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Evidence Check

Commissioning primary health care

An **Evidence Check** rapid review brokered by the Sax Institute for the NSW Ministry of Health. August 2015.

NSW GOVERNMENT Health

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This report was prepared by:

Mark Harris, Karen Gardner, Gawaine Powell Davies, Karen Edwards, Julie McDonald, Terry Findlay, Rachael Kearns, Chandni Joshi, Karla Jacques, Rebecca Alexander.

August 2015

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Commissioning primary health care: an evidence base for best practice investment in chronic disease at the primary-acute interface

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Preface and acknowledgements

This review was commissioned by the Sax Institute on behalf of NSW Health. It was conducted by a team from the Centre for Primary Health Care and Equity.

We thank May Guise and colleagues from NSW Ministry of Health and Gai Moore from the Sax Institute for their assistance in the process of clarifying the brief and shaping the project. We also thank Ms Emma Whitehead and Dr Lesley Russell from the Australian Primary Health Care Research Institute for help with identification of websites and relevant material and Professor Chris Brook from the Department of Health, Victoria, Associate Professor Helen Dickinson from Melbourne University, Professor Judith Smith from the Health Services Management Centre at Birmingham, England, Professor Jackie Cumming from the Health Services Evaluation Centre, University of Wellington, and Dr Nick Goodwin from the International Foundation for Integrated Care for their valuable advice.

1 Executive summary

Aims

This systematic review was undertaken for the NSW Ministry of Health to assist them in building an evidence base to address the following question:

> What forms of commissioning will support best value investment for primary care, with a particular focus on the primary-acute interface and chronic disease management?

Findings

Question 1: What national and international forms of commissioning primary care at jurisdictional or local/regional levels have been shown to be effective, for which population groups and in what contexts?
There is some limited evidence for the impact of various models of commissioning for individuals, groups and populations on service use and costs in the US and UK. However there is a diversity of opinions about the population benefits of commissioning, especially with respect to reducing inequalities.

There is no evidence for the superiority of any one commissioning model or commissioning organisation. Planning, contracting and monitoring are all critical elements in the process of commissioning. Studies show the greatest emphasis in commissioning is usually on planning, with some attention to contracting but very little on monitoring contracts, performance or supporting patient choice.

Question 2: Of the effective models for commissioning primary care identified in question 1 what are the requirements for implementation including regulation, governance, policy and funding arrangements?
Overseas experience suggests that Commissioning needs to occur in an environment of clear policy, governance and leadership which defines priorities, accountability, reporting, consultation, monitoring, roles and responsibilities. System and workforce support as well as skills and capacity are required to build relationships, provide technical expertise for commissioning and develop the market.

Identified barriers to commissioning include lack of resources, time, and personnel. There are also challenges associated with maintaining relationships with partners, obtaining external support and the limited use of decision support tools. Successful commissioning relies on deep knowledge of service and sector as well as information sharing and networking.

Question 3: Drawing on evidence identified in questions 1 and 2, and taking account of impacts, risks and unintended consequences, which models (or components of these) could be applied in Australia, or if Australian, which models (or components of these) could be used more widely?
The Australian context presents several challenges to the effective commissioning for primary health care. Challenges include split funding and accountability, dominance of fee-for-service payment mechanisms, lack of patient registration, and lack of experience with commissioning. Clear accountability for value and integration of care as well as cost would be desirable in any future commissioning approach, whether undertaken solely by one level of government or through joint commissioning.

Significant effort will be required to develop the provider market and the skills and experience required for successful commissioning.

Conclusions

The unique features of the Australian health system need to be considered in adapting overseas experience with commissioning. The following need to be considered: pooled funds, commissioning for value and integration. Models of commissioning to meet the needs of individuals, groups or populations are feasible but will require the development of trust and capacity between commissioners and providers of services, as well as government and non-government funders.

2 Introduction

This review was initiated to assist the NSW Ministry of Health build a reliable evidence base to support best value investment in the health system, particularly at the primary care and the primary-acute care interface. The immediate catalyst was the Reform of the Federation White Paper[1] (Australian Government, 2015) process, which aims to clarify roles and responsibilities for different levels of government in Australia, and may result in new arrangements for health among other services.

The over-arching question for the review was:

> What forms of commissioning will support best value investment for primary care, with a particular focus on the primary-acute interface and chronic disease management?

The specific research questions were:

1. What national and international forms of commissioning primary care at jurisdictional or local/regional levels have been shown to be effective, for which population groups and in what contexts?
2. Of the effective models for commissioning primary care identified in question 1 what are the requirements for implementation including regulation, governance, policy and funding arrangements?
3. Drawing on evidence identified in questions 1 and 2, and taking account of impacts, risks and unintended consequences, which models (or components of these) could be applied in Australia, or if Australian, which models (or components of these) could be used more widely?

The review was conducted in a period of six weeks in July and August 2015. Material was found through consulting with experts from the UK, Canada and New Zealand, searching library databases, hand searching from the reference lists of articles, selected journals and relevant websites from Australia, the US, UK, New Zealand and Europe. Question 1 was answered using relevant 'black' (peer reviewed) literature and case studies, and questions 2 and 3 using both relevant black and grey literature. For full details of the search strategy, selection of materials, and data extraction, see Appendix 1.

[1] A working draft of this was retrieved 20 July 2015 from http://federation.dpmc.gov.au/publications/discussion-paper

3 Background

What is commissioning?

Commissioning is a term that has only recently gained currency in the Australian policy context. As noted by a number of authors, there is no single authoritative definition of commissioning and the term means different things to different people (Newman 2012, Dickinson 2015). For this report, and to align with international approaches, commissioning is defined broadly as the process of planning, purchasing and monitoring services for a population (e.g. geographically defined), subpopulation (e.g. people with diabetes in a given region) or individual client (often in the context of care coordination with individual needs assessment). The core process of commissioning involves three main areas of activity: strategic planning, contracting services and monitoring and evaluation (Figure 1). These areas typically involve some or all of the tasks outlined in the Figure.

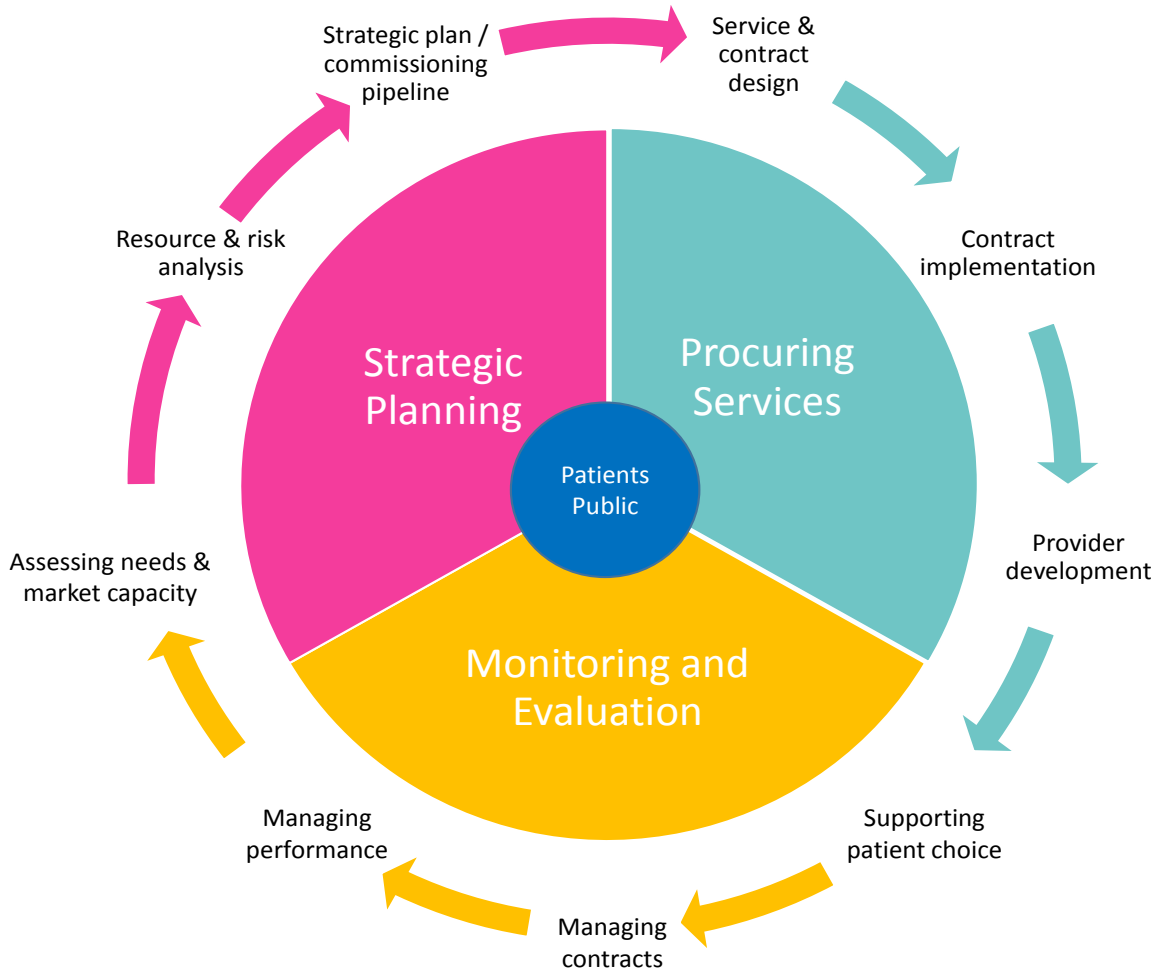

Figure 1: Elements of the Commissioning Cycle

Adapted from SA Health Clinical Commissioning Intentions (2013–17) & NHS Commissioning Board Report (2012)

Strategic planning

Assessing needs and market capacity

- Identifying service needs for a defined area, as in the English Primary Care Trusts (PCT), or a group of citizens or patients, as in some coordinated care programs
- Analysis of the likely demand for contracted provision in terms of the numbers of people likely to use the services and assessing capacity in the market to deliver the services required are key elements
- Engaging stakeholders (especially communities and patients) is an essential part of this process.

Resource and risk analysis

- Assessing commissioner resources in terms of budget, people and skills to procure the services it needs as well as identifying risks to commissioning a delivery of contracted services is undertaken in this stage. For example, risks might include increased demand for services and capital-constrained providers unable to meet demand.

Strategic plan/Commissioning pipeline

- Bringing together all the available information into a single strategic commission plan outlining how commissioners will deliver their objectives through the commissioning of services.

Procuring services (contracting)

Service and Contract designs

- Develop service specifications and contracts that define services and incentivise providers to deliver sustained health care and not to 'cream' or 'park' customers. It may in some cases identify models of care.

Contract implementation

- Put strategy into action through commissioning either in-house or externally.

Provider development

- Support provider development and promote best practice. This might include helping providers wanting to expand or leave the market or to build capacity among those in the market such as through information system development.

Management, monitoring and evaluation

Supporting patient choice

- Supporting patient choice may include building health literacy.

Managing contracts

- Metrics should be used to capture how well commissioners manage their contracts and may include stakeholder satisfaction, quality of data etc.

Managing performance

- Monitor provider performance in terms of outcomes or in some cases against specified targets
- Obtain consumer feedback and reports on provider capability.

Characteristics of commissioning in Australia and Overseas (further details in Appendix 2)

- Commissioning bodies are usually government or insurance bodies but can be local or regional commissioning bodies e.g. Clinical Commissioning Groups (UK) and Primary Health Networks (Australia)

- Major funding sources for commissioning differ from country to country and may include government (through taxes), employers (e.g. in the USA), health insurance funds (e.g. in the Netherlands) and consumers
- A balance between the technical aspects of commissioning (such as assessing needs and contracting) and developing and maintaining relationships, between commissioners and providers, and amongst providers as well as with communities and consumers is important
- Services may be provided by the commissioning body, or by independent providers through an agreed contract or a system of fees for particular services
- Regulation of the quality of services provided is essential
- Commissioning can promote competition which may improve quality or reduce costs; however competition may also undermine collaboration (and so integration)
- Commissioning can be primary or secondary: primary commissioners are responsible for all elements of the commissioning cycle whereas secondary commissioning involves implementation of contracting and monitoring only, usually within parameters specified by the primary commissioning agency
- Market development (of providers and/or commissioners) is often required to ensure a supportive environment and capable service providers
- Commissioning is a complex process. The Kings Fund advocates proceeding slowly, particularly when commissioning in areas where integration of service delivery is important.

The NSW Government Strategic Commissioning approach is reported to consider and addresses three core elements:

- A focus on client outcomes. Commissioning seeks to identify and prioritise outcomes, rather than service outputs. Of key importance is articulating what results will be achieved by delivering the service for the client and the community
- Delivering better services. There is no one-size-fits approach to delivering services, and the process should consider the optimal role for government and a range of service delivery options to achieve the desired outcomes. Measurable service standards and performance objectives should be designed to inform government whether quality services are being delivered
- Providing greater value for money. Strategic commissioning should also consider opportunities to improve the efficiency or value for money of services being provided. The resulting service delivery model may provide a greater level of service for less money or for the same value.

A consultation paper on better value public services and infrastructure through Strategic Commissioning and Contestability was released in February 2014.

4 Question 1

What national and international forms of commissioning primary care at jurisdictional or local/regional levels have been shown to be effective, for which population groups and in what contexts?

This section draws on data from 37 studies – 33 from England, one from Finland, two from USA, one from New Zealand and one comparison of commissioning in England and Germany. Studies include PCTs, Fundholding Practices, Practice Based Commissioning (PBC), Clinical Commissioning Groups (CCGs) and Joint Commissioning in the UK, Municipal contracting in Finland, Managed Care and Accountable Care in the USA, and District Health Boards in New Zealand. Further details of study characteristics are provided in Appendix 1.

Key findings

The evidence base for the impact of commissioning is very small. Most studies are of commissioning for populations; fewer studies explored commissioning for subpopulation groups or for commissioning services for individuals.

There is insufficient evidence to identify a preferred model. Impacts have been demonstrated for interventions targeting individual, group or population levels and specific elements were not also always described in the evaluation literature. However qualitative studies did report the importance of two of the three major elements: planning and contracting. The lack of emphasis on monitoring and evaluation may reflect the relatively early stage of development of many of the models.

The majority of studies of the commissioning cycle focus on planning, with some attention to contracting but none on monitoring contracts, performance or supporting patient choice. More details on the focus of studies are provided in Appendix 3.

Lack of skills and capacity are cited as major barriers to the implementation of commissioning. This implies significant investment is needed in developing skills in the workforce to be involved in the commissioning process, and support for them in the field with resources and advice. There also needs to be a competent organisational and provider base to be contracted to deliver services.

Most countries appear to be moving away from a strict competitive model in which there is a distance between purchaser and provider as this runs counter to many models of integrated care and provides little real benefit in terms of lower pricing of services. Engagement of providers, especially physicians, is considered to be critically important but has proven difficult to sustain.

Evidence of impact of commissioning at individual, group and population level

Very limited evidence is available to assess the impact of commissioning on service use, outcomes or value. As shown in Table 1, of the seven relevant studies related to commissioning at individual, group and population levels, three studies described impacts on health service use. In the context of inappropriate treatment of routine childhood conditions, service redesign was modelled to have led to reductions in costs of children's services (Barnes, 2013). A study of joint commissioning for health and social care services demonstrated reduced hospitalisation, length of stay and delay in transfer of care (Goldman, 2010). A third study of fund holding practices demonstrated reduced emergency and elective admissions (Dusheiko, 2006).

One study of joint health and social care commissioning demonstrated improved quality of care as perceived by users and carers for patients with mental illness problems (Freean, 2006).

A randomised trial as part of PCT Commissioning demonstrated improvements in smoking rates (McLeod, 2015).

Two US studies involved analysis of economic benefit. A study of US managed care demonstrated improved physician incomes and time with patients but little overall improvement in value (Ly, 2014). A study of Accountable Care in three practices showed reduced costs and improved quality of care (Salmon, 2012).

Table 1: Impact of commissioning on service use, outcomes and value

Level	Study citation	Service use	Quality of care	Outcomes	Value
Individual	Ly DP, Glied SA. The impact of managed care contracting on physicians. Journal of General Internal Medicine. 2014;29(1):237-42				Physicians who contract more with managed care have higher income and spend more time in patient care, modest costs on time outside patient care and have lower perceived adequacy of time with patients (US Managed Care)
	Salmon et al. A collaborative Accountable Care model in three practices showed promising results on costs and quality of care. Health Affairs 2012; 31(100): 2379-87				A shared savings accountable model of care with collaborative support from a payer can reduce costs and improve quality (US ACCO)
Sub-population	Barnes, K et al (2013). Evidence based commissioning: calculating shift potentials for paediatric services. Clinical Governance: 18(1), 39-48	Reduction in emergency admissions for children (UK PCTs)			

Level	Study citation	Service use	Quality of care	Outcomes	Value
Sub-population (continued)	Goldman. Joint Financing across health and social care: money matters but outcomes matter more. Journal of Integrated Care 2010; 18(1): 3-10	No change in length of stay, hospital admission, delays in transfers of care (UK CCG)			
Population	McLeod, H., Blissett, D., Wyatt, S., & Mohammed, M. A. (2015). Effect of Pay-For-Outcomes and Encouraging New Providers on National Health Service Smoking Cessation Services in England: A Cluster Controlled Study. PLOS ON 10(4):1-15			Randomised Controlled Trial (RCT). PCTs achieved increases in number of 4 week quits per 1000 adult population of 9.6% compared to 1.1% in control group PCTs. The largest 2 of 10 providers accounted for these increased quit rates. 3 of the 10 were new market entrants (UK PCT)	
	Dusheiko et al (2006). The effect of financial incentives on gatekeeping doctors: evidence from a natural experiment	Patients of fund holders had decreased emergency admission by 3.5% and elective admissions by 4.9% (UK Fundholding)			

Level	Study citation	Service use	Quality of care	Outcomes	Value
	Freeman and Peck. Evaluating partnerships: a case study of integrated specialist mental health services. Health and Social Care in the Community. 2006; 14(4): 408-417		Users and carers were largely positive towards the provision of specialist services under a mental health partnership (UK joint commissioning)		

Factors found to facilitate or impede commissioning

There are a limited number of studies exploring the facilitators and barriers to commissioning. Identified barriers include lack of resources (Bradley, 2006), time, and personnel as well as difficulties associated with maintaining relationships with partners (Checkland, 2009), obtaining external support (Naylor, 2011) and limited use of decision support tools (Marks, 2012). Attitudes vary on the extent to which General Practitioner (GP) commissioning is likely to deliver population benefits (Gridley, 2012; Perkins, 2014), especially with respect to reducing inequalities (Turner, 2013). Successful commissioning relies on deep knowledge of service and sector as well as information sharing and networking (Checkland, 2012).

