

This chapter explores the second of three theory components that were prioritised for realist review purposes:

If commissioners award place-based contracts (incorporating capitated budgets and risk-/gain-sharing) then providers will share accountability for population health, cost-effectiveness, patient experience and staff experience.

The chapter begins by setting the evidence scene for the *if* statement, that is, the characteristics of new forms of contracting and their contribution to place-based care, followed by an assessment of the *then* statement in the literature, by describing the outcomes associated with capitation, risk-/gain-sharing and financial incentives. Next, a brief description of the state of the evidence is provided for R2, which precedes the section for outcomes, delineated by the quadruple aim and unintended outcomes. Subsequently, we describe the mechanisms as resources (of the intervention) and reasoning (stakeholder volition) for patient, staff and system. When possible, we place the resources of the mechanisms alongside the context within which the theory component operates together with the specific intervention outcomes. Finally, we provide a brief overview to capture the key aspects of R2.

Characteristics of place-based contracting and payment systems

According to Andersson and Wikström,¹⁹⁶ accountability in health care could be construed to incorporate 'answerability, blameworthiness, liability and expectation of account giving'. *Shared* accountability, then, might be the product of integration, facilitated by a range of levers and incentives within new payment models designed to improve outcomes, reduce unnecessary expenditure and encourage place-based care: capitation; risk- and gain-sharing; differential outcome-based payments; and pay for performance.^{119,120}

Owing to its emphasis on collective accountability through long-term planning, aligned incentives and risk-/gain-sharing, an 'accountable care' model – loosely based on the ACO model from the USA – is seen as offering a balance of structured payment systems with the flexibility to adapt to local contexts.^{119,120,126} Bringing together multiple services under a single contract and a capitated budget signals a shift in emphasis from activity to outcomes, theoretically offering health and care systems the ability to reduce supplier-induced demand, increase standardisation, share best practice, reduce variation and thus, improve productivity and overall value.^{118,119,197} Furthermore, meeting the dual requirements of an integrated system that is cost-effective highlights the need for a population-level budget, with a focus on outcomes to enable greater attention on population prevention strategies.¹¹⁸

The MCP framework,¹¹ produced by NHSE, describes the ambition for a fully integrated MCP, incorporating capitation (the whole-population budget),¹⁹⁸ risk-/gain-sharing and incentives (the MCP Improvement Payment Scheme, which replaces the QOF).¹⁹⁸ Capitation may involve pooling budgets across health and social care.¹⁹⁹ Vanguard sites are seeking longer-term contracts, of between 5 and 15 years,²⁰⁰ to enable longer-term planning and investment, allowing providers to spread the risk over a longer time frame and to address the wider determinants of health.

The King's Fund recently undertook a series of interviews with vanguard sites to explore progress,²⁰⁰ noting that many of the commissioners are exploring capitation as an opportunity to abandon ineffective and

perverse payment mechanisms. Risk- and gain-sharing is designed to ensure ‘that the payment system does not inhibit the path to transformational, system-wide change’ (contains public sector information licensed under the Open Government Licence v3.0),¹¹ avoid perverse incentives and encourage public reporting on quality and costs.¹¹⁸ Risk- and gain-sharing agreements have gained traction, demonstrated by the contract for musculoskeletal services in Bedfordshire.²⁰¹

The learning from current examples emphasises the time taken to design and embed new pathways and new ways of working, in addition to the implementation costs at the start of the contract,^{126,201} which is reflected in the NHSE draft MCP contract.²⁰² In the Bedfordshire example, the performance management starts after the first year of operation. The MCP framework suggests that the performance payment might amount to 10% of the total contract value. In a series of interviews with vanguard commissioners, Collins²⁰⁰ noted that the operational risks expected of providers may not reflect the reality of what is in their control, for example, in relation to unscheduled care and delayed transfers of care.

Advocates of outcome-based commissioning suggest that a focus on patient and population outcomes, rather than on process outcomes, will drive up the quality of care. Influenced by the concept of value-based health care,²⁰³ outcome-based commissioning gained attention through work in Milton Keynes.¹¹⁸ Pay-for-performance incentives, a feature of outcome-based contracts, are used to drive productivity or quality.²⁰⁴ The design and format of payments vary, typically based on units or thresholds, and may be paid retrospectively or prospectively.^{205,206} The vanguards recognise the need for the alignment of incentives at different levels of the system, from the individual level to the service level.²⁰⁰

Current commissioning practice typically involves the management of numerous contracts, ranging in value, for different community-based services. The lead provider model, potentially the vehicle for the fully or partially integrated MCP, has been promoted as enabling better management of pathways and offering clearer governance and accountability,²⁰¹ and is the preferred model in several vanguards,²⁰⁰ with at least one vanguard working with a prime contractor, or systems integrator,²⁰⁷ to develop the model. The theoretical benefits of this approach include a lower administrative burden; greater co-ordination of specialist providers; and the facilitation of innovative approaches to care.¹¹⁸ The alliance contract, the likely vehicle for engaging GPs in the partially integrated or virtual MCP,¹¹ is considered to result in less disruption locally, but still requiring robust governance arrangements.²⁰¹

The evidence base

The evidence base underpinning R2 is characterised by limited empirical evidence, although there have been earlier reviews of available evidence; there are a number of commentaries, drawing on experiential evidence (case studies and informal evaluations). Details are provided in *Appendix 6*. The review is based on 12 reviews, 3 qualitative studies, 7 experimental studies, 8 official publications and 18 commentaries. Support for this component is therefore relatively weak. Limitations of the evidence base mainly relate to the heterogeneity of contracting models and variable reporting, resulting in a moderate level of uncertainty around the conclusions.

There has been substantial debate and commentary on contractual models within UK and international literature, but limited empirical studies that test and evaluate the theory, perhaps indicative of the challenges involved in measuring impact. Owing to the features of NHS funding and its flows, much of the international evidence base needs to be considered for its applicability to a NHS context. It has even been suggested that, given the significant variation, the labels used may be unhelpful, implying a level of consistency not visible in reality.²⁰¹ The evidence base, although limited, will help to articulate the theory and underlying assumptions of the MCP model. When appropriate, gaps in the knowledge base are highlighted, suggesting potential priorities for further research and evaluation.

Outcomes

Population health

Reviews^{197,208} of contracting arrangements in health and social care present a relatively mixed picture of the impact on population health outcomes, with those that had 'well-developed and comprehensive pooling arrangements across a range of sources, creating large health and social care budgets'²⁰⁸ demonstrating positive impacts. The reviews found limited studies exploring the impact of contracts on the quality of care, and considerable variation in the measures used. The findings suggested that pooled resources might offer providers the ability to create a more holistic package of care that meets patients' needs; however, this carries an associated risk that capitation might act as a perverse incentive, encouraging providers to sacrifice quality to reduce cost. The opportunity hinges on the availability of information on health needs, service utilisation and quality indicators.¹⁹⁷

Learning from legacy initiatives, such as the Better Care Fund, suggests that expectations on population health outcomes may be ambitious, failing to take into account the time taken to influence changes in behaviours and to demonstrate an impact on morbidity or mortality;²⁰⁹ a qualitative analysis of Better Care Fund implementations suggests that a time scale of ≥ 5 years is realistic. This same analysis notes how several local health economies chose to scale back ambitions, focusing on specific population groups to achieve short-term goals. Elsewhere, it is proposed that financial reform in health care could have a negligible or negative impact on health inequalities,²¹⁰ although the evidence is limited.

Three Cochrane reviews^{204–206} have explored the effectiveness of financial incentives, which highlights the need for more robust evidence on the impact of financial incentives on patient outcomes. Although incentives seem to have some effect on the behaviours of health-care professionals, this may not necessarily translate into improvements in patient outcomes.²⁰⁵ Capitation, fee for service and pay for performance were found by Yuan *et al.*²⁰⁶ as likely to have little or no impact on health outcomes, leading to their conclusion that decision-makers should consider the selection of performance measures and targets, the availability of funding and the means to test the payment level needed to influence behaviour change.²⁰⁶

Several MCP vanguards have expressed a commitment to develop new outcome frameworks for primary care, replacing the QOF. The QOF was established to drive up quality in primary care, but has since been criticised for (1) its failure to address multimorbidity;²¹¹ (2) encouraging an overly mechanistic approach to care, focusing on biomedical surveillance and neglecting self-management;^{212,213} (3) a focus on measurable, rather than truly improved, health outcomes;²¹⁴ and (4) imposing barriers to case-finding, particularly in deprived practices, in which prevalence is higher.²¹¹ The focus on single diseases²¹¹ may have inhibited a more holistic approach for comorbid patients. However, it has been argued²¹⁵ that, although guidelines could be created for common comorbidities such as depression, the task would be overwhelming, because of the multitude of potential conditions and combinations.

A recent review²¹⁶ suggests some lessons, relating to the QOF, which may usefully inform new outcome frameworks. The review found a limited effect on outcomes, including glycaemic control and high blood pressure, suggesting that impacts may be transient and may not lead to improvements in population-level morbidity and mortality. Attribution is problematic – typically many influences, such as housing, environmental factors and deprivation, will have contributed to these outcomes.^{118,197,209,216,217} It has been argued that the long-term contracts being developed by MCPs may offer an opportunity to invest in interventions with partners to address these wider determinants.¹¹

Cost-effectiveness

The current focus on savings and reduced utilisation does not seem to be borne out in the literature. Findings regarding the cost-effectiveness of new contractual arrangements in earlier legacy initiatives have been mixed. A review²⁰⁸ of 34 schemes found only three that reported significant reductions in utilisation; 11 had no significant effect; and, for the remaining studies, results were mixed. Few studies have assessed the long-term impacts, making it difficult to draw conclusions on the sustainability of any reductions in service

utilisation.²⁰⁸ Notwithstanding several evaluations of integrated care contracts, such as Torbay and Wye Valley, the methodologies make it difficult to compare findings accurately.¹⁹⁷ It is possible that integration may help to identify unmet need, which may initially limit savings and tip resources towards acute-based care;²⁰⁸ in addition, the current climate of widespread provider deficit holds a risk that ‘crisis management’ may over-ride prevention.¹⁹⁷ Even when costs are reduced, it can be difficult to translate these into actual savings, without reducing provision or closing beds.¹⁹⁷

A commentary, by Humphries,²¹⁸ argues that the Better Care Fund, designed to enable integration through pooling resources, ‘created risks as well as opportunities’, because of implicit assumptions ‘based on optimism rather than evidence’ about the savings that could be achieved. The ambition to deliver £511M of savings in 2015–16 was not attained, as a result of increased emergency admissions and delayed transfers of care.²⁰⁹ Plans to reduce delayed transfers of care by 293,000 days in total actually resulted in an increase of 185,000 days and additional costs of £146M – approximately 75% of areas were unable to achieve the targeted reductions in delayed transfers of care. Similar numbers of local areas experienced increases in emergency admissions, leading to costs of £311M over the plans. Qualitative interviews suggest that the initial administration of the fund created a level of bureaucracy that affected capacity and existing integration schemes.²⁰⁹ Similar comments about the administrative overhead have been made, by Allen and Petsoulas,²¹⁹ about the Commissioning for Quality and Innovation scheme. The assumption that pooling resources will help to identify and address barriers to improvement fails to take account of the inevitable redundancy within any system.²¹⁷

Looking further afield, to understand what may be learnt from international systems of care, commentaries on the early ACOs in the USA point to mixed results on costs and health outcomes.^{119,126,220} A difference-in-differences analysis²²¹ suggests that the success of the ACO model may derive from the shift to lower-cost facilities and the emphasis on outcomes, rather than activity, based on learning from the Massachusetts-based initiative incorporating capitation and pay for performance. These changes are associated with reduced utilisation in some population groups. At this stage, given the maturity level of ACOs, it may be too early to see, where reductions in utilisation have been demonstrated, if these can be sustained over time.¹²⁶ Questions remain regarding the expectations of cost-savings from shifting care closer to home^{191,222} within a NHS context. An evaluation of the CMS Group Practice Demonstration Programme²²³ found significant reductions (US\$500 per person per year) for the sickest patients (people receiving both Medicare and Medicaid support). The authors go on to speculate that ACOs may have a role in ‘slowing the rate of increase in health care spending and in bringing about some improvements in the quality of care’; however, they also point out that ‘if ACOs are to bring benefits then they will need a range of capabilities in order to manage cost and quality and to be able to implement what is known about the characteristics of successful integrated systems’.²²³

Capitation and pay for performance were found to be ‘generally effective’, based on the findings from a Cochrane review.²⁰⁴ In an outpatient setting, pay-for-performance incentives were associated with improvements in quality in outpatient settings, particularly in the use of tests and treatments for long-term conditions, but little or no difference to health outcomes or utilisation of services.²⁰⁶ Learning from the QOF suggests that the effectiveness has been variable. The QOF has been associated with a small curb in the increase in emergency admissions²¹⁶ for those conditions that are included in the framework. However, it is difficult to attribute any improvements to the QOF, given the multiple factors that may have contributed. A key criticism of the QOF is that the framework incentivises activity rather than quality.^{204,224}

Lessons from earlier initiatives suggest that potential savings could be limited by the time and set-up costs to design and implement new contracts, outcome frameworks and performance management systems.^{201,225} There may be costs associated with data collection and management, actuarial analysis and training. It has been suggested that this work can take up to 2 years.^{201,226}

Patient experience

With the emphasis on outcome-based commissioning within MCP contracts, it could be argued that the use of financial incentives is geared more at improving productivity than quality. However, little evidence exists to support the notion that financial incentives will drive up quality without some investment of organisational development,²⁰⁵ particularly focusing on collaboration, communication and teamwork.¹¹⁸ The review found little evidence on the impact of financial incentives on patient experience.

This is indicative of the challenge of defining and measuring outcomes that are meaningful from both a patient and service perspective¹¹⁸ and is a recurrent theme in the literature: ‘... complying to arrangements for patient empowerment and patient centredness will be challenging as these terms are not self-defining and there are a wide variety of approaches to achieving these goals, depending on how they are understood.’¹¹⁸

Staff and provider experience

The evidence base appears to focus on the experience of provider organisations rather than individual staff, suggesting a potential research gap.

For providers, there may be greater flexibility for investment within a pathway and over the lifetime of a contract, to manage risks and gains.²²⁷ It has been argued that this creates an environment for innovation¹¹⁸ and enables a focus on the wider determinants of health.

The context in which MCPs will be operating presents challenges to commissioners and providers, in particular, political pressure to deliver change within time frames that have been described as idealistic; Burns and Pauly²²⁰ suggest that a time frame of 5–7 years is more realistic. Anecdotally, MCP teams are noting the time involved in building relationships and structures. In a conference presentation on new care models, Hopson²²⁶ noted that the logistics of getting out to talk to stakeholders (e.g. practices, local authorities) presented significant challenges to vanguard teams.

Unintended consequences

Elsewhere in this report, the issue of defining ‘place’ or ‘community’ is noted. Although many of the MCP vanguards refer to ‘natural communities’, the notion of ‘community’ is fluid and subjective (further described in *Chapter 6*). As with any boundary, there may be consequences from where contractual lines are drawn. For patients living near the boundaries, there may be impacts on patient choice and on the liability of the MCP, as suggested in the following commentary:

If a patient opts to seek care from a different provider outside the area, the local ACO would remain accountable for that individual's care and bear all the costs. In addition, the ACO or other provider that receives this out-of-network patient would be remunerated depending on the level of success.

Reproduced from Ahmed et al.¹¹⁹

Uncertainty exists regarding the tensions and trade-offs resulting from the shift of care from hospital to community settings, with speculation that organisations may act in their own interests rather than those of the overall system.¹¹⁸ Conflicting policies may exacerbate this, as pointed out in the National Audit Office analysis of integrated care.²⁰⁹ Although some areas (such as Salford and Northumberland)²⁰⁰ are making progress on pooling budgets, hurdles remain in pooling across health and social care, making it difficult to align incentives,²⁰⁸ and in transferring savings and risks across sectors. Those areas that are making progress are building on a history of collaborative working.²⁰⁰ In the USA, there has been speculation²²⁸ that the ACO model, in its emphasis on consolidation and co-ordination, may inhibit those market forces/competition that are necessary in driving cost and quality improvement.

In addition, concerns have been expressed that the lead provider/contractor model, advocated in the fully and partially integrated MCP contracts, could have negative consequences, creating further distance between commissioners and providers and affecting clinical governance and patient safety.¹¹⁸ The actions of individuals are also unpredictable; a review, by Billings and de Weger,¹¹⁸ points to earlier analysis of the

effectiveness of incentives: ‘... although agents will often change their behaviour in response to sanction/reward mechanisms, this is not always in desired ways’. Outcome frameworks may risk focusing on process outcomes, rather than those that are more challenging to define. The implications for providers should also be considered – qualitative measures may involve new data collections and could incur more cost.¹¹⁸

Learning from the ACO models in the USA, it has been noted that current savings typically derive from the first cohort, set up in 2012, demonstrating the time needed to deliver efficiencies/improved productivity.²²⁹ Similarly, it seems unlikely that improvements to the quality or experience of care can be delivered in a matter of months.²²¹ This may translate into an optimism bias,²⁰¹ whereby commissioners may develop contractual forms that do not have the support of providers and local communities. The challenge of designing a population-based capitated contract, in which subcontracted providers may hail from both the public and private sectors, should not be underestimated; ‘gains’ may be seen as profit for shareholders or reinvestment for improvements.²⁰⁰ New guidance²³⁰ from NHS Improvement suggests that adjustments will be considered for agreed periods, to enable integrated working to become embedded.

There is a risk that incentives may reward inappropriate behaviours; for example, capitation could restrict access for some patients to some services;²⁰⁸ however, commissioners have the opportunity to set thresholds to mitigate this. The focus on reducing hospital utilisation may also have an impact on patient choice, if packages of care are focused around this aim to the exclusion of patient preferences.²⁰⁸ In particular, it can be difficult to define outcomes relating to the experience of care.

The different contractual forms described in the MCP framework¹¹ offer different combinations of risk and opportunity. Reviews of contracting arrangements have found that alliances (the vehicle for GP practices to join partially integrated MCPs) benefit from incentives to collaborate, improved relationships, active involvement of commissioners,²⁰¹ information-sharing, reduced capital costs and better co-ordination.²²⁵ However, some evidence suggests a high failure rate in alliances¹¹⁸ because of the conflict between competition and collaboration:

Alliance partnerships differ in the amount of pressure the firms feel to cooperate vs compete. These competitive forces are affected by contracts existing between the parties, the amount of product and service overlap, as well as the amount of trust in the relationship.

Reproduced from Billings and de Weger¹¹⁸

The lead provider model offers commissioners the opportunity to address pathways via one contract, as opposed to the multiple contracts currently in place. This raises questions on how group accountability for outcomes will be managed. It has been argued that incentives might result in unintended behaviours and outcomes. Incentivising case-finding could initially increase costs as unmet needs are identified. Professionals may be incentivised to focus their efforts on outcomes that are rewarded, thus neglecting other aspects of care.²⁰⁵ Furthermore, there is an associated risk of ‘gaming’ unless robust information systems underpin performance management.^{197,208} The availability of information is associated with the power balance between commissioner and provider; information asymmetry is a risk²²⁷ when commissioners are ‘price-takers rather than price-setters’,²⁰⁸ leading to inefficiencies in the contract.

As the theory behind longer-term, place-based and outcome-based contracts suggests that outcomes can be improved, recent examples – such as Hinchingsbrooke²³¹ and the UnitingCare contract in Cambridgeshire and Peterborough^{200,232–234} – have demonstrated the difficulty of pricing services previously procured on block contracts. The UnitingCare contract – a 5-year £725M contract awarded in 2014 for acute and mental health services for older people and community services across Cambridgeshire – failed, resulting in at least £16M in termination costs shared by the parent companies of the provider and the CCG.²⁰⁰ The viability of the procurement, which stipulated a 10% reduction in costs over the course of the contract, was questioned.²³³ In addition, the financial risk and value-added tax (VAT) implications were not sufficiently addressed.^{232,233} The context of an existing unsatisfactory contract combined with local ambition to deliver to tight time scales influenced decision-making behaviours to prematurely sign the contract.²³³ Potential implications may relate

to circumstances in which commissioners prefer larger providers or partnerships, which offer greater financial resilience²⁰⁰ over smaller providers.

Mechanisms

We have identified several mechanisms for R2 from the evidence base. In the following section, we categorise these as staff and system factors and make distinct the resource and reasoning aspects of mechanisms.⁷⁶

Staff factors

It is widely recognised that the contracting arrangements alone are unlikely to deliver change without an explicit commitment to organisational development.^{200,209} A culture of trust and collaboration (context), which takes time to develop, is needed to underpin the new ways of working (outcome) required of new contracting arrangements. A key theme to emerge from the literature is the mutually reinforcing relationship between structural interventions, for example, organisational forms (context) and governance structures (resource), and behavioural change [e.g. staff motivation (reasoning)] from staff engagement and development (resource), leading to a shift from siloed working (reasoning).²³⁵ In addition to these cultural factors, specialist capacity and capability (resource), with clear roles and responsibilities in contract management and procurement,^{233,234} are underlined as critical to enabling new contracts. Investment to stimulate engagement and organisational development (resource) is considered imperative to improving the value of health care²²¹ (outcome).

At an individual practitioner level, it has been argued that extrinsic incentives (resource) 'may crowd out or reduce intrinsic motivation'²⁰⁴ (reasoning).^{182,192,205} This reflects the logic of the value-based health-care movement²⁰³ that value should be defined by the customer (patient/local, community/clinicians). This might be facilitated by the co-production of incentives with clinicians and patients (resource) to focus performance around measures that are meaningful within local communities¹¹⁸ (outcome). There is also an argument for considering the appropriate ceiling²¹⁶ and 'strength'²⁰⁴ of incentives:

For example, a weak incentive to perform a valued behaviour may be more effective than a strong incentive to perform a behaviour that is not seen as important by the physician.

Reproduced from Flodgren et al.²⁰⁴

System factors

Co-production (resource) encourages outcomes that are meaningful to patients, practitioners, local communities, providers and commissioners²³⁶ (outcome) which, in turn, depend on robust information¹¹ (resource). Incomplete information, partly attributable to siloed working, was one of the issues identified in the analysis of the UnitingCare contract failure.²³² This approach suggests a focus on value rather than activity²⁰³ (context), presenting the challenge of translating a complex system of care into a set of measurable outcomes and indicators.¹⁹⁶ Accountability 'as active inquiry over time: listening, asking questions and talking, as opposed to taking a snapshot'^{196,236} has the potential to build the relational behaviours (reasoning; see *Chapter 6*) that underpin the MCP vision.

Collaborative behaviours (outcome) and sustainable relationships (outcome) are dependent on trust (reasoning).^{118,120,200,219,225} Contracts in the NHS depend on a level of flexibility (resource), which is challenging where relations are fragile or adversarial (context); Sanderson *et al.*²²⁵ note the importance of relationships in building a shared sense of identity and values, which is particularly important in the context of agreeing opportunities for improvement or innovation and in determining what outcomes should be monitored.

Collaboration (reasoning) may be encouraged through a co-productive approach (resource), described in an ethnographic study¹⁹⁶ as 'social accounting [. . .] through the acknowledgement and enactment of

multiple accountabilities and relationships' – in recognition that changes to structure and process are not sufficient to facilitate a culture of shared accountability (outcome).

The effectiveness of incentives is explored by Mehrotra *et al.*²³⁷ in their application of behavioural economics theory to the use of incentives. Although commissioners find the threat of penalties (resource) to be a useful incentive, not all of them act on the penalties²¹⁹ (reasoning), citing the risk of impeding provider efforts to improve quality as one reason; thus, incentives may fail to influence individual practitioners' behaviour¹¹⁸ (outcome). The unpredictability of behaviours also makes it difficult to ensure how measures influence individual practice.^{212,238} Findings from The King's Fund inquiry into the quality of general practice concluded that protected time (resource) is needed alongside incentives, to allow for reflection^{239,240} (reasoning). The co-production and testing of outcomes and incentives with stakeholders may help to ensure alignment with business plans and interagency strategies^{118,227} (context).

The readiness of organisations (context) to take on the role of lead provider has been questioned,¹¹⁸ with the suggestion that larger institutions providing secondary care may be in a more favourable position to take on the level of risk, particularly in areas that lack a strong GP federation. The need for investment in technology, information systems, governance, process re-engineering and cultural change (resource), and the resulting need for revenue streams to manage high set-up costs (context), may also favour larger institutions.²²⁰ It has been suggested that implementation costs could outweigh potential savings.¹¹⁸ Within a primary care context, there is a suggestion that the large multispecialty group practices in the USA are able to improve quality as a result of shared infrastructure; however, this has not been robustly tested.²⁴¹ It is likely that GP practices will vary in enthusiasm for existing contracts and readiness to give up existing contracts (reasoning) to participate in the partially or fully integrated model.²⁰⁰ Readiness is dependent on a host of contextual factors,²⁰⁰ notably the strength of existing relationships across the health and care economy (context). It can be challenging to build collaborative system-wide relationships in a regulatory system built around the performance of separate organisations (context),²⁰⁰ and it is acknowledged that relationships will evolve over years rather than months. NHS Improvement and NHSE are jointly developing the Integrated Support and Assurance Process to support new care models.²³⁰

The programme theory articulates the notion that new contracting and payment arrangements will incentivise shared accountability. However, it is clear from the evidence that consideration needs to be given as to how to encourage inclusivity (reasoning) through the co-production of outcomes (resource) and engagement in data collection¹⁹⁶ (resource). An ethos of co-production combined with a long-term perspective (context) goes some way towards the vision of the culture of stewardship described by Gray²⁴² (outcome).

Chapter summary

The review highlights significant gaps in the literature base, notably relating to patient and staff experience of introducing new contractual forms. There is limited empirical evidence, and much of the literature seems to be anecdotal or theoretical, based on limited case studies or informal evaluations, rather than robust research designs. This is indicative of the challenges of measuring and attributing outcomes to contractual forms; when studies have been able to explore outcomes, these often look at aspects of the MCP contractual model in isolation (e.g. incentives or capitation), rather than the overall approach.

The influence of contractual forms on population health seems to be mixed, which is suggestive of the impact of different local contexts. Findings suggest that a tension between incentives to compete and collaborate could lead to potential confusion within a system; however, there does seem to be potential to encourage more holistic care through pooling resources. Learning from other programmes of integrated care suggest that ambitions are often unrealistic, particularly with regard to the savings that can be achieved and the time scales of changing the behaviours within a system. Behaviours can be unpredictable, and there is a risk that well-intended incentives may result in inappropriate behaviours, for example, by prioritising productivity over quality.

From a system-wide perspective, new forms of contracting will need to be supported by an explicit programme of organisational development and the involvement of clinicians and patients in the development of outcomes and incentives. This cultural change is needed to ensure a shared understanding of value within the context of the local community, and to encourage the behaviours associated with new ways of working inherent in the new contract. Our analysis suggests that the involvement of clinicians in the development of incentive frameworks (context), with sufficient time for reflection and learning (resource) enables individuals to understand how their role contributes to patient outcomes (reasoning). Equally, engagement of patients and service users helps to define 'shared accountability' on clear measures of value (outcome). Investment in organisational development (resources) and robust high-quality information on cost and quality (resource) encourages trust and collaboration (reasoning), in turn enabling informed (re)investments (resourcing) and financial risk to be managed appropriately (outcome). This sharing of information and intelligence, which provides access to the same outcome data (resource), can facilitate joint accountability (outcome) for informed and consistent decisions (resourcing).

Chapter 6 Fostering relational behaviours builds resilience within communities

Introduction

This chapter explores the third of three theory components that were prioritised for realist review purposes (see *Chapter 3* for more detail on how MCPs intended this theory component to work). It begins by setting the evidence scene for the *if* statement, focusing on the characteristics of relational behaviours and co-production followed by the *then* statement, describing how health and care services support local communities to build resilience. Next, a brief description of the state of the evidence is provided, which precedes the section for outcomes, delineated by the quadruple aim and unintended consequences. Subsequent to this, we describe the mechanisms as resources (of the intervention) and reasoning (stakeholder volition) for patient, staff and system. When possible, we place the resources of the mechanisms alongside the context within which the theory component operates together with the specific intervention outcomes. This narrative is followed by a summary of the extended advisory group discussions related to R3, highlighting aspects that further develop the theory components. Finally, we provide a brief overview to capture the key aspects of R3.

Characteristics of relational behaviours

Influenced by systems thinking, MCP vanguards recognise that health care is inexorably interconnected with other public services, support networks and local neighbourhoods. MCP vanguards express an ambition for a different relationship with local communities, in which patients and members of the public, along with community groups and local businesses, are more engaged in the design and delivery of health care. A sense of 'co-ownership' or 'mutuality' is described. This chapter focuses on the multifaceted approach, described by MCP vanguards in their logic models, to develop mutually beneficial relationships between service users, professionals, services and communities. Recognising these various dimensions, this chapter considers the breadth of this approach, illustrated by interventions referenced in the MCP logic models, at the individual (self-management and social prescribing) and community (co-production, community engagement and joint working) levels.

As referenced in *Chapter 5*, the concept of 'community' is fluid. A community may be defined by shared interests, needs or experiences (such as groups with similar health needs), or by common attributes such as place of residence, ethnicity, age and occupation.²⁴³ Individuals are likely to belong to various 'communities', associated with specific identities such as race or religion, as well as interests, or by needs of health care²⁴⁴ or social care. An inherent tension in defining communities is in setting boundaries of inclusivity, thus determining who is or is not included.²⁴⁵

To address the growing demand on services and the social burden of long-term conditions, national and local policies advocate interventions such as self-management, shared decision-making and social prescribing, with a focus on empowerment. Recognising that actively involved patients will need support networks, services are increasingly exploring joint working with voluntary and community services to build social capital, by engaging volunteers and peer-support workers.^{246,247} The strategy of connecting patients to local support networks is at the core of social prescribing initiatives.²⁴⁸

The changing relationship between health services and local communities is characterised by increased engagement, encompassing 'a range of approaches to maximise the involvement of local communities in local initiatives to improve their health and wellbeing and reduce health inequalities'.²⁴³ Engagement can help to identify and prioritise community needs and preferences as well as develop community assets that

may support the design and delivery of services.²⁴⁹ Building on engagement, co-production involves the 'contribution of service users to the provision of services',²⁵⁰ enabling service users to take an active role, challenging the perception of patients as passive recipients of care. Originating in the USA during the 1970s,²⁵¹ co-production is increasingly adopted by services^{250,252} in the UK.

As the concept of co-production is increasingly applied within health care, guidance has developed. Six principles of co-production have been developed by Nesta: (1) building on people's existing capabilities; (2) reciprocity and mutuality; (3) peer-support networks; (4) blurring distinctions of professionals and service users; (5) facilitation of networks, rather than delivering; and (6) recognising the importance of assets.²⁵² NHSE has published a set of six principles, developed by the Independent People and Communities Board, for new care models, focusing on the empowerment of patients and communities.²⁵³

The move towards co-production and engagement is also reflected in increased collaboration with other public services, such as schools, fire services, police services and housing. For example, fire services are working with health and social care commissioners²⁵⁴ and, in *Chapter 3*, we shared details of an innovative competition, working with a local school, to engage young people in health care. This combination of activities is intended to improve community resilience, defined as the ability to withstand, adapt and recover, by individuals and communities.²⁵⁵ Community resilience is increasingly being recognised as an important ingredient to the reduction of health inequalities.^{255,256} The resilience of individual patients and their local communities is interdependent and access to social resources has been demonstrated to be critical to empowering patients to self-care.²⁵⁷ The nature of the relationships between individuals and their neighbours, statutory authorities and voluntary groups has an impact on the quality of life, and the capacity, of the community to contribute to positive changes within the community.²⁵⁸ Notable relevant policies in recent years include the 'Big Society' initiative,²⁵⁹ which sought to encourage individuals to take a more active role in their communities; and 'Healthy Lives, Healthy People',²⁶⁰ which aimed to empower local communities to adopt healthier behaviours. These policies have tended to focus on developing the assets and resources needed for a community to thrive: human capital (e.g. skills and education), social capital (e.g. social networks), built capital (e.g. access to amenities), natural capital (access to green space) and economic capital (e.g. income).^{256,259} More recently, the Realising the Value programme²⁴⁹ has provided funding for a series of partnerships between health services and the voluntary sector.

The evidence base

The evidence base for R3 is varied, with limited review evidence available for the effectiveness of co-production and social-prescribing interventions, and several systematic reviews examining self-management interventions. Literature from the UK has been prioritised for relevance; when international examples are used, we have given precedence to countries with a similar primary care model to the UK. The dearth of evidence is reflected in the data set used for this review (11 systematic reviews; seven literature reviews; two qualitative studies; one quantitative study; one cost-benefit analysis; six evaluation reports; and six commentaries). Support for this component can therefore be considered to be moderate. Limitations mainly relate to the use of before-and-after methods, which are prone to bias, and variable reporting, resulting in a moderate level of uncertainty around the conclusions.

Much of the evidence relating to mutual beneficial professional relationships stems from case studies of health and social care integration programmes. Many studies examining co-production and social-prescribing initiatives are small in scale, descriptive and focus on implementation, with limited evidence on effectiveness. Such initiatives are relatively new to the UK and need further evaluation. Review evidence pertaining to self-management consists of international literature, often with a bias towards studies from the USA; many studies are limited in follow-up on outcomes, with an absence of evidence on outcomes for staff experience. Please refer to *Appendix 7* for a list of studies included.

Outcomes

There are significant challenges in measuring the impact on community resilience of new models of care, not least that any impacts are likely to be long term in nature and evaluations can often indicate only proxy measures. An associated issue relates to the definition of measures and outcomes, which are meaningful to service users and communities.^{261,262} As described in *Chapter 5*, this may present an opportunity for the co-creation of outcomes and measures.^{262,263}

Population health

Although there is some evidence of the impact of a higher level of participation (through co-production, volunteering, empowerment through self-management and social prescribing) on health and well-being outcomes, there are issues around heterogeneity, the quality of reporting, the lack of sufficient control comparison and short follow-up periods.^{264,265} Evaluations have reported findings of varying quality, citing improvements in lifestyle changes, social isolation, reduced symptoms, health literacy, improved support for carers and improved independence.^{33,132,265–272} From a service perspective, it has been suggested that co-production can help improve the quality of care.²⁷³ Boyle and Harris²⁷⁴ suggest that participation in public services could help service users to develop a social network, building social cohesion, which may be key in supporting them to manage their condition(s). In a case study of an arts intervention for multisensory impairment, Vogelpoel and Jarrold²⁷⁰ hypothesise that interventions such as social-prescribing can help to address the needs of high-risk groups that are particularly hard to reach through traditional channels. However, the impact of poorly managed participation does not seem to be reported.

A key characteristic of the MCP model is the focus on social action. There is some evidence to suggest that involvement in public services, through volunteering or co-production, is associated with higher levels of health and well-being and can also have an impact on social outcomes within local communities.^{256,275} A Cochrane systematic review²⁷⁶ examining community-driven interventions targeting racial and ethnic minority populations reported mixed results. Interventions led by community health workers were found to lead to changes in health status, but results were not consistent. Wider health and social care system interventions led to small changes in measures of health behaviour and health status.

These findings, although sometimes based on anecdotal evidence, suggest a need for a longer follow-up period, to understand how levels of engagement and health outcomes might change over time and the contextual factors that are likely to influence behaviours and, thus, the resilience of local communities.

Cost-effectiveness

The MCP focus on participation is based on a theory that service users who are supported and engaged will be better informed to make appropriate use of services and, in turn, better able to contribute to a mutually supportive network. However, there are considerable challenges in translating this to an impact on the cost-effectiveness of services, notably, the lack of robust measures and the difficulties of relating outcome measures to costs.^{265,272,277} Few studies report costs, and even when costs are reported, it is often difficult to determine the cost of individual elements of services and interventions.²⁶⁴ This is particularly challenging in services involving volunteers, whose unpaid contributions, training and support may be excluded from analysis.^{132,264,269} Evidence suggests that higher engagement may lead to earlier intervention, which could help to prevent downstream costs.^{272,274} A broader range of metrics may be more appropriate in assessing the impact of greater participation, including on admissions; workload in primary and community care; and the service-user and carer experience.²⁴⁷

Several case studies suggest potential impacts on cost-effectiveness; for example, Boyle and Harris²⁷⁴ cite the Expert Patient programme, which reported a 7% reduction in GP consultations and 16% reduction in accident and emergency (A&E) visits. Partnership-working seems to be a key factor; large-scale self-management

initiatives, involving national or regional authorities, were found to reduce admissions, deaths and time off work.²⁷⁸ The Brighton and Hove social-prescribing pilot evaluation²⁷⁹ estimated potential savings of £1.36M per year of GP time. Several authors,^{33,280} however, caution that programmes often understate supplier-induced demand and overstate cost reductions, failing to account for set-up and operational costs appropriately:

The idea of self-management as a demand management strategy is also based on an assumption that utilisation behaviour is patient-led, when some aspects of utilisation (such as clinical attendance) are also a function of professional behaviours and may not be affected by changes in patients or carers.

Reproduced from Panagioti et al.²⁸⁰

Dayson *et al.*¹³² also point to the issue of scale, suggesting that, for some interventions, cost-effectiveness depends on a large critical mass of service users. There is also the potential to deliver improved cost-effectiveness through partnership-working with public health services; a recent study²⁸¹ found a median return on investment (ROI) of public health interventions of ≈ 14.1 . Health promotion interventions, including falls prevention and smoking cessation, delivered a median ROI of 2.2; health-care interventions, including disease management, offered a median ROI of 5.14. There may be potential for partnership-working across public services to address wider determinants of health; interventions were found to deliver a fivefold ROI. Partnership-working with the third sector may need specific consideration in terms of financial sustainability – the uncertainty around budgets, typical of the public sector, can have very far-reaching ramifications for small third-sector groups and for individual volunteers.¹³²

A case study²⁸² reports on an instance of community engagement following a consultation to close a community hospital as a result of the recruitment and retention issues in primary care. The community, opposed to the closure, rallied to support GP recruitment, producing promotional materials to attract applicants to the area.

Patient experience

Reviews suggest that service users' experience of participation in health care²⁷¹ seems to be generally positive, reporting benefits relating to physical and emotional health and well-being, self-confidence, self-esteem, social relationships and their individual sense of empowerment.²⁶⁷ However, the experience can prove to be negative for some service users.²⁶⁷ Co-production is viewed by some service users as an opportunity to move 'beyond token involvement and consultation towards more equitable power relations' through 'genuine collaboration'.²⁸³

A greater role for third-sector and community groups may offer service users access to specialist knowledge, for example, on dementia,²⁸² which could prove to be a valuable resource.²⁸⁴ Where service users are actively engaged, they may also begin to contribute their knowledge; this is illustrated by del Castillo *et al.*,²⁸² in which patients with rare diseases collectively shared knowledge to support each other. Increased involvement of the third sector can also create and mobilise a body of volunteers, who can contribute to a more holistic care and support package, connecting service users to provide further support, complementing that provided through public services.^{132,270} Farenden *et al.*²⁷⁹ suggest that this collaboration adds value by spanning the gaps between services. This mutually supportive relationship is demonstrated in a Hospital to Home service,²⁸² which recruited volunteers to support early discharge, reporting a statistically significant positive impact on patient experience, mood, anxiety levels, nutrition and hydration, and releasing nurses' time to care. Similar findings are echoed by Maughan *et al.*,³³ who also cite 'improved socialisation and occupational outcomes'.

Where service users are referred to social-prescribing programmes, the evidence suggests a mixed picture. Attendance varies considerably, with one review, which reported on two studies, reporting a 58% attendance rate and a 100% attendance rate, respectively.²⁶⁵ An evaluation of a pilot reported that 101 out of 393 referred patients were unable to complete the package of support offered.²⁷⁹ There are various possible reasons for low uptake suggested in various studies and evaluations, including inappropriate referrals, readiness to engage and logistical difficulties. High levels of satisfaction have been reported;^{265,279} an evaluation of a pilot service reported that service users felt that their needs were better understood.²⁷⁹ A further theme to emerge from the research and evaluation is the sense of mutual support that service users can give and receive through initiatives such as

social-prescribing. Vogelpoel and Jarrold²⁷⁰ describe the development of ‘supportive relationships [...] where skills, practical advice and mutual support were shared’ between participants of an arts intervention for people with sensory impairment. Over time, this grew into a ‘genuine sense of community’, stemming from ‘a willingness to extend informal support to one another’.

Staff experience

The evidence base suggests that health-care workers have mixed experiences of initiatives such as social-prescribing, with some evaluations reporting relatively high levels of satisfaction,^{247,265,279} whereas others have reported a reluctance among primary care staff to get involved in non-medical aspects of care.²⁷⁵ Potential reasons for this are explored in the literature, with suggestions that a medically oriented model of care (as opposed to a socially oriented model), as well as confidence in third-sector organisations, may influence perceptions of the value of social prescribing.²⁷⁵

Conversely, volunteers and third-sector workers felt that they were able to spend more time with service users and could therefore offer a more intense level of help and support than those offered in primary care.²⁷⁵ Pilot evaluations suggest that volunteer retention can remain relatively high when part of a formal structure.²⁷⁹ In the Brighton and Hove pilot,²⁷⁹ volunteers gave an average of 7 hours per week during the first 12 months, totalling 5824 hours.

It has been suggested that a contract enabling collaboration across public sector and third-sector organisations could offer a balance of scale and infrastructure, with an expert understanding of communities, thus helping to create the conditions for a culture of improvement.²⁸⁴ Some of the services that have been developed within the NHS have developed a ‘broker’ role, contracting with an umbrella third-sector organisation,^{132,269,279} offering a pragmatic option to commissioners and providers to manage relationships with multiple groups and organisations.

Unintended consequences

There are challenges in sustaining community involvement over time, and barriers such as the technical terminology used routinely in the NHS can act as a barrier to involvement.²⁸⁵ There is some evidence of uneven representation or engagement across demographic groups, particularly from ethnic minorities and those with low levels of literacy.^{256,286,287} Similar findings have emerged from initiatives aimed at individual service users, for example, social-prescribing.¹³² This presents the risk of widening, rather than resolving, health inequalities. A universal community engagement intervention (covering both relatively advantaged and disadvantaged groups) risks increasing health inequalities.^{264,266} Inequalities may also be widened when social networks benefit members of one particular group, but exclude others outside the group from sharing those resources.²⁶⁴ As well as difficulties in recruiting patients and carers, it may also be difficult to retain them through the different stages of projects; for example, patients who are no longer using the service may decline further participation.²⁷¹

There is some debate regarding the extent to which service users may wish to engage in decisions about their care or about local services, with clear differences in expectations affecting willingness and capacity to engage in self-management and co-design.^{261,288} A case study from the UK reports some reluctance to participate, with some patients stating that ‘it was the clinician’s role to manage their care’.²⁸⁸ This is echoed in a recent review:

Not all patients have the desire or capacity to be active participants in coproducing their healthcare service. Sometimes patients are sick, and need a health professional to relieve a burden rather than enable self-care.

*Batalden et al.*²⁶¹

Howieson and Fenwick²⁸⁹ use the example of a patient's right to choose their general practice to highlight that patient choice is generally not exercised. They also argue that the assumption that the public – with whom the NHS would be in collaboration – would be reasonable and open-minded and would have (and take) a holistic view of the health service and understand and appreciate the best way to allocate resources for health provision is very much open to debate.

Greater engagement may be experienced as burdensome by some, with the physical and mental health benefits of community engagement diluted by the stresses and strains associated with involvement for some participants.²⁶⁷ Sorting helpful from available information is complex; diminishing the value of professional expertise by transferring care responsibility to patients and families could result in bad health outcomes.²⁶¹

Implementing community engagement among disadvantaged communities has highlighted complex challenges, such as poor health system infrastructure and service delivery, and poor staffing and resources.²⁶⁶ Furthermore, these complex challenges often result in unmet community needs, causing community partners and study participants to feel dispirited, and compromise the potential for community engagement.²⁶⁶ Clarke *et al.*²⁷¹ report that a lack of progress in community engagement projects can lead to frustration for both staff and patients. Programmes are likely to be considered 'tokenistic' in nature when suggestions are not acted upon,²⁶⁷ and compromise the trust and relationship-building purpose of community-engagement initiatives, resulting in poor individual health outcomes.²⁶⁶

The role of social movements and third-sector organisations and groups in health care is growing. However, tensions can emerge from working across very different cultures and governance structures. The agile and dynamic nature of social movements can clash with the more structured approach of publicly funded services, and del Castillo *et al.*²⁸² recommend a considered approach with realistic expectations. Voluntary and community organisations, although able to mobilise volunteers, are limited by resource constraints. In the example of one social-prescribing pilot, it became clear that NHS-led time scales for roll-out across practices had not factored in time to cascade training and guidance around the availability of volunteers and the capacity of individual practices.²⁷⁹

Where there is willingness to participate, there is potential for confusion regarding this new more participatory role for service users, as reported in a 2014 systematic review,²⁹⁰ which highlighted contradictory information and conflicting instructions about individuals' needs, priorities and management strategies.

Self-management and social-prescribing programmes are based on implicit assumptions that improving health literacy and self-confidence will lead to long-term behaviour change, increasing independence and reducing service utilisation. However, as pointed out in a NIHR-funded systematic review,²⁸⁰ few trials and evaluations measure outcomes beyond 1 year, so the extent of ongoing support needed remains uncertain. This leads to the question of 'whether or not the reductions in utilisation achieved are significantly greater than the service input required to maintain gains in knowledge, skills and confidence'.²⁸⁰

Furthermore, Batalden *et al.*²⁶¹ highlighted experience from shared decision-making, demonstrating that, even after training, many patients and professionals in Scotland inconsistently apply newfound skills and orientation.

Service-user participation can help to identify unmet needs and gaps in service provision. In the short term, this may result in higher costs.²⁴⁷ It is debatable as to the extent to which voluntary and community services have the capacity to offer help to people who do not meet thresholds for formal care, but who may benefit from social contact and low-level practical help. Conversely, service gaps were also thought to contribute to the inappropriate referral of service users with highly complex needs to a social-prescribing pilot: 'some clients fall through the gaps'.²⁷⁹ Service evaluations report on the impact of funding cuts and the uncertainty of future funding on the capacity of voluntary and community services, highlighting the risk of delays in agreeing contracts.²⁷⁹ The impact on volunteers and service users can be significant, with longer

waiting lists for support, reduced or closed services and low retention of volunteers being reported.²⁷⁹ There is a risk that service users, who may be vulnerable, are left feeling 'abandoned'²⁹¹ and that other services, such as general practice, are placed under additional pressure.²⁷⁹ In a competitive market, staff may be more likely to move on to new roles in the event of continued uncertainty regarding future funding.²⁷⁹

There is also the potential to introduce unnecessary duplication and waste if roles and responsibilities are not explicitly clear – for example, various referral routes to social-prescribing support.¹³²

Mechanisms

Through the evidence base, several mechanisms have been identified for R3. We describe these in the following section as service users, staff and system factors, and make distinct the resource and reasoning aspects of mechanisms.⁷⁶

Service users

Patient mutuality and co-ownership in health-care services (context) require patients to be appropriately trained [e.g. in health literacy^{287,292} and self-management²⁶¹ skills (resources)], improving their self-efficacy and confidence to manage their care²⁹² (reasoning). More widely, low awareness of long-term conditions (context) could be improved by a stronger narrative (resource), informing 'patient help-seeking behaviour and public perceptions of need'.²⁷⁸ This can help individual service users, who are interested in getting more actively involved in decisions about their care, but is dependent on an understanding of the service user's context (e.g. carer/family support)²⁷⁵ and a shared understanding²⁹¹ (reasoning), which can help to develop confidence and personal resilience (reasoning):

Self-management was conceptualised by health care professionals as incorporating both a biomedical model of compliance and individual responsibility. Lay people understood self-management in wider terms, reflecting biomedical, psychological and social domains and different expectations of responsibility.
Sadler et al.²⁹¹

The willingness of service users to participate in social-prescribing programmes^{265,275} depends on an individual's sense of confidence^{265,270} (reasoning), the relevance of the activities provided (reasoning),²⁶⁵ the individual's literacy (context) and logistical issues, such as travel²⁷⁰ (resource). Facilitated support (resource) has been shown to be more effective in assisting people with wider social needs than simple signposting, and in one case study, maintaining follow-up (resource) 'enabled participants to implement important choice-making and autonomy building processes' (reasoning).²⁷⁰ Greater confidence (reasoning) can help service users to make connections with their peers and to explore options for support (outcome).²⁷⁰

Where community engagement is introduced (context), research should be conducted^{264,266} (resource) to build a clear understanding of the community and its resources^{293,294} (reasoning), which would then enable appropriate community resources to be mobilised^{264,266} (outcome). Coulter²⁹⁴ emphasises the importance of starting with a very clear sense of the local community, centred on the ability to describe target stakeholders and the value of engagement.

Through the successful mobilisation of appropriate community resources (context), the programme can be carefully designed, with community involvement and validation where possible^{264,266} (resource). Services can therefore be tailored to reflect community representation, not tokenism, such as through the cultural adaptation of programmes^{264,266,294} (resource); community resources, such as community leaders, outreach workers and lay workers,^{263,266,293} are used to facilitate and promote opportunities to relevant participants²⁸⁷ (resources). This increased awareness of authentic and credible programmes can enable people to identify with a community^{264,293} (reasoning), helping to remove barriers to participation and to empower citizens to become involved^{266,287,293} (outcomes).

The design of community engagement programmes (context) should include clearly defined roles and responsibilities,²⁷¹ and training and support.^{250,264,278,287,291,294} Methods of participation that address concerns and support requirements,²⁸⁷ facilitated or delivered by community representatives,²⁶⁴ can be facilitative. In turn, these resources can build the confidence of service users so that they become more aware of their contribution²⁷³ and expectations^{283,287} (reasoning), thus encouraging involvement^{263,267,287} (outcome).

To encourage service-user participation, incentives, such as financial rewards or recognition,^{264,273,283,287,294} support with practical issues such as time and transport²⁸⁷ (resource) or meetings to suit community members' needs can help to engender a sense of trust and respect (reasoning) between patients and health professionals^{287,295} (resources). Methods for participation should be carefully selected so that they recognise patient abilities^{261,267} and give consideration to practical and logistical problems.^{271,294} Recognising that service users differ in their preferences for involvement in decision-making, there should be an offer of alternative forms of participation (resource).^{263,264,267,287} Carers, in particular, may need to be consulted, as there is some evidence to suggest that programmes of self-management and social-prescribing can assume a certain level of capacity among carers and can also cause confusion regarding responsibilities.²⁹¹ Delivery should be culturally relevant^{264,266} and goals should be realistic.^{263,273} Communications should be clear and transparent (resource),^{264,294} using bidirectional communication when necessary,²⁹⁵ avoiding overloading service users,^{263,267} and making involvement an accessible and enjoyable experience²⁶⁴ (reasoning), thus encouraging commitment and retention^{266,283} (outcome):

... individuals are less likely to find community engagement a positive experience where consultation is the main method employed by professionals and no real power to effect change is ceded to community members.

Reproduced from Attree et al.²⁶⁷

Staff factors

Where leaders have identified participation in decision-making and co-production of services as a priority (context), a clear case for change (resource)^{273,294} championed by confident leaders with the energy to innovate and motivate (reasoning)²⁹⁶ (resource) has been shown to facilitate cultural change (outcome):^{263,289}

Some of the key challenges in co-production within health care are the different education, culture, philosophy and interaction models of different professional groups.

Reproduced from Philips and Morgan²⁶³

Practically, support for staff (resource) can encourage new ways of working (outcome) – for example, training using patient stories,^{261,263,265} time to develop and utilise skills,^{261,263,264,271,287,289,294} supportive tools and infrastructure,^{261,273,287,289} feedback³³ and appropriate guidance²⁷⁴ – can motivate staff (reasoning) through understanding the case for new ways of working.^{249,273} This also applies where volunteers are engaged in the delivery of services; evaluations demonstrate the importance of mentoring support, feedback and information-sharing (resource), to help volunteers to feel like a part of the team (reasoning).^{33,275,279} A change in mindset to one that recognises service users as equal partners^{261,263,274,289} and diminishes the fear of losing status and control^{273,289} can help to develop confidence in 'sharing power and accepting user expertise'²⁸⁷ (reasoning). Underpinning this is the challenge to build a sense of mutual trust^{266,275} (reasoning) across different cultures:

Co-production calls, instead, for a slower pace of sharing and producing knowledge and for open-ended, experimental forms of learning, critical thinking, and working together in health care and research.

Reproduced from Filipe et al.²⁸³

Given that some local health economies may experience a high turnover of staff, there needs to be an ongoing programme of training and development to embed and sustain more participative decision-making.²⁷⁸

Relevant policy and governance structures (resource) will need to support new ways of working, articulating the shared purpose, values and principles that emerge from joint working across the local health and care system.^{249,261,263,271,273,286,292} On a practical level, this will help to clarify, for example, the referral criteria for social-prescribing support.^{33,270} This can provide staff with clarity of purpose and expectations (reasoning), and provides assurance for system leaders through regular reviews of progress and impact.^{263,274,283} This can encourage sustainable partnerships and collectively agreed, realistic outcomes (outcome).

System factors

In a MCP context, a co-production approach is intended to achieve a more participative relationship with individual service users and community groups, contributing to a system-wide impact.^{250,261} Within public sector organisations, working with service users to understand their experiences (resource) has been shown to create a sense of urgency among staff to act, and served to legitimise (reasoning) the realisation of quality improvements to higher management bodies (reasoning).²⁹⁷ To support greater levels of participation by service users in decisions about their own care and about services (outcome), a shift in the role of staff from 'fixers to facilitators' is required.²⁷⁴ This shift balances power towards service users (reasoning) through front-line professionals who are trained (resource) and subsequently empowered (reasoning) to take on these new roles.²⁵⁰ Management of expectations will be an important consideration in bringing together people with different motivations, cultural backgrounds and prior experience, coupled with realistic goals (resource):

... co-productive experiments are best seen as generative processes that are less about delivering predictable impacts and outputs and more about developing new communities, interactions, practices, and different modes of knowledge and value production.

Reproduced from Ryder²⁶⁸

Poortinga²⁵⁶ references the five capital model, which emphasises the importance of health services working with other public services and community groups to address the wider determinants of health:

... healthy neighbourhoods have a balanced combination of human capital (e.g. skills and education), social capital (e.g. social networks), built capital (e.g. access to amenities), natural capital (e.g. access to green space), and economic capital (e.g. income) resources.