Table 2: Facilitators and barriers to commissioning

Facilitators	Barriers
Commissioners with deep knowledge of service sector & authority; sharing information; networking inside and outside the organisation (Checkland, 2012)	Lack of time, resources, personnel (Checkland, 2009) Difficult relationships between PCT and partners (Checkland, 2009)
Commissioners satisfied with external support for commissioning (Naylor, 2011)	Difficulties with obtaining external support for commissioning include need to build effective working relationships and implementation of suggested strategies (Naylor, 2011)
Added value GPs bring to commissioning include increased capacity for service redesign, involvement with local people, improved uptake of quality based referrals; focus on improving quality of primary medical care (Perkins, 2014)	Limited use of priority setting tools (decision support) for resource allocation related to perceived lack of value, lack of skill &data, lack of suitable tools for public health (Marks, 2012)
Pharmacy contracts a facilitator in PCTs purchasing pharmacy services (Elvey, 2006)	Professionals perceive that reduced commitment to health inequalities agenda, inadequate skills and loss of expertise and weak partnerships have impacted on capacity of commissioning to reduce health inequalities (Turner, 2013)
	GPs may be no more able to deliver equity and excellence than other providers. Without top down management service improvement will be patchy and may not reduce inequity (Gridley, 2012)
	Lack of access to funding and capacity in PCTs a barrier to commissioning pharmacy (Bradley, 2006)

Case studies

Three commissioning case studies are presented. Cases illustrate different approaches to commissioning and identify how key elements are operationalised in their real world settings. Full details for each case are provided in Appendix 5. Key lessons are identified in Table 3. The three models are described below.

Accountable Care Organisations in the USA

This refers to a health care organisation composed of doctors, hospitals and other health care providers who voluntarily come together to provide coordinated care and agree to be held accountable for the overall costs and quality of care for an assigned population of patients. The payment model ties provider reimbursements to performance on quality measures and reductions in the total cost of care. Providers agree to take financial risk and are eligible for a share of the savings achieved through improved care delivery, provided they achieve quality and spending targets.

Bundled Care in Germany

Bundled payments are a method in which payments to health care providers are based on the expected costs for a clinically defined episode or bundle of related health care services. The payment arrangement includes financial and quality performance accountability for the episode of care. Provider associations are paid by Sickness Funds (non-profit health insurers). These in turn pay GPs and specialists on a fee-for-service basis up to a capped maximum (negotiated with physician associations in each federal state).

Clinical Commissioning Groups in England

CCGs are clinically led National Health Service (NHS) organisations which have replaced PCTs in the UK since 2013. By the end of 2016 it is expected that these will be autonomous from the NHS. All GP practices must belong to a CCG as members. These elect a governing body which consists of GP representatives, CCG executive, other clinicians and lay representatives.

Each of these models is highly influenced by the overall context in which they occur, including a system for payment of providers, and there is variable scope and depth of services being commissioned. All three models involve enrolment of patients either with the provider or commissioning organisation.

Table 3: Commissioning case studies

Model	Description and key elements	Lessons
USA, Integrated Care	Accountable Care Organisations (ACO) are groups of physicians and health care providers, including primary care physicians, specialists and hospitals, who collaborate voluntarily to provide services to Medicaid populations Aims to reduce use of health resources Only mandated requirement is that at least one member is a primary care physician Providers are held accountable to a global, risk-adjusted budget plus incentives for quality & agree to a two-sided risk model that allows them to share in savings and cost of care that exceeds targets Payment based on quality and spending rather than activity	• New payment models have been observed to drive organisational and operational change, as well as increase use of data. Reliable data systems and good access to data are essential for reporting and monitoring • There is potential to use payment models to shape provider behaviour by rewarding reduced expenditure and improved quality. Models where both providers and payers share savings rewards and deficit costs may drive increased provider motivation to change • If providers are held accountable for the full range of services to patients, there is a greater incentive to control costs and improve quality across the entire spectrum of care • Change takes time and this needs to be recognised in allocation of targets and timeframes under new payment models, particularly early in the change process. Support in service redesign can also assist • Those providers who have a significant local presence and a solid market share are in the best position to take up new models

Model	Description and key elements	Lessons
Germany, Bundled Care	Disease management plans (DMPs) are implemented by Sickness funds through contracts with providers The Sickness funds enrol patients into a range of chronic disease programs which include patient selection, coordinated care, patient education, use of an electronic record and evidence based treatment guidelines. The sickness funds must accept any applicant. Sickness funds make a global payment to each regional physician's association, which then distributes this to GPs and specialists on a fee-for-service basis. A payment ceiling is set for each physician	Based on RAND Report: • Size – larger DMPs benefit from economies of scale and a larger resource pool. Larger DMPs have greater capacity to influence physician behaviour and to gather evidence (sample size) on interventions • Simplicity – more successful DMPs have kept administrative processes (such as enrolment of patients) simple and not too restrictive. They have not over-complicated care pathways • Patient focus – successful DMPs have identified patients' needs and capability. They have developed programs that are applicable for patients and have built patient capacity through education and self-management • Information transparency – clear data requirements and reporting metrics support effective DMPs. In addition to physician level collection and analysis, independent analysis of data is provided by third parties • Incentives – these may be financial or non-financial and apply to patients and providers. RAND notes that where there is a fee-for-service model, financial incentives probably remain the strongest form or incentive for physicians
UK, CCGs	CCGs are membership organisations comprised of general practices who elect a governing body which includes GPs, other clinicians and community representatives One of their key objectives is to integrate health and community services They cover a registered population of between 70 and 900,000. They are responsible for commissioning the majority of health services (excluded primary and some specialised care)	• CCG members have mixed views on primary care co-commissioning, with those who held a role in CCG governing bodies feeling more positive about co-commissioning than those who did not • Most GPs do not support performance management by CCGs, although the majority do accept the role of the CCG in primary care development • Clinical engagement in CCGs is declining, but is still higher than under Practice-Based Commissioning, with a minority of GPs believing quality of care had improved and fewer GPs feeling they could influence the work of the CCG • Integration of care is at odds with wide separation between purchaser and provider • It is resource-intensive and requires advanced skills in procurement, contract management and commissioning

5 Question 2

Of the effective models for commissioning primary care identified in Question 1, what are the policy settings in which they operate, including regulation, governance, policy and funding arrangements?

Key Findings

Across all three elements of commissioning activity, there needs to be clear policy, governance and leadership, which define accountability, reporting, consultation, monitoring, roles and responsibilities. However there are some differences in the requirements for implementation between models of commissioning at the level of individual patients, groups or populations.

In the countries studied, broad policy and governance settings are usually defined by government and professional bodies which have broad stewardship over the health system. These define the broader context in which commissioning occurs – including workforce supply, professional standards, funding and incentives – as well as regulating the scope of services which can be commissioned for which groups of people (Figueras, 2005). Governments may also define the models of care or health care package including the structure, quality, amount and cost of services.

There usually is some degree of gatekeeping of access to services otherwise it may be impossible to manage within a budget (Mannion, 2008). For individual commissioning this implies some degree of patient enrolment or registration. However this needs to be open to the population. Furthermore excessive gatekeeping controls which restrict provider autonomy or restrict choice to preferred providers were found to be counterproductive in the US (Ham, 2008). More recent models such as ACOs have involved a greater choice being offered to providers and patients (Robinson, 2004).

It is also very important that there is not high variability in uptake of the program, as in UK GP-fundholding, as this is likely to lead to inequities (Mannion, 2008). This needs to be addressed through widespread efforts to engage providers, and to monitor both uptake (geographically and socioeconomically) and any consequent inequities of access to quality care which may arise.

Policy settings for successful commissioning

Planning

Successful commissioning requires a clear policy framework of national and regional priorities which define agreed targets for Commissioning agencies. In the absence of such planning, Germany has had to establish much greater regulation to ensure equity and balance of interests (Figueras, 2005).

Adequate information on the cost, volumes and quality of health care services is critically important for setting priorities, contracting and monitoring performance. Lack of this resulted in serious problems in New Zealand in the 1990s (Ham, 2008) which has been partly addressed with the introduction of the Primary Care Strategy (PCS) in 2001 and subsequent developments. There also needs to be an adequate skill base at the national and local level for the analysis of data to inform priority setting and practice redesign (Williams, 2011). There needs to be clarity over roles and responsibilities and supportive legal frameworks particularly in the context of funds pooling or flexible use of budgets and joint commissioning involving different levels of government or sectors (Newman, 2012).

Contracting

Skills are also especially important in the securing or contracting domain for procurement, risk and contract management (Figueras, 2005). Local commissioners and providers need to have the competency for local decision management (Russel, 2013). This includes priority-setting, engagement of the population and stakeholders, quantifying, costing, structuring demand, ensuring services are effective and high quality, collaboration and partnership, information management, innovation, governance, compliance, accountability, project management and leadership (Dickinson, 2015). Measures must be in place to ensure stability of the management workforce as high staff turnover undermines the relationship (Newman, 2012).

Providers need autonomy to respond flexibly to contracts (Figueras, 2005). Much of the backlash against managed care was due to heavy-handed restrictions on providers. Providers need the flexibility to be able to respond to patient need and changing conditions and develop innovative solutions. Strict interpretation of competition law in New Zealand made it difficult to develop long term contracts and relationships between purchasers and providers necessary for effective commissioning and service continuity (Ashton, 2004). Integrated care involving primary and secondary care or health and social care is especially difficult to deliver in the context of competition and separation of purchaser and provider (Mannion, 2008). Commissioning for long-term condition services requires competition and purchasing policy which allows commissioning to be undertaken in partnership with providers, blurring the distinction between commissioners and providers (Shaw, 2013).

Both providers and consumers need to be engaged (Joyce, 2015). This takes time but is crucial in building trust and legitimacy for commissioning, especially where difficult decisions have to be made (Dickinson, 2013). This needs to be driven clearly by policy mandating clinician and consumer involvement in the commissioning processes (Sampson, 2012). Incentives for the service workforce need to align with commissioning aims (Dickinson, 2015). The tools to influence providers should include capitation, episode-based funding and pay for performance (Ham, 2011). There also needs to be regulation to ensure procedural fairness and transparency about purchasing contracts to ensure trust (Figueras, 2005).

Monitoring

There is a need for high-quality nationally standardised performance measures and data requirements to be built into contracts and ongoing monitoring and evaluation. This is reinforced by public reporting and incentives to reward providers and consumers of good quality of care as part of 'value based purchasing' (Guterman, 2013). A poor fit between goals and intended outcomes and performance measures may lead to unintended consequences (e.g. sacrificing quality over cost saving).

Table 4: Requirements for implementation of effective models

Domain of commissioning	National	Local
Planning	Workforce planning for more flexible workforce (Ham, 2008) Integration requires some flexibility about competition and separation of purchaser and provider (Newman, 2012) Clarity over roles and responsibilities and supportive legal frameworks particularly in the context of pooling or flexible use of budgets and joint commissioning (Newman, 2012)	Need good information on pattern of care, quality, cost of services (Newman, 2012) Need to engage and involve patients and clinicians (Sampson, 2012) and ensure widespread uptake to prevent inequities (Mannion, 2008)
Contracting	Providers need autonomy to respond flexibly to contracts (Ham, 2008) Consumers need choice protected in contracts or regulation (Ham, 2008) Need capitation and incentives that align with the aims of commissioning (Dickinson, 2015) Competition law at odds with cooperation and relationship development (Ashton, 2004)	Need to have or develop management, technical and financial capability and stability of staff to implement commissioning (Figueras, 2005) Need time to develop relationships and engage community and clinicians in contract negotiations (Ham, 2008) Integrated delivery facilitated by collocated teams and conterminous boundaries (Newman, 2012)
Monitoring	Focus on accountability of providers for both cost and quality including patient outcomes and reduce inappropriate care (Ham, 2008) Need common performance and outcome measures (USA, UK) (Guterman, 2013) Need consumer monitoring e.g. "Healthwatch groups" within quality commission (Newman, 2012)	Requires good data systems to monitor performance measures at local level (Robinson, 2012)

6 Question 3

Drawing on evidence identified in questions 1 and 2, and taking account of impacts, risks and unintended consequences, which models (or components of these) could be applied in Australia, or if Australian, which models (or components of these) could be used more widely?

Key Findings

In response to question 1, we found little evidence of the effectiveness of commissioning at any one level (population, subgroup or individual patient). It is also clear that impacts are highly context-dependent. Transferring models or elements of models to other contexts therefore needs to be undertaken with careful consideration, and there needs to be scope for innovation (Dickinson, 2015). As the distribution of studies suggests, commissioning is likely to occur at different levels in different health care systems, for example individually in the very disparate US system, and on populations in the UK, where the NHS is the single funder of all services.

In Australia, there is almost universal access to primary medical care through Medicare and state/territory government funding, and commissioning has been used largely to fill gaps rather than as the framework for mainstream health services. For individuals this has included services not included in Medicare such as home care (Veterans Home Care) and disability care (the National Disability Insurance Scheme [NDIS]). For subgroups the focus has been on conditions where there is a problem of access to high-quality specialist care, for example for people with severe mental illness, diabetes or in palliative care. For populations it has tended to be for groups otherwise not adequately served: rural areas or indigenous populations. There is little experience with commissioning mainstream primary health care and little published literature from Australian programs other than from CCTs in the 1990s and evaluations of existing programs such as After Hours.

This suggests that there is significant work to be done in areas of policy and governance, funding systems and incentives, patient enrolment or registration, information systems, individual and organisational capacity, community engagement and experience in commissioning before it is likely to be viable option, especially in complex areas such as integrated care, care across the Commonwealth/state divide and between primary health care and acute care.

Australia might be wise to move slowly towards commissioning, starting with relatively uncomplicated areas where the benefits are clearest, monitoring progress carefully and only expanding as experience is gained and all the elements required for commissioning are in place. In this process, it will be important to consider the potential benefits and impacts, and risks and possible unintended consequences in the table below, and work on the issues identified underneath it.

Requirements for effective commissioning

Question 2 identified some requirements for effective commissioning, at the national and local level. Table 5 describes some aspects of the Australian health care system which will have an impact on these requirements, and some of the implications for commissioning.

Table 5: The Australian health system: Potential impacts and implications for commissioning

Aspect of Australian primary health care	Potential impacts	Implications for commissioning
Funding and accountability for primary health care from more than one level of government	Conflicting purposes, lack of integration, a high reporting burden, perverse incentives and cost shifting	Need to harmonise aims, pool funding and/or share benefits, align boundaries, priorities and accountability and align incentives
Different funding and accountability for acute care and primary health care	As above, making it difficult to integrate care or change patterns of care between primary and secondary care	As above
Individuals not formally registered with any primary health care providers, except with private health insurers, who currently have a limited role in primary health care	Difficult to calculate budgets, measure outcomes or hold providers accountable for care provided	Some form of registration or identification of individuals needed
Primary health care can be funded from Medicare Benefits Scheme (MBS) independently of commissioning	Less incentive to operate within the framework of commissioning, and may use MBS to supplement capped care budgets	Need to clearly differentiate commissioned services and ring-fence from other sources of funding, or explicitly include MBS funding in joint pool
Dominance of fee-for-service	Rewards patient contact and procedures at the expense of other activities (e.g. care coordination, prevention); does not encourage innovative approaches to organising and providing care	Shift towards a system of blended payments with capitated payments, fee-for-service and quality payments appropriate to the intended outcomes. Some services may be bundled for the purposes of payment
Very limited data on services provided in primary health care (Bramwell, 2014)	Hard to identify gaps, measure costs, specify outcomes or determine the impact of commissioned services	Invest in improved data systems; ensure data is available to support commissioning
No clear framework for accountability or structure for clinical governance in primary care	Hard to measure and reward quality or make primary care providers accountable for quality of care	Need for consistent structures (e.g. the CQI networks being established for Aboriginal Community Controlled Health Services) for accountability and clinical governance, linked to appropriate incentives
Very limited experience in commissioning services	Unskilful commissioning may lead to poor decisions, including costly purchases, poor quality service and damage to service networks	Develop commissioning slowly and carefully, with appropriate monitoring and evaluation. Invest in workforce and systems for commissioning

Potential impacts, risks and unintended consequences of commissioning

Potential impacts, risks and unintended consequences of commissioning with respect to each of the elements of commissioning are outlined in Table 6.