Reproduced from Poortinga²⁵⁶

Social movements may be a route to encouraging open innovation to address specific community needs,²⁸² but there is a risk that the bureaucracy inherent within the public sector can stifle smaller and more agile groups, which suggests a need for strong relationships to manage potential tensions in relation to priorities, governance and culture.²⁸² A useful early step may be to map community 'asset' or resources (resource),^{33,269} potentially via an umbrella third-sector organisation acting as a broker.^{269,279}

Although trust is often mentioned as important to building and maintaining strong relationships, there is also an argument that 'distrust is not necessarily detrimental to community involvement and wellbeing', helping to engender greater 'political involvement' or 'critical trust', encouraging individuals to get involved in decisions about local public services.²⁵⁶

When working across multiagency sectors (context), time and space for learning,^{261,263,264,274,283,294} role definition,^{283,291} shared planning and values,^{261,284,294} external facilitators^{271,295} and administrative support^{264,295} (resources) can be important enablers. Opportunities for face-to-face contact (resource), to build social connections, can help to develop trust (reasoning) across diverse services and groups;²⁷⁵ for example, across primary care and community groups, this can help to build the legitimacy of groups that may be unfamiliar to staff. Training (resource) may be needed at multiple levels of the local health-care system, including at the board level.²⁸⁴ This can support the development of collaborative relationships and trust^{261,263,283} through a shared understanding and recognition of each other's expertise and values.^{250,261,283} External support (resource) can help to resolve tensions and conflicts,²⁹⁵ allowing critical inquiry and the

confrontation of ideas²⁸³ (reasoning). This can help to create an environment of improved power-sharing^{250,266,271,274} and collective decision-making²⁶⁴ (outcome).

Chapter summary

The review highlights a number of gaps in the literature base, notably relating to the longer-term outcomes of self-management, social-prescribing and social action. There is limited empirical evidence, and much of the literature seems to be anecdotal or theoretical, based on limited case studies or informal evaluations, rather than robust research designs. This is indicative of the challenges of measuring and attributing outcomes to new ways of working; where studies have been able to explore outcomes, these often look at aspects such as patient or staff satisfaction.

There is some evidence to suggest that involvement in public services, for example, through volunteering, can lead to an improved sense of well-being. There are also suggestions that the involvement of volunteers and third-sector groups can help to build social cohesion, which increases the social support that people with long-term or complex conditions may access. Patient satisfaction levels seem to be positive, although there needs to be an acknowledgement that service users and carers will vary in their preferences for engagement and involvement in decision-making, whether about their own care or about services more widely. Staff satisfaction suggests a need for co-ordination, communication and engagement to build relationships. Cost-effectiveness has proved to be difficult to measure; some costs can be less visible and may not be included in an analysis. There is emerging evidence, however, that working with public health offers a ROI.

Mutually beneficial relationships to support co-production are dependent on effective community engagement, that is, actively involving service users, community groups and other members of the local community. This engagement can lead to more targeted self-management support and social-prescribing, encouraging healthier behaviours and helping to reduce social isolation. Organisational development, with a focus on interpersonal skills, can help to build confidence and motivate staff to establish the conditions for a culture of co-production and reciprocity. However, there is a risk that low representation from key groups may widen existing health inequalities.

Chapter 7 Programme theory maps

This chapter maps the evidence base pertaining to the remaining five programme theory components. These maps are intended to be indicative, rather than representing an exhaustive review of the literature base, providing a starting point for further exploration. The focus of the maps is on signposting the relevant wider literature bases, which offer valuable, transferable learning for the design, implementation and evaluation of population health-based models of care.

M1: collective responsibility improves quality and safety outcomes

As described in *Chapter 3*, integrated pathways feature as a focal point in MCP models, driving collective responsibility for quality and safety. Nationally, the Right Care programme is developing pathways to 'support Local Health Economies to concentrate their improvement efforts on where there is greater opportunity to address variation and improve population health' (contains public sector information licensed under the Open Government Licence v3.0).²⁹⁸ Related closely to place-based contracting driving new outcome frameworks (R2) and more collaborative working (R3), this programme theory component relates to the alignment of processes, people and technology:

If providers share collective responsibility for outcomes through standard integrated pathways, then providers will improve the quality and safety of care.

The evidence map for this component of the programme theory is derived from five 'sets' of related evidence (*Table 5*). Three of these evidence sets relate to context and two relate to potential mechanisms:

1. care for long-term conditions and multimorbidity (context)
2. population-based approaches to primary and community care (context)
3. integrated and collaborative care (context)
4. quality improvement (mechanisms)
5. service development (mechanisms).

The three contextual evidence sets are primarily theoretical, whereas those relating to mechanisms are underpinned by varying levels of empirical and theoretical evidence.

TABLE 5 Evidence map: M1 – collective responsibility improves quality and safety outcomes

Focus	References
Care for long-term conditions and multimorbidity	Grant and Chika-Ezerihoa ²⁹⁹
Population-based approaches to primary and community care	Alderwick <i>et al.</i> , ¹⁰² Collins ¹³⁹ and Tomlinson <i>et al.</i> ³⁰⁰
Integrated and collaborative care	Alderwick <i>et al.</i> , ¹⁰² Collins, ¹³⁹ Tomlinson <i>et al.</i> , ³⁰⁰ Threapleton <i>et al.</i> , ³⁰¹ Whittle and Hewison, ³⁰² Curry and Ham, ³⁰³ McConnell <i>et al.</i> ³⁰⁴ and Beenstock <i>et al.</i> ³⁰⁵
Quality improvement	Threapleton <i>et al.</i> , ³⁰¹ Whittle and Hewison, ³⁰² Chen <i>et al.</i> ³⁰⁶ and Veenstra <i>et al.</i> ³⁰⁷
Service development	Grant and Chika-Ezerihoa, ²⁹⁹ Curry and Ham, ³⁰³ McConnell <i>et al.</i> , ³⁰⁴ Beenstock <i>et al.</i> , ³⁰⁵ Chen <i>et al.</i> ³⁰⁶ and Veenstra <i>et al.</i> ³⁰⁷

Outcomes relating to the quadruple aim

There is some evidence to suggest that integrated care pathways could contribute to improved health outcomes. A disease-management programme in Germany has established disease-specific objectives with defined treatment goals and specific criteria for referrals to secondary care. The programme has an emphasis on patient education and self-management. Patients choose a physician, who co-ordinates their treatment; the framework clearly sets out when specialists should be involved in patient care to avoid gaps in care provision.^{303,308} Further afield, the shared guidelines and standard procedures of the Mayo clinic are considered to contribute to lower complications and improved clinical outcomes.^{303,309} An end-to-end pathway may enable the focus on prevention common to many of the MCP logic models; one example suggests that integrated pathways may contribute to a reduced incidence of falls, following knee arthroplasty.³⁰² Although it is difficult to attribute population health outcomes to pathways, theoretically, integrated pathways may help to stimulate an environment that encourages communication, collaboration and peer review, thus leading to improvements in quality and safety.³⁰³ Audit and feedback can strengthen the impact of integrated pathways, identifying what works in improving health outcomes and identifying problems that may indicate potential improvements or amendments to the pathway.^{303,306}

Integrated pathways, through reducing waste and duplication, could contribute to improved cost-effectiveness and lower unnecessary utilisation. The Nuka system of care, run by the Southcentral Foundation in Alaska, is credited with achieving improved quality for a lower cost, demonstrated by a decrease in unscheduled care alongside improved patient and staff satisfaction.¹³⁹ Integrated pathways have been used to enable a shift of care from hospital to community settings, demonstrated by the Veterans Home Administration, which measured fewer hospital bed-days and overall admissions.^{303,310,311} Integrated pathways may also lay the foundations to introduce technology to support the delivery of care. Shared health records have a role in driving patient safety and adherence to guidance, supporting smoother discharge and transition between teams or services.³⁰¹ Telecare and telehealth can support more home-based care through remote monitoring and, in some contexts, has been found to contribute to reduced bed-days and increased patient satisfaction.^{303,312} Opportunities exist to embed technology within pathways; for example, patient deterioration can trigger a responsive multidisciplinary package of care to avoid further decline, based on an agreed care plan facilitated by record-sharing.³⁰³ Some countries have initiated condition-specific approaches, such as disease-management programmes in Germany, Sweden's chains of care and Scotland's managed clinical networks, finding the most impact on patients with long-term conditions. All of these approaches involve elements of integrated care, recognising the importance of co-ordinating care and working across systems, and creating pathways across traditional 'single-disease' pathways.³⁰³

Unintended consequences

Integrated pathways are dependent on behaviour change and multidisciplinary working. However, behaviour can be unpredictable, with the risk that practice may not change in the way intended. This could lead to inconsistency, fragmentation and 'disharmony', ultimately affecting the safety and quality of care.³⁰³ Integrated pathways intricately link the success or failure of providers, supporting a population health-based approach and shared accountability¹⁰² for outcomes, as illustrated by ACOs such as Kaiser Permanente.³⁰³ There is, however, a risk that misaligned responsibilities between different professions, departments and organisations can prevent the effective integration of pathways,^{303,313} particularly beyond defined boundaries.^{303,314} The intention to collaborate and consolidate brings potential benefits of economies of scale, but could backfire if the collective organisations are perceived as a monopoly, hindering competition; nonetheless, Curry and Ham³⁰³ suggest that competition and integration need not be mutually exclusive:

... there is no inherent contradiction between integration and competition provided that patients are able to exercise choice either within or between integrated care organisations.

Curry and Ham³⁰³

It could be argued that integrated pathways encourage a 'cookie-cutter' approach to patient care, failing to consider the individuality of patients – their needs, preferences and case mix.^{299,302} The integrated pathway

may also assume a level playing field in terms of infrastructure, which could, in reality, be strikingly different across settings.²⁹⁹ This highlights a need for strategies to achieve closer co-ordination of care.³⁰³

Mechanisms

A virtuous cycle, akin to the theory of the MCP model, could operate where clinicians and managers work more effectively across boundaries to attain financial and quality goals, which then improve cost-effectiveness, which can support investment in quality initiatives.³⁰² In such an environment, integrated care pathways can act as a focal point for clarifying and articulating the roles, responsibilities, processes and systems to underpin co-ordinated care, shared decision-making and care-planning.^{302,303} This co-ordination can provide the stimulus for information-sharing, supporting patient-centred care. Where the design of integrated care pathways is based on engagement with patients and practitioners, patients may feel empowered and supported to maintain independence for longer.^{102,301,303} Such engagement can also be instrumental in enabling access to a more holistic approach to care.³⁰¹ From a patient perspective, an integrated pathway can translate into a single point of entry, a single assessment and a personalised care plan, delivered by a MDT (see *Chapter 7, M2: multidisciplinary teams provide continuity for patients with long-term conditions/complex needs*), which can help to reduce the burden on carers and address unmet needs.^{301,303} This co-ordinated standardisation can, in theory, address unwarranted variation, drive up quality and improve equity of access.³⁰² Patient satisfaction can be strengthened by the routine collection of patient-reported outcomes and regular patient feedback.^{303,306}

The process of developing integrated care pathways to incorporate shared values and goals can support the integration of teams and influence organisational culture and staff motivation, making it more likely that new processes will be embedded in routine practice.^{301,304} Closer working and standard pathways can help to identify those patients with more complex needs who need specialist secondary care, and those who are better managed in the community.³⁰³ Pathways informed by formal needs analysis – for example, Joint Strategic Needs Assessments – and community engagement can help to align the investment of resources within local communities,^{139,300,305} factoring in the wider determinants of health and significant risk factors specific to local communities.¹⁰² This, in turn, can help to promote holistic and person-centred care and a sense of ‘shared ownership’, shared goals and incentives to address prevention.^{139,303}

Early engagement of staff will help to ensure that pathways are comprehensive and realistic,²⁹⁹ and can ‘offer an opportunity for professionals to renew their implicit rules for operation and shape collective meanings and objectives’.³⁰² Affording more opportunities for communication across teams³⁰² can contribute to ‘an environment in which excellence in clinical care will flourish’.³⁰⁷ Standardisation facilitates monitoring and evaluation;³⁰² supported by transparent reporting, this can be a catalyst for quality improvement when larger teams are better able to exploit performance data for quality improvement, and to address wider issues, such as prevention and health promotion.³⁰³ Benchmarking, using national audits and other tools, can help to demonstrate the impacts of changes to pathways and to highlight issues relating to demand and capacity. A culture of personal professional responsibility and innovation among health-care professionals can be encouraged through more autonomy.^{301,304,307} Multidisciplinary training and development, with a focus on communication and trust, can encourage more collaborative working.^{299,301,304,307} When individuals understand their contribution and that of others, pathways are more likely to be ‘owned’ by staff and successfully embedded in practice.^{139,302} Problems can be identified and resolved collectively,³⁰¹ thus developing a learning culture and a ‘continuous quality improvement “mind-set”’.³⁰⁷ Where a history of co-operation and trust pre-exists, this may be a smoother process; conversely, where relations are more adversarial, behavioural change is likely to require significantly more investment.^{139,303} Cultural barriers, such as competitive funding, poor relationships between senior leaders and risk aversion can stifle innovation and motivation.³⁰¹ Local barriers and facilitators need to be considered, for example, around data-sharing.¹⁰²

Although engagement is to be encouraged, there is evidence to suggest that the design and testing of integrated care pathways may be better managed by small focused teams, which are sufficiently agile to make the decisions needed to progress, but also sufficiently connected to ensure staff commitment and confidence.³⁰¹ Pathways alone are unlikely to deliver significant transformation – delivery may be contingent on new or expanded roles within primary and community settings.¹³⁹ In areas where there

are long-standing recruitment issues, integrated pathways could be hindered by key staff shortages that, without workforce planning and development, could serve to undermine morale.³⁰² Multidisciplinary working will need to be supported by organisational development, to tackle cultural aspects, contractual incentives to influence behaviours and operational logistics, such as systems to enable shared data,^{102,301} as demonstrated in Geisenger Health.³⁰³ Information systems, in particular, may help to facilitate timely and efficient information flow, supporting knowledge-sharing, the spread of good practice, consistent standards and communication between generalists and specialists.^{299,303} Shared governance can promote care standards, patient safety and professional competencies;³⁰¹ conversely, instability can severely constrain the implementation of integrated pathways.^{102,299,303}

M2: multidisciplinary teams provide continuity for patients with long-term conditions/complex needs

Multidisciplinary working is core to the MCP model of care, underpinning care-planning and more proactive management of patients with long-term conditions and more complex needs, as described in *Chapter 3*. Specifically, this programme theory component relates to the impact on the continuity of care of MDTs:

If commissioners and providers train and fully engage staff in service transformation, then staff will drive the cultural change that underpins new ways of working.

Continuity denotes consistency and can be described from a patient perspective, entailing a continuous relationship, or from a provider perspective, entailing co-ordinated or seamless care.³¹⁵ It is a longitudinal concept, judged over time.³¹⁵ Informational continuity is an important element, dependent on shared records and information to ensure a full history.³¹⁶ Continuity is often described on a continuum with access, with suggestions that patients with long-term conditions prefer continuity of care, whereas patients with acute episodic needs prefer convenient access;³¹⁶ it is unlikely to be so simplistic in practice, and will be influenced by contextual factors. Continuity has been associated with reduced unnecessary utilisation and improved prevention,^{316,317} so could be an important ingredient to achieving the quadruple aim through the use of MDTs.³¹⁸

The evidence map for this component of the programme theory is derived from five ‘sets’ of related evidence (*Table 6*). Three of these evidence sets relate to context and two to potential mechanisms:

1. management of long-term conditions (context)
2. population-based approaches to primary and community care (context)
3. integrated and collaborative care (context)
4. quality improvement in primary care (mechanisms)
5. team and organisational development (mechanisms).

The three contextual evidence sets are primarily theoretical, whereas those relating to mechanisms are underpinned by varying levels of empirical evidence.

Outcomes relating to the quadruple aim

There is evidence to suggest that an integrated approach to care, via MDTs, is associated with improved outcomes for patients with long-term conditions or complex needs;³⁴⁰ however, the majority of studies focus on single conditions – for example, reduced glycosylated haemoglobin values/improved glycaemic control in diabetes,^{335,344} blood pressure control,³²⁸ treatment compliance,^{328,344} reduced depression and anxiety^{324,327,334,352} – and it is unclear if benefits are sustained over time. As with any package of interventions, attribution is a challenge and, typically, MDTs are implemented alongside programmes of self-management, case management and enhanced pathways.³⁴⁰ It has been suggested that the ‘supportive network of professionals and peers’³⁵² contributes to improved health and well-being. Additional evidence suggests that MDTs can facilitate disease management and encourage self-management,³³⁴ reflecting the common features of MDT working, including case management,³⁵¹ care-planning,³⁵¹ the promotion of self-management and medication adherence.^{325,334,338,353}

TABLE 6 Evidence map: M2 – MDTs provide continuity for patients with long-term conditions/complex needs

Focus	References
Management of long-term conditions	Kadam <i>et al.</i> , ³¹⁹ Kasteridis <i>et al.</i> , ³²⁰ Powers <i>et al.</i> , ³²¹ Ruikes <i>et al.</i> , ³²² Thistlethwaite, ³²³ Archer <i>et al.</i> , ³²⁴ Bearne <i>et al.</i> , ³²⁵ Chung <i>et al.</i> , ³²⁶ Coventry <i>et al.</i> , ³²⁷ Fortuna <i>et al.</i> , ³²⁸ Glogowska <i>et al.</i> , ³²⁹ Green <i>et al.</i> , ³³⁰ Bonney <i>et al.</i> , ³³¹ Smith <i>et al.</i> , ³³² Tricco <i>et al.</i> , ³³³ Hernández <i>et al.</i> , ³³⁴ Huang <i>et al.</i> , ³³⁵ Maneze <i>et al.</i> , ³³⁶ and Raine <i>et al.</i> ³³⁷
Population-based approaches to primary and community care	Kasteridis <i>et al.</i> , ³²⁰ Powers <i>et al.</i> , ³²¹ Ruikes <i>et al.</i> , ³²² Thistlethwaite, ³²³ Huang <i>et al.</i> , ³³⁵ Kruis <i>et al.</i> , ³³⁸ Loewenson and Simpson, ³³⁹ Ouwens <i>et al.</i> , ³⁴⁰ Stranges <i>et al.</i> , ³⁴¹ Kruis <i>et al.</i> , ³⁴² Nandram and Koster, ³⁴³ and Martínez-González <i>et al.</i> ³⁴⁴
Integrated and collaborative care	Goodwin <i>et al.</i> , ²³⁹ , Archer <i>et al.</i> , ³²⁴ Bearne <i>et al.</i> , ³²⁵ Chung <i>et al.</i> , ³²⁶ Coventry <i>et al.</i> , ³²⁷ Fortuna <i>et al.</i> , ³²⁸ Glogowska <i>et al.</i> , ³²⁹ Green <i>et al.</i> , ³³⁰ Hernández <i>et al.</i> , ³³⁴ Huang <i>et al.</i> , ³³⁵ Maneze <i>et al.</i> , ³³⁶ Raine <i>et al.</i> , ³³⁷ Kruis <i>et al.</i> , ³³⁸ Loewenson and Simpson, ³³⁹ Ouwens <i>et al.</i> , ³⁴⁰ Stranges <i>et al.</i> , ³⁴¹ Martínez-González <i>et al.</i> , ³⁴⁴ Mulvale <i>et al.</i> , ³⁴⁵ Morgan <i>et al.</i> , ³⁴⁶ Parker and Fuller, ³⁴⁷ van Dongen <i>et al.</i> ³⁴⁸ and Gray <i>et al.</i> ³⁴⁹
Quality improvement in primary care	Goodwin <i>et al.</i> , ²³⁹ Bonney <i>et al.</i> , ³³¹ Smith <i>et al.</i> , ³³² Tricco <i>et al.</i> , ³³³ Mulvale <i>et al.</i> , ³⁴⁵ van Dongen <i>et al.</i> , ³⁴⁸ Powell <i>et al.</i> ³⁵⁰ and Schepman <i>et al.</i> ³⁵¹
Team and organisational development	Kruis <i>et al.</i> , ³⁴² Nandram and Koster, ³⁴³ Morgan <i>et al.</i> , ³⁴⁶ Parker and Fuller, ³⁴⁷ Gray <i>et al.</i> , ³⁴⁹ Powell <i>et al.</i> ³⁵⁰ and Schepman <i>et al.</i> ³⁵¹

Conversely, there seems to be little or no impact of MDT-working on patient-reported outcomes, such as activities of daily living,^{338,353} functioning,³²² quality of life^{322,325} and disability.³²⁵ There may be limited benefits for older people with multimorbidity or frailty.³⁵¹ The extensivist model (based on the Care More model in the USA)³²¹ is designed to provide more intensive support for older patients with very complex needs, and is being implemented as part of the MCP model in Fylde Coast. It can be challenging to measure the effectiveness of MDTs, notably the appropriate follow-up period within which to measure impact and the baseline (with a 'ceiling effect' of limited impact, whereby primary care was already well organised).³²²

Patients with multiple conditions may find it challenging to manage the complexity of their conditions and to prioritise needs, particularly within the context of deprivation or social isolation.³³⁶ It can be difficult to navigate the health and care system, and care packages developed by MDTs could be a critical element in improving support to patients and carers, as demonstrated in Torbay.³²³ Patient involvement may be facilitated by certain roles within MDTs; one qualitative study³⁵⁴ reported perceived improvements in care co-ordination and problem-solving, following the inclusion of a nurse practitioner within the MDT. Trust was also greater, possibly resulting from more time spent with patients and more opportunities for communication. The value of a MDT is in the opportunity for interdisciplinary diversity, with multidisciplinary participation emphasised as a key benefit of MDT meetings,³³⁷ supporting a range of social functions such as peer support, team-building and bonding,³³⁷ which can, in turn, have an impact on health outcomes.³⁵⁰

Several studies report reductions in service utilisation associated with integrated care via MDTs (hospital admission,^{326,334,355} A&E attendance,³³⁹ readmission³⁴¹ and length of stay)³²⁶ with a potentially higher impact in those 'with at least moderate disease'.³²⁶ Few cost-effectiveness studies explore the effect of MDTs. Of those studies that do report costs, few have reported savings.³⁴⁴ One cost-effectiveness study estimated³³⁰ a mean cost per QALY of £14,248, arguing that collaborative care is expected to be less costly and more effective.

Unintended consequences

Integrated governance frameworks have been used to clarify roles, responsibilities and reporting arrangements,³⁴⁵ and the principle of MDTs seems to be valued by professionals.³³⁸ However, dissatisfaction and frustration can

arise from perceptions of inequality and underinvestment in relationships,^{337,356} potentially leading to issues regarding team processes and structure, available resources and sharing of information.^{315,337} This suggests that the reality of multidisciplinary working may diverge from the vision of increased co-ordination. Decision-making may even be impaired by the multidisciplinary approach, where the enabling cultural change (see *Chapter 7, MB: engaged and trained staff expedite cultural change*) has not occurred.

Attendance and participation at MDT meetings can be problematic as a result of workload pressures. An observational study,³⁴⁹ found that the number of participants ranged from 7 to 27, with an average of 14 participants; however, the mean number of people contributing was only three. There seem to be clear cultural differences across teams, with some dominated by relatively few people, and others demonstrating higher levels of participation. Medical dominance is perceived in some contexts to be a barrier to participants having an equal voice.^{337,349} There may also be tensions from the underlying perspectives of different disciplines, which influence how practitioners perceive their role and relationship with patients.³³⁷ Cancer Research UK found a relatively low level of verbal contribution from nurses in meetings,³⁴⁹ which could impact patient care if the nurse has greater contact with patients and greater familiarity with patient preferences. The report suggests that 10–15% of MDT recommendations are not implemented, partly because such preferences were not taken into account.³⁴⁹ Contrary to this, Raine *et al.*³³⁷ did not find a link between discussions on preferences and the decisions made. Preferences may change over time, with differing opinions on how this knowledge should be incorporated into care-planning. Interestingly, Raine *et al.*³³⁷ found that those teams that were more medically dominated showed a stronger record of implementing decisions made. Implementation was found³³⁷ to be influenced by socioeconomic factors, which may have implications for the role of MDTs in building community resilience (see *Chapter 6*), and this is noted as an area that needs further investigation.

Significant variation in how MDTs operate reflects the different contexts within which teams are working. However, this could reflect a lack of clarity on best practice and a need for guidance.³³⁷ Delays in decision-making have been reported, as a result of a lack of availability of key staff and/or information,^{337,349} with staff shortages being cited as having a strong effect on attendance. Notwithstanding attendance and participation barriers, the caseload of MDTs can have an impact on the quality of discussions. The Cancer Research UK study³⁴⁹ found that meetings lasted up to 5 hours; the mean length of patient discussions was 3.2 minutes, and over half of the discussions were < 2 minutes long.

Mechanisms

The professional composition of MDTs is variable and typically comprises three to eight members, with GPs and nurses most frequently represented. The inclusion of voluntary sector organisations (VSOs) in MDTs has recently increased, often to support self-management and more holistic care.³⁵⁷ Involving other public services, such as housing, enables a care plan that addresses the wider determinants of health, and supports patient-focused goals to tackle social isolation.³⁵⁸ Specialist nurse roles, with arguably more capacity than GPs, can help to support patient education³²⁹ by spending time with patients to personalise information. This could be of particular benefit to patients who may struggle with more generic approaches, for such reasons as language, learning difficulties and cognitive decline. The 'drip feed' of information can support a continuous relationship.³²⁹ For patients with multimorbidities, decisions on the trade-offs between the benefits and harms of treatments can be supported by specialist roles.³²⁹ Conversely, it has been argued that patients with very complex needs might need more support from GPs.³³¹

In bringing together multiple services, the role of care co-ordinator can be critical in tackling fragmentation,³⁵⁹ supporting relational continuity between the services and the patient; informational continuity between services and with the patient; ensuring accountability to the patient; and acting as the patient's advocate to ensure patient-centred care. Nurses without advanced qualifications or advanced training have reported feeling ill equipped to take on the care co-ordination role, highlighting the importance of support (information systems, monitoring processes, guidelines), as well as training and development.³⁴⁷

Space and time for informal communication and shared communication methods are identified as enablers,³⁴⁶ underpinning access to, and the exchange of, essential information and ideas. MDT working can be facilitated

by a shared understanding and vision of integrated care,^{340,346} translated into clear, agreed objectives.³⁶⁰ Operationally, explicit processes^{338,345,346} can help to clarify expectations; for example, mandating attendance in job descriptions, regular feedback on team performance, provision of administrative support and sharing of information with other practitioners involved in pathways. An absence of such clarity can have an impact on the implementation of decisions.³³⁷ Organisational development can support the development of shared goals, values and outcome measures.²³⁹

To effectively manage multimorbidity, interventions may offer greater benefit if targeted at specific combinations of common conditions or specific problems facing comorbid patients,³³² highlighting the role of dedicated case managers.^{327,333} Risk stratification and predictive modelling are often used to support case-finding,³⁶¹ and several recent studies present alternative methods to predict future utilisation.^{319,320} Sharing and access to patient records is critical in MDTs working across organisational boundaries to support clinical decisions and more holistic support.^{323,343,345} The use of technology is variable,³³⁷ challenging information-sharing within current systems. The experience of the Buurtzorg model suggests that technology can underpin timely communication, operational transparency, knowledge-sharing and quality improvement, through team access to audit and performance data.^{343,345}

System leadership,^{346,362} with its attributes of building a common vision and engaging with colleagues and partners to build commitment, may act as a trigger to develop the collaborative culture that is key to MDTs. Maintaining a shared vision that is clearly communicated, alongside an explicit commitment to quality improvement through benchmarking and peer review, are considered to be essential to creating the environment for integrated working.³³⁷

The vanguards seem to recognise that integrated working is unlikely to emerge simply by forming teams. Team development is needed at all levels of the system – not just at the executive level – and investment in organisational development is needed to underpin structural and cultural change.^{360,363} Without explicit development, teams can lapse into ‘domain thinking’.³⁴⁸ Specific training and development can help to define a shared language and strengthen relationships.³⁴⁸ Development may involve coaching, leadership training, 360-degree feedback, personal development and action-learning sets.³⁶⁴

Although not a multidisciplinary model, the underlying philosophy of the Buurtzorg model,⁵⁵ with its emphasis on autonomy and empowerment, may offer valuable learning. Care is delivered by self-organising teams, typically comprising 8 to 12 nurses or health-care assistants. Teams are given the freedom to develop their own models for joint working with other professions. Value-based recruitment has created a virtuous cycle, in which the high levels of patient and staff satisfaction have attracted highly motivated individuals who perpetuate the cycle. The Buurtzorg mission is based on a shared sense of purpose, which ‘appeals to professional pride’, aimed at stimulating a culture of innovation and improvement. Teams are embedded within communities, developing detailed knowledge of their ‘clients’, their families and community resources; this informs problem-solving, and, in turn, helps to build the resilience of patients, families and communities.³⁴³

The mix of professional backgrounds in MDTs can enable ‘participants to transcend their own professional roles and routines, leading to learning and a more collaborative environment’.³⁴⁵ Support for reflection, innovation, open communication and supportive colleagues can create an environment in which participants feel part of the team, supporting a belief in interprofessional care.³⁴⁵ On a practical level, a nominated lead to co-ordinate and chair meetings, supported by administrative resource, can help to nurture the team as it develops,^{345,348} with appropriate personal development. This need for development is emphasised by West *et al.*,³⁵⁶ who note that leadership skills are unlikely to emerge from clinical experience alone and will need nurturing through training and support.

M3: engaged and trained staff expedite cultural change

Closely related to the emphasis on multidisciplinary working is the aspiration for a systematic approach to engagement and development of the workforce. This is referenced earlier in *Chapters 4–6*, demonstrating engagement and development as important enablers to new care models:

If commissioners and providers train and fully engage staff in service transformation, then staff will drive the cultural change that underpins new ways of working.

The evidence map for this programme theory component is derived from five ‘sets’ of related evidence (*Table 7*). Two of these evidence sets relate to context and three to potential mechanisms:

1. population-based approaches to primary and community care (context)
2. integrated and collaborative care (context)
3. quality improvement in primary and community care (mechanisms)
4. team and organisational development (mechanisms)
5. leadership development (mechanisms).

The two contextual evidence sets are primarily theoretical, whereas those relating to mechanisms are underpinned by varying levels of empirical evidence.

Outcomes relating to the quadruple aim

Findings from the UK National Staff Survey suggest that staff engagement is the best overall predictor of NHS organisations’ outcomes (care quality and financial performance; patient satisfaction; staff absenteeism; and health and well-being).³⁷⁴ The impact of staff experience on the quality and safety of care has been explored, following the Francis inquiry³⁸⁰ and the Berwick report,³⁸¹ with suggestions that strong team-working and clear aims among staff can contribute to patient outcomes.^{382,383} Engagement has also been linked with organisational productivity, quality of patient care, lower mortality rates and better financial performance.³⁸³ In one study, practices demonstrating higher leadership scores were more likely to implement clinical improvements.³⁶⁸

Leadership development, through training and increasing workforce capabilities, is seen as a particularly critical element of workforce development. Staff on leadership programmes, such as the Leadership Challenge programme, have reported improved organisational impact, including raised awareness of costs

TABLE 7 Evidence map: M3 – engaged and trained staff expedite cultural change

Focus	References
Population-based approaches to primary and community care (context)	Roland <i>et al.</i> , ³⁶⁵ Akhnif <i>et al.</i> , ³⁶⁶ and Perreira <i>et al.</i> , ³⁶⁷
Integrated and collaborative care (context)	Ghate <i>et al.</i> , ³⁶² Roland <i>et al.</i> , ³⁶⁵ Donahue <i>et al.</i> , ³⁶⁸ Fillingham and Weir, ⁹¹ Smith <i>et al.</i> , ³⁶⁹ Timmins, ³⁷⁰ Frich <i>et al.</i> , ³⁷¹ Hardacre <i>et al.</i> , ³⁷² Rosenman <i>et al.</i> , ³⁷³ West <i>et al.</i> , ³⁷⁴ and Willis <i>et al.</i> , ³⁷⁵
Quality improvement in primary and community care (mechanisms)	Powell <i>et al.</i> , ³⁵⁰ West <i>et al.</i> , ³⁶⁴ Roland <i>et al.</i> , ³⁶⁵ Apekey <i>et al.</i> , ³⁷⁶ and Lega <i>et al.</i> , ³⁷⁷
Team and organisational development (mechanisms)	van Dongen <i>et al.</i> , ³⁴⁸ Powell <i>et al.</i> , ³⁵⁰ Roland <i>et al.</i> , ³⁶⁵ Akhnif <i>et al.</i> , ³⁶⁶ Perreira <i>et al.</i> , ³⁶⁷ Lega <i>et al.</i> , ³⁷⁷ McMullen <i>et al.</i> , ³⁷⁸ and Storey <i>et al.</i> , ³⁷⁹
Leadership development (mechanisms)	van Dongen <i>et al.</i> , ³⁴⁸ Ghate <i>et al.</i> , ³⁶² West <i>et al.</i> , ³⁶⁴ Roland <i>et al.</i> , ³⁶⁵ Donahue <i>et al.</i> , ³⁶⁸ Fillingham and Weir, ⁹¹ Smith <i>et al.</i> , ³⁶⁹ Timmins, ³⁷⁰ Frich <i>et al.</i> , ³⁷¹ Hardacre <i>et al.</i> , ³⁷² Rosenman <i>et al.</i> , ³⁷³ West <i>et al.</i> , ³⁷⁴ Willis <i>et al.</i> , ³⁷⁵ Apekey <i>et al.</i> , ³⁷⁶ McMullen <i>et al.</i> , ³⁷⁸ and Storey <i>et al.</i> , ³⁷⁹

and cost-savings, as well as improved patient care.³⁶⁴ The experience of staff is often linked to patient satisfaction.^{350,360,374,384,385} Staff views of leaders are strongly related to patients' perceptions of the quality of care. Where leadership enables effective team-working, health-care delivery is more effective, and organisations exhibit higher levels of innovation and patient satisfaction.³⁷⁴ Team working, in particular, has been found to be a critical ingredient in high-quality care, particularly in relation to care for long-term conditions.³⁶⁵

Higher levels of support for staff from managers has been associated with higher numbers of patients reporting better care.^{350,374} Greater engagement has also been linked to safer patient outcomes and significant associations with patient satisfaction, patient mortality and infection rates.³⁸⁵ When staff experience is positive, for example when they feel that they have 'meaningful roles', individual staff outcomes (e.g. job satisfaction) and organisational outcomes (e.g. absenteeism and staff turnover) have tended to improve.³⁵⁰ Conversely, higher turnover may exist where working environments are perceived as negative, because of bullying, harassment and aggression.³⁵⁰ A learning organisational culture, exemplified in many high-performing services, has been linked with organisational commitment, job satisfaction, innovation and performance.³⁶⁶ Linking with the theory components M2 and M4, learning organisations typically demonstrate an effective use of data to reflect and learn from performance at the individual, team and organisation levels.³⁷¹

Unintended consequences

The criticisms of leadership development programmes, referenced earlier, can result in a process-driven and task-focused approach to change, which is incongruous with the system leadership style advocated for complex change.^{362,373} There is a risk that organisational development cannot keep pace with the skills development needed to design, deliver and evaluate service transformation. On a broader scale, the ability of formal education to keep pace has been questioned.³⁸⁶ For example, problem-based learning to develop emotional intelligence, strategic planning and organisational awareness will take time to establish.

An inevitable tension exists between the competing priorities of continuing to run existing services, while planning and commissioning new services. Focusing efforts on the development of selected cohorts could limit opportunities for 'cultivating greater levels of understanding and communication networks across professional groups',³⁷¹ and runs the risk of developing subcultures of unnecessary variation.³⁵⁰ Staff engagement is recognised as a critical enabler to service transformation,¹⁴⁶ but in an environment of ambiguity, volatility, complexity and uncertainty,³⁶² it can be challenging to maintain efforts in a meaningful way.³⁷⁵

Mechanisms

Organisational development could usefully focus on empowering teams to explore opportunities to improve and innovate. Positive staff experience has been associated with the ability to contribute towards service and quality improvement at work and strong communication.³⁵⁰ Clarity on the opportunities for involvement and engagement in change has been identified as 'an important contextual element'.³⁷⁵ Multidisciplinary learning, potentially working via networks, can help to cement the vision of integrated working^{365,378} and develop the adaptive skills needed to implement and evaluate service transformation. Leadership and quality improvement skills in primary care have been identified as a priority; team dynamics may also be influenced by value-based recruitment.³⁶⁵

Leadership development often focuses on processes, targeting more senior or medical roles, thereby missing the opportunity to develop skills more widely.³⁷¹ Various groups within health care, notably primary care staff, have not engaged as much with leadership development, possibly because of capacity issues.³⁶⁵ This points to an opportunity to engage more of the workforce in leadership development. A 'learning organisation' culture can be encouraged through processes and systems to support the sharing of knowledge, data and feedback.³⁶⁴ With leadership support, including time for reflection, teams can be trained and empowered to audit and benchmark their performance, analyse problems and share knowledge.³⁶⁴⁻³⁶⁶ For clinicians, autonomy may be a particularly important factor, enabling more collaborative and innovative behaviours.^{379,387} Evidence suggests that learning and development should be seen as an ongoing commitment; incremental change to encourage continuous learning and improvement^{364,375} has been shown to sustain cultural change.

High levels of motivation are associated with higher levels of productivity, and tend to be reflected in positive relationships with patients/service users.³⁶⁷ Motivation is influenced by levels of engagement and the working environment; continuous high pressure and evidence of discrimination are associated with lower levels of motivation and patient satisfaction.^{350,382} A positive environment may be encouraged through clear goals³⁸² and a systematic approach to learning and development.³⁶⁶ The attributes of senior leaders are an important influence here, with a key role to play in inspiring collaborative working through fair-mindedness, the empowerment of staff, vision and organisational awareness.^{379,386} 'capacity building and effective leadership development implies social systems to help build commitments among members of a community'.³⁸⁶

Integrated care depends on a system perspective, and much has been written about system or collective leadership,^{362,369,370,374} where there is a 'notional dispersal and sharing of leadership'.³⁷⁹ Distributed leadership models, which allocate time and resources to staff engagement, can 'create a shared sense of energy',^{388,389} activating 'a learner's sense of psychological safety'. Involving people in projects can help to build the credibility of the change programme, demonstrating the feasibility of change and encouraging uptake, spread and sustainability.^{366,375}

Interpersonal skills are a critical element in creating 'the foundation for making good ideas into tangible improvements',³⁷² this is especially the case with complex change, for which senior clinicians will need to influence others to contribute expertise and ideas. A longer-term view is needed to build the relationships that are needed to support complex change, and this will also help to develop insight to spot opportunities in an environment of ambiguity and uncertainty.³⁷² A key priority is to develop primary care staff, at all levels, to support quality improvement and innovation,^{365,376,377} with a clear role for mid-level managers in creating and sustaining change.^{368,378}

The pace and scale of change involved in new models has the potential to demotivate staff. Although evidence suggests that employing a range of staff can extend the current skill mix and improve working life, an accompanying risk of stress and anxiety highlights the importance of mutual support, which can be encouraged by team development.^{365,367} It is important to staff that they feel that their roles make a difference to patient care, which increases their trust in their employer; a sense of shared values and a feeling of belonging can build mutual respect, which is particularly important in potentially stressful contexts. From these perceptions of trust and respect, motivation and satisfaction can increase, demonstrated by lower levels of staff turnover. Similarly, when staff feel like they are under less pressure, training and appraisals seem to increase in frequency. Personal experience is strongly affected by instances of negative behaviours – bullying, harassment, discrimination and aggression – particularly, when it is perceived that it is inadequately addressed, leading to low morale, and potentially increased absence, which affects patient satisfaction.^{350,367}

M4: system learning embeds and sustains transformational change

System learning is a thread that runs through several of the identified programme theory components, demonstrating its critical role in transformation. Evaluation and feedback loops are presented as underpinning new ways of working within enhanced primary care and MDTs, and informing strategic commissioning and place-based accountability:

If MCPs learn and adapt quickly using evaluation/monitoring loops and knowledge sharing, then MCPs will sustain transformational change.

System learning takes place at multiple levels, notably within MCPs, across the MCP vanguard sites, and, ultimately, through the lessons learnt, as they are shared within the overall health system. As 'system-learning' is a nebulous concept, *Figure 19* is included to describe it, within the context of a logic model.

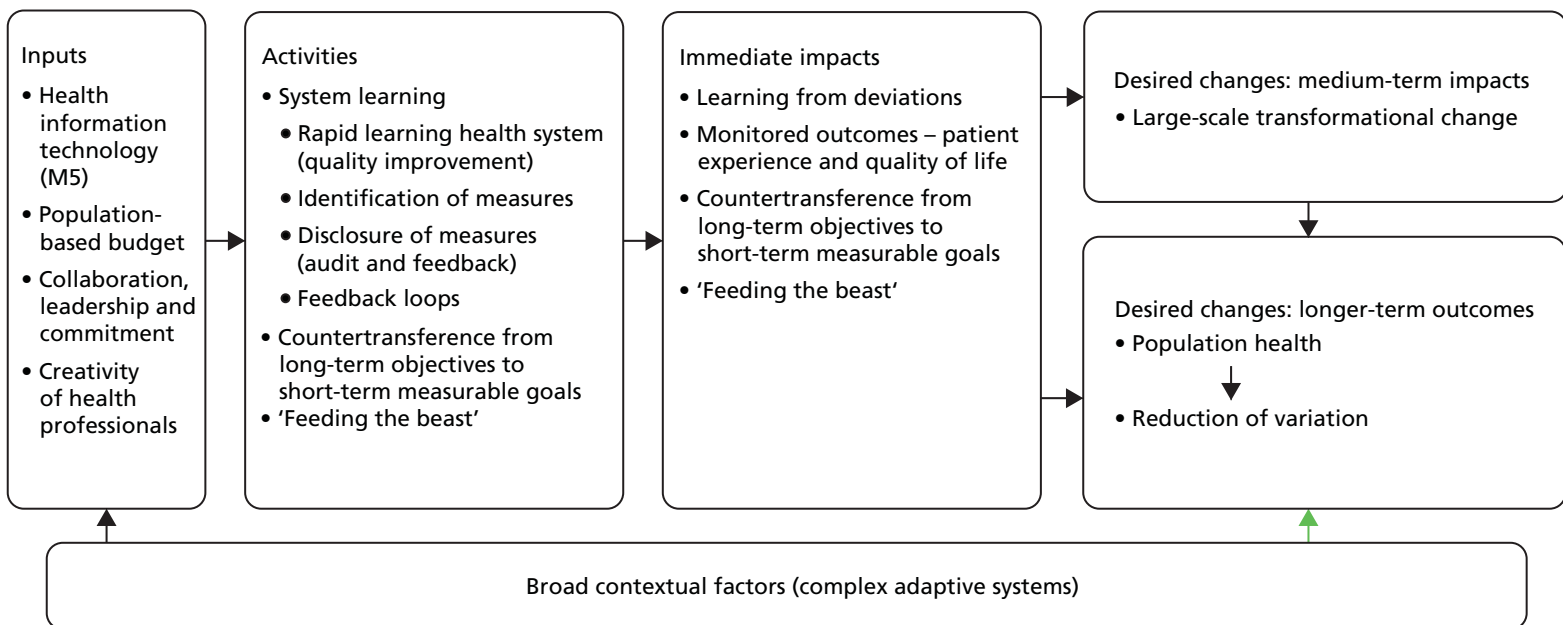


FIGURE 19 Logic model for programme theory component M4: system learning embeds and sustains large-scale transformational change (context).

The evidence map for this programme theory component is derived from six 'sets' of related evidence (Table 8). Three evidence sets relate to context and three to potential mechanisms:

1. large-scale transformational change (context)
2. population-based approaches to primary care (context)
3. complex adaptive systems (context)
4. learning theory (mechanisms)
5. quality improvement (mechanisms)
6. audit and feedback (mechanisms).

The three contextual evidence sets are primarily theoretical, whereas those relating to mechanisms are underpinned by empirical evidence.

Outcomes relating to the quadruple aim

In contrast to other programme theory components, the achievement of transformational change does not map directly to the quadruple aim. Instead, it is best seen as an intermediate outcome by which the medium- to long-term outcomes articulated by the quadruple aim might be achieved. An alternative view might locate transformational change as a subsequent context, within which the achievement of outcomes might be demonstrated through the monitoring of outcomes and the creation of feedback mechanisms.

Population health

A key underpinning theory to US ACOs is that the allocation of a population-based budget set against the delivery of agreed outcomes will provide the incentive for providers to invest in activities to encourage better health, thus reducing utilisation.³⁹⁷ In their review of large-scale approaches to primary care, Pettigrew *et al.*³⁹⁰ examined the claim that population health management enables improvements in the quality of care and reduces unwarranted variation. They presented four published observational before-and-after studies in support of this claim, concluding that the results appear promising, demonstrating a step-wise improvement in most, but not all, areas.³⁹⁰ A qualitative study³⁹⁸ examined by the same authors³⁹⁰ evaluated quality and safety processes, and provided staff views on their job satisfaction and staff views on patient experience. Study results were equivocal, with evidence to suggest that cross-coverage and greater skill mix may inadvertently contribute to fragmentation of care and a loss of continuity of care. Pettigrew *et al.*³⁹⁰ observed that, collectively, these studies support the theory that large-scale general practice collaborations may provide a better environment for standardisation of care, greater community resilience, investment in technology and improved access to care.

Other large-scale population-health providers exist across the globe (see Ewbank *et al.*³⁹⁹ and Figure 16). Ribera Salud, a private service provider in Valencia, encapsulates the attitude of a population-health

TABLE 8 Evidence map: M4 – system learning embeds and sustains transformational change

Focus	References
Large-scale transformational change	Best <i>et al.</i> , ⁸⁸ Rosen <i>et al.</i> , ¹⁹⁰ Pettigrew <i>et al.</i> , ³⁹⁰ Willis <i>et al.</i> ³⁹¹ and Swanson <i>et al.</i> ³⁹²
Population-based approaches to primary care	Rosen <i>et al.</i> , ¹⁹⁰ Sturmberg and Lanham, ³¹⁸ Pettigrew <i>et al.</i> ³⁹⁰ and Stroebel <i>et al.</i> ³⁹³
Complex adaptive systems	Best <i>et al.</i> , ⁸⁸ Sturmberg and Lanham, ³¹⁸ Willis <i>et al.</i> , ³⁹¹ Swanson <i>et al.</i> , ³⁹² Stroebel <i>et al.</i> , ³⁹³ Hovlid <i>et al.</i> , ³⁹⁴ and Fraser and Greenhalgh ³⁹⁵
Learning theory	Hovlid <i>et al.</i> , ³⁹⁴ and Fraser and Greenhalgh ³⁹⁵
Quality improvement	Stroebel <i>et al.</i> ³⁹³ and Taylor <i>et al.</i> ³⁹⁶
Audit and feedback	

approach, focused on improving health outcomes for the whole population, while managing demand and achieving value for money.³⁹⁹ This incentivises Ribera Salud to intervene at the most effective moment.

Cost-effectiveness

A supplemental theory underpinning US ACOs is that receipt of a population-based budget incentivises providers to shift care from higher-cost hospital sites to community-based settings.³⁹⁷ Ribera Salud in Valencia was contracted to provide secondary care, extending the contract to primary care for financial reasons.⁴⁰⁰ Overall, Ribera Salud has delivered care improvements at a 26% lower cost than providers within the wider Valencia region.⁴⁰⁰

Pettigrew *et al.*³⁹⁰ highlighted a lack of evidence to identify the characteristics (e.g. size, governance) of large-scale general practice that are likely to contribute to sustainability. Arguments for large-scale primary care organisations tend to rest on improved financial sustainability. Having reviewed the literature, Pettigrew *et al.*³⁹⁰ concluded that further research is needed to evaluate the effects of general practice operating on a large-scale. In particular, such effects should be evaluated over the long term in relation to effects on the workforce, patient experience, clinical outcomes and costs.

Patient experience

A 15-month mixed-methods study showed that three-quarters of practices were now involved in bigger partnerships or federations,¹⁹⁰ but this had a minimal impact on performance against a range of quality indicators, and patient satisfaction had fallen.⁴⁰¹ Rosen *et al.*¹⁹⁰ recommends a phased introduction of alternative contract models for large-scale general practice organisations and integration with community providers, citing a lack of evidence that large-scale general practice leads to improvements in the quality and value of care.

Staff/provider experience

Achieving population-based care within a NHS context requires practices to organise into larger-scale practices. The Primary Care Workforce Commission acknowledges that larger-scale general practice collaborations could enable the delivery of a wider range of services, offer better opportunities for staff development and training and allow more effective relationships with commissioners, specialists, hospitals and social services.⁴⁰² Mechanisms for achieving such improvements relate to 'investing in technology, strengthening clinical governance, standardising procedures, performance monitoring and benchmarking, peer review and feedback, spreading best practice, and having a population-based approach to services'.³⁹⁰

Unintended consequences

A counterargument to measurement activities is their counterproductive or unintended effects: 'what gets measured influences behaviour'.^{88,403} Transformational processes are less easily measured than transactional activities, possibly contributing to a countertransference from the longer-term objectives to short-term measurable goals.⁸⁸ Those working in health care split their time between the 'two jobs' of health care: 'to do their work and to improve it'.⁴⁰⁴ Many front-line staff face competing priorities, with associated undue effort in 'feeding the beast' through metrics and accounting for performance.⁴⁰⁵ Metrics and learning, the third of five key components of accountable care (population; outcomes; metrics and learning; payments and incentives; and co-ordinated delivery), require both the means (i.e. metrics and processes) by which to monitor outcomes and the feedback loops required to learn from unintended outcomes.⁴⁰⁶ All components are related in a closed-system feedback loop.⁴⁰⁷ This principle has been fundamental to developments within the vanguard sites.

Leaders need time to realise the benefits from new models of care, not being accountable simply for short-term performance. Alderwick and Ham⁴⁰⁸ comment that the time needed to implement large-scale change in the NHS and to demonstrate its impact is often dramatically underestimated.⁴⁰⁹ At the same time, expectations from new care models have been overestimated, requiring a more realistic appraisal

from policy-makers and health service leaders. Feedback loops need to blend quantitative and qualitative data in order to 'make sense of the transformation effort'.⁸⁸

Vize⁴¹⁰ highlights a further paradox, namely that, at a time when increasing time, money and effort are being invested in integrated care, the system is experiencing pressures in funding research that explores the impact of integrated care on 'costs, outcomes, and patients' experiences'. Even when such evaluation activities are forthcoming, their results are not always used to transform practice.

A rapid realist review⁸⁸ identified five 'simple rules' of large-scale transformational change. One rule involves establishing feedback loops: 'Almost without exception, successful large-scale transformational efforts were recognized and sustained through the careful identification of measures and judicious disclosure of those measures to those both inside and outside the organization'.⁸⁸

Do feedback loops work under all circumstances and contexts? Best *et al.*⁸⁸ attributes success within transformational change to two factors: (1) leadership commitment to reporting performance throughout and outside the organisation, in order to effect transformation (a necessary accompaniment of Vanguard status);⁴¹¹ and (2) the quality of the supporting information infrastructure (see programme theory in *Chapter 7, M5: proactive population health is dependent on shared and linked data*) in order to effect the aggregation of data for audit and performance management.^{412,413} The literature offers vigorous debate as to if and how NHS performance management systems are comparable to those of, for example, Kaiser Permanente.⁴¹⁴

Large-scale longitudinal case studies conducted across 12 health-care systems identified five interactive elements considered to be critical to successful transformational change. The elements include an impetus to transform, leadership commitment to quality and improvement initiatives that engage staff in meaningful problem-solving. Additional elements include alignment between organisational goals and resource allocation, and integration across traditional intraorganisational boundaries.⁴¹⁵

A systematic review⁴¹⁶ of organisational change identified 56 recent studies, 13 of which were in health care. Limited differences were found between health care and other industry studies, suggesting a future productive line of inquiry. Published research reveals that transformational change is multifactorial, attesting to the need to adopt a complexity lens for evaluation.⁴¹⁶ A mixed-methods study of transformational change in the NHS, located in north-east England similarly revealed 'a need to develop new methods to understand how change occurs, or fails, in complex settings like the NHS'.⁴¹⁷ In-depth mixed-methods case studies are required to supplement evidence synthesis work, such as our own report.

Complex adaptive systems (context)

Feedback loops are equally prominent within complex adaptive system (CAS) frameworks that seek to explain how transformation occurs.^{394,418,419} A CAS is 'a collection of individual agents with freedom to act in ways that are not always totally predictable, and whose actions are interconnected so that one agent's actions changes the context for other agents'.⁴¹⁸ The influential Institute of Medicine report, *Crossing the Quality Chasm*,⁴²⁰ played a major role in recognising how a CAS's lens can help in understanding how to improve and transform health systems. It reinforced the idea that health organisations operate within CASs,⁴²¹ an idea further developed in a series of papers in the *British Medical Journal*.^{418,422} In focusing not on organisational elements themselves, but on the interdependency of those elements, the CAS approach seems particularly well suited to the complexities of evaluating new care models.⁴²³

Even though CASs are complex and unpredictable, they are open to the influence of simple rules that are sufficiently flexible to allow for adaptation. Rather than trying to manage the complex system through top-down large-scale transformation efforts, a CAS approach seeks to mobilise the natural creativity of health-care professionals to evolve, through system learning, locally owned solutions by which to achieve quality.⁴²⁴

Complex adaptive systems, such as that within which integrated care operates,^{425,426} pose a further challenge with regard to evaluation; with so many different aspects to care, the system itself inevitably changes over time as practice develops.⁴¹⁰ Evaluators seek to measure a moving target.

Best *et al.*⁴²⁷ employed an action research methodology to explore transformation within the British Columbia health system, using a systems-thinking perspective. Requirements for managing large-scale clinical change included creating a context to prepare clinicians for health system transformation initiatives; promoting shared clinical leadership; strengthening knowledge management, strategic communications and opportunities for networking; and clearing pathways through the complexity of a multilevel, dynamic system. More specifically, Sturmberg and Lanham³¹⁸ identify future priorities for research into systems-thinking and complexity theory within general practice, 'applying nonlinear dynamics and empirical modelling to patient care, and to organizing and developing local practices, engaging in community development, and influencing health care reform'.

Feedback loops can generate change or stability within a system. Where feedback loops generate change, two systems that initially are quite similar may develop significant differences over time. Even the same system, after the passage of time, may bear little resemblance to its previous configuration. Because the context for each CAS is unique, and each CAS is context dependent, each CAS is unique.⁴²⁸ The implications for planning are far-reaching, requiring that notions of 'control' over the process of change should be avoided, as should language that emphasises 'overcoming resistance'.^{422,429} Instead, efforts should be directed towards iterative planning and practice cycles that acknowledge that successful action is less about meeting targets and more about shifting the system's behaviour through generic guidance and steering mechanisms. Changing the principles by which people carry out their work is considered to be more important than attaining seemingly arbitrary predefined targets.

Complex adaptive systems require constant monitoring and adaptation if transformational change is to be achieved. CASs challenge the linear logic models utilised by the vanguards; they are 'self-organizing and constantly adapting to change; they are driven by interactions between systems components and governed by feedback; and they are nonlinear and often unpredictable, with changes on one part of the system producing unexpected changes in other parts'.⁴³⁰ Although the realist method offers one particular lens for exploring such complexity, further work is required to develop methods for the evaluation of real-world CASs.⁴³¹ The recognition of system complexity opens up the use of a diverse range of 'systems-thinking tools',⁴³² which might include knowledge synthesis, concept-mapping, social network analysis, programme budgeting and marginal analysis and system dynamics modelling.⁴¹⁹

Mechanisms

Learning theory (mechanisms)

The link between system-thinking and learning theory is explicit:

Systems thinking is an iterative learning process in which we replace a reductionist, narrow, short-run, static view of the world with a holistic, broad, long-term, dynamic view, reinventing our policies and institutions accordingly.