Table 6: Potential impacts, risks and unintended consequences of commissioning

Element	Potential impacts/benefits	Risks/unintended consequences
Planning	Comprehensive assessment of individual or community need	Commissioners may lack the skills and the data to support needs assessment
	Opportunity to address inequities in a systematic way	It may be difficult adequately to engage under-served groups in the commissioning process
	Personal budgets allow consumers and providers to plan the services they need and select their providers	At the system level, fixed personal budgets may reduce the ability to cross subsidise those with lesser to greater need At the provider level, it may be difficult to plan and develop services when dealing with many personal budgets
	Opportunity to engage community	Technical aspects of commissioning can lead to an under-valuing of relationships with and between service providers, and sideline community input
	Opportunities to innovate	Lack of capacity and experience in commissioning Perpetual restructure and system redesign not conducive to learning (McCafferty, 2012)
	Opportunity to pool funds from a variety of sources	Can be difficult to align aims, policies and accountability for different funders and to demonstrate evidence of benefit (Goldman, 2010) Hostage to changes in any of the funders Payment systems may be incompatible
Contracting	Opportunities for savings through choosing cost effective services	May focus on cost at the expense of quality High transaction costs associated with commissioning (Newman, 2012) Providers may cherry pick easy clients (Barnes, 2013) Effective local services may lack capacity for tendering May be a limited market of potential providers Commissioning may bring new entrants into the market with capacity to deliver quality services (McLeod, 2015)
	Opportunity to improve coordination and reduce duplication (Newman, 2012)	Competitive commissioning may undermine collaboration Large non-government organisations (NGOs) or private organisations may replace local services with strong connections The cycles of review and re-commissioning may disrupt health care and undermine collaborative relationships

Element	Potential impacts/benefits	Risks/unintended consequences
Contracting (continued)	Opportunity to incentivise high-quality care/effective models of care	Some aspects of care (e.g. prevention and health promotion) may be sidelined (Barnes, 2013) Ongoing services may be replaced by time-limited programs, undermining trust and sustainability
Monitoring	Opportunity to monitor individual and community changes in service use and health status	Current information systems may not be adequate
	Provider and community satisfaction may improve if they perceive themselves more able to provide and receive relevant and effective services (Procom review, table 4)	Restrictions on autonomy and choice may reduce satisfaction Commissioning may be used to ration services (Barnes, 2013) Inadequate budgets may reduce consumer engagement Loss of job security for providers

Considerations for implementation in Australia

Based on the above, it seems likely that in developing the commissioning of primary health care in Australia it will be important to consider the following issues:

- Fragmentation
- Pooling funds/joint commissioning
- Commissioning for value
- Commissioning for integration
- Registration/enrolment and ring-fencing
- Incentives
- Accountability and clinical governance
- Market development
- Skills and Infrastructure.

Further details are provided below.

Fragmentation

There needs to be a joint governance body, organisation or alliance of organisations to first deal with the fragmentation of responsibilities in any of the levels of commissioning in the Australian context. This will have to first provide a clear framework for accountability within which commissioning can occur, especially if involves organisations like Primary Health Networks (PHN) as commissioning bodies. This is obviously less an issue the narrower the commissioning role.

Pooling funds/joint commissioning

Pooling funds or joint commissioning is important where services or programs that are being commissioned require collaboration across jurisdictions. This can occur at any level: national and state, regional or individual. Funds pooling and joint commissioning can free service providers from conflicting requirements, but they involve harmonising the often conflicting requirements of different jurisdictions/funders, and sharing risk can be complicated. Australian experience of funds pooling has tended to be with clearly defined programs (e.g. the Coordinated Care Trials) and services (Regional Health Services Program and Multi-purpose Services).

The Regional Health Services Program was a national program of health service funding for smaller rural and regional communities (Regional Health Services Program, 2002; Delphi Mentors, 2006). It originally went to Area Health Services (AHS), after which it was contestable by Medicare Locals (MLs), and possibly others. The aims of the program were to:

- Enhance access to quality, multi-disciplinary, comprehensive primary health care services
- Establish and maintain mechanisms for effective community participation in the ongoing review, planning and management of health services
- Adopt integrated approaches to planning and delivery of health services to maximise health gains for consumers
- Manage services within a quality framework including organisational and cultural change.

Commissioning for value

Commissioning should be on the basis of value rather than cost alone. This involves making the trade-off between cost and quality explicit. While commissioning is often thought to improve efficiency, there is little evidence that commissioning in itself saves money, particularly as there can be significant overheads involved in the commissioning process (Ham, 2008). However it may provide opportunities to improve quality and outcomes. Commissioning for value relies on evidence of effectiveness, an understanding of local context, valid and feasible measures of quality and/or outcomes and appropriate incentives for services and providers. Each of these elements will need to be developed further.

Commissioning for integration

Commissioning can be used to rationalise care and promote coordination. However there is a risk that commissioning can fragment care (for example separating physical and mental health care for people with mental illness) and disrupt relationships between services. This can occur where the services being commissioned are too narrowly defined, where current partners have to compete with each other for contracts or where successful tenderers have no connections in the area. This may be particularly likely when commissioning is on the basis of cost rather than quality (of which integration is a part).

The Kings Fund (Addicott, 2014) highlights four main issues to consider in commissioning for integrated care:

- It is essential to continually engage and communicate with providers, patients and the wider community to define the problem and identify appropriate solutions
- It will be important to develop both transactional (i.e. technical) and relational (i.e. trust) approaches
- Payment mechanisms and incentives will need to be aligned across providers
- Providers will need to develop appropriate governance and organisational models (including inter-organisational links).

Registration/enrolment and ring-fencing

Lack of patient registration is a problem chiefly for individual and subgroup commissioning, where it can make it difficult to plan services, identify the participants in programs, develop budgets, hold providers accountable and measure outcomes. This is a particular problem in private general practice, with its strong ethos of private provision and patient choice, but it also applies more widely, for example in state/territory programs providing supplementary services for people with chronic conditions.

The wide scope of MBS payments can also blur the boundaries of commissioned services. It can be difficult to stop providers or receivers of commissioned services 'double dipping' from the MBS unless MBS is in the funding pool.

Incentives

Payments and other incentives need to be consistent across a program or service, and aligned with the type of care that has been commissioned. This is needed at all levels: for provider organisations, for clinicians and for patients. This may include block payments, capitation payments, fee-for-service and payments (or penalties) for quality and/or outcomes of care. The best mix will reflect the nature of the service provided and the risk that the provider faces. A UK review of methods of payment for general practice concluded that 'the evidence suggests that blended payment models may have advantages but that there is no evidence to identify the appropriate mix of payment schemes, but evidence suggests that a mixed system is usually most effective (Peckham, 2014). Australia is strongly reliant on private fee-for-service in the primary care sector, and activity-based funding and block payments for acute and community health services. Commissioning will require a broader and more flexible range of options. There will need to be careful design of the mix of payments and incentives for each program or service, to align the often competing priorities of providers in different sectors to achieve system-wide objectives of high quality, efficient and sustainable patient care.

Accountability and clinical governance

Commissioning requires clear accountability between funders and providers of services, for example for the volume, quality, equity and community/patient satisfaction with services provided. It also needs systems of clinical governance and quality improvement through which the quality of services can be monitored and improved. Australia currently has very loose accountability in primary health care and varied clinical governance, which in private practice is dominated by accreditation and medico-legal concerns. The shared care programs developed particularly by Divisions of General Practice showed that systems for accountability and clinical governance can be developed across sectors, and that this requires careful negotiation, agreed indicators of quality and significant improvements in information systems, with a concomitant investment in time and money.

Market development

Commissioning requires a 'market' of service providers able and willing to bid for contracts and provide services within a commissioning framework. In many places in Australia this does not exist, either because of a shortage of services (rural and remote Australia) or because their ways of working do not fit easily into the mould of commissioning (general practice). Developing the market is therefore an essential part of commissioning. The NDIS is a case in point. Providing people with personal budgets will be of no use if there are no services for them to purchase, or there is no one to assist the providers to provide services of adequate quality.

Market development may support existing providers or bring new services into the area. The form of development will vary: some providers will simply need to 'learn the ropes' of commissioning while many private providers will need to improve their organisational capacity and systems, and may need to form larger units. One danger to be alert for is replacing local services, which provide good care but lack expertise in commissioning, with 'outside' services with expertise in commissioning but without the capacity for local relationships needed for good care.

PHNs (and to some extent Local Health Districts) may be well placed to develop the local market of services.

Skills and infrastructure for commissioning

Commissioning requires specialised skills and good systems for information and risk management. While some of the skills are available in other forms (for example needs assessment in Local Health District planning units), it will take some time to develop the skills for effective commissioning on any broad scale. Clinical knowledge in commissioning may improve the quality of commissioning (Naylor 11). While we are

fortunate in having an increasing number of health workers with commissioning experience in the UK, this will not translate directly to the Australian health care system.

Significant investment will be needed in the organisations, the staff and the services which will be expected to take in commissioning, as funders or providers. The advice from England, where there has been the greatest experience, is unequivocally to move slowly with commissioning (Addicott, 2014). At least for commissioning some services, there is evidence that incremental change is more effective than wide-scale change across complex systems (Shaw, 2013).

7 Conclusions

This review has addressed three specific research questions about the form of commissioning best suited to the Australian primary health care system.

1. There is some limited evidence for the impact of commissioning on service use and costs. However there is no evidence for the superiority of any one commissioning model or commissioning organisation in targeting individuals, groups or populations. We have identified three domain elements (planning and contracting and monitoring) which appear critical to the process of commissioning and the skills and capacity required to implement these.

2. In support of all three domains of the commissioning process, there needs to be clear policy, governance and leadership which define priorities, accountability, reporting, consultation, monitoring, roles and responsibilities. System and workforce support are also needed to conduct each of the three steps in the commissioning process effectively.

3. The Australian context presents several challenges to the effectiveness of commissioning for primary health care including the division of funding and accountability, dominance of fee-for-service, lack of patient registration, and lack of experience with commissioning. It is likely that the model will involve joint commissioning between Commonwealth and States. Clear accountability for value and integration of care as well as cost would be desirable. Significant effort will be required to develop the provider market and the skills and experience required for this type of commissioning. Overseas experience suggests that a cautious incremental approach would be wise.

8 Researchers' reflections

1. **Commissioning seems attractive, both as a response to particular service needs and as a general approach to service development.** It can be seen as a way of:
    - Encouraging service planners to be very clear about what services are required for given individuals or populations
    - Finding the most appropriate service providers for a particular need
    - Seeking value for money
    - Having explicit levers through which to encourage quality of care.

This is particularly so in the Australian context, where there is a need to create more comprehensive, integrated and patient-centred care from a mixed economy of often disconnected providers.

2. **However there are also significant risks involved in commissioning, which can undermine its effectiveness as a way of providing high-quality, high-value patient and community care.**
    - There may be a limited understanding of commissioning: it may be equated with contracting services out to external providers, rather than seen as a comprehensive process of ensuring the best mix of services, regardless of provider. There is also limited but conflicting evidence for its impact on health disparities
    - Commissioners may lack the technical skills needed for each of the stages of commissioning – defining needs, contracting and monitoring. Where this is so, there is a danger of inappropriate services, weak governance and poor outcomes, including greater inequity
    - The overheads for managing commissioning can be high: some estimates put the cost to the NHS in the UK at about 15% of the budget. These overheads need to be included in any calculation of cost-effectiveness
    - Commissioning is predicated on having an effective market of potential providers. This may not be available
    - Where commissioning sets up competition between potential providers, this can undermine the collaboration needed for effective and integrated health care
    - It can be difficult to ensure quality through commissioning. This requires clear outcomes, good data and information systems, and active use of feedback and incentives. Quality can be undermined through gaming, and 'unrewarded' aspects of care may be neglected
    - Commissioning can cut across the relationships needed for effective care: the relationships between providers needed for integration, between providers and communities to ensure that services are appropriate, and between commissioners and contractors, who need to collaborate in ensuring that cost effective services are provided
    - Good local services can be excluded from contracts simply because they lack the capacity to tender effectively, or because commissioners may prefer to manage fewer contracts with a smaller number of organisations, with whom they may have existing relationships.

3. **Many of the pre-conditions for ineffective commissioning are present in Australia**.
    - There is insufficient breadth of experience or the skills required for commissioning
    - There is a shortage of data to define needs and measure quality of services, and often a lack of agreement about priorities and measures
    - There is no patient enrolment with primary care providers
    - The market of primary health care providers is undeveloped, due in part to the small size and varying capacity of services
    - Decisions about commissioning may be made at a level (state or national) where the local failings of poor commissioning may not be apparent
    - Policies and incentives are not harmonised across different sectors (e.g. public hospital and primary care), making cross-sector commissioning difficult
    - The variety of funding mechanisms and the reliance on fee-for-service for primary health care makes it difficult to have a coherent approach to commissioning.
4. **Australia should therefore proceed cautiously with commissioning. We might:**
    - Focus on contexts where there is a gap in services which is fairly well understood, for example a lack of primary care and primary allied health care, or of palliative care or detoxification services
    - Develop the conditions for effective commissioning: consistency between different sectors, funding systems that support collaboration (including funds pooling and a reduced emphasis on fee-for-service), patient registration, establishment of data and information systems, agreed measures of cost and quality and effective systems for monitoring and feedback
    - Test the potential for commissioning to support new service models across public, private and non-government sectors, and across levels of government, with careful evaluation. This should include the impact on consumers, communities and the broader health care system as well as the services provided, and the costs of commissioning should be included in all costing exercises.

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10 Appendices

Appendix 1: Methods

1. Search strategy

This review was conducted in a period of six weeks in July and August 2015. It drew from a comprehensive search of the Australian and international literature on commissioning.

Material was found through consulting with experts from the UK, Canada and New Zealand, searching library databases, hand-searching from the reference lists of articles and selected journals (Health Policy, Health Services Research and Policy, Health Management journals and Health Economics) and searching relevant websites from Australia, the US, UK, New Zealand and Europe.

Searches were conducted in the following data bases using the search terms outlined below.

- Medline
- Embase
- CINAHL
- Informit
- Cochrane database of systematic reviews.

Search terms

1 commissioning.mp.

2 exp Contract Services/ma, mt, og, sd, ut [Manpower, Methods, Organization & Administration, Supply & Distribution, Utilization]

3 procurement.mp.

4 exp Group Purchasing/mt, og, ut [Methods, Organization & Administration, Utilization] (323)

5 commissioning health services.mp.

6 exp Value-Based Purchasing/ec, og, ut [Economics, Organization & Administration, Utilization]

7 clinical commissioning.mp.

8 1 or 2 or 3 or 4 or 5 or 6 or 7

9 exp "Delivery of Health Care"/ec, ma, mt, og, sd, ut [Economics, Manpower, Methods, Organization & Administration, Supply & Distribution, Utilization])

10 health planning/ or health resources/ or national health programs/ or regional health planning/

11 9 or 10

12 exp primary health care/

13 exp family practice/

14 exp Health Maintenance Organizations/

15 public health services.mp.

16 12 or 13 or 14 or 15

17	8 and 11 and 16
18	limit 17 to (English language and yr="2000 -Current")

Inclusion criteria

To be included in the review, studies had to have been conducted since 2005 and incorporate key aspects of commissioning of primary health care services with a focus on purchasing services at the primary and acute care interface or chronic disease management. Studies had to report on one or all of the following: key elements or activities of a local/regional level commissioning process; impacts on processes of care; client outcomes; cost containment; patient satisfaction or barriers and facilitators to implementation of commissioning. Qualitative and quantitative studies were included. Studies were excluded if they did not explicitly include some elements of commissioning and report on at least some impact, outcome or barrier to implementation. Papers drawing on expert opinion were also excluded but retained for background to the review. Inclusion and exclusion criteria are outlined in the table below.

Inclusion and exclusion criteria

No.	Criteria	Include	Exclude
1	Date of study	Papers since 2005	Papers published prior to 2000
2	Language of publication	The study is in English	Studies not published in full text in English
3	Country of study	Australia, UK, USA, Canada, Germany, Netherlands, New Zealand	
4	Participants	The study addresses commissioning for: 1. Population groups such as • Priority populations (including Aboriginal people, homeless people, substance users, people of Culturally and Linguistically Diverse [CALD] background, prisoners) • Veterans 2. Conditions such as • Chronic disease • Disability • Mental health 3. Service types such as • Primary health care • Social care • Home care • Transition discharge • Medication management • Maternity services	The study is not focused on commissioning with respect to the intersection of primary care with acute care sector or chronic disease management

No.	Criteria	Include	Exclude
5	Type of study	Qualitative and quantitative studies: 4. Evaluation 5. Research reviews 6. Systematic reviews 7. Descriptive reviews 8. Case studies 9. Comparative studies Opinion pieces/commentaries that focus solely on describing interventions, approaches or strategies without any evaluation or analysis of the results will be retained for background material	
6	Subject of study	The study describes the elements/activities of commissioning: 10. Identification of needs 11. Service planning 12. Purchasing and evaluates the approach, in terms of: 13. Cost containment 14. Sustainability 15. Effectiveness 16. Outcomes 17. Processes 18. Access, equity 19. Acceptability to either users or practitioners and describes the context in which it operates: 20. Federated system 21. Payment arrangement 22. Patient enrolment 23. Provider groups and explores the needs, potential avenues, challenges, perceptions and barriers to successful commissioning approaches or strategies	Research purely reporting incidence, prevalence or demographics associated with chronic disease or population screening Research that focuses on a single activity such as service purchasing and does not include all aspects of commissioning

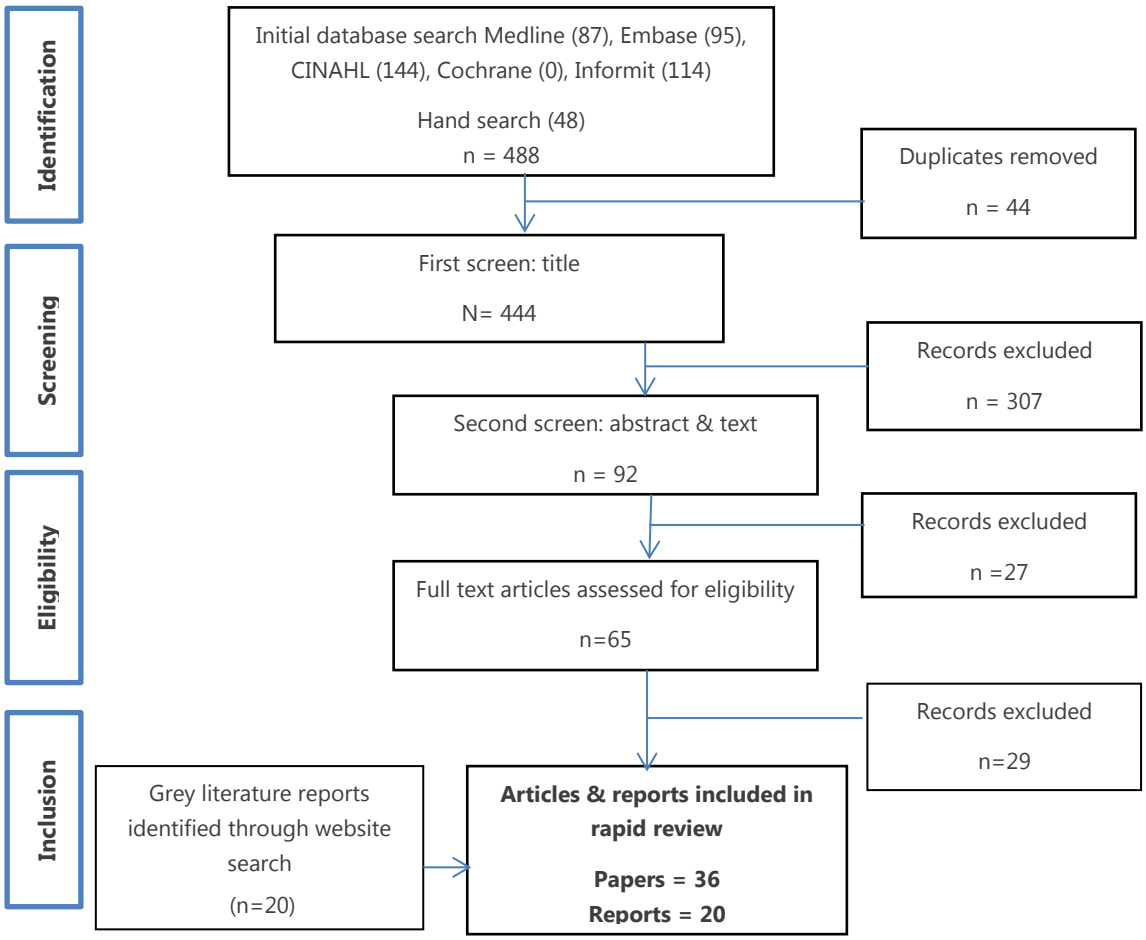
No.	Criteria	Include	Exclude
7	Who commissions/ commissioning body	The approach or strategy is located in: 24. Country of interest and commissioners include: 25. A general practice, family practice, health clinic, community health centre, an Aboriginal Community Controlled Health Services (ACCHS) centre 26. Regional health 27. Primary care organization, 28. Other primary health care service 29. Insurance company 30. Kaiser Permanente 31. NGOs 32. National, state, local governments	

Grey literature

Grey literature searches were conducted in relevant Australian and International websites, through google scholar and hand searches of relevant reports. Our international experts were asked to identify and locate relevant websites, evaluation and other reports. These have included 5 experts advising on Canada (from 4 provinces); one on New Zealand; four on the UK; one on the USA; and one on Germany and Europe. The results of the search are summarised in the table below.

3. Search strategy results

As shown in the diagram below, 444 papers were identified in the initial search and of these 408 that did not meet our criteria were excluded, leaving 36 papers for review.



Of the overall number of papers identified, 91 were descriptive papers that drew on expert opinion to describe various models, related policies or reforms, or that explored some aspect of commissioning such as clinician involvement. These were not subjected to full review as they did not meet the criteria for having an evaluative element but were retained as background information and have been used in this report.

3. Data extraction

Two templates were used for extraction of data. For grey literature, data were extracted into a template that included details on: program name; description of key strategies/mechanisms; study type and any evidence of impact on service use, cost, client outcomes or analyses of barriers and facilitators to implementation or sustainability (quantitative or qualitative). Two reviewers identified programs and reports and extracted data from the grey literature (GPD, KE) and five extracted data from the black literature (JM, KG, MH, CJ, RA). Data from the black literature were extracted into a template that covered the following details: country, model or aspect of commissioning, study design, relevant results and implications. The quality of studies was not formally assessed as all studies that met the criteria were included in the review.

The commissioning cycle (planning, contracting, monitoring) formed a framework for analysis of the literature and impacts were assessed at individual, subpopulation, or population levels.

4. Characteristics of identified studies

Of the 36 studies included, 30 are from England (including one comparison of commissioning in England and Germany), one from Finland, four from USA, and one from New Zealand. No studies from Australia or Canada were identified that met our inclusion criteria. This may be because it has only recently emerged as a major policy issue in these countries.

As shown in the table below, included studies cover a range of different commissioning organisations. These include PCTs, Fundholding Practices, PBC, CCGs and Joint Commissioning in the UK, Municipal contracting in Finland, Managed Care and Accountable Care in the USA, and District Health Boards in New Zealand. Studies are predominantly qualitative involving case studies, interviews and/or surveys of the perceived impacts, levels of engagement, success factors, barriers and enablers to commissioning, or satisfaction among different stakeholder groups. Six quantitative studies assessed the impact of commissioning on cost containment and service use and there was one cluster randomised controlled trial on the impact of pay-for-outcomes on smoking cessation rates.

Included studies by commissioning organisation and study type

Commissioning organisation	Study type*	No. of studies	Focus of study
UK PCTs (n=12) Comparing PCTs with other types of commissioning (n=4) Alternative Provider Medical Services (APMS) (n=1) Health Living Pharmacy (HLP) n=1 Personal Dental Service Scheme (PDSS) n=1	Six qualitative Six mixed method Six quantitative including 1 RCT	18	Redesigning children's services (Barnes, 2013) **PCT** Collaborations between PCTs for commissioning secondary care services (Baxter, 2007) **PCT** Barriers and enablers to commissioning (Bradley, 2006) **PCT** Characteristics of commissioning managers (Checkland, 2012) **PCT** Engaging pharmacy in pharmaceutical needs assessment for commissioning pharmacy (Elvey, 2006) **PCT** Perceptions of value of priority setting tools (decision support) for resource allocation (Marks, 2012) **PCTs** Cluster RCT examining impact of commissioning on smoking cessation and entrance of new market players (McLeod, 2015) **PCTs** Commissioning services for long-term conditions (Shaw, 2013) **PCT** Use of external consultants by NHS commissioners (Naylor, 2011**) PCT** Priority setting and rationing in PCTs (Robinson, 2012) **PCT** AFR (Accountability for Reasonableness) Framework to aid decision making (Vergel, 2006) **PCT** Program Budgeting & Marginal Analysis tool (PBMA) for purchasing (Wilson, 2007) **PCT** Comparisons across commissioning models in Germany & UK (Sheaf, 2013) **PCT and other** Views of CCG versus PCT commissioning (Turner, 2013) **PCT and CCG** Are GPs best placed to deliver equity and excellence –

Commissioning organisation	Study type*	No. of studies	Focus of study
			comparing GP commissioning with PCT (Gridley, 2012) **PCT and other** APMS Contractual processes (Coleman, 2013) **UK Alternative Provider Medical Services (APMS)** Commissioners viewed HLP scheme as an effective model with which to deliver increased volume, quality and reliability of community health services (Kennington, 2013) **HLP** Commissioning dental services through Personal Dental Service Scheme (Newton, 2005) **PDSS**
Fundholding Practices (n=1) PBC n=2 CCGs n=7	Six quantitative Six qualitative	10	Impact on cost containment & service use (Dusheiko, 2006) **Fundholding** Barriers to Practice Based Commissioning (Checkland, 2009) **PBC** Practice Based Commissioning as a service redesign tool (Slater, 2007) **PBC** Investigating disinvestment practices (Rooshenas, 2013) **CCG** Exploring development of Clinical Commissioning Groups (Checkland, 2013) **CCG** Attitudes of GPs to commissioning including level of GP engagement with clinical commissioning and attitudes to incentives and/or impediments to engagement with clinical commissioning? (Ashman, 2014) **CCG** What governance structures are forming under the CCG model, how are they engaging members and serving the population they represent. (Peckham, 2013) **CCGs** Attitudes of CCGs to outsourcing commissioning functions (Petsoulas, 2014) **CCGs** Do GPs bring value to commissioning (Perkins, 2014) **CCGs** Development of world class commissioning in UK –lessons for CCGs (McCafferty, 2012) **CCGs**
Joint commissioning	Quantitative	Two	Challenges to implementation of joint financing of health and social care, perception of value for $ and impact on service users (Goldman, 2010) Impact of partnership working in integrated specialist mental health on role clarity, job satisfaction, fragmentation and integration, teamwork (Freeman, 2006)
Municipal contracting (Finland)	Qualitative	One	Rationale for purchasing from private sector (Tynkkynen, 2012)
Managed Care contracting (USA)	Mixed method	Two	Physician satisfaction & impact on practice of managed care contracting (Ly, 2013) Implementing bundled payments (Hussey, 2011)

Commissioning organisation	Study type*	No. of studies	Focus of study
Accountable care (USA)	Case study	Two	Strengths and weaknesses of Accountable Care (Song, 2015) Accountable Care costs (Salmon, 2012)
District Health Board (NZ)	Qualitative	One	Decentralizing resource allocation (Ashton, 2008)

*Study type – Quantitative/Qualitative /RCT/Mixed Method/Case Study

Appendix 2: Detailed description of commissioning in Australia and overseas

Different countries have had a variety of reasons for moving to more explicit commissioning of services, and different aims in doing so. In the UK, commissioning has been in part an attempt to use market forces to bring innovation into a highly centralised system, often with an emphasis on improving access to care. In parts of Eastern Europe it has been part of a move away from exclusively state-run health services towards more private sector provision. In the USA it has been used to organise coherent and affordable health care for groups of people (veterans, employees, Medicare recipients, members of Health Maintenance Organisations) within a largely unstructured system.

Many of the reasons for considering a greater role for commissioning in Australia are described in the Reform of the Federation discussion paper (Australian Government, 2015), as well as the Primary Health Care Advisory Group's discussion paper (Australian Government, 2015). Moving away from a system that rewards occasions of service to one that places greater emphasis on the quality and cost of service delivery is an important driver. In the context of an uncapped, largely fee-for-service primary health care system for private medical or allied services, a significant intention is to improve access to care for specific patient groups while keeping a cost-effective sustainable system. In terms of service provision, there is a need to offer more appropriate packages of care for older people or those with chronic conditions or complex care needs, and to provide services which will avoid or reduce hospitalisation where appropriate. This requires being able to combine different sources of funding, and rationalise often-conflicting systems of accountability. This is especially important in Australia's Federated system with shared funding responsibilities for health between Commonwealth and states. Pooling funds and jointly commissioning services can begin to address this. Further impetus comes from the interest of private health insurers in providing support services for members who may become users of hospital services.

Australia's first major experiment with pooling funds and purchasing services for discrete populations was undertaken in the late 1990s in the Coordinated Care Trials (CCT) for people with complex care needs. Nine trials tested the hypothesis that coordination of care for people with multiple service needs, where care was accessed through a care plan and from pooled funds (MBS, Pharmaceutical Benefits Scheme [PBS], some hospital, community health and Home and Community Care), would result in improved health and wellbeing. Despite significant effort and major investment, the national evaluation found that outcomes were not improved and that significantly higher health service use and costs were incurred. While the short timeframe of the trials is likely to have limited their success, lessons can be learnt about policy and program design. These are outlined in the box below.

Model	Description and key elements	Learnings
CCTs 1997-99	Aim: to test new models of coordinated care for high service users Rationale: historical divisions of responsibility for health between three levels of government and an uncapped fee-for-service system for ambulatory medical care provided few incentives for integrated care Design: nine coordinated care trials in which care for individuals with complex care needs was purchased through an	Trial results were explained in the final evaluation report as a consequence of: • The short timeframes that prevented the trials from being able to achieve their intended outcomes • The inappropriateness of the outcome measures that were too blunt to have detected change • A client group that did not all meet the identified criteria so could not have benefited • Levels of unmet need that were uncovered

Model	Description and key elements	Learnings
	individual care plan from pooled funds (MBS, PBS, Community health, HACC, Some hospital). Key elements included: • Pooled funds cashed-in via capitation estimates • Devolved purchasing • Formal Care Coordination Evaluation: national evaluation measured patient outcomes (Sf36) and cost effectiveness and individual trials conducted qualitative evaluation Trial results: outcomes were not improved and significantly higher health service use and costs were incurred. Although mean quality-of-life of patients did not improve, some clients reported a positive experience; some care coordinators perceived that the trial was of benefit to clients	• Problems associated with running a trial within a context that retained elements of a universal system Studies arising from local trial evaluations argued that there was a failure both of implementation and program design In one site, evaluators argued that although elements of an integrated model had been put into place, pre-existing relationships and structures prevented them from being fully operationalised. Linkages between care planning, purchasing and fund pooling that were required to manage the fund pool and strengthen the role of GPs as gatekeepers to secondary services were not established Incentives provided were insufficient for motivating behaviour change: • Care plans were not a good basis for purchasing • GPs did not become gatekeepers • Cost saving strategies were not taken up • Improvements in continuity were impeded by limited provider network development Another trial site argued that there were failures in both design and implementation, including fund pooling arrangements that provided limited possibilities for service substitution, inadequate training of GP care coordinators, limited focus on clinical guidelines or consumer empowerment and a trial design and expected outcomes that were unrealistic

The table below shows some existing approaches to commissioning services in Australia. Initiatives that are particularly important in Australia at present include:

- Flexible funding for Medicare Locals (and now PHNs) to use to commission services to meet local needs
- Specific programs like Partners in Recovery which have been commissioned from local organisations or consortia
- Contracting services to NGOs: for example Victoria has commissioned much of its community health program from the non-government sector, and NSW Health has an extensive set of NGO contracts

- The contracting out of HACC services, and of defined packages of care
- Veterans Home Care, which has created regional commissioning agencies who then contract with local providers
- Telehealth programs, including Health Direct Australia, the national after-hours line.

For each of these initiatives, the table shows the level at which services are commissioned (for individuals, subgroups or populations), the length of the initiative, type of commissioning (primary or secondary), the breadth of services commissioned, and the scope of commissioning activities.

Recent approaches to commissioning services in Australia

Program/ commissioner	Level*	Length**	Type of commissioning***	Breadth of services commissioned	Element in the commissioning cycle		
	Individual **Subpopulation** **Population**		**Primary/secondary**	**Specific or narrow**	**Strategic planning**	**Design and contract services**	**Manage, monitor & evaluate performance**
MLs flexible funding	Population	Short-term	Primary	*Specific* Health prevention Clinical health Allied health Outreach	Yes	Yes	Yes
MLs/ACCHSs extra programs • Headspace • Access To Allied Psychological Services (ATAPS) • After Hours • Partners in Recovery • Mental Health Nursing • Rural Health Program	Subpopulation	Short-term	Secondary	*Specific services for population groups* Mental health Allied health After hours Mental health nursing	Yes	Yes	Yes

NGO Grant Program (NSW)	Population	Long-term	Primary	*Specific*	Yes	Yes	Yes
NDIS	Individual		Primary	*Broad*	Assessing individual need	No	No
HACC	Population	Long-term	Secondary	*Broad & specialised*	Yes	Yes	Yes
DVA • Home care • Telehealth	Subpopulation	Long-term	Secondary	*Specific services* Home care Telehealth			

*__Level:__ Individual/group/population

**__Length__: short =<3yrs; long =>3yrs

***__Type of commissioning__ – primary involves all elements of cycle/secondary commissioning involves procurement and monitoring

Population: services commissioned for identified populations on the basis of regional or locational needs assessment

Subpopulation: services commissioned for particular subpopulations such as people with chronic disease, mental health, or people seeking after-hours services on the basis of regional or locational needs assessment

Individual: services commissioned for an identified group of individuals on the basis of an individual needs assessment or care plan

Key features of commissioning

Commissioning may be conducted by national, regional or service organisations for populations, groups or individuals. Commissioning bodies are usually government or insurance bodies but in some cases regional commissioning bodies have been established such as CCGs (UK) and PHNs (Australia).

Major funding sources for commissioning differ from country to country and may include government (through taxes), employers (e.g. in the USA), health insurance funds (e.g. in the Netherlands) and consumers. There are also other sources such as occupational health services. Joint commissioning involves several funders working together, often pooling funds to commission services of mutual interest (for example, national and state/territory governments, health and social care).

Across the activities of commissioning a balance is required between the technical aspects of commissioning (such as assessing needs and contracting) and developing and maintaining relationships, between commissioners and providers, and amongst providers. Relationships with communities and consumers are also important (Addicott, 2014).

Purchasing may be through a contract for specific services, or through an agreed system of fees for particular services (as in Activity Based Funding) supported by agreements about safety and quality, or on a capitation basis. Services may be provided by the commissioning body, or by independent providers.

The extent to which commissioning can be successfully implemented and benefits realised depends upon the policy context, type and level of system development and the levers available to support it. The policies governing commissioning are typically set at different levels of the system, and may include national, regional, or local governments, health insurers, managed care organisations, professional organisations and consumer groups.

Regulation of the general quality of providers and services provided is essential, often through specifying and monitoring quality. Accreditation, financial incentive payments to improve adherence to best practice; systems for supporting patient engagement and quality improvement and national performance indicators are all key features of a commissioning policy context.

Commissioning can promote competition which may improve quality or reduce costs. However competition may also undermine collaboration (and so integration). Commissioning is sometimes seen as requiring a quasi-market, with a clear gap between funders and providers. However services may also be sourced from the funding organisation or its partners (Kutzin, 2010). A recent report from the Kings Fund suggests that the NHS may be moving away from insisting on separation of purchasers and providers (Jupp, 2015). A main provider may undertake to provide all relevant services, or, if they are subcontracted, take responsibility for them as prime contractor; or an alliance of organisations may jointly contract to provide services, managing the coordination and sharing responsibility between them.

Commissioning can be primary or secondary. Primary commissioners are responsible for all elements of the commissioning cycle from planning through contracting and monitoring, whereas secondary commissioning which may be outsourced by a primary commissioner involves implementation of contracting and monitoring only, usually within parameters specified by the primary commissioning agency.

Market development (of providers and/or commissioners) may be needed to ensure a supportive environment, with a wide range of capable service providers, effective commissioners and rules that sustain the commissioning process and ensure transparency and fairness. Rules might include policy relating to specification of conflict of interest for example. Developing the market involves a balance between cooperation and appropriate levels of accountability.