Reproduced from Sterman⁴²⁹

The challenge for 21st-century health services is to 'aim not merely for change, improvement, and response, but for changeability, improvability, and responsiveness'.³⁹⁵ This requires a change from enabling not just competence, but also capability. Effective implementation requires a system-wide approach in which 'the needed capabilities are combined, articulated and developed simultaneously in the same delivery system. Networks of providers will need to put energies and effort into the management of change and ensuring capabilities are embedded'.²²⁰ Commentators recognise that needed capabilities are often in short supply and investment in leadership and organisation development is required if NHS providers are to be ready to take on additional risks and responsibilities.⁴³³

System learning requires an environment within which individuals are able to develop sustainable abilities appropriate for a continuously evolving organisation³⁹⁵ and that enables organisations to capitalise on local knowledge to generate continuous improvements.⁴³⁴ Such a supportive learning environment enables an organisation to harness relationships and the skills and capacities of individuals in the system.⁸⁸ A learning culture, focused on developing the capability, capacity and confidence of staff and service users, provides an environment for the collaborative problem-identification and solving, experimentation and evaluation that is key to addressing systemic issues.⁴³⁵ The US ACO experience confirms that successful ACOs manufacture mechanisms and systems for learning (and then act on that learning).¹²⁶ Such learning systems must be agile in driving rapid quality improvements, as they empower staff and service users to address shortcomings in care.¹²⁶

'Rapid-cycle' evaluation is an identifying characteristic of many organisations that seek to achieve transformational change.⁴³⁶ In a study of transformational change in acute care, Greenhalgh *et al.*⁴³⁷ emphasise the criticality of 'tools and techniques for quality improvement, including systematic data capture with rapid feedback loops (plan-do-study-act cycles)'. Rapid-learning cycles enable organisations, such as the ChenMed organisation, which offers high-quality primary care to older people in the USA, to test different ways of working across different contexts,¹¹⁷ tailoring approaches in the light of agile feedback. However, the evidence base for plan-do-study-act (PDSA) methods, notwithstanding their prominence in system transformation, modernisation and quality improvement, is equivocal at best. Few formal objective evaluations of their effectiveness have been conducted, and the achievements of PDSA approaches range from significant improvements in care and patient outcomes through to no improvement at all.³⁹⁶ A systematic review of PDSA cycles in quality improvement found that many inherent advantages of the PDSA method, such as the facility for iterative learning, and the ability to build up to larger cycles from small-scale changes and capitalise on learning from abandoned cycles, remain underexploited.³⁹⁶

In Saskatchewan, Canada, primary health-care teams were equipped with the tools and resources to allow them to understand, monitor and compare their own performance as part of the drive towards large-scale transformation.³⁹¹ Rather than reflecting a strong accountability structure, such tools place learning at the 'forefront of the re-design process',³⁹¹ building in the capacity for rapid learning is likely to be equally critical to the development of integrated care in the NHS.

The link between individual and organisational learning requires the identification and negotiation of shared mental models.⁴³⁸ Closely related is the concept of double-loop learning, which arises when such shared mental models enable action at an organisational level.⁴³⁹ Whereas single-loop learning corrects any defect or mismatch between desired and actual outcomes without challenging any underlying assumptions, double-loop learning effects a more profound, longer-lasting and, thus, transformational change by changing not just the defect but also reconfiguring the underlying decision-making rules.

Research and evaluation consistently emphasise the importance of organisational and system architecture in supporting high performance in health care and other sectors.⁴⁴⁰ Collins²⁰⁰ claims that how the vanguards work together as effective learning systems will prove to be critical to their success. Membership of the network of vanguards is predicated on a principle of 'reciprocal benefit',⁴⁴¹ sharing of data and current practice in turn opens up the prospect of accessing the data and practice of other organisations and, thereby, accelerating the lessons learnt.

Quality improvement (mechanisms)

Within large-scale primary care, stronger performance monitoring and feedback has been cited as a way of improving clinical quality and removing variation.³⁹⁰ Performance data on quality and cost are key to improvement at an overall practice and individual physician level. Rosen *et al.*¹⁹⁰ report that monitoring and improving quality represents a constant priority for the central management team, with significant resources allocated to identifying and addressing weak performance in individual practices and services. Dashboards and other performance management systems frequently feature in vanguard documentation.

An internal modality report stated that the use of technology to centralise information across all sites and to improve monitoring systems had allowed leaders to hold partners to account for variations in quality and performance.¹⁹⁰ Fifteen indicators were used for monitoring the performance of the primary care organisations across four domains: (1) prescribing, (2) hospital activity, (3) the QOF and (4) patient satisfaction (the GP Patient Survey).¹⁹⁰

Variable results from quality improvement can be attributed, at least in part, to the fact that ‘improvement strategies typically treat practices as something . . . that can be independently isolated and “fixed”, and as such, optimally approach change through the implementation of sequential steps, or stages, to achieve a set objective.’³⁹³ Understanding primary care organisations as CASs would recognise their need for support in ‘achieving reflective, adaptive, and action-oriented approaches to managing the future’. This represents a different feedback culture from the current emphasis on ‘hard’ performance indicators. Sheaff *et al.*⁴⁴² describe ‘concertive control’, whereby members monitor each other’s work through peer pressure and peer review, using a combination of organisational culture and technical knowledge to implement collective decisions. Concertive control represents a natural evolution, as organisations move from hierarchical control to self-managing teams.⁴⁴³ Rosen *et al.*¹⁹⁰ contrast a ‘directive’ model of change, whereby executive staff both determine the need for change and then facilitate staff to undertake it with a ‘consultative’ model of change, in which peer review and peer pressure are prominent. The latter model corresponds to ‘concertive control’ – exemplified by federations in which individual practices kept their own separate contracts.⁴⁴²

Audit and feedback (mechanisms)

Evidence on the value of audit and feedback, although not exclusive to a primary care setting, is considered to be quite conclusive, albeit to modest effect. A Cochrane review⁴⁴⁴ of audit and feedback activity recorded ‘small but important’ improvements in professional practice. A cumulative meta-analysis by the same authors led them to question if allocating further resources to testing the effectiveness of audit would be worthwhile.⁴⁴⁵ At least 20 systematic reviews report data on the use of audit and feedback in primary care.⁴⁴⁶ Audit and feedback in primary care achieved only modest effects, with a median change of 1.3%. Many unanswered questions remain, for example on whether single or multiple component feedback mechanisms are more effective and exactly what the mechanisms are by which audit and feedback achieves its effect. A realist review of clinical audit by the University of Groningen⁴⁴⁷ suggests four mechanisms for audit: (1) those relating to continuous improvement, (2) the fact that the process is ‘bottom-up’, (3) the active involvement of professionals and (4) a miscellaneous category of other mechanisms.

M5: proactive population health is dependent on shared and linked data

Closely related to the new ways of working (R1 and M2) and system learning (M4) is the need for linked and shared data to inform decision-making and continuous improvement:

If MCP staff are not able to access shared/linked data, then patients will continue to experience fragmented care.

The evidence map (Table 9) for this programme theory component is derived from four ‘sets’ of related evidence. Three of these evidence sets relate to context and one to potential mechanisms:

1. population-based approaches to primary and community care (context)
2. evidence-informed commissioning/value-based health care (context)
3. integrated and collaborative care (context)
4. quality improvement in primary and community care (mechanisms).

The three contextual evidence sets are primarily theoretical, whereas those relating to mechanisms are underpinned by varying levels of empirical evidence.

TABLE 9 Evidence map: M5 – proactive population health is dependent on shared and linked data

Focus	References
Population-based approaches to primary and community care	Tian <i>et al.</i> , ⁴⁴⁸ House of Commons, ⁴⁴⁹ The University of York ⁴⁵⁰ and NHS RightCare ⁴⁵¹
Evidence-informed commissioning/value-based health care	Hunter <i>et al.</i> ⁴¹⁷ and the House of Commons ⁴⁴⁹
Integrated and collaborative care	Winpenny <i>et al.</i> , ¹⁷⁴ Sheaff <i>et al.</i> ⁴⁵² and Rodgers <i>et al.</i> ⁴⁵³
Quality improvement in primary and community care	Winpenny <i>et al.</i> , ¹⁷⁴ Hunter <i>et al.</i> , ⁴¹⁷ Tian <i>et al.</i> , ⁴⁴⁸ NHS RightCare, ⁴⁵¹ Sheaff <i>et al.</i> ⁴⁵² and Rodgers <i>et al.</i> ⁴⁵³

Outcomes relating to the quadruple aim

The importance of information to assist with public health is well recognised. At the local level, data are used to target interventions and monitor population health. At the national level, information is used to make informed decisions about prioritisation, planning and commissioning. At the global level, information assists with the burden of disease and tackling global health threats. Routinely collected health data are not only used by public health agencies, but also for academic research and the development of technology. Large population-level data can help to accurately identify social inequities, and target specific groups and geographical and regional challenges, which can be addressed through evidence-based health interventions.⁴⁵⁴ The Symphony Project in south Somerset is an example of the use of extensive data sets for the purpose of improving the integration of care. Data on utilisation, costs and patient characteristics have been combined with local intelligence to identify groups that would benefit the most from proactive care.⁴⁵⁰ To this end, examples also exist in which segmentation analysis combined with ‘big data’ has divided patient populations into distinct groups, for needs-based targeting of care models and intervention programs.⁴⁵⁵

Southampton City CCG is an example of an organisation that has used data to assist with the reduction of unwarranted variation in health care. NHS RightCare provided data that highlighted the key priority areas for the reduction of variation, which could increase the value of health care. The CCG used these data to target areas of concern for spend and quality indicators, which subsequently led to the development of an implementation plan to improve the management of gastrointestinal patients.⁴⁵¹ A UK study suggests that information on variations in costs, activity and outcome could be better exploited, perhaps indicating a need for tools to help understand the causes of variation in health-care delivery.⁴⁵⁶ Despite the availability of data, however, data on disease surveillance, cause-specific mortality, intervention coverage and other vital statistics remain underused data sources,⁴⁵⁴ suggesting missed opportunities in discovery and innovation.

The potential for effective information-sharing to achieve cost-savings remains inconclusive. One systematic review concluded that there is sufficient evidence to suggest a reduction in costs through the use of electronic health records,⁴⁵⁷ whereas another study suggests that, although such cost-savings are achievable over a long period of time, there is a high degree of variation dependent on the practice setting.⁴⁵⁸ The high costs of implementation can also function as a barrier to the uptake of electronic health records.⁴⁵⁹ Such costs may also not be recovered.⁴⁶⁰ Support for the cost-effectiveness of shared electronic health records remains limited and conflicting.⁴⁵⁹

The government-anticipated ‘big data’ and the use of large data sets for the purposes of analysis have been promoted as potentially reducing costs, with an estimated £20B of benefit over a 5-year period for the central government.⁴⁴⁹ This estimate was based on the understanding that the cost-effectiveness of services is, to some degree, dependent upon data transparency and effective data-sharing.⁴⁴⁹ To this end, linked data have proved to be useful in exploring the utilisation and costs of services. Patient-level linked data have been used to explore the NHS and social care costs of the care pathway associated with elderly patients recovering from a fall in Torbay, Devon, UK. In this case, cost data patterns proved to be helpful in identifying and targeting patients to fall prevention services.⁴⁴⁸

Information-sharing can help to improve patient–doctor interaction, including through the use of telephone, e-mail and web-based consultations, with tools such as webGP and askmyGP enabling patients to share information with clinicians to support clinical decision-making.⁴⁶¹ Modality, a super-partnership in Birmingham and Sandwell, and one of the MCP vanguards, operates a remote hub to support triage, self-management and same-day consultations, enabling 65% of health concerns to be dealt with remotely.⁴⁶¹ A similar system, based at south Somerset’s Symphony, one of the PACS vanguards, has established a web platform to enable patients to access their care plan, messaging capabilities (such as Skype™; Microsoft Corporation, Redmond, WA, USA), test results, information about their condition and telehealth functionality. The platform enables a ‘single view of clinical activity between the [integrated] hub and practices’, directly linked with the GP system. From an information governance perspective, such systems can also clarify permissions for sharing information with carers and family members, which can be useful in the event of a crisis or emergency or when the patient is reluctant to engage with technology.⁴⁶² Mobile phone applications are increasingly being used⁴⁶³ and may help to support patient empowerment and shared decision-making.

An earlier HSDR programme study⁴⁵² explored continuity and co-ordination in primary care, including the impact of informational continuity. Up to half of the patients at all five sites studied described instances of information, regarding history, diagnosis and treatment, not being passed between providers. Patients reported correcting health worker omissions and out-of-date information, and having to repeat information to the next practitioner. In one instance, a district general hospital delayed action on an urgent GP referral, resulting in emergency admission of the patient 2 days later. Poor protocols for sharing data and unclear responsibilities were cited as contributing factors. Informational continuity seems to decline across traditional boundaries, with some patients with long-term conditions maintaining their own paper-based histories.

Effective communication, to share and link data, underpins multidisciplinary and collaborative working,^{174,453} and can range from a basic model through to a shared care record with e-referrals, e-prescribing and e-discharge. Data-sharing, enabled by telemedicine, allows GPs to access advice from specialists; examples include GPs working with dermatologists and ophthalmologists to share data and enable remote specialist consultation, with mixed results.¹⁷⁴ Informational continuity, through shared records across primary and secondary care, seems to show potential in improving decision support outside of specialist clinics.¹⁷⁴

Data-sharing is considered to be one of the key factors driving high-quality care for chronic conditions, with the potential to improve efficiency, drive up quality and reduce duplication.^{453,464,465} The chronic illness care model^{466,467} encourages the use of information systems to facilitate data-sharing and communication across traditional boundaries, helping to translate knowledge into practice. One example demonstrates integrated medical records for frail elderly patients providing read–write access for all health professionals involved in care, as well as patients and carers.⁴⁵² Such systems can be built on to develop tools and dashboards to alert MDTs to patients at risk of admission^{417,452} and identify potential bottlenecks and delays.⁴¹⁷ In north London, an information technology tool was developed and used to support information storage, sharing and analysis to support integrated care programmes.⁴⁶⁸ Information-sharing does, however, depend on data quality; GP systems and templates may enable standardised and complete data collection.^{453,469}

Unintended consequences

The push for data-sharing and health information exchange has given rise to concerns surrounding privacy, confidentiality and control of data about individuals,⁴⁷⁰ specifically, concerns around user trust, data privacy, transparency of data ownership and the potentially intrusive nature of data analytics. Poor communication and confusing messages can turn public and patient attitudes against the sharing of personal data, as demonstrated in the issues surrounding care data.⁴⁷⁰ The risks and benefits should be clearly articulated, as should information on data governance and anonymisation techniques.⁴⁷⁰ Data governance is likely to become an even more important issue, given the predicted rise in wearable technology and digital applications, which have the potential to link directly to records to support decision-making and remote monitoring.⁴⁶¹ Privacy terms and conditions are less clear, and the process for opting out is sometimes not explicit.⁴⁷⁰

Inevitable concerns persist in relation to sharing data with patients and carers, with the 'digital divide' highlighting the socioeconomic disparities in access to technology,⁴⁶² which can be exacerbated when patients with low educational attainment and health literacy rely on carers for information. NHSE ran a widening digital participation programme from July 2013 to April 2016, which provided digital health training to 221,941 people who were at a risk of being digitally excluded.⁴⁷¹

The focus on shared data and technology-driven data collection could unintentionally signal a shift away from the social contract that underpinned the traditional doctor–patient relationship,⁴⁷⁰ with criticisms regarding the 'depersonalisation' of care and risks to provider autonomy.⁴⁷² There is an additional risk that staff may feel that data collection is being driven by targets rather than patient-centred care.⁴¹⁷

Mechanisms

Facilitated by new 'disruptive' technologies enabling large data sets,⁴⁷⁰ real-time analytics can be a catalyst to drive population-based health care. Future iterations of clinical decision support systems are likely to enable data linking across sectors, enabling primary and secondary care clinicians to access data to inform decisions at key points in the pathway.⁴⁶¹ Currently, information exchange is constrained by such factors as local information governance protocols, incompatible information systems leading to duplication and rescanning, unreliable connectivity and inconsistent clinical coding.⁴⁵² Digital strategies should encompass a range of technologies to support data-sharing and co-ordinated multidisciplinary care; shared electronic records, used in combination with predictive analytics; telehealth; and patient-facing tools, such as portals.⁴⁶⁹ Consideration needs to be given to infrastructure (e.g. data storage, real-time analytics and integration of distributed data sets),⁴⁷⁰ capacity and skills,⁴⁷⁰ and financial sustainability.^{454,464} Some form of central administration is needed to 'monitor, mediate and facilitate data-sharing across multiple stakeholder organisations'⁴⁵⁴ and to manage protocols, processes and data specifications.⁴⁷⁰ At a national level, there is also a role to ensure interoperability between policies, systems, data standards and supporting market development,^{454,461} in order to avoid unnecessary variation⁴⁷² and conflicting policies.^{469,473}

The sustainability of data innovations is dependent on demonstrating benefits for patients, commissioners and practitioners.⁴⁷² Data-sharing needs to be supported by cultural changes, such as multidisciplinary working and support for shared decision-making.^{174,461} Innovations are also likely to be more acceptable if patients and staff have been engaged, and communication on the legal and ethics implications has been clear.⁴⁷⁰

Both patients and health-care professionals will need support in developing the skills and knowledge to benefit from data-sharing.⁴⁷⁰ Training centres specialising in big data (large linked data from electronic health records and health data collected by personal wearable devices) and open data (the sharing of data sets) can help services to reap the benefits from data-sharing to address population health needs.⁴⁷⁰ In the absence of training, the 'noise' of large data sets may risk the misinterpretation and misuse of data.⁴⁷⁰

Numerous barriers to technology transformation have been identified, including the absence of standards, significant variation in workflows, inefficiency of health information technology, incompatible legacy systems, incomplete information flows and poor system design.^{452–454,472} An absence of incentives for data-sharing, opportunity costs and disagreements around the use of data can also hinder effective information exchange.⁴⁵⁴ Poorly defined goals can result in uncertainty about what can be shared and which data need to be included,⁴⁶⁴ potentially leading to variation in the capability of organisations and services to share and act on data.⁴⁶⁴ Relationships based on trust and collaboration will be key to overcoming structural, cultural and ethics barriers.⁴⁵⁴

Chapter summary

The intention for these maps has not been to systematically cover all of the relevant literature. Indeed, it is clear that each of the evidence sets relating to the programme theory components holds the potential to sustain an in-depth analysis of empirical literature and the underpinning theory. The maps demonstrate the interdependencies between individual theory components. Structural developments, such as the introduction of MDTs and integrated pathways, are contingent on cultural change, which, in turn, needs to be stimulated through organisational development and system leadership behaviours. Staff autonomy and empowerment is identified as a critical thread in cultural change, associated with trust and collaboration. This shift to a more collaborative, population-based approach to health care can be hindered by misaligned systems and processes, and it is clear from the evidence base that shared data can offer the opportunity to improve the co-ordination and continuity of care for patients and to instigate improvement and innovation. System learning, within each vanguard and then across vanguards under the aegis of NHSE initiatives, can be demonstrated to be a key component of the New Care Models programme to a degree that has not typically been encountered with vanguard-type initiatives. Indeed, similarities can be detected with the Institute of Medicine's Learning Health Care System model.⁴⁷⁴ In particular, feedback loops built into audit and formative evaluation could potentially trigger a range of different mechanisms, variously interpreted as responses to transformational change, learning or quality improvement resources.

Chapter 8 Discussion

In this chapter, we bring together the findings from the realist reviews (R1–3) and maps (M1–5) of the programme theory components. The overlaps between them are discussed in the context of implications for research and practice. This provides the means by which we refine the policy and MCP vanguard programme theories (from NHSE MCP guidance and logic models, respectively) within the realist synthesis approach⁷⁰ and propose a conceptual model for future accountable population-based integrated systems (Figure 20).

The review set out to address four research questions, which are discussed fully in the previous sections of this report:

1. What are the foremost theories of change inherent within the MCP model of care? In *Programme theory components*, we summarise each of the three prioritised components, the maps and the unintended consequences.
2. What seem to be the 'active ingredients' that should inform design of MCP models of care? The *Implications for practice* section below captures discussions from testing our emerging findings at a MCP stakeholder workshop and a dissemination activity with NHSE's New Care Models programme teams. These have helped to refine our proposed active ingredients to support practitioners (Table 10).
3. What are the social and cultural conditions that influence (enabling and blocking) change within MCP models of care and how do these mechanisms operate in different contexts? In *Implications for research*, we frame the combined findings within a theoretical understanding by abstracting to relevant mid-range theories. This provides an explanatory framework to reinforce the conceptual model (see Figure 20).
4. What are the key knowledge gaps and uncertainties in relation to the design, implementation and evaluation of MCP models of care? The study strengths and limitations within *Implications for research* describe this aspect in more detail.

Programme theory components

The programme theory relates to activities, such as contracting, as well as behaviours, such as community involvement. The individual theory components were notable in their coverage of both interventions (what MCPs will do) and ways of working (how MCPs will design and deliver services). The evidence base is variable, characterised by limited empirical studies; experiential learning through informal case studies and before-and-after evaluations; and the transfer of lessons from international models to a NHS context. Our synthesis incorporated stakeholder engagement, via an advisory group and focus group (see *Stakeholder engagement*), which enabled sense-checking of emerging findings.

R1

The delivery of new and expanded roles in primary care, including access to specialist care in the community, requires a degree of trust between the different professionals. The provision of relevant training and practical tools in parallel can trigger professional willingness to adopt new ways of working or task-shifting. Once new professional roles and behaviours are effectively embedded, there is the potential to achieve the outcomes of better management of chronic conditions, a reduction in the number of secondary care referrals and cost-savings, following sustained implementation and stabilisation of increased demand (with the costs of training and additional community services provision accounted for).

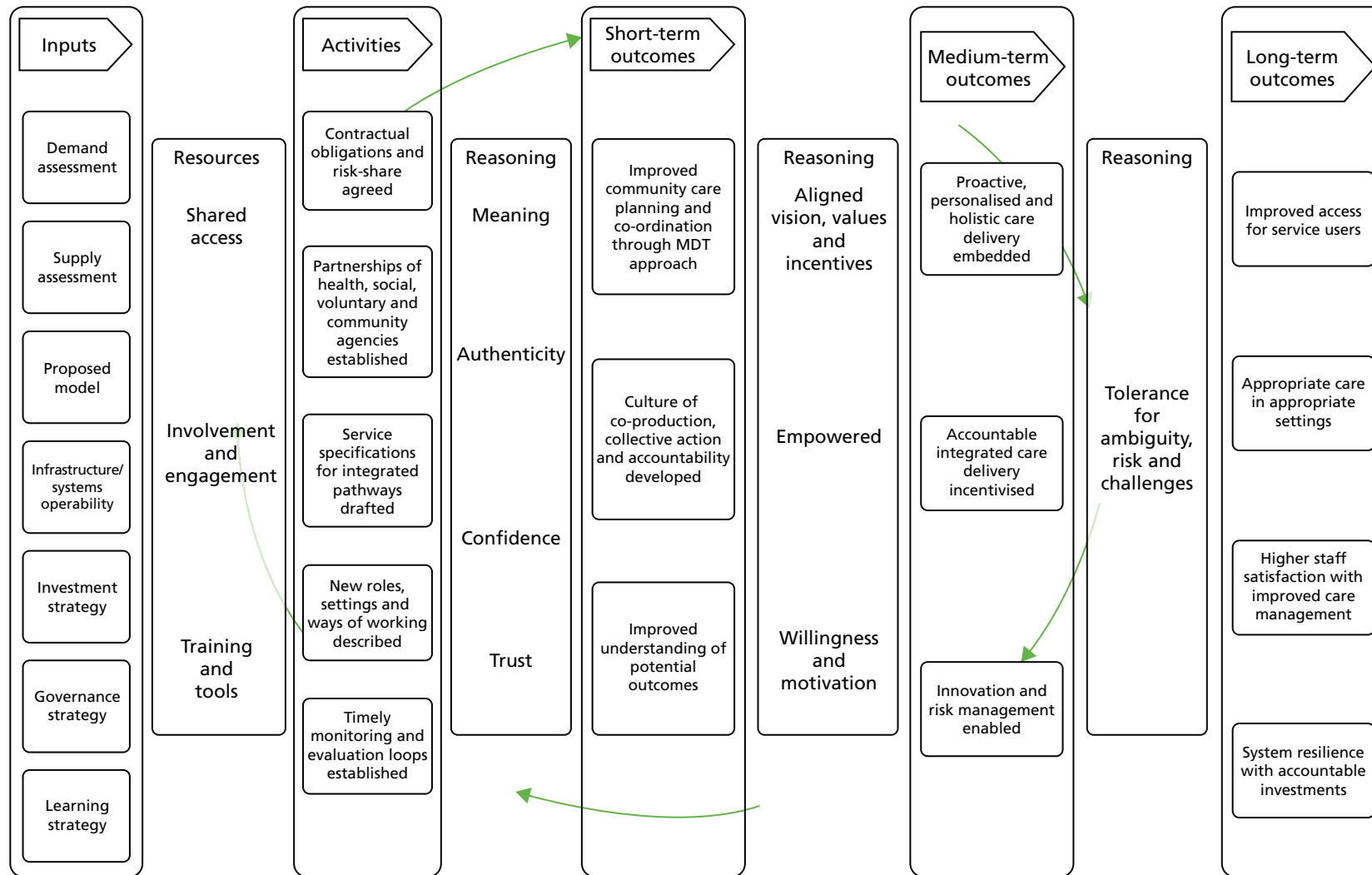


FIGURE 20 A conceptual model encompassing the tangible features of a logic model with the more intangible resource and reasoning mechanisms.