The approach to commissioning will be influenced by the health needs and communities for which services are being commissioned, the reason for commissioning them, and the environment within which the commissioning is taking place. It can be useful to consider three dimensions:

- Breadth: is an appropriate range of services being bundled together?
- Length: will the length of the contract be long enough to enable services to establish themselves and avoid unnecessary disruption?
- Depth: will the services have the connections to their communities and to other services to be able to provide appropriate and integrated care?

Commissioning is a complex process. The Kings Fund advocates proceeding slowly, particularly when commissioning in areas where integration is important (Addicott, 2014).

Appendix 3

Focus of studies

Fifteen studies described at least one element of the commissioning process (see Figure 1) as shown in the table below.

In relation to 'planning' there was a strong focus on the importance of comprehensive needs assessment for groups and populations (Shaw, 2013; Elvey, 2006). Tools for assisting priority setting and rationing were a key interest with several authors arguing the need for better tools that can improve priority setting decisions and understanding of the opportunity costs of purchasing decisions (Vergel, 2006; Wilson, 2007). Marks (2012) found limited use of priority setting tools (decision support) for resource allocation in commissioning for populations. Priority setting needs to be embedded in routine planning and budgeting processes (Robinson, 2012 a&b) and provide support for disinvestment as well as investment decision-making (Rooshenas, 2013). Shaw (2013) found that commissioning care, especially long term care is time-consuming and complex, supported best by an incremental rather than widespread change approach.

Studies of 'contracting' were predominantly focused on partnerships for supporting commissioning of specialist services for subpopulation groups (Freeman, 2006) and the impact of service and contract design on improving models of care. Slater (2007) found some support for PBC service redesign in improving models of care, and Freeman (2006) of perceptions among service users that PCT commissioning has improved specialist models of care for mental health, drug and alcohol. CCGs were not supportive of outsourcing contracting or other support functions as it is perceived as potentially leading to fragmentation and increased transaction costs (Petsoulas, 2014). Alternative Provider Medical System (APMS) contractual processes were transactional rather than relational and were time consuming, expensive, and perhaps unsustainable (Coleman, 2013). There may be benefits in engaging clinical skills in contracting for service redesign (Naylor, 2012).

In the USA, Ly showed that contracting opportunities confer significant benefits on physicians, although they do add modest costs in terms of time spent outside patient care and perceived lower adequacy of time with patients. Simplifications that reduce the administrative burden of contracting may improve care by optimising allocation of physician effort.

No studies of 'monitoring' were identified.

Elements of commissioning for individuals, subpopulations and populations

Target	Planning	Contracting	Monitoring
Individual	**Assessing needs and market capacity**	**Service and contract designs** Physicians who contract more with managed care have higher income and spend more time in patient care, modest costs on time outside patient care and have lower perceived adequacy of time with patients (Ly 1013) **(US Managed Care)**	**Supporting patient choice**
	Resource and risk analysis	**Contract implementation**	**Managing contracts**
	Strategic plan	**Provider development**	**Managing performance**
Subgroup	**Assessing needs and market capacity** Commissioning long-term care involves assessing local health needs, coordinating planning and specifying services, as well as reviewing and redesigning care. This is time-consuming and complex and best done incrementally rather than as wide scale change (Shaw, 2013) **UK PCT**	**Service and contract designs**	**Supporting patient choice**
	Resource and risk analysis	**Contract implementation**	**Managing contracts**
	Strategic plan	**Provider development** PCT partnerships for commissioning mental health, drug and alcohol services perceived by user groups as having a positive impact on service models (Freeman, 2006) **UK PCT**	**Managing performance**
Population	**Assessing need and market capacity** Pharmacy needs assessments undertaken by 90% of PCTs and high levels of local pharmacist engagement in the process (Elvey, 2006) **PCT**	**Service and Contract designs** APMS contractual processes were transactional contracting as opposed to relational contracting and were time-consuming and expensive, and perhaps unsustainable. (Coleman, 2013) **UK APMS**	**Supporting patient choice**
	Resource and risk analysis Limited use of priority setting tools (decision support) for resource allocation (Marks, 2012**) UK PCT**	Service design new model of care for children leads to reduction in costs (Barnes, 2013) **UK PCT**	

	Using a Program Budgeting & Marginal Analysis (PBMA) tool can help prioritisation and understand the opportunity costs of purchasing decisions (Wilson, 2007) **UK PCT**	External support for increasing input of clinical knowledge can improve the quality of commissioning (Naylor 12) **UK PCT**	
	Adopting the AFR (Accountability for Reasonableness) Framework can improve fairness and consistency of decision making processes, reducing PCT to legal challenges (Vergel, 2006) **UKPCT**	CCGs not supportive of outsourcing contracting or other support functions as it is perceived as potentially leading to fragmentation and increased transaction costs (Petsoulas 14) **UK CCGs**	
Population (continued)	Priority setting processes need to be embedded in budget management, address disinvestment as well as investment strategies (Robinson, 2012a) **UK PCT**	Rationale for purchasing from private sector to benefit municipality (Tynkkynen, 2012) **UK PCT**	**Supporting patient choice**
	Priority setting processes are perceived to be compartmentalised and peripheral to planning and need to address disinvestment as well as investment strategies (Robinson, 2012b) **UK PCT**	Practice Based Commissioning as a service redesign tool for implementing better models of care (Slater, 2007) **UK PCT**	
	Disinvestment of low-value care difficult to achieve due to lack of opportunities, capacity, training and methods. Sustainable methods needed to support disinvestment practices (Rooshenas, 2013) **UK CCG**	**Contract implementation**	**Managing contracts**
	Strategic plan	**Provider development**	**Managing performance**

Levels of commissioning and services commissioned

A range of services can be purchased for individuals on the basis of an individual assessment, such as through a care plan, for specific subpopulations or groups on the basis of a jurisdictional needs assessment, or for whole populations within a specified region.

As can be seen from the table below, international models commission services for subpopulations with specific needs such as children services, mental health, services for older people or those with long-term conditions, health and social care, chronic disease, and services to reduce health inequalities.

Services purchased for populations include dental, pharmacy and GP services.

USA models purchase individual care for specific populations through ACOs to address fragmentation and poor access.

Services commissioned for individuals, subpopulations and populations

	Services commissioned
Individual	Non-specific services, Accountable Care Organisations USA (Salmon, 2012)
Sub-population	Children's ambulatory care UK (Barnes, 2013) Chronic disease Care for the elderly Finland (Tynkkynen, 2012) Mental health, drug and alcohol UK (Freeman, 2006) Financing disability, mental health and community equipment UK (Goldman, 2010) People with long-term conditions UK (Shaw, 2013)
Population	Pharmacy UK (Bradley, 2006; Elvey, 2006) Dental UK (Newton, 2005)

Appendix 4: Summary of included studies

Papers included in review

Author/publication details	Country	Model or aspect of commissioning	Study design	Relevant results	Implications drawn from results by authors
Ashman I, Willcocks S (2014). Engaging with clinical commissioning: the attitudes of general practitioners in East Lancashire. *Quality in Primary Care* 22(2):91-99	England (East Lancashire)	No specific model of commissioning investigated. Commissioning is broadly defined as prioritising, securing, funding and monitoring health improvement and healthcare services provided in a defined locality, or for a specific group of individuals	*Design* Cross sectional *Data collection methods* Survey: Clinical Commissioning Engagement Scale - CCES (designed for study) *Sample* GPs within one CCG. 35.3% response rate (N=85) *Research questions:* 1. What is the level of GP engagement with clinical commissioning? 2. What are the incentives and/or impediments to engagement with clinical commissioning?	*Processes:* Involvement with clinical commissioning was restricted (two thirds of GPs never or rarely involved). Total mean score across all localities *M*=3.17 (on a 6 point Likert scale) Relatively little difference in mean scores across the 5 localities. Only one district in which every respondent had a least some experience with commissioning Total means cores for capacity (*M*=2.42) and capability (*M*=2.87) were slightly lower than for attitude (*M*=3.81) and opportunity (*M*=3.58)	Findings highlight potential challenges for CCGs in engaging GPs & responding to problems of capacity & capability
Ashton T, Tenbensel T, Cumming J, Barnett P (2008). Decentralizing resource allocation: early experiences with District Health Boards in New Zealand. *Journal of Health Services Research and Policy* 13(2)	NZ	District health boards (DHB) – decentralised commissioning	*Design* Qualitative *Data collection methods* Semi-structured interviews Case studies Document review *Sample* *N*=44 interviews key national stakeholders including ministers, Ministry of Health officials and representatives from national provider organizations; *N*=52 interviews DHB	*Effective (containing system costs)* Cost effectiveness is yet to be determined. Many DHBs inherited large deficits from prior commissioning practices in the 1990s, which emphasised market-oriented purchasing, with focus on price rather than quality of services. These deficits currently constrain innovation, induce short-term thinking, and divert attention from higher-order health goals. The elimination of systematic deficits has released some constraints on DHB spending decisions, however the need to work within budgets still appears to dominate purchasing decisions	The re-structuring of the health sector in New Zealand has enhanced and inhibited the achievement of government objectives. There is a need for further consideration of the key mechanisms and processes that enhance or constrain progress towards these objectives

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			chief executive officers, DHB funding and planning managers, and chairs; case studies in 5 districts, including N=227 DHB board members, senior managers, representatives from Primary Health Organisations, non-government providers, and local organisations and community-based interest groups, plus observational studies of board and committee meetings; document analysis of cabinet and policy papers, DHB strategic and annual plans, and minutes of meetings *Research questions* What have been the processes associated with the allocation of health resources in the decentralised system? To what extent are four of the government's stated objectives likely to be achieved?	*Improving patient outcomes* As above, innovation in services and a public health mindset are constrained by the need to balance budgets On a positive note, DHBs are required to seek community input into their decision-making to improve delivery of services that are needed in the local community. However, research revealed that the needs assessment processes were sometimes not rigorous, due to DHB lack of skills and the capacity to undertake this work. Also some ambivalence among board members and senior managers about the effectiveness of community consultation *Satisfaction* No information on public satisfaction with DHB system of service planning & purchasing. However, DHB stakeholders noted difficulties balancing new agenda for commissioning and inherited deficits, which act against this agenda *Processes* Local decision-making has encouraged greater local responsiveness and new funding arrangements have allayed concerns about inter-regional equity. The system and its processes are less commercially oriented and collaboration between DHBs is improving. However, the combination of increased integration of purchasing and provision within DHBs and the focus on financial deficits in the early years appears to have inhibited the development of partnership relationships between DHBs and non-government providers, and of longer-term	

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				funding arrangements for high quality providers. Non-government providers perceive that DHBs have a tendency to favour their own providers when allocating contracts	
Barnes K, Longfield P, Jones K, Littlemore G, McDonough C, McIntyre A, McLaughlin M (2013). Evidence based commissioning: calculating shift potentials for paediatric services. *Clinical Governance: An International Journal* 18(1):39-48	England	Commissioning (here, funding) in secondary care settings for a specific client group (paediatric) and specific conditions (ambulatory-sensitive). The article focuses specifically on cost-effectiveness	*Design* Mixed methods *Data collection methods* Utilised cost data from commissioning PCTs for six common paediatric ambulatory-sensitive conditions (PASC) Also uses case studies to recommend alternative funding avenues for paediatric care *Data analysis* Compared the costs of recent paediatric short-stay admissions in secondary care settings for every English PCT for which data was available *Sample* Cost data for the following paediatric conditions: (1) Asthma and wheezing without complications (2) Upper respiratory tract disorders without complications (3) Lower respiratory tract disorders without complications (4) Minor infections without complications	*Effective (containing system costs)* Current expenditure is not cost-effective. Large amounts of money are being spent on children attending Accident and Emergency (A&E) departments with minor illnesses. Of these, many end up admitted for precautionary observation. This provision is expensive and therefore an attractive target for commissioners seeking alternative provision *Improving patient outcomes* Article recommends two alternative approaches to improve patient outcome and ensure more cost-effective delivery of services. One alternative is to channel funds into a walk-in centre in hospitals to lower emergency admissions. The other is to channel funds and expertise into specialist-paediatric units located in the community in GP surgeries *Ensuring sustainability of model* The current funding model for paediatric services in secondary care settings is not sustainable in the long-term and needs review. A&E visits and subsequent admissions for minor illnesses are too high and divert funds from more serious childhood conditions. These funds would be better channelled into local and community services	The study finds that large sums are currently being spent on inappropriate treatment of routine childhood conditions, especially in large urban conurbations. It demonstrates that in the case studies, the alternative provision can provide a viable and effective alternative

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			(5) Acute infectious and non-infectious gastroenteritis; and (6) Acute bronchiolitis without complications	*Service use* • Nearly three million children (equivalent to 28% of all children in England) attend A&E departments in hospitals in England each year, accounting for more than 25% of patients seen in A&E nationally • The number of children presenting to urgent care is increasing (7% from 2004 to 2007) • There is significant variation in average length of stay between organisations, ranging from 1.06 to 5.08 days	
Baxter K, Weiss M, Le Grand J (2007). Collaborative commissioning of secondary care services by primary care Trusts. *Public Money and Management* 27(3):207-14	England	Collaborative commissioning of secondary care services by groups of PCTs	*Design* Case study *Sample* Two sites each involving a lead PCT and other collaborating PCTs and an NHS trust from which secondary services were commissioned *Research questions/aim* *To* investigate collaborative commissioning and ways of enhancing partnership working between PCTs	Delayed service level agreement in the case which involved poor agreement on priorities Shared information although this varied in quality	In one case there were agreed priorities and objectives and things worked well. In the other case there were different priorities, which led to delays and inefficiencies

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Bradley F, Elvey R, Ashcroft D, Noyce P (2006). Commissioning services and the new community pharmacy contract: (2) Drivers, barriers and approaches to commissioning. *Pharmaceutical Journal* 277(7413):189-92 (Needs to be read with related paper: Elvey, 2007)	England	Commissioning: new pharmacy contracts	*Design* Cross sectional *Data collection methods* Survey (2006) *Sample* All PCTs (n=290) Response rate 74% *Research questions* To identify barriers & drivers to the commissioning of community pharmacy services	Most common commissioning approach of PCTs was to engage with local pharmaceutical committees and/or local pharmacists Reported barriers to commissioning: • Access to funding (84%) • Lack of PCT capacity (59%) • Impending PCT restructuring (53%) Main commissioning driver was new pharmacy contract (76%)	The impact of the new contract on enhanced service commissioning levels has been modest. Commissioning of services for substance misuse and smoking cessation are high, mapping onto national priorities
Checkland K, Coleman A, Harrison S, Hiroeh U (2009). 'We can't get anything done because…': making sense of 'barriers' to Practice-based Commissioning. *Journal of Health Services Research & Policy*. 14(1):20-26	England	PBC Specifically the challenges that are perceived by PBC stakeholders to achieving their goals	*Design* Qualitative case studies (part of a larger study into PBC). *Data collection methods* Observation of meetings (n=68), interviews (n=46) and document analysis. *Sample* GPs, PCT employees, Local Authority employees, and patient representatives Participants came from 3 sites identified as 'early adopters'. These 3 PCTs (within which 5 PBC consortia were selected for study) were chosen purposively to cover a range of consortia types *Research questions* What are the challenges faced by emerging PBC consortia as they go	*Effective (containing system costs)* This article focuses mainly on the challenges faced by PBC consortia, rather than providing a balanced overview of effectiveness Two main areas of difficulty arose during interview: (1) Lack of time, personnel and expertise to undertake effective commissioning. GPs do not have time to do the work involved; PCTs are providing insufficient management support and expertise; and the skills available are inadequate (2) Relationship with PCT. Local PCTs seen as obstructing progress *Improving patient outcomes* Nil *Ensuring sustainability of model* PBC stakeholders evidenced a negative attitude to the sustainability of PCTs. In fact, one respondent explicitly reported many PBC	Problems arose from quite different 'sense-making' in the developing PBCs, and as a result, carried different meanings in different organisational contexts. This suggests that centralised or 'top-down' solutions will not work unless local context can be taken into account

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			about developing their commissioning role?	stakeholders actively hoped PCTs would fail due to the negative relationship between PCTs and PBCs *Service use* Nil *Satisfaction* PBC stakeholders were not satisfied with PCT management support or involvement with PBC consortia, e.g. PCT management 'keeping an eye' on PBC initiatives and acting outside of PBC engagement *Processes* Not explicitly reviewed. However, PBC consortia often expressed feeling undermined and under-supported by PCTs or without sufficient autonomy to achieve their goals	
Checkland K, Snow S. McDermott I, Harrison S, Coleman A (2012). 'Animateurs' and animation: what makes a good commissioning manager? *Journal of Health Services Research and Policy* 17(1):11-17	England	Managerial behaviours in PCTs	*Design* Qualitative *Data collection methods* In-depth interviews Formal & informal observation *Sample* *N*=41 interviews with PCT managers and GPs involved in commissioning services for hospitals *N*=150 hours of observation *Research questions* Which of the managerial behaviours elucidated by Hales are visible in the context of commissioning?	*Processes* Typical managerial behaviours included: (1) Management and distribution of information, both upwards towards senior management and down and sideways to colleagues and subordinates. Complexities around number of levels to be negotiated & confusion around where ultimate decision-making power lay (2) Internal networking with colleagues and external networking with outside bodies such as hospitals and collaborative groups of managers. Complexities around areas of responsibility & ensuring no duplication of work between colleagues Commissioning-specific behaviours included: (1)	Managers of the new commissioning organisations (i.e. CCGs) will require a deep and contextualised understanding of the NHS and that it is important that organisational processes do not inhibit managerial behaviour. Legitimacy may be an issue in contexts were managers are automatically transferred from their existing appointments

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			Are there any other specific or novel modes of behaviour that are important in facilitating commissioning?	manager as *animateur*: an active, yet non-hierarchical management of disparate groups, working to align objectives and to ensure that the right people behave in the right ways at the right time, and contribute to a particular overall objective. Managers appeared to be working creatively to ensure that the emic concerns of one group were taken account of while aligning activity as a whole with the needs of the wider organisation. Found specifically among managers responsible for managing across the boundary between the PCT and groups of GPs with commissioning responsibilities	