TABLE 10 'Active ingredients' for accountable population health-based models of integrated care

Framework theme	What	How
Design	<ul style="list-style-type: none"> Establish and communicate a clear vision and case for change Systematically assess the needs of patients, local communities, shareholders and staff Adopt a system-wide approach that ensures shared responsibility 	<ul style="list-style-type: none"> Share ownership and goals at all levels Link success (or failure) of individual components so that the whole system must work together to succeed Develop a model that recognises all of the factors that influence how healthy we are as a population
Delivery	<ul style="list-style-type: none"> Establish a dedicated change-management team Recognise that change will be gradual and introduce an evolving system 	<ul style="list-style-type: none"> Introduce a culture of stewardship, taking into account the sustainability of services for future generations Implement continuous learning and development for all staff Ensure that everyone involved understands how the system will work, grow and improve health
Management	<ul style="list-style-type: none"> Invest time in building and maintaining relationships to work together across the whole system Collaborate to agree aims and ensure that everyone is empowered to work towards these aims Design a monitoring framework based around outcomes that are important and meaningful to patients and local communities Establish shared governance structures and standards 	<ul style="list-style-type: none"> Ensure that every part of the system is responsible for achieving the goals of the new model Support everyone involved to feel that they can introduce new and better ways of doing things Create an environment in which staff feel that their roles are valuable and rewarding, and are focused on making a difference
People and communities	<ul style="list-style-type: none"> Involve patients and local communities as partners in designing, delivering and evaluating new models of care Provide training and support for staff to shift towards more shared decision-making, self-management, co-production and community engagement Work with partners, such as public health and third-sector groups, to improve access to preventative care Ensure that no-one feels excluded, by using language that everyone can understand and avoiding jargon 	<ul style="list-style-type: none"> Work with patients and local communities to understand how best to provide support and involve them in decisions about their own health and health services Motivate people to get involved in change Develop routes to reach underserved groups Encourage individual ownership of personal health Give staff and patients the confidence and trust to engage in shared decision-making Support service users to develop health literacy Foster mutual trust and respect
Workforce	<ul style="list-style-type: none"> Design training and development to reflect and develop new ways of working Ensure that everyone has clear roles and responsibilities and is aware of others' roles and responsibilities Involve staff throughout the process and ensure that they have the opportunity to share their knowledge and experience Ensure that there is 'protected time' and facilitation to enable reflective practice and quality improvement Attract and select employees whose personal values and behaviours align with your values 	<ul style="list-style-type: none"> Ensure that everyone understands their role within the new model Ensure that everyone understands that they have an important part to play in making the model work and has the confidence to contribute ideas and suggestions Help staff develop the skills they need to monitor and improve outcomes Improve teamworking Establish shared aims, values and a sense of belonging Encourage multidisciplinary working through multidisciplinary learning and development
Technology	<ul style="list-style-type: none"> Ensure that information systems, processes and policies are in place to enable the appropriate sharing and linking of data across services and sectors Use these data to respond to demand and maximise capacity 	<ul style="list-style-type: none"> Pay attention to how individual practitioners and teams will share knowledge and information Ensure that teams always have the information and data they need, including real-time data, to make decisions in relation to individual patients and communities

continued

TABLE 10 'Active ingredients' for accountable population health-based models of integrated care (*continued*)

Framework theme	What	How
	<ul style="list-style-type: none"> Offer patients easy, secure ways of accessing information in relation to their care and local services Use advanced analytics to drive improvements in care 	<ul style="list-style-type: none"> Provide training in the use of key information systems
Leadership	<ul style="list-style-type: none"> Adopt a collaborative, system-wide leadership approach Commit to a programme of organisational development to align values and activate collaborative and system-wide ways of working 	<ul style="list-style-type: none"> Give teams permission and the resources to improve and innovate, within agreed parameters Create an environment of open communication
Knowledge	<ul style="list-style-type: none"> Implement robust and secure data-sharing agreements and protocols Engage patients and clinicians on legal and ethics implications of data-sharing Use data on outcomes and variation to continuously monitor, evaluate and improve services (rapid learning cycles) Ensure that this is replicated at a team level, providing teams with relevant performance data, feedback and benchmarking to enable continuous learning and improvement 	<ul style="list-style-type: none"> Give teams the tools and skills to share data, audit their own performance (feedback loops) and agree improvements and innovations Adopt ways of working that can adapt and improve over time Ensure that partners are held to account and issues with performance are addressed immediately Foster a reflective and adaptive learning culture Learn from successes and mistakes

R2

The opportunity for clinicians and patients to engage with providers and commissioners for accountable place-based contracting and payment systems requires the alignment of personal, professional and organisational values and incentives. Moreover, sufficient time needs to be allocated to learning and development, agreeing outcome frameworks and sharing access to robust high-quality information that includes cost and quality data. This will allow the building of trust, collaboration and shared decision-making for accountability across quadruple aim outcomes. Furthermore, through service users and a diverse group of professionals having the confidence to hold providers and commissioners to account, MCP leaders will be spurred to make informed (re)investments based on clear measures of value and appropriate management of financial risk.

R3

The development of mutually beneficial relationships with communities requires opportunities for equal and reciprocal engagement for all relevant health-care professionals and the local population. The provision of ongoing training, guidance, feedback and practical support for community-based working needs roles, responsibilities and expectations to be clearly articulated. Together, they can empower individuals with the confidence to contribute to decision-making or the sharing of experience and knowledge to inform the priorities for targeted preventative and holistic care. Consequentially, this encouragement of shared community ownership will result in improved health behaviours and increased social participation, and will engender community resilience.

M1–5

The maps further demonstrate the interdependencies between individual theory components at the individual, organisational and system levels. Professional autonomy and empowerment is critical for driving cultural change that is associated with trust and collaboration, particularly for structural developments of MDTs and integrated pathways. Cultural change needs to be stimulated through organisational development

and system leadership behaviours that promote collaborative, population-based approaches to health care and aligned processes that support delivery. Shared data, in particular, offer the opportunity to improve the co-ordination and continuity of care at the individual and organisational levels, while MCP-wide learning can be accomplished through training and feedback loops, built into audit and formative evaluation, to support system learning and improvement.

Unintended system consequences

The concept of 'community', as we discuss in *Chapter 6*, is fluid and subjective and does not necessarily follow the boundaries set out by MCP designers. As a consequence, the drawing of contractual lines may effect patient choice and the liability of the MCP.¹¹⁹ There are also organisational boundaries to consider. The shift of care from hospital to community settings is fraught with tensions and trade-offs, with speculation that organisations may act in their own interests rather than in the interests of the overall system,¹¹⁸ and this is not helped by the presence of conflicting policies.²⁰⁹

A lack of representation or engagement with co-production activities by some groups in a community may result in increased health inequalities, as services are designed without them in mind.^{286,287} In any case, any initiative must take care to be consistent in its information-sharing with service users; for example, receiving conflicting instructions about service users' individual needs, priorities and management strategies in self-management would prevent the successful uptake of self-management initiatives.²⁹⁰

Defining the continuity of care in community-based settings as 'seeing the same health care provider every-time'¹⁵⁵ poses a problem for access to an expanded primary care, as discussed in *Chapter 4*. MCP delivery by an enhanced team with more new roles has the potential to disrupt relational continuity¹⁵⁶ for those service users who prefer an ongoing, trusted relationship with a specific professional over quick access. This means that an expanded primary care and community system will need to maintain both its connectivity to the local population and the generalism inherent in general practice;¹⁹⁰ operate as hubs to offer more extended access;³² and have sufficient and appropriate staffing,¹⁸⁵ which pays heed to workload,^{32,172} staff development¹⁶³ and the status of innovation.¹⁵⁹ It is notable that those areas seen to be making the most progress are those building on a history of collaborative working;²⁰⁰ their learning is that it is difficult to develop accountable approaches without aligning incentives²⁰⁸ and transferring savings and risks across sectors. In any case, introducing new services has the potential to induce demand⁷¹ or incentivise use.¹⁷⁴ There is the potential to misuse new services^{71,187}, or duplicate care at hospital¹⁷⁴ or in primary care.¹⁵¹

The findings from *Chapter 5* suggest that the risks of increased costs¹⁸⁷ cannot be overstated and include loss of economies of scale;¹⁷⁴ set-up costs for new posts^{32,163} or registration for hubs and federations;³² and the associated administrative support and resource cost to ensure that system protocols are followed.^{174,187} There is also the potential that a model focused on consolidation and co-ordination might inhibit those market forces/competition that are necessary to drive cost and quality improvement.²²⁸

Quality of the evidence base

The evidence base identified varies from moderate (for R1 and R3) to relatively weak (for R2). There is a lack of robust, empirical evidence and the findings are therefore somewhat dependent on experiential evidence, informed by case studies and informal evaluations. The 'intellectual heritage' of the MCP models – earlier NHS integration programmes and international models of accountable care – offer some transferable findings, although the contexts differ significantly.

Application of theories to enhance the understanding of implications

Complex adaptive systems theory⁴¹⁸ offers a conceptual lens to explore the MCP model. The focus within the CAS approach on the interdependency of elements in a system, and not the system itself, makes it particularly well suited to framing the complexities of integrated care at the core of the new models and,

in time, evaluating it,⁴²³ in order to guide future policy and practice.⁴⁷⁵ CASs are characterised by a range of features that are particularly relevant to the design, implementation and evaluation of the MCP model of care, including the following:

- Feedback loops – these serve to feed back the output of a process, as an input, into the same system.⁷⁴ Positive feedback loops can be facilitative, for example, in the use of PDSA cycles in quality improvement processes.³⁹⁶ Feedback loops are particularly pertinent to the commitment of new care models to shared and continuous learning and improvement (explored in our programme theory component M4). This capacity to learn, and to share learning, is dependent on positive feedback reinforcement when intended outcomes are being realised or corrective action following negative feedback from less desired outcomes. Thus, in a MCP-like system, feedback allows adaptation⁴⁷⁶ of delivery to align with the constantly shifting landscape. This is likely to be a critical factor, as new care models are rolled out and incorporated into sustainability and transformation plans or ACSs.
- Connectivity – the manner in which agents in a system connect and interact, and gives rise to the behaviour of a CAS, highlighting the significance of these relationships over the agents themselves. As Plsek and Greenhalgh⁴¹⁸ note, ‘the observable outcomes are more than merely the sum of the parts’.⁴¹⁸ This connectivity is a recurrent theme in the MCP programme theory. This includes practitioners connecting to adopt new roles and ways of working, building or strengthening relationships to co-ordinate care for the benefit of patients (R1). The involvement of service users and local communities in the design and delivery of care (R3) adds a further dimension of connectivity. The responsibility of delivering safe, appropriate and high-quality care is discharged through collective decision-making, with dependency on good communication and working relationships (M1 and M2). The importance of team-building and peer support is clear in a model that is built on interdisciplinary working (M2 and M3) and, on a broader level, also underpins the deployment of technology to support population health (M5).
- Edge of chaos – a CAS approach seeks to draw out and mobilise the natural creativity of health-care professionals to adapt to circumstances and evolve.^{418,477} This suggests that multidisciplinary delivery teams – which may comprise NHS practitioners and staff, independent and private contractors and third-sector groups – need the capacity and the capability to reflect and innovate. Capability will need to be built through organisational development, and capacity can be built through system learning and locally owned solutions to improve quality,⁴²⁴ contrary to an arguable emphasis on top-down large-scale transformation efforts. Crucially, this requires some experimentation and risk-taking to encourage learning from mistakes or failures, within clear boundaries for accountability. There may also be a need to allow tensions to play out, for instance, in R2, the contracting and payment mechanism for MCPs is necessarily at the edge of chaos, using the opposing forces of competition and co-operation to be mutually beneficial,⁴⁷⁸ in order to allow local sites to innovate for their accountable local place-based system.

Several theories may be usefully applied to enhance our understanding of complexity in practice, and a fuller discussion is included in *Appendix 8*, which offers some pointers regarding when further analysis may prove to be valuable. On a practical level, the ‘capability’, ‘opportunity’, ‘motivation’ and ‘behaviour’ (COM-B) model can be used to understand the implications for the design, implementation and delivery of MCPs.⁴⁷⁹ New care models are built on the premise of changing behaviours at the individual (i.e. clinicians, support staff, service users, carers, system leaders), community and wider system levels. The COM-B model is based on the argument that an individual’s or group’s behaviour arises from capability, opportunity and motivation. We have mapped our key findings to the COM-B model to describe contextual factors that are likely to influence behaviour change (*Figure 21*). This has been expanded on in order to develop a set of ‘active ingredients’ to inform the wider roll-out of integrated models of care.

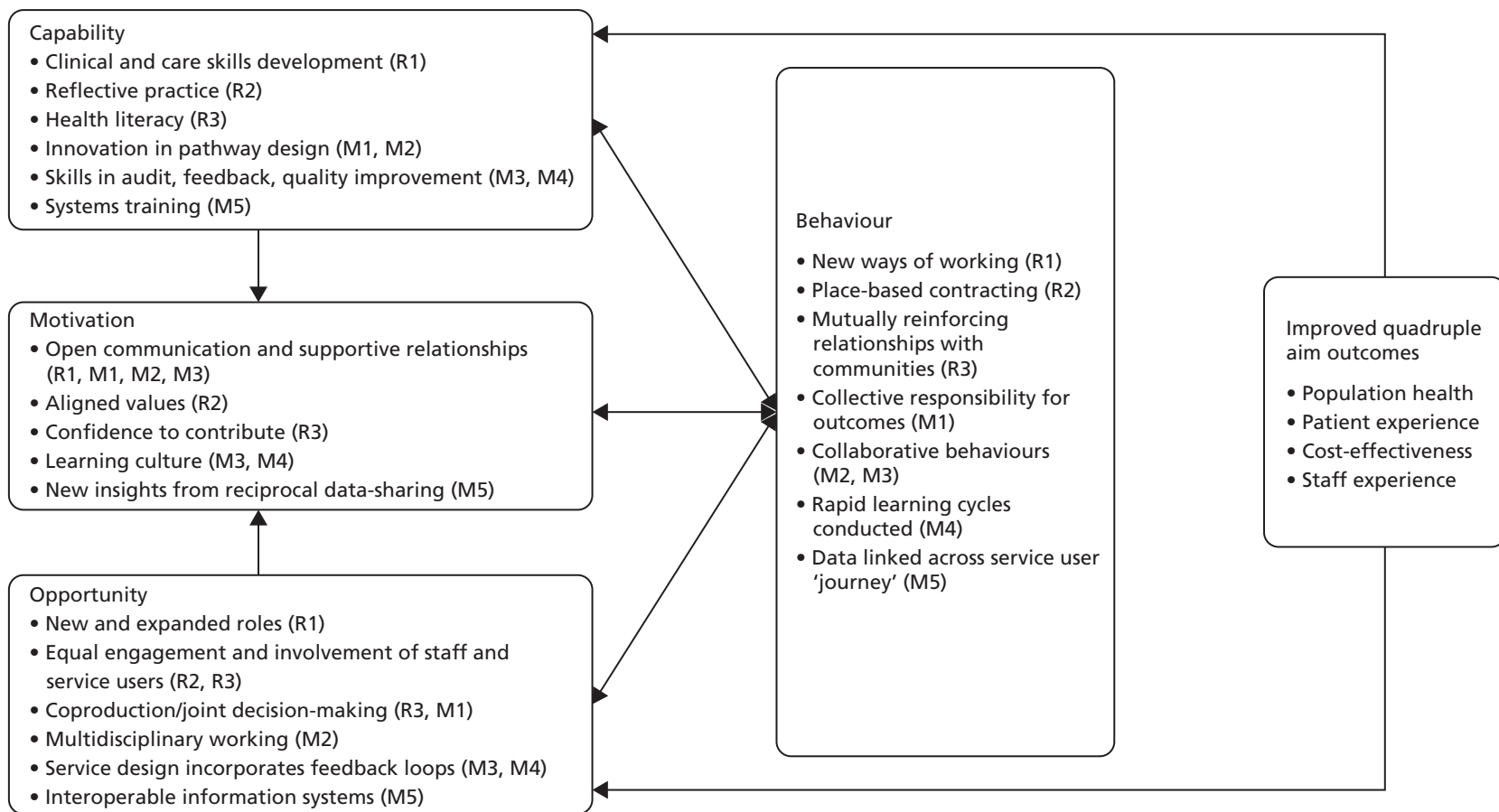


FIGURE 21 Implementation theory applied to the MCP model. Adapted from Michie *et al.*⁴⁷⁹ This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/2.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Study strengths and limitations

Strengths

The project team composition is relatively unique in being embedded in the NHS, with methodological support and mentoring from an academic partner. This model of co-production ensures a connectedness with current policy and practice, while maintaining methodological rigour. A key strength of this partnership is in harnessing existing links to connect with a range of stakeholders at a strategic and operational level. On a practical level, these links have helped in enabling early access to relevant NHS documents. The team is also well placed to translate emerging findings into language that resonates with key audiences and to relate findings to current service priorities. These findings are not limited to MCPs, but can apply to transformation or integrated care more generally.

Expertise in the principles of realist synthesis remains relatively scarce, although the approach is fast emerging as a response to the challenges of evaluating CASs. We were able to harness expertise acquired from prior involvement in other NIHR HSDR evidence syntheses, and from NIHR projects more generally, as well as borrowing heavily from the tools developed by other teams funded by the HSDR programme. Our methodology acknowledges the increasingly hybrid nature of current realist synthesis projects, spanning the published literature and stakeholder input. We believe that our methodology was genuinely innovative, by starting with the analysis of existing logic models, as well as by using a best-fit framework synthesis to produce a conceptual framework, not only for structuring our own analysis, but also as a potential vehicle for the evaluation of future service models. We benefited from pooling the expertise of three information specialists relating to the 'realist search' being captured by a book chapter being written concurrently with our own project,⁶⁵ as well as from existing tools such as Pawson's time and task template⁶⁴ and data extraction forms developed by other teams.⁷⁰ The team has used the RAMESES training materials⁴⁸⁰ in expanding our realist synthesis capacity, and RAMESES guidance⁶² to ensure project outputs and high-quality reporting.

The close involvement of the advisory group has proven to be valuable in articulating and validating programme theories, and validating a clear, consensual basis on which to focus and target the synthesis strategy. The work with the advisory group helped to ensure that the prioritised in-depth realist reviews focused on the aspects likely to add the most value, while ensuring the relatively comprehensive coverage of the breadth of the MCP model, through the series of theory maps. To test and validate findings, the advisory group was expanded to form a broader focus group, involving additional key stakeholders identified during the project. The focus group provided a 'reality check' of our findings. A summary of discussions at the focus group and during interviews with advisory group members is included in the review chapters.

Patient and public involvement has been a key component of stakeholder engagement. In developing the review proposal, the team contacted local patient participation groups to invite feedback from current patients and members of the public. As Davies *et al.*⁴⁸¹ point out, patients and the public constitute a group that has been largely absent from the knowledge mobilisation literature. The project aimed to address this gap through the active involvement of service users. Two PPI representatives were appointed to the advisory group and have provided valuable input throughout, notably in the prioritisation of programme theories for review, reviewing emerging findings and advising on dissemination activities.

Communications and engagement are critical to producing outputs focused on relevant and actionable insights for our various stakeholder audiences. Recognising the importance, the team has been supported by dedicated and specialist communications support and expertise. The skills and experience have been valuable and have enabled stronger relationships with the communications team at NHSE, enabling wider reach to MCP sites and minimising the risk of overburdening them with ill-timed requests and information. The dedicated communications role, with a background in communicating complex research, might be a useful model for future projects.

See *Appendix 9* for a summary of how the study has addressed the research objectives.

Limitations

The programme theory was substantially based on the MCP vanguards' logic models, developed to support the submission of value propositions to bid for transformation funding. However, this approach was dependent on complete logic models being available and other national processes affected the production of the logic models. The team was able to access logic models for 12 of the 14 vanguards and, at this early stage, the format and granularity of the models were variable. The team subsequently used associated documentation available in the public domain, from the vanguard sites (e.g. consultation documents) and NHSE, to supplement the logic models. As the models have evolved significantly during the lifetime of the review, particularly regarding procurement and contracting, the team has endeavoured to keep up to date with emerging policy and guidance. However, given the rapid pace and scale of change, it is likely that the programme theory will continue to evolve subsequent to our analysis.

From a methodological perspective, we acknowledge that conducting a review against a backdrop of continual change, to add to the already-identified complexity associated with diverse contexts, was extremely challenging. Although the new care models are being intensively evaluated, and our networks identified relevant data as soon as these became available, we encountered a degree of prematurity within the specific context of a UK-focused evaluation. We sought to minimise the impact of this in two ways, by (1) exploring transferable lessons from international comparisons and UK legacy models and (2) seeking to identify generic lessons that may be used to explore future care models that seek to achieve large-scale transformational change within CASs. Although vanguard sites offered a ready-made source of what was intended to happen, there was little supporting detail on how this was to be achieved. In particular, individual sites lacked specificity about the perceived and actual intended impacts from the new care models, making inferences about mechanisms extremely problematic. However, we were able to use the composite picture, derived from 12 sites, to mitigate some of these difficulties, and we believe that our analysis was particularly strong in isolating unintended consequences. In particular, the embedded nature of our NHS-based team, continuous stakeholder engagement and telephone interviews with key informants added to the value of our inquiry.

Although the overall review draws on a broad evidence base, this predominantly derives from within the health sector. The team has made a concerted effort to explore social care and third-sector literature, but recognises that there may be valuable learning from other disciplines, for example, lessons from other public services or the private sector in relation to large-scale public-funded procurements. A realist review does not aim for the exhaustive searching of a systematic review and, therefore, it is possible that important papers have been missed. The iterative approach and stakeholder engagement has focused the search on the identification of key sources, but does not eliminate the risk of confirmation bias.

Implications for practice

Stakeholder engagement

At our stakeholder event in May 2017 (see *Chapter 2*) we tested our emerging findings across the programme theory components with stakeholders. We framed our discussion in the context of the observable progress at the MCP sites from the perspective of participants. The discussion content is summarised according to the relevant theory components below; there was of course overlap between the topics.

R1

There was much support for new ways of working; however, in the 2 years since the vanguards had been appointed (in March 2015), the substantial preparatory work was still to materialise into standardised improved access to health care. MCPs that had made progress were noted to have prior experience of collaborative working. As a consequence, these mature models had allowed for the development of trust (see *Figure 20*) between professionals over time. Conversely, where historical organisational partnership relationships were deemed to be poor, this had an impact on professional motivation and willingness to change. There was also a recognition of the potential widening of inequalities within sites as MCPs

progress. For instance, patients at smaller practices were yet to benefit from some of the changes implemented at larger practices, the location of practices may prohibit access to improved estates, and access to specialist care in the community may not be available to all.

R2

The concerns within the literature base were reiterated by stakeholders – too much faith may be put in contractual processes and mechanisms, potentially neglecting the significant cultural change needed to support the effective implementation of capitation and risk-/gain-sharing. Five strategies were put forward to manage the inherent challenges: (1) the contract should be viewed as a system transformation enabler with a dependency on aligning strategic, operational and front-line behaviours; (2) a longer-term contract offered greater stability, with the ability to invest in organisational development, cultural change and underlying infrastructure to support system-wide transformation – this also negated the significant effort expended in reviewing and negotiating contracts on an annual basis and the resulting emphasis on short-term outcomes; (3) time scales for transformation, especially linked to payment mechanisms, had to be realistic, with a period of realignment and readjustment built in; (4) a rigorous governance structure articulating how shared resources are to be used, how decisions will be made and how risk is shared across the system should be transparent to all; and (5) MCP-wide difficult conversations, including clinicians and patients, regarding trade-offs across the system to facilitate improved prioritisation and decision-making.

Among all of this, the potential risks of destabilising current providers should contracts be awarded to new market entrants rather than incumbent providers needs to be monitored, in particular, the management of failure; participants made explicit references to the UnitingCare contract failure in this regard.

R3

The stakeholder discussions highlighted the challenge of defining communities on a place-based geographical basis; in practice, there were many layers and shifting boundaries within a community. Within this, there was a need to scope community assets and map the full range of organisations that could be included in delivering place-based accountable care. Resourcing of third-sector and voluntary organisations, both in terms of funding and the availability of staff or volunteers, was essential, with consideration of prevention and holistic care becoming increasingly important. Standardised training for this varying workforce needed to be delivered by the MCP to ensure a consistent, person-centred approach and appropriate skills and support for all.

Although co-production was seen as ‘a good thing’, the cynicism on the part of health professionals was discussed. The value of co-production was in need of promotion in a way that would appeal to clinicians. Within co-production approaches, there should be a focus on a short list of ‘outcomes that matter’. It was acknowledged that co-production, by definition, calls for difficult conversations regarding trade-offs across the system, but that these opportunities should be viewed as a means to engage clinicians and patients.

M1–M5

The interdependencies inherent within the MCP model were made clear. The discussion around ‘equal’ versus ‘collective’ responsibility, incorporating statutory duties and delegated responsibilities within a multiprovider model, found favour in the development of a combined reward system. This was proposed to encourage shared accountability in integrated pathways by ensuring ‘skin in the game’. In line with this, a culture of openness, transparency and honesty ‘a non-defensive system’ was required of a MCP, with processes for learning and feedback that also included tacit knowledge and acknowledgement of mistakes. The ‘fail fast learn fast’ principle was considered to be particularly pertinent to the pace of change within vanguards. Another contributor to collective responsibility is shared professional access to data; the current ‘brick wall’ between primary and secondary care should be a priority for MCPs to redress.

Similarly, the delivery of integrated pathways within 'natural communities' by MDTs needed to bear in mind the 'communities within communities' and the support networks available for patients with long-term or complex needs. As MDT working was gaining traction elsewhere, there were observable innovations emerging within MCP settings; for instance, one vanguard was using a MDT to support same-day access to acute episodic care, part of a two-pronged approach to reduce A&E attendances and increase resilience within general practice. A MDT need not be limited to clinical teams. Inclusion of non-clinical staff in system-wide pathway development would facilitate the necessary cultural change as part of a wider strategy of staff development, which includes leadership.

Dissemination

NHS England has signalled the intention for new care models to continue to evolve,⁵⁷ with a commitment to developing ACSs, subsequently announced in eight areas, two of which include current MCP vanguards.⁵⁹ These ACSs will have responsibility for improving population health, developing horizontally and vertically integrated models of care, learning from the MCP and PACS vanguards. As the vanguards have evolved to fit within their local contexts, it is apparent that they share common characteristics, and any distinguishing characteristics between the two models become more blurred, as acute providers become more involved in MCPs and community providers in PACS. Using the best-fit framework as a structure, and informed by our mapping to the COM-B model (see *Figure 21*), we provide a quick-view summary of the key findings from our synthesis, extracting the interventions and mechanisms identified in the evidence as significant to the MCP model of care (see *Table 10*). We describe these conditions as 'active ingredients' that, although derived from a programme theory relating to the MCP model, will offer transferable insights to population health-based models of care in general. This table was refined as part of the dissemination activities, which included a presentation to the new care models team but also discussions with the wider Strategy Unit team and NHS colleagues interested in accountable integrated models of care.

Implications for research

Our review has identified considerable gaps and areas of uncertainty within the evidence base. The local and national evaluations of the New Models of Care vanguards may go some way to addressing some of these gaps. As ACSs (now referred to as integrated care systems by NHSE) start to emerge within England, building on the learning from the vanguards, further research is needed to provide actionable insights into the development of place-based population health management within the NHS.

To inform future research and evaluation, we have endeavoured to articulate those areas of uncertainty that could be considered a priority. We present these in the list below, which we prioritise by the potential scale of opportunity to influence policy and practice and the quality of currently available evidence:

- Future research could usefully explore the medium- to long-term impact of enhanced primary care, particularly in relation to workforce recruitment and retention; workload; demand and capacity; quality of care; or access to care. Although there is some evidence relating to new and expanded roles in primary care, the quality is variable. In particular, there is a need for evaluation of the role of care navigator, common to several MCP vanguards. This is likely to be best served by a mixed-methods evaluation, including case studies, to measure quantitative impacts, such as emergency admissions, and qualitative impacts, such as perceived workload.
- Given recent high-profile failures of large-scale contracts, there is a need for greater insight into the effects of longer-term contracts and associated procurement, on financial sustainability, patient experience and system capacity. In particular, economic evaluation could usefully explore the impact of risk- and gain-sharing on patient outcomes; the tension between competition and collaboration; and the contribution of contextual factors (e.g. historical relationships, financial deficit). There is also an opportunity to test the theory that newer contracting forms enable a greater focus on the wider determinants of health, potentially via organisational case studies.

- The conditions to develop system capacity for rapid-cycle learning are central to the underpinning philosophies of the New Models of Care Programme. Our synthesis has highlighted the role of organisational development and the need for agile learning to enable continuous improvement. The evidence relating to system learning suggests that although PDSA cycles are common, implementation is variable and the evidence equivocal, pointing to a need for applied action research into the development of learning health systems. This should focus on improving our understanding of the conditions needed for successful continuous improvement and learning at a system level.
- We found surprisingly few publications specifically on the role and experience of carers in relation to patient empowerment, suggesting a significant gap in the evidence base. It could be argued that the current emphasis on patient activation is based on assumptions on carer capacity and capability, yet little is understood about the needs and behaviours of this overlooked and heterogeneous group. Further research into the role of carers in self-care, shared decision-making and social-prescribing could usefully inform future policy and practice. Realist evaluation, with a focus on what works for whom in what circumstances, would offer useful insights into relevant mechanisms in different contexts.
- There is a need for further insight into community perspectives on involvement in decisions about patient care, and the design, implementation and evaluation of new care models. Our analysis suggests that, despite an intention to address inequalities, there is a very real risk of widening existing gaps in provision. There is therefore a need for research to improve our understanding of how involvement affects individual patients, community groups and local charities; how initiatives such as social-prescribing, self-care and community participation can be sustained over time; and how these collectively might contribute to community resilience. This may benefit from further evidence synthesis, in the form of a systematic review, encompassing literature beyond health and social care.