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Checkland K, Coleman A, McDermott I, Segar J, Miller R, Petsoulas C, Wallace A, Harrison S, Peckham S (2013). Primary care-led commissioning: applying lessons from the past to the early development of clinical commissioning groups in England. *British Journal of General Practice*, 63(614):e611-19	England	Clinical Commissioning Groups (CCGs)	*Design* Qualitative Maximum variation case studies (*N*=8) *Data collection methods* Interviews with key stakeholders (*n*=91) Observation at meetings across various levels of governance (2011-2012) On-line surveys at two points in time. *Sample* 8 diverse district CCGs (*n*=91) (deprived, affluent and mixed population) *Research questions* 1. What governance structures are forming under the CCG model of commissioning? How are these serving the population they represent? 2. How are CCGs engaging members? 3. What areas of commissioning activity are CCGs focused on? 4. What monitoring activities do CCGs envisage for their own and related subgroup commissioning responsibilities?	*Processes* 1. Autonomy & governance: CCGs have great degree of autonomy in establishing governance structures. Significant complexity & variety in CCGs structure & governance arrangements. Internal structures & external accountabilities of CCGs constrain their freedom to act. Large internal governance structures & growing awareness of external accountability to NHS England, but lack of clarity around specific reporting requirements created constraints in decision making and autonomy 2. Engaging members: CCGs are membership organisations and engaging members is crucial to their success. Different CCGs take differing approaches based on size of membership body. Issues for CCGs regarding member engagement: who feels ownership, communication, role & remit of locality groups 3. Commissioning activities: Tendency for commissioning activity to focus on small scale & familiar practice level interventions to improve long-term care 4. Monitoring: Emphasised importance of monitoring to improve quality of primary care. CCGs keen to improve quality through performance management, but difficult as limited number of staff to do the work Tensions between CCGs as bottom up organisation led by members VS perceived need to performance manage members	Past evidence indicates GPs engage & maintain their enthusiasm most were they can see direct relationship between efforts and tangible outcomes This direct relationship generates a 'virtuous cycle' vs feelings of constraint & inability to make change happen generating 'vicious cycle' of disengagement In context of complex & multi-layered structures, there is a need for robust CCG governance & accountability frameworks, in absence of CCG parent body

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Coleman A., Checkland K, McDermott I, Harrison S (2013). The limits of market-based reforms in the NHS: the case of alternative providers in primary care. *BMC Health Services Research* 13 Suppl 1:S3	England	The Alternative Provider Medical Services (APMS) were introduced in 2004 to allow new providers to bid for contracts to provide primary care services. APMS contracts differed from the centrally-negotiated General Medical Services (GMS) contracts in that PCTs were able to negotiate the terms of the contract. Contract monitoring included payment linked to achievement of centrally set Key Performance Indicators (KPI)s: access; quality; service delivery; value for money; and patient experience. Achievement of KPIs was worth 25% of the total contract value	*Design* Qualitative case studies *Data collection methods* Interviews, observation of meetings and document analysis (2009-10) *Sample* 2 case studies *Research questions* To investigate the commissioning and operation of APPCs	*Processes* The procurement and contracting process was perceived as costly and time-consuming; negotiation proved more difficult than expected; processes could be contentious in terms of confidentiality and transparency. As a result the process became highly legalistic There were some early difficulties in the relationships between Alternative Providers of Primary Care (APPC) and other local GP practices, especially where they were based in the same building. These difficulties seem to stem from competition over patients Local competition had led to some GP-practices to change behaviour Few systematic differences between APPC & traditional GP-practices regarding ways of working The APMS contracts were generally perceived as a relatively expensive way of providing primary care, primarily in the view of difficulties felt in building up adequate list sizes Some KPIs were unclear or unworkable, and formal contract amendments were required. Monitoring processes were intensive and time consuming *Perceived success factors* Meeting KPIs & Quality and Outcomes Framework (QOF) targets, plus broader measures of providing better patient care or improving health	The contractual processes were transactional contracting as opposed to relational contracting. They were time consuming and expensive, & perhaps unsustainable While may have stirred up local practices to change their behaviour, limited wider impact

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Dusheiko M, Gravelle H, Jacobs R, Smith P (2006). The effect of financial incentives on gatekeeping doctors: evidence from a natural experiment. *Journal of Health Economics* 25(3):449-78	England	Fundholding – Impact of GP financial incentives on monitoring quality of care and cost containment	*Design* Quantitative *Data collection methods* Data drawn from Hospital Episodes Statistics for admissions, General Medical Statistics for practice characteristics and the database assembled for the AREA project (Sutton, 2002) for socio-economic characteristics and provider characteristics *Sample* English General Practices *Research questions* How has the abolition of fundholding financial incentives impacted hospital admission rates?	The policy of GP fundholding exerted downward pressure on secondary care admissions for elective surgery. The effect of removing financial incentives of holding a budget was to increase chargeable elective admissions amongst the pre-fundholding practices by 3.5–5.1%. This effect was greater on the early wave fund holders (around 8%) than on later wave fund holders Differences in differences (DID) estimation for two types of admissions (non-chargeable electives, emergencies) not covered by fundholding were calculated as additional controls for unobserved temporal factors. Using DID estimates, data suggested that the abolition of fundholding increased ex-fund holders' chargeable elective admissions by 4.9% (using the non-chargeable DID) and by 3.5% (using the emergencies DID)	These results strongly suggest that gatekeeping physicians' admission thresholds do respond to financial incentives. Given the importance of gatekeeping in many countries and, in particular, the similarity of the physician incentives under fundholding with those for physicians under capitation contracts with managed care organisations, our findings are also relevant for other health care systems
Elvey R et al (2007). Commissioning services and the new community pharmacy contract: (1) Pharmaceutical needs assessments and uptake of new contracts. *Pharmaceutical J* 277:161-63	England	Commissioning: new pharmacy contracts	*Methods* As per Bradley et al (2006) above *Research questions* To identify and describe pharmaceutical needs assessment (PNA) activity & the awarding of new pharmacy contracts in PCTs	*Processes* 90% of PCTs had completed PNA & 85% of these had used one or more resources to assist with the PNA process Local community pharmacists were engaged in the process in most PCTs (92%) Most PCTs (90%) had analysed the PNA results & those who had undertaken the PNA earlier were more likely to have used the results when commissioning services	Local needs assessment important to PCTs when planning & commission pharmacy services. Needs assessments take time to do and translate into action and plans

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Freeman, Peck (2006). Evaluating partnerships: a case study of integrated specialist mental health services. *Health and Social Care in the Community* 14(4):408-17	England	Joint commissioning mental health services by eight Hertfordshire PCTs and the County Council	*Design* Impact of partnership working integrated specialist mental health provision *Sample* Semi structured interviews, self-complete questionnaires and focus groups of users, carers, service managers, and front line staff *Research questions* What is the impact of partnership working in integrated specialist mental health provision on role clarity, job satisfaction, fragmentation and integration, teamwork?	*Effective (containing system costs)* Little effect on *Improving patient outcomes* *Nil* *Ensuring sustainability of model* *Nil* *Service use* *Nil* *Satisfaction* Improved support from team and work satisfaction. However may be lack of continuity. *Processes* Improved role clarity	Attributing improved outcomes to partnerships is difficult

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Goldman (2010). Joint Financing across health and social care: money matters but outcomes matter more. *Journal of Integrated Care* 18(1):3-10	England	Joint Commissioning between NHS bodies and councils	*Design* Survey of Audit Commissions for PCTs; eight workshops in local areas involving participants from executive and director levels; semi-structured interviews with two councils, one PCT and one mental health trust; review of documents, expenditure and activity data; seminar with 16 organisations *Sample* PCTs, councils and mental health services in England *Research questions:* What is their experience and what is the impact of joint commissioning on value for money and service user experience	*Effective (containing system costs)* Unable to quantify how it has contributed better value for money or improved outcomes for users *Improving patient outcomes* *Nil* *Ensuring sustainability of model* *Nil* *Service use* No change in length of stay, hospital admission, delays in transfers of care. *Satisfaction* *Nil* *Processes* Joint financing represented only 3.4% of total health and social spend but often "pooling" is really aligned budgets	Need more evidence of outcomes

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Gridley K, Spiers G, Aspinal F, Bernard S, et al (2012). Can general practitioner commissioning deliver equity and excellence? Evidence from two studies of service improvement in the English NHS. *J Health Serv Res Policy* 17(2):87-93	England	PCTs CCGs	*Design* Qualitative (2008-09) *Data collection methods* Interviews *Sample* 10 PCTs: 187 professionals; 99 people affected by services *Research questions* Explore key assumptions underpinning the development of GP-led commissioning. Part of broader study on evaluation of NSF for long-term neurological conditions; and a study of health care closer to home for children with a range of conditions.	*Processes* PCTs not sufficiently powerful to guide or change patterns of service provision, as per National Service Frameworks (NSF), without support of performance-managed targets Where there were objectives underpinned by targets & financial incentives (payment by results), changes were seen GPs do not always have a pivotal role for all patients (e.g. services for people with long term conditions), where care coordination was the job of a specialist team/nurse (not affiliated with a general practice) With children with long term and chronic conditions, GPs took a back seat, ongoing care-coordination role	Concern that CCGs will not be subject to top-down performance management, with implications for how agreed quality standards will be met. GP-commissioning could lead to greater not reduced disparity in service quality

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Hussey P, Ridgely S, Rosenthal M. The PROMETHEUS bundled payment experiment: slow start shows problems in implementing new payment models. *Health Affairs* 30(11):2116-24	USA	'Bundled payment' model – In particular, evaluation of the "PROMETHEUS Payment' Initiative in the US (Provider Payment Reform for Outcomes, Margins, Evidence, Transparency, Hassle reduction, Excellence, Understandability, and Sustainability)	*Design* Qualitative *Data collection methods* Telephone interviews Two site visits in which interviews (*N*=36) were conducted *Sample* Representatives of an employer coalition, health plan administrators, hospital administrators, medical staff management, frontline physicians, and health informatics and quality improvement staff. All participants were involved in the 'road test' of PROMETHEUS across three pilot sites *Research questions* Can the PROMETHEUS model be implemented under real-world conditions? What factors might contribute to its success or failure?	The PROMETHEUS road test encountered major challenges, and none of the pilot sites had made bundled payments as of May 2011 *Challenges* PROMETHEUS builds on fee-for-service claims infrastructure and thus adds to the complexity of existing payment systems Modifying complex insurance claims processing procedures to identify services that are part of a bundle Difficulty in changing member benefits only for patients identified as clinically eligible for bundled services and attributed to a participating provider organisation Communication issues - language used in PROMETHEUS is largely oriented toward broad conceptual categories, whereas physicians are accustomed to thinking in terms of specific, concrete cases. Difficulty identifying patients eligible for benefits using PROMETHEUS terminology Executing contracts is difficult because of the number and complexity of considerations involved, including the market power—or lack thereof—of individual payers and providers in their own health care markets	Bundled payment is complex and must build on existing complex health care systems. Despite numerous challenges in implementing PROMETHEUS, participants continued to see promise and value in the bundled payment model. However, the desired benefits of this and other payment reforms may take time and considerable effort to materialise

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Kennington E, Shepherd E, Evans D, Duggan C (2013). Benefits of healthy living pharmacies for commissioner and contractor / employer. *International Journal of Pharmacy Practice* 21:122	England	Healthy Living Pharmacy (HLP). HLP is a tiered commissioning approach that aims to deliver health services through community pharmacies	*Design* Mixed methods *Data collection methods* Commissioners' responses taken from Pathfinder area reports' free text entries Short online survey to gather contractor/employer views *Sample* Commissioners (*N*=14) Contractor/employer survey (*N*=153) – 38% response rate *Research questions* What are the benefits of the HLP scheme to commissioners, contractors and employers?	*Effective (containing system costs)* No hard data available on the impact of HLP on income. However, commissioners viewed HLP scheme as an effective model with which to deliver increased volume, quality and reliability of community health services *Improving patient outcomes* As above, commissioners viewed HLP scheme as an effective model with which to deliver increased volume, quality and reliability of community health services. In addition, public health teams perceived HLP as beneficial to improving community health outcomes *Ensuring sustainability of model* Nil *Service use* Take-up on HLP schemes has risen and increased service activity (61.8%) in participating pharmacies *Satisfaction* Authors surmise that increases in up-take of HLP is indicative of public satisfaction with the model In addition, 70.6% of contractors/employers agreed that becoming an HLP had been worthwhile from a business perspective and 91.5% felt it was beneficial from a staff development perspective	HLP has acted as a catalyst to help develop and improve working relationships between commissioners and providers. Services have been commissioned or further extended as a result of pharmacies having HLP status, demonstrating that commissioners have confidence in the outcomes of services

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Ly DP, Glied SA (2014). The impact of managed care contracting on physicians. *Journal of General Internal Medicine* 29(1):237-42	USA	Impact of managed care contracting among physicians	*Design* Quantitative *Data collection methods* Secondary data analyses on the nationally representative Community Tracking Study Physician Survey (1996–2005) *Sample* 36,340 physicians (21,567 Primary Care Physicians [PCP] and 14,773 specialists) *Research questions* How do physician practice outcomes vary with the number of managed care contracts held or the availability of such contracts?	*Effective (containing system costs)* For specialists, increases in the number of contracts are associated with increases in income. Moving from a practice with only one contract to the average practice with 12 contracts is associated with about a 3%, statistically significant, increase in physician income per year. For PCPs increases in the number of contracts is related to insignificant increases in income *Improving patient outcomes* Not specifically measured. However, greater numbers of contracts are associated with about 30 more minutes spent by PCPs in direct patient care and 20 more minutes spent by specialists in direct patient care *Ensuring sustainability of model* Nil *Service use* The median practice contracted with eight plans – but 19 % of practices that participated in at least one managed care plan had fewer than five contracts and 12 % of such practices had more than 20. The average number of reported managed care contracts held by a practice was 12 *Satisfaction* Participating in additional contracts did not have a significant effect on physician satisfaction. For PCPs only, each additional contract was associated with of reporting very low adequate time with patients	Contracting opportunities confer significant benefits on physicians, although they do add modest costs in terms of time spent outside patient care and lower adequacy of time with patients. Simplifications that reduce the administrative burden of contracting may improve care by optimising allocation of physician effort

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Marks L, Cave S, Hunter D, Mason J, Peckham S, Wallace A (2011). Governance for health and wellbeing in the English NHS. *Journal of Health Services & Research Policy* 16 Suppl 1:14-21	England	Commissioning role of PCTs for populations	*Design* Qualitative *Data collection methods* Semi-structured interviews and an online survey	Eight PCTs said partnerships are required to fulfil the stewardship role; seven said public is involved in local health needs assessment and five said public is involved in priority setting 10 PCTs said leadership/commitment of board and of executive directors to the health of the population and to addressing health inequities would enable prioritising prevention Author comment: Public health commissioners are likely to have multiple objectives such as concern for the distribution of health benefits across the population (equity issues), representation of local user views, and balancing long- and shorter-term health gains. They therefore need to combine public health intelligence with decision-support methods relevant for public health priority setting Eight PCTs said that corporate governance/ performance management should be aligned to strategic priorities Six said there should be accountability for achieving return on investment for population health and two said awareness of opportunity cost is required One said applying the principle of social equity is needed 10 PCTs said that outliers in cost and outcomes should be identified through benchmarking using national data; nine said services need to be redesigned to release efficiencies within and across pathways of care; others had disinvestment strategies in place or planned, or scenario modelling, while a few used Program	There is complexity in the governance structures currently in operation, and contradictions in relation to commissioning preventive health services arise The stewardship role is changing and is sometimes narrowly defined; an emphasis on governance as meeting targets and performance management impacts PCT capacity to work jointly with stakeholders on health and wellbeing commissioning; incentive schemes for preventive health care are still only optional extras; contextually relevant prioritisation tools still needed to make decisions about strategic preventive health services Shifts towards local priorities and increased public accountability co-exist within hierarchical forms of governance It will be important to ensure that future changes to British health care are critically assessed and realigned to promote preventive services

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				Budgeting and Marginal Analysis (PBMA)/decision conferencing to assess opportunity costs	which are key for the longer-term sustainability of the NHS. Leadership will be needed to negotiate the complexities of the governance structures currently in place, and re-emphasise the strategic importance of preventive health

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McCafferty S, Williams I, Hunter D, Robinson S, Donaldson C, Bate A (2012). Implementing world class commissioning competencies. *Journal of health services research & policy* 17 Suppl 1:40-8			*Design* Qualitative *Data collection methods* *Sample* PCT commissioners, PBC representatives, PCT non-executive directors and Strategic Health Authority Staff, acute trust staff and patient groups *Research questions* Explore development and implementation of world class commissioning	*Satisfaction* Partnership working with providers, was perceived as being impossible by respondents due to a) a perceived imbalance of power between the PCT and acute providers, b) differing objectives, and c) providers in competition with one another There was a perceived skills gap between GPs and the PCT with regard to commissioning, with the PCT skills, experience and capability in commissioning not available or resourced within PBC groups The organisation of health care was highly politicised and thus beyond the control of the PCT Challenges included: perverse political incentives; constant change; and policy misalignment Continual change was seen to impact negatively on PCTs' ability to maintain and sustain focus and momentum in commissioning; a lack of leadership and the loss of tacit knowledge in building and maintaining 'organisational memory' around commissioning	

Author/publication details	Country	Model or aspect of commissioning	Study design	Relevant results	Implications drawn from results by authors
McLeod H, Blissett D, Wyatt S, Mohammed MA (2015). Effect of Pay-For-Outcomes and Encouraging New Providers on National Health Service Smoking Cessation Services in England: A Cluster Controlled Study. *PLOS ON* 10(4):1-15	England	Commissioners adopted novel 'any qualified provider' regulations, which allowed any provider to deliver services that met specified criteria, including adhering to NHS service quality requirements and accepting new payment, contractual and reporting obligations Providers were paid for quits achieved (four and 12 weeks) whilst encouraging new market entrants	*Design* Cluster controlled RCT *Data collection methods* Published PCT data on stop smoking services for 2009/10-2012/13 (provider level data) *Sample* Eight intervention PCTs, 64 matched control PCTs *Outcome measures* Changes in quit at four weeks. Number of new market entrants within the group of two largest providers at PCT level *Research questions* Examine impact of pay-for-outcomes on new market entrant providers	*Improving patient outcomes* There was a statistically significant increase in the number of four-week quits per 1,000 adult population in the intervention PCTs compared to the control PCTs (9.6% increase in the intervention PCTs compared to 1.1% decrease in the control PCTs per year) *Processes* The largest 10 providers in the intervention accounted for 84% of the four-week quits, and three of these providers were new market entrants	Although provision was dominated by existing NHS community services providers, the finding that a new entrant generated most quits in two of the eight intervention PCTs suggests that provider diversity has been promoted
Naylor C, Goodwin N (2011). The use of external consultants by NHS commissioners in England: what lessons can be drawn for GP commissioning? *Journal of Health Services & Research Policy* 16(3):153-60	England	Assesses how commissioners in the NHS use external support, the impact of external support, and factors that influence effectiveness of external support in commissioning of health services by PCTs. External support is defined as short-term consultancy projects of an essential advisory capacity, longer-term partnership arrangements in which	*Design* Qualitative fieldwork supported by quantitative analysis *Data collection methods* Baseline survey of PCTs (*N*=96) In-depth interviews (*N*=10) and focus groups (*N*=11) at three case sites Follow up survey of PCTs (*N*=76) *Sample* Baseline and follow-up survey sent to PCT Managers Interviews and focus groups with members of the senior management	*Effective (containing system costs)* A number of factors impacted the cost-effectiveness of support services: (1) clarity of purpose, (2) procurement processes, (3) working relations between PCT & service provider, (4) client characteristics (i.e. work culture, managerial capacity), (5) consultant characteristics, and (6) using support appropriately (i.e. tapping into skills & expertise of support organisation fully) *Improving patient outcomes* Nil *Ensuring sustainability of model*	External support can play a role in improving the quality of commissioning in a publicly-funded health system However, it is clear that while external support is now widely used in the NHS it is not always used effectively The nature of external support, sources from which it is drawn and type of support offered are likely to change significantly in the move to GP-led

Author/publication details	Country	Model or aspect of commissioning	Study design	Relevant results	Implications drawn from results by authors
		internal and external teams share commissioning responsibilities (and in some cases related financial risk), and outsourcing	team and commissioners, as well as support staff. Also included 10 of the organisations approved to supply services through the FESC framework, and two other companies *Research questions* How do commissioners in the NHS use external support? What impact is this perceived to have on commissioning activities? What factors influence the effectiveness of support?	Nil *Service use* In 2009 (baseline) 77% of PCTs had used external support for commissioning (defined as any service purchased in support of the commissioning function). In 2010 (follow up) this had risen to 89% World-class commissioning was a major driver prompting commissioners to seek external support, with 54% percent using external consultants to help prepare for the world-class commissioning assurance process There were several areas in which external support was perceived to have been particularly useful: data analysis, managing contracts & provider relationships, engaging clinicians in commissioning, and organisational transformation *Satisfaction* The majority of respondents indicated that external support achieved its goals either completely or partially: 87% in 2009 (baseline); 79% in 2010 (follow-up). On most occasions the service received was rated as 'excellent' or 'good' overall. Interviews revealed more mixed experiences with external support *Processes* The processes related to seeking external support were not specifically detailed. However, limitations to effective support highlighted the fact that commissioners sometimes struggled to identify their needs and access appropriate	commissioning. GP commissioners will need considerable guidance in using external support successfully

Author/publication details	Country	Model or aspect of commissioning	Study design	Relevant results	Implications drawn from results by authors
				support to address them during the procurement process. They also experienced difficulties associated with poor working relationships once support has been procured during the roll-out process. Processes related to securing support and utilising this effectively need to be closely considered	
Newton JT, Alexandrou B, Bate BD, Best H (2006). A qualitative analysis of the planning, implementation and management of a PDS scheme: Lessons for local commissioning of dental services. *British Dental J* 200:625-30	England	Capitation-based funding of personal dental services Scheme included rewards for quality rather than quantity of care Increase uptake of children, improve quality, integration and control escalating costs Prevention and treatment of dental problem Activity and population reach	*Design* Qualitative *Data collection methods* Interviews *Sample* Three PCTs; 29 participants (PCTs, dental teams & other key informants) *Research questions* To identify the experiences of the planning, implementation & management of a Personal Dental Services Scheme (PDSS)	*Service use* Not known whether PDS was meeting local needs Practitioners' perception that they delivered more & higher quality preventive care (related to additional time they could spend with patients re health education) *Satisfaction* Positive provider experiences regarding increase in the quality of care, more professional management approach *Processes* Significant differences in perceptions of PCTs and dental practitioners Little quality benchmarking which would have allowed for robust measure of success	For local commissioning: needs to identify mechanisms for ensuring effective planning, management and evaluation of the impact of schemes The disparate views of practitioners and PCTs highlight the challenge for local commissioners in drawing together these differing views

Author/publication details	Country	Model or aspect of commissioning	Study design	Relevant results	Implications drawn from results by authors
Perkins N, Coleman A, Wright M, Gadsby E, McDermott I, Petsoulas C, Checkland K (2014). The 'added value' GPs bring to commissioning: a qualitative study in primary care. *The British journal of general practice: the journal of the Royal College of General Practitioners* 64(628):728-34	England	CCGs	*Design* Qualitative (Sept 2013) *Data collection methods* Interviews *Sample* Seven CCGs. 40 clinicians & managers. *Research questions* 1. Explore key assumptions underpinning CCGs 2. Examine the claim that GPs bring 'added value' to commissioning	*Processes* Claims of 'added value' centred on GPs' detailed & concrete knowledge of their patients which improves service design Close working relationship between GPs and managers strengthens mangers' ability to negotiate Concerns expressed about the large workload both groups faced & difficulty in engaging the wider body of GPs	Will CCGs be any better at supporting & enabling effective use of GP knowledge than previous initiatives? Concerns about representativeness & extent to which other perspectives are considered Including systematic public health intelligence
Petsoulas C, Allen P, Checkland K, Coleman A, Segar J, Peckham S, et al (2014). Views of NHS commissioners on commissioning support provision. Evidence from a qualitative study examining the early development of clinical commissioning groups in England. *BMJ Open* 4(10):e005970	England	CCGs	*Methods:* As per Checkland et al (2013) above *Research questions* Exploration of attitudes of CCGs towards outsourcing commissioning support functions during the initial state of reform	*Processes* Many CCGs reluctant to outsource core commissioning support functions (e.g. contracting): risk of fragmentation of services & loss of trusted relationships & local knowledge Others were disappointed by the absence of choice and saw Commissioning Support Units (CSU) as monopolies Many participants were at ease with outsourcing transactional commissioning functions, (e.g. business intelligence and data management). Doubts expressed that outsourcing of commissioning support functions will result in lower administrative costs. Some keen to keep vital CS functions in-house, and share support personnel across CCGs thereby reducing their overall management costs	

Robinson S, Williams I, Dickinson H, Freeman T, Rumbold B (2012). Priority-setting and rationing in healthcare: Evidence from the English experience. *Social Science & Medicine* 75:2386-93	England	Priority-setting activity in PCTs	*Design* Qualitative (case study) *Data collection methods* Documentary analysis, interviews with priority-setters and overt non-participant observation of priority setting boards *Sample* Documentary information relating to priority-setting activity; senior management teams & wider stakeholder groups from five PCT sites *Research questions* What current priority-setting arrangements and processes are in place? What is the impact and effectiveness of these arrangements and processes? What are the implications for future priority-setting both in England and other healthcare systems?	*Effective (containing system costs)* Priority-setting was viewed as fundamental to delivering cost-effective, high quality services. Within the context of government financial stringency and pressure on PCTs to reduce costs, priority-setting was viewed as a way to meet budget targets (e.g. a focus on disinvestment). In addition, the World Class Commissioning (WCC) programme provided a strong motivation for PCTs to examine their priority-setting processes (Department of Health, 2007). The WCC assessment criteria aim to increase transparency, efficiency and quality of services. Further, the Quality Innovation Productivity and Prevention (QIPP) agenda (Department of Health, 2010c) also served to draw attention to efficiency and quality *Improving patient outcomes* Focus in priority-setting was more on budgetary considerations than explicitly on patient outcomes *Service use* A wide range of stakeholders were involved in priority-setting activities in each of the sites, including: local authority professionals and representatives; local councillors; health organisations such as primary care providers, acute providers, voluntary sector and mental health providers; practice-based commissioning groups, and; GPs. However, the levels of such involvement varied between sites. There was limited engagement of citizens in decision-making *Satisfaction* All sites noted the difficulties in engaging the	To be effective as a management tool, priority setting needs to be central to local planning activity, rather than being treated as a bolt-on mechanism for allocating spare funds. It is yet to be seen whether priority-setting can form a central part of health service investment and disinvestment arrangements either in the English NHS or elsewhere. However this study suggests that a well-resourced and designed priority-setting function can help to make contentious decisions more palatable and defensible for those involved

				acute sector in priority-setting. Even in the two sites where there was engagement and signs of fairly strong partnerships (between the acute and commissioners), the power of the hospital sector and differences in culture, focus and strategy made priority-setting a challenge *Processes* Decision-making processes which involved the use of priority setting aids - such as Multi-Criteria Decision Analysis (MCDA) and business proposal templates - tended to be more explicitly supported by evidence for example via either individual or collective scoring of investment proposals. Explicit priority-setting tools helped to provide a structured setting for deliberation and coalition-building, thereby facilitating the decision-making process rather than algorithmically deriving the 'answer'	
Robinson S, Williams I, Freeman T, Rumbold B, Williams I (2012). Structures and processes for priority-setting by health-care funders: a national survey of primary care trusts in England. *Journal of Health Services Management* 5(3)133-20	England	Priority setting	A national survey of Directors of Commissioning in English Primary Care Trusts (PCTs). The survey was designed to provide a picture of the types of priority-setting activities and techniques that are in place and offer some assessment of their perceived effectiveness	There is variation in the scale, aims and methods of priority-setting functions across PCTs. A perceived strength of priority-setting processes is in relation to the use of particular tools and/or development of formal processes that are felt to increase transparency. Perceived weaknesses tended to lie in the inability to sufficiently engage with a range of stakeholders	Although a number of formal priority-setting processes have been developed, there are a series of remaining challenges such as ensuring priority-setting goes beyond the margins and is embedded in budget management, and the development of disinvestment as well as investment strategies. Fostering a more inclusive and transparent process will be required

Rooshenas L, Owen-Smith A, Donovan J, Hollingworth W (2013). Saving money in the NHS: a qualitative investigation of disinvestment practices, and barriers to change. *The Lancet* 382(S3)	England	Disinvestment practices of CCGs	*Design* Qualitative ethnographic *Data collection methods* Observations of routine meetings Interviews *Sample* Two NHS decision-making groups (PCTs, public health, CCGs, secondary care providers) *Research questions* 1. To investigate how local decision-makers recognise and negotiate opportunities for disinvestment 2. Identify barriers to implementation of disinvestment decisions	*Processes* Few examples of active disinvestment decisions, with agendas dominated by requests for new health-care provision Challenges in identifying opportunities for disinvestment, with previous approaches being unsystematic and unsustainable A lack of capacity, methods, and training were identified Differences in how commissioners and providers understood & portrayed disinvestment, contributing to poor collaboration Lack of provider input into previous disinvestment initiatives which they felt compromised the clinical validity and acceptability of decisions All groups perceived a lack of central support for developing the disinvestment agenda	Need for sustainable methods to guide local disinvestment practices. Disinvestment needs to be a collaborative effort, which includes health-care providers in the decision-making process

Salmon et al (2012). A collaborative Accountable Care model in three practices showed promising results on costs and quality of care. *Health Affairs* 31(100):2379-87	USA	Accountable Care Organisation	*Design* Case study *Sample* Three practices in different states. *Research questions* What facilitated or impeded care quality and cost saving?	*Effective (containing system costs)* Reduced medical costs ($27 per patient per month) *Improving patient outcomes* Improved quality of care and intermediate outcomes	*What helped:* Embedded care coordinator. Clinical resources – e.g. coaching, pharmacy consultation, case management Capitation model (full risk) for many patients, pay for performance, feedback of performance data in a "patient dashboard" to clinicians *Barriers* Preferred provider arrangements for referral services that limited patient and primary care provider choice Lack of integration between primary care and speciality providers and services Lack of funding for IT and care coordination infrastructure

Shaw SE, Smith JA, Porter A, et al (2013). The work of commissioning: a multisite case study of healthcare commissioning in England's NHS. *BMJ Open* 3: e003341	England	Commissioning health services for populations with chronic conditions. Commissioning cycle included assessment of local health needs, coordination of healthcare planning and service specification, reviewing and redesigning services and providing support for implementation of new services. These activities largely separate from contracting and financial negotiations Commissioning activities reviewed as part of PCT model and prior to CCG model implementation in the UK	*Design* Qualitative - Multisite mixed methods case study *Data collection methods*: Interviews, documents and observation of meetings *Sample* Three "commissioning communities" (covered by a single PCT): managers and clinicians, general practice-based commissioners, NHS trust and foundation trust senior managers and clinicians, voluntary sector and local government representatives *Research questions* (1) What is involved in commissioning chronic condition services? (2) What factors inhibit or facilitate commissioners in making service change?	*Process* Commissioning services was a long term process involving a range of activities and partners Only some activities were aligned with commissioning cycle Additional activities included service review & redesign, supporting implementation of new services Processes involved partnership working, largely divorced from contract/financial negotiations For long term services the time & effort involved was disproportionate to anticipated/likely service gains Incremental vs large-scale change appeared more successful (i.e. in delivering planned changes)	Commissioning for long-term condition services challenges distinction between commissioners and providers Significant redesign work required as a partnership approach Such work is labour-intensive & potentially unsustainable in times of reduced finances Need to balance relational and transactional elements
Sheaff R, et al (2013). How managed a market? Modes of commissioning in England and Germany. *BMC Health Services Research* 13 Suppl 1:S8	England & Germany	Contrasts two basic generic modes of commissioning	Systematic case studies using systematic observation and comparison *Research Question:* How can commissioning be used for exercising governance over health-care providers in a quasi-market?	Surrogate planning (English NHS), in which a negotiated order involving micro-commissioning, provider competition, financial incentives and penalties are the dominant media of commissioner power over providers Case-mix commissioning (Germany), in which managerial performance, an 'episode based' negotiated order and juridical controls appear the dominant media of commissioner power	Governments do not necessarily maximise commissioners' power over providers by implementing as many media of power as possible because these media interact, some complementing and others inhibiting each other. In particular, patient choice of provider inhibits commissioners' use of provider competition as a means of control

Slater B, White J (2007). Practice-based commissioning: learning from a development programme. *Journal of Integrated Care* 15(2):13-25	England	Learnings on implementation of PBC	Audit of service redesign initiatives in the first six months at PBC 27 sites	Some early successes in referral management and service redesign were observed. Implementation barriers related to fear among PCTs of loss of power and loss of income were observed	Enablers were payment by results and the levels of interest and engagement among practices
Song Z (2014). Accountable Care Organizations in the U.S. Health Care System. *J Clin Outcomes Manag* 21(8):364-71	USA	Review of evaluations of Accountable Care Organisations	Synthesis of evaluation findings	Evidence points to the potential of ACOs to slow spending and improve quality, but also the significant obstacles that they face	One encouraging lesson is that quality of care need not be threatened by a contract that rewards savings, provided that meaningful incentives for quality are in place
Turner D, Salway S, Mir G, Ellison GT, Skinner J, Carter L, et al (2013). Prospects for progress on health inequalities in England in the post-primary care trust era: professional views on challenges, risks and opportunities. *BMC Public Health* 13:274	England	Views on CCG commissioning versus PCT commissioning	*Design* Qualitative *Data collection methods* Semi structured interviews *Sample* Purposive sampling and snowballing used to identify 42 individuals involved with health and social commissioning at either national or local level Interviewees included representatives from the Department of Health, PCTs, Strategic Health Authorities, Local Authorities, and third sector organisations *Research questions* (1) Professional background and experiences (2) Commissioning structures, networks and processes (3) Commissioning impact	*Processes* Concern that GP-led commissioning will not achieve measurable improvements in health inequalities any more than the PCT era, particularly in a time of reduced spending. Specific concerns centred on: reduced commitment to a health inequalities agenda; inadequate skills and loss of expertise; and weakened partnership working and engagement. On a positive side, there could be greater accountability of health care commissioners to the public and more influential needs assessments via emergent Health and Wellbeing Boards (HWBB) in the context of the CCG commissioning, leading to more equitable health outcomes. On the other hand, key actors expect the contribution from commissioning to address health inequities to become more piecemeal in the CCG context, as it will be dependent upon the interest and agency of particular individuals within the CCGs to engage and influence a wider range of stakeholders	Agreed need to improve on the PCT-led era of commissioning as far as a health inequalities agenda is concerned General pessimism about whether the move to CCG-led commissioning would improve health inequalities given the primary care focus of GPs and their relative inexperience with commissioning A general feeling that GPs would need to shift focus from the immediate concerns of the people they see in practice, to a broader public health view, in order to meet the needs of under-represented groups The decision to fund CCGs on