In testing the programme theory of the MCP model, we have explored the potential unintended consequences. This is likely to be useful to policy-makers and strategic decision-makers, and we suggest that the complexity associated with the New Models of Care Programme warrants mixed-methods approaches to capture quantitative measures and qualitative perspectives of impact. There is also the potential to learn from other sectors, for example, how large-scale contract failures are managed in other public services.

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Contributions of authors

Alison Turner was the principal investigator for the review and was involved in developing the programme theory, designing the search strategy and screening the search results. She led the synthesis of R2 and M2, contributed to the synthesis of R3, led on writing *Chapters 3, 5, 6 and 7*, and contributed to *Chapter 8*.

Dr Abeda Mulla was the co-applicant for the review, led the work to develop the programme theory and was involved in screening the search results. She led on *Chapters 1 and 8* and contributed to *Chapters 4 and 6*.

Dr Andrew Booth was the co-applicant for the review, leading on the methodology and acting as a mentor to Alison Turner and Abeda Mulla. He wrote *Chapter 2*, led on the synthesis and writing of M4, co-authored *Chapter 7* and advised on *Chapters 3–8*.

Shiona Aldridge was involved in developing the programme theory, designing the search strategy and screening the search results. She led the synthesis of R1 and led on the writing of *Chapter 4*. Shiona also contributed to the synthesis of R3 and to the writing of *Chapter 6*.

Sharon Stevens was involved in developing the programme theory, designing the search strategy and screening the search results. Sharon contributed to the synthesis of R3 and the writing of *Chapter 6*. She also contributed to the synthesis of M1, M2, M3 and M5.

Mahmoda Begum was involved in screening the search results and led the synthesis of M1 and M3, writing these sections of *Chapter 7*.

Anam Malik was involved in screening the search results and led the synthesis of M5, writing this section of *Chapter 7*. She also contributed to *Chapter 1*.

Other contributions from the project team

Peter Spilsbury chaired the project advisory group and the focus group, and commented on early findings and drafts of this report.

Fraser Battye deputised for Peter Spilsbury in the role of chairperson and acted as an expert advisor to the project, commenting on early findings and drafts of this report.

Sharon Townsend provided administrative support for the project and convened the project advisory group.

Lorna Crofts convened the focus group and supported the production of this report.

Data-sharing statement

All available data can be obtained from the corresponding author.

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Appendix 1 Terms of reference for the project advisory group (June 2016)

Project advisory group: terms of reference

Aims and objectives of the project

The project is led by The Strategy Unit, NHS Midlands and Lancashire Commission Support Unit together with the School of Health and Related Research (SchARR) University of Sheffield. Funded by the NIHR HSDR programme (project reference number 15/77/15), the project is concerned with combining existing knowledge of what works in integrated care with the intentions of the MCPs in developing innovative new care models. It is expected that this work will help MCPs to improve their models.

The aim of this synthesis is to provide decision-makers in health and social care with a practical evidence base relating to the MCP model of care. The synthesis, based on realist principles, will develop a 'blueprint', which articulates how and why MCP models work, to inform design of future iterations of the MCP model.⁶¹

Specifically, the objectives of the synthesis are to:⁶¹

- articulate the underlying programme theories behind the MCP model of care, by mapping the logic models of the MCP demonstrator sites, prioritising key theories for investigation
- identify sources of theoretical, empirical and practice evidence to test the programme theories
- appraise, extract and analyse evidence, reconciling confirmatory and contradictory evidence
- develop the synthesis, producing a 'blueprint' to explain how the mechanisms used in different contexts contribute to outcomes and process variables
- consult with key stakeholders from selected MCP demonstrator sites to validate findings and to test applicability to different contexts
- finalise the synthesis, incorporating stakeholder feedback
- disseminate the findings, preparing a series of practical tools to support knowledge mobilisation.

Terms of reference of the advisory group

This group has been established to provide the project with independent support and advice. Its objectives are to:

- provide stakeholder perspectives on the scope of the synthesis and on emerging findings
- inform the study design, including input into the search strategy
- participate in strategic decisions about the project
- advise on key policy, strategy and communication activities which may inform or impact this project
- advise on the identification of key audiences and networks for dissemination activity
- advise on dissemination formats, routes and activities
- advise on interpretation of findings, to ensure relevance to stakeholders
- support the translation of findings into actionable recommendations and tools for local health economies.

Membership

Members have been assembled to provide a range of experience and expertise, including New Care Model vanguard sites, NHSE, senior leaders in health and social care, public representation, academic partners and collaborators, communications expertise and project team members (*Table 11*).

TABLE 11 Advisory group members

Name	Affiliation
Peter Spilsbury (chairperson)	Director, The Strategy Unit, MLCSU
Dr Sue Baxter	SCHARR, University of Sheffield and chief investigator of a project funded under the same call
Professor Simon Brake	Director of Primary Care, Sustainability & Integration, Coventry and Rugby CCG
Amanda Doyle	Accountable Officer/Chief Clinical Officer, Blackpool CCG
Bryan Gould	Patient and public representative
Julia Grace	Senior Strategic Account Manager, New Care Models programme – FYFV, NHSE
Paul Maubach	Chief Officer, Dudley CCG
Naresh Rati	Executive Director, Modality
Louise Rowan	Communications Consultant and Fellow
Kevin Rudge	Patient and public representative
Charles Tallack	Head of Operational Research and Evaluation, NHSE
Lorraine Thomas	Director of Strategy and Transformation, Birmingham Community Healthcare Foundation Trust
Project team	
Fraser Battye	The Strategy Unit, MLCSU
Dr Andrew Booth (co-applicant)	Reader in Evidence Based Information Practice and Director of Information, SCHARR, University of Sheffield
Dr Abeda Mulla (co-applicant)	Senior Consultant, The Strategy Unit, MLCSU
Alison Turner (chief investigator)	Head of Evidence Analysis, The Strategy Unit, MLCSU
MLCSU, Midlands and Lancashire Commissioning Support Unit; SCHARR, School of Health and Related Research.	

Working methods

It is expected that the advisory group will be convened on up to four occasions during the project, at the following key stages:

1. at the project start, to confirm the scope of the synthesis
2. during the analysis stage, to share and test emerging findings
3. ahead of stakeholder consultation, to consult on the draft conceptual model
4. at the project conclusion, to sign off the final report and dissemination outputs.

Electronic communication may be used between advisory group meetings.

Minutes will be taken at each meeting and will be shared with the NIHR HSDR programme and, potentially, more widely. The advisory group will be supported administratively by Sharon Townsend, Project Officer.

June 2016

Appendix 2 MEDLINE search strategy

MEDLINE

Date range searched: 2000–16.

Date searched: December 2016.

Search strategy

#	Term
1	("multispecialty community provider*").ti,ab
2	("primary care home*").ti,ab
3	(vanguard* AND (model* ADJ5 care)).ti,ab
4	("place-based").ti,ab
5	COMMUNITY HEALTH PLANNING/
6	("integrated care pioneer*").ti,ab
7	("accountable care organi*ation*").ti,ab
8	ACCOUNTABLE CARE ORGANIZATIONS/
9	MODELS, ORGANIZATIONAL/
10	("primary care at scale").ti,ab
11	("primary care").ti,ab
12	("general practi*").ti,ab
13	("community care").ti,ab
14	exp "COMMUNITY HEALTH SERVICES"/
15	exp GENERAL PRACTICE/
16	PRIMARY HEALTH CARE/
17	"COMPREHENSIVE HEALTH CARE"/
18	(federation* OR network* OR alliance* OR partnership* OR collaborat*).ti,ab
19	(11 OR 12 OR 13 OR 14 OR 15 OR 16 OR 17)
20	(18 AND 19)
21	(14 OR 15 OR 16 OR 17)
22	(18 AND 21)
23	(5 AND 19)
24	(7 OR 8)
25	(19 AND 24)
26	(9 AND 19)
27	PATIENT CARE TEAM/
28	(multidisciplinary OR interdisciplinary OR "multi disciplinary" OR "inter disciplinary" OR integrate* OR collaborat*).ti,ab
29	(27 AND 28)
30	(19 AND 29)
31	(21 AND 29)

#	Term
32	INTERDISCIPLINARY COMMUNICATION/
33	PATIENT CENTERED CARE/
34	DELIVERY OF HEALTH CARE, INTEGRATED/
35	("whole system" ADJ5 (change* OR transform* OR redesign*)).ti,ab
36	((vertical OR horizontal) ADJ5 integrat*).ti,ab
37	("health systems integrat*").ti,ab
38	(32 OR 33 OR 34 OR 35 OR 36 OR 37)
39	(19 AND 38)
40	(21 AND 38)
41	("case manag*").ti,ab
42	CASE MANAGEMENT/
43	PATIENT CARE PLANNING/
44	("case finding").ti,ab
45	("risk stratif*").ti,ab
46	("predictive model*").ti,ab
47	("population segment*").ti,ab
48	ACTUARIAL ANALYSIS/
49	(45 OR 46 OR 47 OR 48)
50	(41 OR 42 OR 43 OR 44 OR 49)
51	(19 AND 50)
52	(21 AND 50)
53	(31 AND 50)
54	(38 AND 50)
55	HEALTH SERVICES ACCESSIBILITY/
56	"APPOINTMENTS AND SCHEDULES"/
57	(access ADJ5 (extend* OR scale OR enhanc* OR improv*)).ti,ab
58	appointment* ADJ5 (extend* OR long*).ti,ab
59	(hour* ADJ5 (extend* OR enhanc* OR improv*)).ti,ab
60	("same day appointment*").ti,ab
61	(55 OR 56 OR 57 OR 59 OR 60)
62	(19 AND 61)
63	(21 AND 61)
64	(38 AND 61)
65	MOBILE APPLICATIONS/
66	CONSUMER HEALTH INFORMATION/
67	("patient access" ADJ5 record*).ti,ab
68	(65 OR 66 OR 67)
69	(19 AND 68)
70	(21 AND 68)
71	(29 AND 68)
72	(38 AND 68)

#	Term
73	DIAGNOSTIC SERVICES/
74	AMBULATORY CARE/
75	AMBULATORY CARE FACILITIES/
76	(73 OR 74 OR 75)
77	(19 AND 76)
78	(21 AND 76)
79	((outpatient* OR specialist*) ADJ5 (shift* OR transfer* OR relocat* OR substitut*)).ti,ab
80	(19 AND 79)
81	(21 AND 79)
82	("care closer to home").ti,ab
83	(extensivist*).ti,ab
84	("community medical assessment*").ti,ab
85	PATIENT NAVIGATION/
86	("directory of service*").ti,ab
87	("single point of access").ti,ab
88	(signpost*).ti,ab
89	(navigat*).ti,ab
90	COMMUNITY INTEGRATION/
91	COMMUNITY NETWORKS/
92	COMMUNITY PARTICIPATION/
93	COMMUNITY INSTITUTIONAL RELATIONS/
94	(engag* ADJ5 (communit* OR volunteer* OR patient* OR people OR carer* OR public OR citizen* OR "service user*")).ti,ab
95	(involv* ADJ5 (communit* OR volunteer* OR patient* OR people OR carer* OR public OR citizen* OR "service user*")).ti,ab
96	(5 OR 8 OR 38)
97	(94 OR 95)
98	(96 AND 97)
99	CAREGIVERS/
100	(carer OR carers).ti,ab
101	(99 OR 100)
102	"SELF-HELP GROUPS"/
103	"SOCIAL SUPPORT"/
104	(102 OR 103)
105	(101 AND 104)
106	(99 AND 100)
107	(104 AND 106)
108	SELF CARE/
109	("self care").ti,ab
110	("self management").ti,ab
111	("health coach*").ti,ab

#	Term
112	PATIENT PARTICIPATION/
113	<i>(108 OR 109 OR 110 OR 111 OR 112)</i>
114	<i>(29 AND 113)</i>
115	<i>(38 AND 113)</i>
116	<i>("mutuality").ti,ab</i>
117	<i>(5 AND 116)</i>
118	<i>(38 AND 116)</i>
119	<i>(91 OR 92 OR 93 OR 94 OR 95)</i>
120	<i>(116 AND 119)</i>
121	<i>(38 AND 119)</i>
122	<i>(5 AND 119)</i>
123	<i>(29 AND 119)</i>
124	<i>(8 AND 119)</i>
125	VOLUNTARY HEALTH AGENCIES/
126	SOCIAL CAPITAL/
127	VOLUNTEERS/
128	<i>("social movement*").ti,ab</i>
129	<i>("community asset*").ti,ab</i>
130	<i>("third sector").ti,ab</i>
131	<i>(125 OR 126 OR 127 OR 128 OR 129 OR 130)</i>
132	<i>(5 AND 131)</i>
133	<i>(19 AND 131)</i>
134	<i>(21 AND 131)</i>
135	<i>(29 AND 131)</i>
136	<i>(38 AND 131)</i>
137	INTERINSTITUTIONAL RELATIONS/
138	<i>(19 AND 137)</i>
139	<i>(29 OR 38)</i>
140	<i>(138 AND 139)</i>
141	CONTRACTS/
142	exp BUDGETS/
143	RISK SHARING, FINANCIAL/
144	<i>(tariff*).ti,ab</i>
145	<i>(procur*).ti,ab</i>
146	<i>(141 OR 142 OR 143 OR 144 OR 145)</i>
147	<i>(5 AND 146)</i>
148	<i>(8 AND 146)</i>
149	<i>(38 AND 146)</i>
150	<i>(pool* ADJ5 budget*).ti,ab</i>
151	<i>("capitated budget*").ti,ab</i>
152	<i>("provider partner*").ti,ab</i>

#	Term
153	("provider alliance*").ti,ab
154	VALUE BASED PURCHASING/
155	(147 OR 148 OR 149 OR 150 OR 151 OR 152 OR 153 OR 154)
156	HEALTH MANPOWER/
157	LEADERSHIP/
158	ORGANIZATIONAL CULTURE/
159	(ma).fs
160	(workforce ADJ5 (capacity OR develop* OR model* OR train* OR plan* OR redesign*)).ti,ab
161	(156 OR 157 OR 158 OR 159 OR 160)
162	(29 AND 161)
163	(38 AND 161)
164	("health champion*").ti,ab
165	("community anchor*").ti,ab
166	("lay worker*").ti,ab
167	("link worker*").ti,ab
168	("care navigator*").ti,ab
169	("outreach worker*").ti,ab
170	("care co-ordinator*").ti,ab
171	("support worker*").ti,ab
172	(169 OR 171)
173	(29 AND 172)
174	(38 AND 172)
175	(19 AND 172)
176	(role* ADJ5 (new OR embed* OR emerg* OR extend* OR expand*)).ti,ab
177	(29 AND 176)
178	(38 AND 176)
179	(GPwSI* OR "GP with a special interest*" OR "practitioner with a special interest").ti,ab
180	(specialist* OR consultant* OR paramedic* OR pharmacist* OR physiotherap*).ti,ab
181	(29 AND 180)
182	(19 AND 181)
183	("values based recruitment").ti,ab
184	PREVENTIVE HEALTH SERVICES/
185	(29 AND 184)
186	(38 AND 184)
187	("social prescri*").ti,ab
188	(4 AND 9)
189	(4 AND 19)
190	(4 AND 5)
191	(4 AND 29)
192	(4 AND 38)
193	(4 AND 119)

#	Term
194	(5 AND 24)
195	(9 AND 24)
196	(24 AND 38)
197	(24 AND 119)
198	(20 AND 61)
199	(20 AND 76)
200	(20 AND 79)
201	(20 AND 119)
202	(20 AND 131)
203	(20 AND 146)
204	(20 AND 161)
205	(20 AND 176)
206	(29 AND 38)
207	(19 AND 206)
208	(1 OR 2 OR 3 OR 6 OR 23 OR 25 OR 189 OR 190 OR 191 OR 192 OR 193)
209	(188 OR 194 OR 195 OR 196 OR 197 OR 208)
210	(38 AND 77)
211	(19 AND 163)
212	(5 AND 38)
213	(209 OR 212)
214	("system leader*").ti,ab
215	("collective leader*").ti,ab
216	("collaborative leader*").ti,ab
217	("leadership development").ti,ab
218	(214 OR 215 OR 216 OR 217)
219	(96 AND 218)
220	("risk shar*").ti,ab
221	(146 OR 220)
222	(96 AND 221)
223	(150 OR 151 OR 152 OR 153 OR 154 OR 222)
224	("multi specialty community provider*").ti,ab
225	("multi-specialty community provider*").ti,ab
226	("multi-specialty community care").ti,ab
227	("multispecialty community care").ti,ab
228	("multi specialty community care").ti,ab
229	(213 OR 227)
230	(53 OR 54 OR 64 OR 69 OR 70 OR 71 OR 72 OR 210 OR 80 OR 82 OR 83 OR 85 OR 86 OR 87 OR 88)
231	(162 OR 211 OR 219 OR 164 OR 165 OR 166 OR 167 OR 168 OR 170 OR 173 OR 174 OR 175 OR 177 OR 178 OR 179 OR 182 OR 183 OR 185 OR 186 OR 187)
232	(90 OR 107 OR 114 OR 115 OR 117 OR 118 OR 120 OR 121 OR 122 OR 123 OR 124 OR 132 OR 135 OR 136 OR 140)
233	(223 OR 229 OR 230 OR 231 OR 232) [DT 2000-2016] [Languages English]

#	Term
234	(23 AND 38)
235	(29 AND 54)
236	(63 AND 64)
237	(19 AND 115)
238	(19 AND 121)
239	(19 AND 122)
240	(1 OR 2 OR 3 OR 6 OR 25 OR 189 OR 190 OR 191 OR 192 OR 193 OR 194 OR 195 OR 196 OR 197 OR 212 OR 227 OR 234)
242	(90 OR 107 OR 114 OR 117 OR 118 OR 120 OR 123 OR 124 OR 132 OR 135 OR 136 OR 140 OR 239)
243	(53 OR 69 OR 70 OR 71 OR 72 OR 210 OR 80 OR 82 OR 83 OR 85 OR 86 OR 87 OR 88 OR 235 OR 236)
244	(223 OR 231 OR 240 OR 242 OR 243) [DT 2000-2016] [Languages English]
245	(1 OR 2 OR 3 OR 6 OR 25 OR 189 OR 190 OR 191 OR 192 OR 193 OR 194 OR 195 OR 196 OR 197 OR 212 OR 227 OR 234) [DT 2000-2016] [Languages English]
246	(90 OR 107 OR 114 OR 117 OR 118 OR 120 OR 123 OR 124 OR 132 OR 135 OR 136 OR 140 OR 239) [DT 2000-2016] [Languages English]
247	(53 OR 69 OR 70 OR 71 OR 72 OR 210 OR 80 OR 82 OR 83 OR 85 OR 86 OR 87 OR 88 OR 235 OR 236) [DT 2000-2016] [Languages English]
248	(162 OR 211 OR 219 OR 164 OR 165 OR 166 OR 167 OR 168 OR 170 OR 173 OR 174 OR 175 OR 177 OR 178 OR 179 OR 182 OR 183 OR 185 OR 186 OR 187) [DT 2000-2016] [Languages English]
249	(150 OR 151 OR 152 OR 153 OR 154 OR 222) [DT 2000-2016] [Languages English]
250	(skype).ti,ab
251	("demand management").ti,ab
252	("new ways of working").ti,ab
253	(skype).ti,ab
254	(250 OR 251 OR 252 OR 253)
255	(96 and 254)
256	(96 and 254) [DT 2000-2016] [Languages English]
257	("shared care record*").ti,ab
258	(255 OR 257)
259	(255 or 257)
260	(255 or 257) [DT 2000-2016] [Languages English]

Appendix 3 Grey literature sources

Name of resource

- Health Foundation.
- *Health Service Journal*.
- The King's Fund.
- Local Government Association.
- National Association of Primary Care.
- National Voices (communities search).
- Nesta (communities search).
- NHS Clinical Commissioners.
- NHS Confederation.
- NHS England.
- NHS Improvement.
- NIHR Journals Library and Collaboration for Leadership in Applied Health Research and Care (www.clahrcprojects.co.uk/impact/projects).
- Nuffield Trust.
- Policy Research Unit in Commissioning and the Healthcare system (PRUComm).
- Public Health England (communities search).
- Pulse.
- Royal College of General Practitioners.
- Social Care Institute for Excellence Social Care Online.

Appendix 4 Data extraction form

Unique ref

.....

Author (Year)

.....

Evidence type

	Quantitative systematic review
	Qualitative systematic review
	RCT
	Qualitative research
	Economic evaluation
	Evaluation (uncontrolled/before and after)
	Other study report
	Experiential learning/case study
	Theoretical evidence/opinion/commentary/
	Other (state)

Patient/Population

--

Intervention/s

e.g. duration, intensity, frequency of contact, professionals involved
--

Outcomes

Population Health		Cost Effectiveness	
Patient Experience		Staff/Provider Experience	

Quality limitations

--

R1: Community based coordinated care is more accessible

IF primary care providers grow (new/expanded roles, additional services, hubs, extended hours) to deliver place-based services THEN patients will access more specialist care within community settings

Confirming evidence

Negating evidence

Modifying evidence

Unintended consequences (e.g. supply-induced demand)

Characteristics of enhanced primary care

Enablers/constraints

Other comments

Further references for follow up

R2: Accountability, contracting and payment systems incentivise integration

IF commissioners award place-based contracts (incorporating new accountability and governance models, capitated budgets and risk sharing) THEN providers will adopt integrated working

Confirming evidence

Negating evidence

Modifying evidence

Unintended consequences (e.g. market forces)

Characteristics of place-based contracting, accountability, governance

Enablers/constraints

Other comments

Further references for follow up

R3 : Fostering relational behaviours builds resilient communities

IF commissioners and providers develop mutually beneficial relationships and co-produce services (with patients, public, voluntary sector, community groups, local businesses, other public services) within local communities THEN health and care services will support local communities to build resilience

Confirming evidence

Negating evidence

Modifying evidence

Unintended consequences (e.g. increased inequity)

Characteristics of mutuality/co-production

Enablers/constraints

Other comments

Further references for follow up

M1 Collective responsibility improves quality and safety outcomes

IF providers share collective responsibility for outcomes through standard integrated pathways THEN providers will improve the quality and safety of care

Confirming evidence

Negating evidence

Modifying evidence

Unintended consequences (e.g. focus on what can be measured rather than what is important to patients)

Characteristics of collective responsibility/integrated pathways

Enablers/constraints

Other comments

Further references for follow up

M2 Multidisciplinary teams provide continuity for patients with LTCs/complex needs

IF primary care providers deliver care via MDTs (organised around natural communities) THEN patients with LTCs/complex needs will experience better continuity of care

Confirming evidence

Negating evidence

Modifying evidence

Unintended consequences (e.g. market forces)

Characteristics of MDT working

Enablers/constraints

Other comments

Further references for follow up

M3 Engaged and trained staff expedite cultural change

IF commissioners and providers train and fully engage staff in service transformation THEN staff will drive the cultural change which underpins new ways of working

Confirming evidence

Negating evidence

Modifying evidence

Unintended consequences (e.g. disenfranchised groups)

Characteristics of engagement

Enablers/constraints

Other comments

Further references for follow up

M4 System learning embeds and sustains transformational change

IF MCPs learn and adapt quickly using evaluation/monitoring loops and knowledge sharing THEN MCPs will sustain transformational change

Confirming evidence

Negating evidence

Modifying evidence

Unintended consequences (e.g. promoting poor practice)

Characteristics of system learning

Enablers/constraints

Other comments

Further references for follow up

M5 Shared/linked data is critical to effective integration

IF MCP staff are not able to access shared/linked data THEN patients will continue to experience fragmented care

Confirming evidence

Negating evidence

Modifying evidence

Unintended consequences (e.g. increased information security risks)

Characteristics of data sharing

Enablers/constraints

Other comments

Further references for follow up

Appendix 5 Table of included studies: R1

Citation (including year of publication)	Country	Study type
Baird <i>et al.</i> , 2016 ¹⁴⁹	UK	Mixed-methods analysis
Bienkowska-Gibbs <i>et al.</i> , 2015 ¹⁹²	International	Literature review
Bradley <i>et al.</i> , 2008 ¹⁶⁰	UK	Case study
Bramwell <i>et al.</i> , 2014 ¹⁸³	International	Literature review
Chambers <i>et al.</i> , 2016 ¹⁷⁵	International	Mapping and focused rapid review
College of Paramedics, 2016 ¹⁸⁸	UK	Framework
Donnelly <i>et al.</i> , 2013 ¹⁹³	Canada	Case study
Drennan <i>et al.</i> , 2011 ¹⁶⁶	UK	Qualitative study
Drennan <i>et al.</i> , 2014 ¹⁸⁹	UK	Mixed-methods study
Drennan <i>et al.</i> , 2015 ¹⁶⁴	UK	Observational study
Freund <i>et al.</i> , 2015 ¹⁵⁵	UK	Literature review
Halter <i>et al.</i> , 2013 ¹⁸¹	International (46 out of 49 papers from the USA)	Systematic review
Heath <i>et al.</i> , 2012 ¹⁷⁶	UK	Qualitative study
Heath <i>et al.</i> , 2015 ¹⁷⁸	UK	Qualitative study
Imison <i>et al.</i> , 2017 ¹⁹¹	International	Review
Imison <i>et al.</i> , 2008 ¹⁸⁴	International	Review
Imison <i>et al.</i> , 2016 ¹⁶³	UK	Review
Jorgenson <i>et al.</i> , 2014 ¹⁵⁹	Canada	Qualitative study
Laurant <i>et al.</i> , 2010 ¹⁵⁶	International	Review
Mallett <i>et al.</i> , 2014 ¹⁶¹	UK	Cohort study
Martínez-González <i>et al.</i> , 2014 ¹⁵⁴	International	Systematic review and meta-analysis
McLeod <i>et al.</i> , 2015 ¹⁷⁷	UK	Observational study
Montgomery-Taylor <i>et al.</i> , 2016 ¹⁸⁵	UK	Case study
Montgomery-Taylor <i>et al.</i> , 2015 ¹⁸⁶	UK	Case study
Mott MacDonald and SQW, 2015 ³²	UK	Case study
CLAHRC Greater Manchester, 2015 ¹⁷²	UK	Mixed-methods evaluation
Pawson <i>et al.</i> , 2016 ⁷¹	International	Realist review
Pollard <i>et al.</i> , 2014 ¹⁸⁷	UK	Case study
Primary Care Workforce Commission, 2015 ¹⁵¹	International	Review
Rashid, 2010 ¹⁵⁷	UK	Integrative literature review
Robertson <i>et al.</i> , 2014 ¹⁷⁹	UK	Case study
Rosen <i>et al.</i> , 2016 ¹⁹⁰	UK	Mixed-methods evaluation
Rosen, 2014 ⁴⁸²	UK	Briefing
Salisbury <i>et al.</i> 2013 ¹⁶²	UK	Pragmatic randomised controlled trial
Tan <i>et al.</i> , 2014 ¹⁵⁸	International	Systematic review and meta-analysis

Citation (including year of publication)	Country	Study type
Taneja <i>et al.</i> , 2015 ¹⁷³	International	Narrative systematic review
Williams and Stone, 2014 ¹⁸²	UK	Case study
Winpenny <i>et al.</i> , 2016 ¹⁷⁴	International	Scoping review

CLAHRC, Collaborations for Leadership in Applied Health Research and Care.

Appendix 6 Table of included studies: R2

Citation (including year of publication)	Country	Study type
Addicott, 2014 ²⁰¹	UK	Commentary
Ahmed <i>et al.</i> , 2015 ¹¹⁹	UK	Commentary
Allen <i>et al.</i> , 2015 ²¹⁹	UK	Evidence review
Andersson and Wikström, 2014 ¹⁹⁶	Sweden	Qualitative research
Baicker and Levy, 2013 ²²⁸	USA	Commentary
Bambra <i>et al.</i> , 2014 ²¹⁰	UK	Evidence review
Billings and de Weger, 2015 ¹¹⁸	UK	Evidence review
Blakeman <i>et al.</i> , 2011 ²¹³	UK	Qualitative study
Britnell <i>et al.</i> , 2015 ²³⁵	International	Commentary
Burns and Pauly, 2012 ²²⁰	USA	Commentary
Calvert <i>et al.</i> , 2009 ²¹⁴	UK	Retrospective cohort study
Chew-Graham <i>et al.</i> , 2013 ²¹²	UK	Longitudinal qualitative study
Colla <i>et al.</i> , 2012 ⁴⁸³	USA	Quasi-experimental analysis
Collins, 2016 ²⁰⁰	UK	Commentary based on qualitative analysis
Conrad, 2015 ²²⁷	USA	Evidence review
Crinson <i>et al.</i> , 2010 ²³⁸	UK	Diagnostic analysis
Dickinson <i>et al.</i> , 2013 ²¹⁷	UK	Evidence review
Dixon <i>et al.</i> , 2011 ²¹¹	UK	Summary of mixed-methods research
Flodgren <i>et al.</i> , 2011 ²⁰⁴	International	Review of systematic reviews
Forbes <i>et al.</i> , 2016 ²¹⁶	UK	Evidence review
Goodwin <i>et al.</i> , 2011 ²³⁹	UK	Independent inquiry report
Gorman and Horn, 2015 ²²⁴	Australia	Commentary
Gray <i>et al.</i> , 2015 ³⁴⁹	UK	Commentary
Hopson, 2016 ²²⁶	UK	Commentary
House of Commons, 2015 ²³¹	UK	Government publication
Humphries, 2015 ²¹⁸	UK	Commentary
Imison <i>et al.</i> , 2017 ¹⁹¹	UK	Review
Lynn <i>et al.</i> , 2015 ²³⁶	USA	Commentary
Mason <i>et al.</i> , 2014 ¹⁹⁷	UK	Evidence review
Mason <i>et al.</i> , 2015 ²⁰⁸	UK	Evidence review
Mehrotra <i>et al.</i> , 2010 ²³⁷	USA	Commentary
Monitor, 2015 ²²²	UK	Summary of qualitative and quantitative analysis
National Audit Office, 2017 ²⁰⁹	UK	Audit report
National Audit Office, 2016 ²³³	UK	Audit report
NHS Improvement, 2017 ²³⁰	UK	Policy/guidance
Porter, 2010 ²⁰³	USA	Commentary
Price Waterhouse Coopers LLP, 2016 ²³⁴	UK	Audit report

Citation (including year of publication)	Country	Study type
Roland and Paddison, 2013 ²¹⁵	UK	Commentary
Scott <i>et al.</i> , 2011 ²⁰⁵	International	Systematic review
Shortell <i>et al.</i> , 2015 ⁴⁴	UK	Commentary
Shortell <i>et al.</i> , 2014 ¹²⁶	UK	Commentary
Song <i>et al.</i> , 2012 ²²¹	USA	Difference-in-differences analysis
Stout, 2016 ²³²	UK	Audit report
Sumner, 2016 ²⁴⁰	UK	Commentary
Weeks <i>et al.</i> , 2010 ²⁴¹	USA	Quantitative analysis
West, 2016 ²²⁹	UK	Commentary
Yuan <i>et al.</i> , 2017 ²⁰⁶	International	Systematic review

Appendix 7 Table of included studies: R3

Citation (including year of publication)	Country	Study type
Addicott, 2013 ²⁸⁴	UK	Commentary
Anderson <i>et al.</i> , 2015 ²⁷⁶	International	Systematic review (Cochrane)
Attree <i>et al.</i> , 2011 ²⁶⁷	International	Rapid review
Batalden <i>et al.</i> , 2016 ²⁶¹	UK	Literature review
Bickerdike <i>et al.</i> , 2017 ²⁶⁵	UK	Systematic review
Bloomfield and Cayton, 2009 ²⁹³	International	Commentary
Boger <i>et al.</i> , 2015 ²⁶²	International	Systematic review and mixed research synthesis
Boyle and Harris, 2009 ²⁷⁴	International	Literature review
Brunton <i>et al.</i> , 2015 ²⁹⁵	International	Systematic review and meta-analysis
Cameron <i>et al.</i> , 2014 ²⁸⁶	UK	Case study
Clarke <i>et al.</i> , 2017 ²⁷¹	International	Rapid review
Coulter, 2013 ²⁹⁴	UK	Commentary
Cyril <i>et al.</i> , 2015 ²⁶⁶	International	Systematic review
Dayson <i>et al.</i> , 2013 ¹³²	UK	Evaluation report
del Castillo <i>et al.</i> , 2016 ²⁸²	UK	Review
Farenden <i>et al.</i> , 2015 ²⁷⁹	UK	Evaluation report
Filipe <i>et al.</i> , 2017 ²⁸³	UK	Commentary
Georghiou <i>et al.</i> , 2016 ²⁴⁷	UK	Evaluation report
Howieson and Fenwick, 2014 ²⁸⁹	UK	Commentary
Liddy <i>et al.</i> , 2014 ²⁹⁰	International	Systematic review
Masters <i>et al.</i> , 2017 ²⁸¹	UK	Cost benefit analysis
Maughan <i>et al.</i> , 2016 ³³	UK	Observational study
Nesta, 2016 ²⁹²	UK	Evaluation report
O'Mara-Eves <i>et al.</i> , 2013 ²⁶⁴	UK	Systematic review, meta-analysis and economic analysis
Ocloo and Matthews, 2016 ²⁸⁷	UK	Review
Panagioti <i>et al.</i> , 2014 ²⁸⁰	International	Systematic review and meta-analysis (NIHR)
Philips and Morgan, 2015 ²⁶³	International	Literature review
Poortinga, 2012 ²⁵⁶	UK	Quantitative analysis
Popay <i>et al.</i> , 2015 ²⁷²	UK	Mixed-methods evaluation (NIHR)
Realpe and Wallace, 2009 ²⁵⁰	UK	Commentary
Rippon and Hopkins, 2015 ²⁷⁷	International	Research report
Ryder, 2015 ²⁶⁸	UK	Case study
Sadler <i>et al.</i> , 2014 ²⁹¹	International	Systematic review
Seale, 2016 ²⁹⁶	UK	Guide
Taylor <i>et al.</i> , 2014 ²⁷⁸	International	Systematic review
Tsegai and Gamiz, 2014 ²⁸⁸	UK	Case study
Vennik <i>et al.</i> , 2015 ²⁹⁷	The Netherlands	Qualitative research

Citation (including year of publication)	Country	Study type
Vogelpoel and Jarrold, 2014 ²⁷⁰	UK	Case study
Voorberg <i>et al.</i> , 2015 ²⁷³	International	Systematic review
White <i>et al.</i> , 2017 ²⁷⁵	UK	Case study

Appendix 8 Abstraction to middle-range theories

This appendix describes some of the theories, models and frameworks that we understood to contribute to our understanding of how the MCP model may work in practice and supports the discussion in *Chapter 8*. Theories, models and frameworks are distinct concepts, although the terms are often used interchangeably. Nilsen⁴⁸⁴ puts forward a 'taxonomy that distinguishes between different categories of theories, models and framework' for selection and application for researchers and practitioners. With respect to understanding and/or explaining what influences implementation outcomes, three categories are put forward:

1. determinant frameworks
2. classic theories
3. implementation models.

In *Table 12*, we describe some of the theories that could usefully contribute to our understanding of behaviour change within the context of the MCP model. We focus on the application of CASs theory as a lens through which to understand complex transformation; and the COM-B model to inform implementation.

Determinant framework

The determinant framework of CASs has emerged from our evidence base, offering a conceptual lens to explore the MCP model as a complex primary care-led and community-based integrated ACS. To frame this understanding for health-care systems, we adopted Plsek and Greenhalgh's⁴¹⁸ definition: 'a complex adaptive system is a collection of individual agents with freedom to act in ways that are not always totally predictable, and whose actions are interconnected so that one agent's actions changes the context for other agents'.

TABLE 12 Convergence of middle-range theories across the programme theory components

Programme theory component	Determinant framework: to provide a conceptual understanding	Classic theory: to explain social process	Implementation models: to provide a tool for action
R1: community-based, co-ordinated care is more accessible	CAS (connectivity)	(Structural) empowerment theories	COM-B
R2: place-based contracting and payment systems as a means to incentivise shared accountability	CAS (edge of chaos)	Accountability theory	
R3: fostering relational behaviours builds resilience within communities	CAS (connectivity)	Relational co-ordination	
M1: collective responsibility improves quality and safety outcomes	CAS (connectivity)	(Structural) empowerment theories	
M2: MDTs provide continuity for patients with long-term conditions and complex needs	CAS (connectivity)	Relational co-ordination	
M3: engaged and trained staff expedite cultural change	CAS (connectivity)	Relational co-ordination	
M4: system learning embeds and sustains transformational change	CAS (feedback loops)	Social learning theory	
M5: proactive population health is dependent on shared and linked data	CAS (connectivity)	Actor network theory	

The use of the CAS lens to understand how to improve and transform health systems was introduced by Zimmerman *et al.*,⁴⁸⁵ and has subsequently been used to argue a need to 'abandon linear models, accept unpredictability, respect (and utilise) autonomy and creativity, and respond flexibly to emerging patterns and opportunities'.⁴¹⁸ Kreitzer *et al.*⁵² conceptualise the Dutch Buurtzorg model as a complex system, confirming a need to be ever 'nimble and responsive' to changing conditions.

The focus within the CAS approach on the interdependency of elements in a system and not the system itself makes it particularly well suited to framing the complexities of integrated care at the core of the new models and, in time, evaluating the new models,⁴²³ in order to guide future policies to avoid the unanticipated consequences.⁴⁷⁵ The following subsections discussed some key features of CASs and their relevance to MCP theory components (see *Table 12*).

Feedback loops

The feedback loops serve to feed back the output of a process, as an input, into the same system.⁷⁴ In health-care studies, feedback loops between individuals and their community or environment have been assessed to determine how 'neighbourhood effects' or 'place effects' affect the individual's health.^{486,487} Feedback loops can generate change or stability in a system, depending on the relationships among different agents;⁴²² positive feedback loops can be facilitative, for example, in the use of PDSA cycles in quality improvement processes.³⁹⁶ Of our eight theory components, feedback loops are most useful in framing the necessary system learning (M4) through positive feedback reinforcement when intended outcomes are being realised, or taking corrective action following negative feedback from less-desired outcomes. Thus, in a MCP-like system, feedback allows the adaptation⁴⁷⁶ of the New Care Models programme delivery to align with the constantly shifting NHS landscape, for instance, allowing MCPs to be incorporated into sustainability and transformation plans or to begin journeys as ACSs, as vanguard evaluation findings are fed back.

Connectivity

The manner in which agents in a system connect and interact gives rise to the behaviour of a CAS, highlighting the importance of relationships between the agents over the agents themselves; as Plsek and Greenhalgh⁴¹⁸ note, 'the observable outcomes are more than merely the sum of the parts'. The capacity to connect and leverage social networks is described to be the most distinctive feature of the Buurtzorg model in the Netherlands, in which multilevel networks with intra- and interprofessional group connectivity coexist at local and national settings.⁵²

This connectivity is a recurrent theme in the MCP programme theory, occurring within components R1, R3, M1, M2, M3 and M5. This includes primary, community and specialist professionals connecting to adopt new roles and ways of working through building or strengthening relationships to co-ordinate care for the benefit of patients (R1). In R3, the inclusion of service users for co-production purposes adds a further dimension of connectivity.

In M1, the responsibility of delivering safe and high-quality care is discharged through collective decision-making with dependency on good communication and working relationships. In M2, interdisciplinary connectivity within a MDT offers shared decision-making and streamlined care for the benefit of the patient, and promotes team-building and peer support for the benefit of professionals.

The importance of connectivity for staff engagement is clear in M3; effective connectivity through sharing and leadership leads to improved staff engagement and workforce morale. Connectivity is also important with a technological interface, as the sharing of data by human agents brings about the intended change of proactive population health (M5).

Edge of chaos

The most productive state for a complex system is proposed to be at the 'edge of chaos', to allow for maximum variety and creativity, making it fundamentally unpredictable and, as such, it has to be observed over time.^{418,477} A CAS approach seeks to draw out and mobilise the natural creativity of health-care professionals to adapt to circumstances and evolve. This requires system learning from locally owned solutions that are intended to achieve improved quality,⁴²⁴ rather than achieving this through top-down large-scale transformation efforts. Crucially, this requires risk-taking and learning from mistakes or failures (see *Chapter 8, Stakeholder engagement*), rather than national interventions to limit local risk-taking. There may also be a need to allow tensions to play out, for instance, in R2, the contracting and payment mechanism for MCPs is necessarily at the edge of chaos, using the opposing forces of competition and co-operation to be mutually beneficial,⁴⁷⁸ to allow local sites to innovate for their accountable local place-based system.

We have abstracted the resource and reasoning aspects of the intangible mechanisms (see *Table 12*) to six classic middle-range theories, in order to provide a rationale for the underlying social processes to inform future accountable population-based integrated care models. This is by no means an exhaustive search for middle-range theories, but a selection of six classic theories that can apply across system transformation, such as the introduction of a MCP.

Empowerment and structural empowerment theories

Empowerment occurs when individuals or communities have a degree of autonomy and self-determination to represent their interests in a responsible and self-determined way and act on their own authority.⁴⁸⁸ Empowerment theory assumes that the experience, knowledge and skills of people can be harnessed to address issues.⁴⁸⁸ The patient ownership and the relationship-based approach of the Nuka care model illustrates how shared responsibility and co-ownership can facilitate improved performance, community engagement and population health.⁵⁰

Similarly, Kanter's⁴⁸⁹ theory of structural empowerment focuses on empowerment through access to information, resources, support and the opportunity to learn and develop. Empowered employees have a higher commitment to their organisation, are more accountable for their work and are better able to fulfil job demands in an effective manner.⁴⁹⁰ Workplaces that facilitate access to resources have been shown to empower employees to accomplish their work more meaningfully.^{491,492} Empowerment is a key aspect of stakeholder reasoning when moving from short-term outcomes to intermediate outcomes (see *Figure 20*). For example, in R1, empowered professionals are more likely to adopt new roles and task-shift to community-based, co-ordinated care delivery, through which they can access structural resources, such as regulatory frameworks,⁴⁹³ training and development¹⁷⁹ and dedicated change management support.¹⁹¹

In M1, population-based, integrated care for long-term conditions and multimorbidities builds on the involvement of patients in decision-making about their own lifestyle choices and self-care. Similarly, it is empowered staff who can draw on structures or resources of a credible integrated care model, and joint decision-making between staff in different services and good working relationships with other professionals are able to achieve the quality improvements of equitable access to services and streamlined patient journeys, including efficient discharges.

Accountability theory

Accountability is pervasive in social systems.^{494,495} Frink *et al.*⁴⁹⁶ argue for a meso-level conceptualisation to better understand the relevant context. Within health care, Emanuel and Emanuel⁴⁹⁷ put forward three essential components: (1) the loci of accountability – the number of different agencies that can be held

accountable or hold others accountable; (2) the domains of accountability – the number of activities for which agents or agencies can be held accountable (professional competence, legal and ethics conduct, financial performance, safety and quality); and (3) the procedures of accountability, including formal and informal procedures for evaluating compliance and disclosing it.

Commentators on the German *Gesundes Kinzigtal* programme have illustrated that accountability comes through the locus of a 'doctor of trust' acting as a gatekeeper (previously unknown in the German health-care system) in co-ordinating care for complex conditions. In the MCP vanguards, primary care bolsters its gatekeeper function through appropriate referrals and providing continuity to ensure collective accountability.

The programme theory component of R2 proposes that place-based contracts and payment systems will incentivise shared accountability. The locus of accountability is likely to be at a system level for the domains of outcomes and assurance, but incentives may need to be tailored to organisational or service levels, with the necessary adaptation and feedback of a complex system. The process of accountability for MCPs is likely to require a co-productive approach of 'social accounting'¹⁹⁶ operating at several loci, such that the domains of accountability and the procedures take into account not just the structural transactional elements that lead to cost-effectiveness outcomes,⁴⁹⁸ but also the operational subculture.⁴⁹⁹

Relational co-ordination theory

Relational co-ordination theory⁵⁰⁰ focuses on three attributes of relationships among members of a work process to support co-ordination and performance. These are shared goals over and above the specific goals of individuals; shared knowledge that helps individuals to see how their specific tasks fit within the whole process; and mutual respect, which helps individuals to view others' work as credible.⁵⁰⁰

The application of relational co-ordination to health care highlights the significance of relationships.⁵⁰¹ For example, the *Buurtzorg* model of care is based on the shared goal of 'humanity over bureaucracy' to provide a sustainable, holistic model of community care; this emphasises connectivity and mutual respect through shared knowledge within an autonomous team responsible of all aspects of care for a group of patients.⁵³ The theory component of M2 resonates strongly with the *Buurtzorg* model, in which the shared goal is one of co-ordinated patient-centred care through interprofessional delivery,³⁴⁵ the clarity of roles and support through reflective practice,^{345,502} emphasising team 'belonging'.^{315,329,502} The emphasis of the MCP on co-production and community resilience (R3) requires trust,²⁶⁶ ownership and confidence,^{263,274,287} enabling individuals to recognise their reciprocal roles²⁸⁶ and maintain mutually beneficial relationships. Staff who share a goal of working within a learning organisation or high-performing service (M3 and M4) are able to effectively use data to reflect and learn from performance, at the individual, team and organisation levels;³⁷¹ a supportive environment in which staff take on new roles³⁶⁶ is linked to improved staff engagement and job satisfaction, as well as the organisational outcomes of reduced absenteeism and staff turnover.⁵⁰³

Social learning theory

Social learning theory postulates that learning occurs through observation, imitation and modelling, and encompasses attention, memory and motivation.⁵⁰⁴ A supportive learning environment enables an organisation to harness relationships and the skills and capacities of individuals in the system, and to respond to occupational innovations.⁵⁰⁵ Learning through iterative evaluation is a core feature of MCPs. This theory encompasses both resources (training and tools) and reasoning (trust and confidence), as well as the activities associated with new ways of working and timely evaluation loops.

Many pioneer ACOs reported an iterative process of learning through experimentation and rapid-cycle changes in their approaches to care management, quality improvement and care transition efforts.⁵⁰⁶ In keeping with the complex systems lens, their learning and feedback processes were not always formalised, but were through an 'organically assembled collection of information sources', including past experience of staff, multiple data analysis, expert advice from consultants, learning collaboratives with peer ACO organisations and partnerships with other providers.⁵⁰⁶ These observations of pioneer ACOs can be imitated in the vanguards; building in the capacity for rapid learning and collaboration as learning systems is likely to be critical to embedding and sustaining the transformational change of the NHS new care models.²⁰⁰ The ACO experience of developing mechanisms and systems for learning (and then acting on that learning) acknowledges the key role of performance data and individual physician-level learning and action.¹²⁶

Actor network theory

This theory considers networks to be made up of both people and technologies, and focuses on how these 'actors' behave as a result of their position in a network and the power that emerges from their dynamic configurations.^{507,508} The theory provides a lens through which to view the role of technology in shaping social processes in a complex system.^{509,510}

In a new care model setting that depends on shared access to linked data (see *Figure 20*) for the delivery of proactive care (M5), the application of actor network theory is apt. The problem is that the sharing and linking of data are fraught with patient confidentiality and information governance issues,⁴⁵⁴ not to mention systemic and historical information technology compatibility issues.⁵¹¹ Generating patient and professional interest is dependent on demonstrating benefits for each of these groups, which, for MCP purposes, would include the receipt (for patients) or delivery (for health-care professionals) of timely access to appropriate care. The theory highlights the importance of defining the role of each actor, from the professionals who enter the data to those who audit it, and the tools, ranging from electronic health records to big data repositories. Importantly, this also requires a defined goal for health information exchange.⁴⁶⁴ There is a need to align with other cultural changes occurring, such as multidisciplinary working (M2), shared decision-making (M1)⁵¹² and training (M3) for patients and health-care professionals,⁴⁷⁰ to overcome technological and ethics barriers.⁴⁵⁴

Further application of theory

Our evidence maps identified a great degree of overlap between the different foci. The links between quality improvement, audit and feedback are self-apparent, while quality improvement and the learning organisation are both categorised by an upwards spiral of individual and organisational development. Feedback is a key component of both transformational change and of quality improvement, and is also linked to the ideas of single-loop and double-loop learning rehearsed above. This interdependence is further emphasised by the presence of common theories (*Table 13*). For example, Lukas *et al.*'s⁴¹⁵ model is designed to offer a lens on transformational change within the context of CASs. Further work is required in order to explore the extent to which it might be helpful to engage with these large and significant bodies of theory within the context of system learning.

TABLE 13 Potential mid-range theories for further examination

Evidence base	Potential mid-range theories
M1–M5: population-based approaches to primary care (context)	Behaviour ecological model ⁵¹³ Community coalition action theory ⁵¹⁴
M1–M3 and M5: integrated and collaborative care (context)	Normalisation process theory ⁵¹⁵
M1–M5: quality improvement in primary and community care (mechanisms)	Adult learning theory ⁵¹⁶ Social cognitive theory ⁵¹⁷ Social influence network theory ⁵¹⁸
M1: service development (mechanisms)	Resource-based view of the firm ^{519,520}
M2 and M3: team and organisational development (mechanisms)	Resource-based view of the firm ^{519,520}
M3: leadership development (mechanisms)	Transformational leadership ⁵²¹ Dynamic theory of leadership development ⁵²² Kotter's eight-stage change model ⁵²³
M4: large-scale transformational change (context)	Behaviour change theory and the role of feedback ⁵²⁴ Lukas <i>et al.</i> 's ⁴¹⁵ organisational model for transformational change in health-care systems Neoinstitutional theory ⁵²⁵ Organisational change theory ⁵²⁶
M4: CASs (context)	Hinings and Greenwood's ⁵²⁷ model of change dynamics Kanter <i>et al.</i> 's ⁵²⁸ 'big three' model of organisational change ⁵²⁸ Lukas <i>et al.</i> 's ⁴¹⁵ organisational model for transformational change in health-care systems Pettigrew's context/content/process model ⁵²⁹
M4: learning theory (mechanisms)	Adult learning theory ⁵¹⁶ Experiential learning theory ⁵³⁰
M4: audit and feedback (mechanisms)	Control theory ⁵³¹ Feedback intervention theory ⁵³²
M5: evidence-informed commissioning/value-based health care (context)	Saliency and immediacy ⁵³³ Three-way pull of competing demands – politics/influence (power), science and evidence (truth) and the public and acceptability (legitimacy) ⁵³³ Dynamic theory of strategy ⁵³⁴

Appendix 9 Revisiting the research objectives

This section summarises how the overall approach and findings relate to the objectives agreed at the outset of the review.

Articulate the underlying programme theories behind the multispecialty community provider model of care, by mapping the logic models of the 14 multispecialty community provider demonstrator sites, prioritising key theories for investigation

This review has articulated a programme theory, comprising eight components, based on the logic models and associated documents from the MCP vanguards and relevant documentation from NHSE. With the support of the project advisory group, the candidate theory components considered to be of greatest benefit for the realist review were prioritised.

Identify sources of theoretical, empirical and practice evidence to test the programme theories

As described in *Chapter 2*, the review has incorporated theoretical, experiential and empirical evidence, to capture and validate transferable learning to new models of care. This 'blended' evidence base provides important lessons in relation to the effectiveness of the interventions, but, in recognition of the inherent complexity and variation, also identifies practical insights to understand the mechanisms of change within the different contexts of the MCPs.

Appraise, extract and analyse evidence, reconciling confirmatory and contradictory evidence

The in-depth realist reviews (*Chapters 4–6*) provide an overview of the evidence base in relation to three of the core elements of the programme theory: (1) enhanced primary care, (2) new forms of contracting and (3) behaviours to develop community resilience. Theory component maps have been developed to provide an indicative summary of the relevant evidence bases that will inform the design, implementation and evaluation of integrated pathways, multidisciplinary working, organisational development, system learning and shared data.

Develop the synthesis, producing a 'blueprint' to explain how the mechanisms used in different contexts contribute to outcomes and process variables

The project team will be working with communications colleagues to develop tools to communicate the findings in accessible formats and with NHSE colleagues to translate findings into actionable insights. A model of the overall programme theory has been developed to summarise the key components of the theory of change underpinning the MCP model. A typology of interventions and mechanisms has also been created using the best-fit framework to facilitate communication with key audiences.

Consult with key multispecialty community provider stakeholders to validate the findings and to test their applicability to different contexts

The project team established an advisory group to provide the project with independent support and advice. Members were assembled to provide a range of experience and expertise, including new care model vanguard sites, NHSE, senior leaders in health and social care, public representation, academic partners and collaborators, communications expertise and project team members. The group was consulted specifically on four aspects of the review to:

1. confirm the scope of the synthesis
2. prioritise the programme theory components for review
3. test and validate the programme theory components as they evolved
4. test the emerging findings.

Working with the advisory group has been useful, not only in testing the approach and programme theories, but also in building awareness of relevant work within the New Care Models programme and the vanguard sites. For example, the team was able to secure early sight of an implementation matrix being developed by NHSE, which sets out the key characteristics and expectations of new models of care.

Finalise the synthesis, incorporating stakeholder feedback

The project team held a focus group, involving the project's advisory group, to share and test emerging findings. When operational priorities prevented attendance, the team subsequently followed up with individuals either by telephone or in person. The range of perspectives – operational/strategic, clinical/non-clinical, current MCP/planned MCP – was particularly useful in testing the findings for a range of audiences. A summary of stakeholder feedback is provided in the review chapters, providing an insight into the implications of the findings for practice at the strategic and operational levels.

Disseminate the findings, preparing a series of practical tools to support knowledge mobilisation

The project team worked with a freelance consultant, with experience of supporting the communication of complex research, to provide dedicated specialist support and advice alongside an in-house communications team, with expertise in engaging staff across health and social care. Communication and engagement are embedded in the project from the outset, initially focused on further developing an existing network of contacts, to ensure the awareness of, and alignment with, national activities. Through these links, the review has had some coverage in NHSE's regular communication with new care model sites. An early output was the advocates toolkit for use by the project team and advisory group members, to ensure consistent messages.

The project protocol was shared via the PROSPERO service and published in *Systematic Reviews*;⁶¹ further opportunities for publication are being explored. Abeda Mulla presented a poster on our innovative methodology – a combination of a realist synthesis with a best-fit framework synthesis – at the second International Conference on Realist Evaluation and Synthesis conference in October 2016.

A blog was established to share updates on the project (<https://mcpsynthesis.wordpress.com/>). The team has also raised awareness of the project via Twitter (Twitter, Inc., San Francisco, CA, USA; www.twitter.com), using a dedicated hashtag (#mcpsynthesis) from the @Strategy_Unit account. In September 2016, the review was promoted at the national NHS Expo event, organised by NHSE, with the aim of raising awareness of the synthesis and inviting delegates to participate, either through a focus group or by sharing local evaluations and other relevant materials.

The team presented at the Health Services Research Network conference in July 2017, and is exploring opportunities at academic and practitioner events to further share findings. The team is also co-ordinating discussions with related projects to identify opportunities to collaborate on dissemination.

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