			(4) Role of evidence and knowledge in commissioning (5) Barriers and opportunities for improved commissioning to address inequalities (6) Implications of new commissioning arrangements for such work		the basis of age of population, rather than level of deprivation, may constrain CCG capacity to address health inequalities However, hopes for greater accountability of commissioners to local communities via the HWBBs, as well as stronger Joint Strategic Needs Assessments (JSNAs) and more coordinated work to address wider social and economic determinants resulting from public health's move to Local Authorities
Tynkkynen LK, Lehto J, Miettinen S (2012). Framing the decision to contract out elderly care and primary health care services - perspectives of local level politicians and civil servants in Finland. *BMC Health Services Research* 12:201	Finland	Mainly concerned with municipal government contracting of health and elderly care services. Other aspects of commissioning (aside from purchasing) are not considered	*Design* Qualitative *Data collection & analysis methods* Group and individual interviews *Frame analysis* (Goffman 1974) used to identify decision-making frameworks. *Sample* Civil servants and elected officials from six municipalities *Research questions* What is the underlying argumentation for contracting health and elderly care services to private and third party providers?	*Effective (containing system costs)* Contracting services was viewed as a rational, cost-effective measure for ensuring quality health and elderly care services in Finland *Improving patient outcomes* The focus on patient outcomes was not a strong rationale for contracting services. While 'good for the local people' was one rationale put forward, the focus was more on diversity of choice for consumers and provision of services into the future *Ensuring sustainability of model* Municipalities focused on delivering what they viewed as 'core services'. In general, contracting with private providers was viewed as a 'sustainable' way to deliver additional, non-core health services into the future	Decisions about contracting are often wrapped up in 'rational' argument and seem free from political, ideological or other exogenous influences. However, ideological and political preferences are also present Decisions about contracting are mostly grounded in what is 'good for the municipality' (cost effective, job outcomes, tax offsets), rather than what is 'good for the people' The current rationales for contracting out health and elderly care services may be undermining the integrity of

				The specific contracting models used by municipalities were not directly assessed *Processes* Contracting with the private sector was viewed mostly as a means to improve the performance of public providers, to improve service quality and efficiency and to boost the local economy. Competition and consumer choice (i.e. purchasing options) was reported as potentially endangering the affordability of the services (out of pocket expenses) Concern that too much diversity in providers could result in fragmentation, inefficiencies and extra costs; and that there was also a risk of local monopolies & and removing small local providers from the market Measures to monitor the quality of care were viewed as fairly poor	the 'welfare state' in Finland
Vergel YB, Ferguson B (2006). Difficult commissioning choices: lessons from English primary care trusts. *Journal of health services research & policy* 11(3):150-54	England		*Data collection methods* Analysis of relevant PCT rationing policy documents (2003) Survey (interviews) of 25 PCTs from two regional Strategic Health Authorities (SHA) *Sample* 14 documents *Research questions* Describe recent local developments on prioritisation decision-making The study compared priority setting by PCTs with the ethical framework of AFR	*Processes* Rationing by exclusion was the most common approach for setting priorities. Involved identification of 'low-priority' services which are excluded from agreements (all or except for exceptional cases), by most policies failed to make the rationale for decisions accessible, apart from vague references to clinical effectiveness Public participation in production of rationing polices was relatively limited Some PCTs had engaged in a formal process to support evidence-based commissioning & integration of National Institute for Health and Care Excellence (NICE) guidance with local decision-making Appeals process varied regarding aims and panel	Adopting Accountability For Reasonableness (AFR) as a prioritisation framework can serve to improve the fairness and consistency of the decision-making process, reducing the vulnerability of PCTs to legal challenge. Characteristics of rationing policies already in place fulfil some of the AFR conditions but there remains scope for further improvements in their design and dissemination

				composition The level of dissemination both of rationing policies and the patients' right to appeal was relatively modest. PCTs primarily relied on GPs and consultants to provide information about patients' options and rights regarding rationing policies implemented by the PCT	
Wilson E, Sussex J, Macleod C, Fordham R (2007). Prioritizing health technologies in a Primary Care Trust. *Journal of Health Services Research & Policy* 12(2):80-85	England	Use of a Program Budgeting & Marginal Analysis (PBMA) tool in PCTs	Pilot of a PBMA	Using a PBMA tool can help prioritisation and understand the opportunity costs of purchasing decisions	The method appears to be a practical approach to prioritisation for commissioners of health care, but the pilot also revealed divergences in relative priority between nationally mandated service developments and local health-care priorities

Appendix 5: Case studies

Accountable Care Organisations in the USA

The Affordable Care Act includes a provision for Medicare to reward health providers who become ACO with a share of savings from improving care quality and reducing the cost for eligible Medicare populations.

ACOs are groups of physicians and health care providers, including primary care physicians, specialists and hospitals, who come together and collaborate voluntarily to provide services to Medicaid populations. They are a key component of the USA health reforms and are expected to target, in particular, integrated care and management of chronic conditions. Membership of the group varies and the only real mandated requirement is that one of the members at least is a primary care physician.

The defining characteristic of funding for ACOs is the payment models under which they operate to provide services to Medicaid patients. There is some choice, but all payment models through Medicare include an element of risk and savings sharing and payment based on quality and spending rather than on activity. This equals a shift away from the fee-for-service model to one that is intended to encourage care that reduces use of health resources.

According to the Council of Accountable Physician Practices ("Accountable Care Organizations: Frequently Asked Questions and Research Summary," 2013) the following characteristics are essential in an ACO delivery model:

- *"An ACO should have the capability to manage both the cost and quality of health care services under a range of payment systems, including fee-for-service, episode payments, and full and partial population-based prepayment (capitation)*
- *Possession of sufficient infrastructure and management acumen to support comprehensive, valid, and reliable performance measurements; to make internal system improvements in care quality; and to externally report on its performance with regard to cost and quality of care*
- *A clear organizational mission and commitment to achieve quality and cost efficiencies; a physician management structure that is supportive of all of the requirements listed above; and a culture that supports and rewards continuous quality improvement*
- *The use of health information technology to manage patients across the continuum of care and across different institutional settings, including at least ambulatory and inpatient hospital care and possibly post-acute care".*

The ACO model of risk sharing and value-based payments has also been adopted by some private insurers such as Cigna and Blue Cross Blue Shield. For example the AQC model through Blue Cross Blue Shield holds providers accountable to a global, risk-adjusted budget, plus incentives for quality. The risk model allows providers to share savings as well as the cost of care that exceeds targets. Key aspects of the AQC model include provider engagement, availability of technical assistance, and structured payment incentives (Seidman, 2015).

The ACO model is an important component of the Vermont Blueprint for Health, which includes private insurers and Medicare providers ("Vermont Blueprint for Health 2014 Annual Report," 2015).

Strategic planning

Identification of health priorities has been undertaken at the national level, with the key focus of ACOs being on integrated care (for example the patient-centred medical home) and on chronic disease. This includes prevention and early intervention.

Procurement

Private insurers may select services in an ACO model as they do in any other model – the defining difference will be the risk-sharing payment model. They may align incentives with provider groups in their marketplaces or purchase groups of physicians to improve quality delivery of care.

Selection of ACOs

Groups of physicians and other providers can apply to become ACOs. There is a specified set of criteria that must be met and a formal application process.

Payment models

The Centres for Medicare and Medicaid Services (CMS) describe the following models and initiatives to support the overarching ACO model ("Accountable Care Organizations (ACOs): General Information," 2015):

- Medicare Shared Savings Program (cms.gov) – for fee-for-service beneficiaries
- ACO Investment Model – for Medicare Shared Savings Program ACOs to test pre-paid savings in rural and underserved areas
- Advance Payment ACO Model – for certain eligible providers already in or interested in the Medicare Shared Savings Program
- Comprehensive ESRD Care Initiative – for beneficiaries receiving dialysis services
- Next Generation ACO Model – for ACOs experienced in managing care for populations of patients
- Pioneer ACO Model – health care organisations and providers already experienced in coordinating care for patients across care settings.

Monitoring and evaluation

In the first two years of ACOs, data was collected and analysed on activity and costs. Revised models were developed in response to this monitoring and reporting (see above).

Data is collected and reported at organisation level and a sample downloaded from the CMS website is included below.

Quality measure	Performance rate
Haemoglobin A1c control (HbAlc) (< 8 percent) Percentage of patients aged 18 to 75 years with diabetes mellitus who had HbA1c < 8.0 percent	56%
Blood pressure (BP) < 140/90 control Percentage of patients aged 18 to 75 years with diabetes mellitus who had a blood pressure < 140/90 mmHg	64%
Aspirin use Percentage of patients aged 18 to 75 years with diabetes mellitus and ischemic vascular disease with documented daily aspirin use or antiplatelet medication use during the measurement year unless contraindicated	61%
Angiotensin-converting enzyme (ACE) inhibitor or angiotensin receptor blocker (ARB) therapy for patients with CAD and diabetes and/or left ventricular systolic dysfunction (LVSD) Percentage of patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12 month period who also have diabetes OR a current or prior left ventricular ejection fraction (LVEF) < 40% who were prescribed ACE inhibitor or ARB therapy	68%

Quality measure	Performance rate
Patient/caregiver experience quality measures	
Getting timely care, appointments, and information Questions included in the measure: • In the last six months, when you phoned this provider's office to get an appointment for care you needed right away, how often did you get an appointment as soon as you needed? • In the last sixmonths, when you made an appointment for a check-up or routine care with this provider, how often did you get an appointment as soon as you needed? • In the last six months, when you phoned this provider's office during regular office hours, how often did you get an answer to your medical question that same day? • In the last six months, when you phoned this provider's office after regular office hours, how often did you get an answer to your medical question as soon as you needed? • Wait time includes time spent in the waiting room and exam room. In the last six months, how often did you see this provider within 15 minutes of your appointment time?	79%
How well your doctors communicate Questions included in the measure: • In the last six months, how often did this provider explain things in a way that was easy to understand? • In the past six months, how often did this provider listen carefully to you? • In the past six months, how often did this provider give you easy-to-understand information about these health questions or concerns? • In the past six months, how often did this provider seem to know the important information about your medical history? • In the past six months, how often did this provider show respect for what you had to say? • In the past six months, how often did this provider spend enough time with you?	92%
Patients' rating of doctor Questions included in the measure: • Using any number from 0 to 10, where 0 is the worst provider possible and 10 is the best provider possible, what number would you use to rate this provider?	90%

Quality measure	Performance rate
Health promotion and education Questions included in the measure: **General health promotion and education** • In the last six months, did you and anyone on your health care team talk about specific things you could do to prevent illness? • In the last six months, did you and anyone on your health care team talk about a healthy diet and healthy eating habits? • In the last six months, did you and anyone on your health care team talk about the exercise or physical activity you get? • In the last six months, did anyone on your health care team talk with you about specific goals for your health? **Mental health promotion and education** • In the last six months, did anyone on your health care team ask you if there was a period of time when you felt sad, empty, or depressed? • In the last six months, did you and anyone on your health care team talk about things in your life that worry you or cause you stress?	56%

A qualitative evaluation was undertaken of physician views of altered payment models and changes to practices that have been influenced by changed payment models. Changes were noted in three main areas. These were:

- Organisational structure – these changes were generally in order to achieve economies of scale, for example in purchasing
- Practice operations – these changes related to using a team-based approach to care, for example with allied health staff, and the use of care manager roles
- Data systems – there was increased investment in data systems and in collection and analysis of data in order to adequately capture and report on activity and maximise payments.

An issue identified in this evaluation was related to the tension between different payment models. Under fee-for-service physicians are rewarded for increased activity but under risk-based payment models the opposite applies. Managing both within the one practice was difficult.

Learning from ACOs

The Council of Accountable Physician Practices has identified the following potential challenges for ACOs:

- Multispecialty group formation and income disparity between specialists and generalists
- Patient population size required to measure outcomes and manage costs
- Establishing or maintaining a patient-focused, physician-led accountable culture and integrating different organisational cultures into one ACO
- Adequacy of resources to manage realignment of money flows and service delivery
- Finding enough primary care doctors
- Lack of consistent measures
- The impact that an ACO transition might have on an organisation's business (short- and long-term)
- Legal and regulatory matters to allow for ACO collaboration and integration (reference is made to the Sherman Act anti-trust laws, anti-kickback laws, and the physician self-referral Stark Laws).

Learnings from the ACO type model implemented through Blue Cross Blue Shield (Seidman, 2015) indicate:

The Alternative Quality Contract (AQC) holds providers accountable to a global, risk-adjusted budget plus incentives for quality. Providers agree to a two-sided risk model that allows them to share in savings and in the cost of care that exceeds targets. The model is similar to the Affordable Care Act (ACA), however it is through a private insurer. Aspects of the AQC model include provider engagement, availability of technical assistance, and structured payment incentives.

- Overall reviews of the AQC and ACOs highlight some key lessons:
- New payment models have been observed to drive organisational and operational change, as well as increase use of data. Reliable data systems and good access to data are essential for reporting and monitoring
- There is potential to use payment models to shape provider behaviour by rewarding reduced expenditure and improved quality. Models where both providers and payers share savings rewards and deficit costs may drive increased provider motivation to change
- If providers are held accountable for the full range of services to patients, there is a greater incentive to control costs and improve quality across the entire spectrum of care
- Change takes time and this needs to be recognised in allocation of targets and timeframes under new payment models, particularly early in the change process. Support in service redesign can also assist
- Those providers who have a significant local presence and a solid market share are in the best position to take up new models.

Clinical Commissioning Groups in the UK

Commissioning responsibilities have changed in the UK since 2013, with responsibilities previously held by single PCTs now distributed between newly established CCGs, Local Authority Commissioners and a new national body, NHS England. The reforms have required the creation of CCGs, establishment of CSUs, establishment of HWBBs and transfer of responsibility for public health to Local Authorities.

What Are CCGs?

Since 2012/13, CCGs have been in place as the statutory bodies responsible for planning and commissioning NHS services (other than primary and some specialised care). CCGs are membership-based organisations and are intended to position GPs as the key local designers of health services. The logic underpinning this change was the pivotal role that GPs play in local services and the in-depth knowledge they hold about their practice populations. All GP practices must belong to a CCG and each practice will nominate a representative to attend members' forums. The governing bodies of CCGs consist of general practice representatives, members of the CCG executive team, other clinicians and lay representatives.

There are 211 CCGs covering populations of between 70,000 and 900,000 each. CCGs have responsibility for over two thirds of the NHS commissioning budget. The key differences between CCGs and previous commissioning bodies are:

- Membership is a mandatory requirement for GPs
- The CCG is intended to operate on a membership model whereby the organisation is led by GPs and represents all GPs in its catchment (Holder, 2015).

What are CSUs?

CSUs offer commissioning support to CCGs, in recognition that CCGs may not have internal expertise and/or resources to support effective commissioning activities. The services CSUs might provide range from operational support (e.g. planning, Human Resources, IT) to support with elements of the commissioning cycle (e.g. health needs assessment, service design, procurement, contract negotiation and management, and information management) to clinical support (e.g. medicines management, continuing care, complex case management).

CSUs are currently hosted by NHS England and were initially staffed with mangers from PCTs, but it is expected that by the end of 2016 CSUs will become autonomous entities in order to be able to compete in a developing market for Commissioning Support provision. Existing staff with responsibility for supporting commissioning work have been transferred to one of 18 CSUs although there are indications this number might reduce as some CSUs merge (Checkland, 2014; Petsoulas, 2014).

Levels of accountability and funding

In this latest iteration of commissioning in the UK, NHS England is responsible for commissioning the following in primary care:

- Essential and additional primary care services – these are negotiated nationally with GPs and consist of:
    - A 'global sum', which is based on patient population (capitation) with adjustments for demographics
    - Pay-for-performance (Quality and Outcomes Framework), which pays incentives for reaching disease-based targets
- Nationally commissioned enhanced services in primary care (e.g. the NHS health check programme)
- Contraceptive services
- Mental health interventions
- Public health interventions provided in primary care (e.g. tobacco control, alcohol misuse)
- Immunisation.

National commissioning occurs for Directed Enhanced Services provided for the patient population (e.g. childhood immunisation) and National Enhanced Services (services to meet local needs but commissioned to national specifications and benchmark pricing). However Local Enhanced Services, services developed locally to meet local needs are generally commissioned by Clinical Commissioning Groups (CCGs), with some commissioned by the Local Authority-based Public Health commissioners (e.g. sexual health services). This is where there is a greater degree of variability in the services provided.

Approximately one-third of UK practices are funded through Primary Medical Service (PMS) contracts, individually developed to include specific, or area-relevant services. These include a capitation payment and payments for additional services. APMS contracts for private service provision of general practice services to NHS patients are similar to PMS contracts, but are open to a wider range of providers, including private and for-profit providers (Peckham, 2014).

Strategic planning

One of the key objectives of the UK health reforms is the integration of health and community services. As of April 2015, CCGs were expected to commence co-commissioning.

Bramwell et al (2014) undertook a rapid review of the factors to be considered in planning for closer work between primary care and community services, to increase provision of services outside of hospital. They considered micro, meso and macro levels. Overall they found:

- Initiatives should be developed locally, based on local collaboration and building on good communication between and within services and practices
- It may be useful for local community services and practices to align their target populations when planning joint commissioning
- There is not an evidence base to guide decisions about which organisational structures best support joint commissioning
- There is limited data available on community services, including the cost-effectiveness of community services, which presents a challenge in planning for service models.

Procurement

Contracting

Several potential contracting models, particularly focusing on integration, have been identified as having application to integrated care by the Kings Fund (Addicott, 2014) and by the NHS ("A capitated approach to payment with outcome and risk share components," n.d.):

- Prime contractor model – where the CCG contracts with a single organisation (or consortium) which then sub-contracts individual providers to deliver care. This model is simple to manage and effectively shifts accountability to providers. There is a high financial risk for the prime contractor and it requires providers to have skills in contracting, supply chain management and commissioning
- Lead Accountable provider model – where in addition to sub-contracting individual providers, the contracted single organisation above also delivers care directly as part of the agreement. In this model there are clear governance arrangements, increased control over care provision and ability to move resources across and within a pathway. There is a risk of provider monopoly and perverse incentives leading to 'cream skimming'
- Alliance contract model – where a set of providers enters into a single arrangement with a CCG to deliver services. Commissioners and providers are legally bound together to deliver the specific contracted service, and to share risk and responsibility for meeting the agreed outcomes. Under this model there are strong incentives to collaborate and risk of dominance by a single organisation is minimised, commissioners remain actively involved and relationships between commissioners and providers are strengthened. The interdependency of providers means all share clinical and financial risk and all rely on the performance of others. Relationships have to be strong. This model is more complex to manage and requires establishment of strong governance arrangements
- Joint venture – providers remain independent but jointly establish a joint venture agreement for care provision. CCGs would contract with the joint venture for the specific services.
- Fully integrated care – CCGs would hold a single contract with a single provider. This provider may be a direct or indirect care provider but would take responsibility for providing services for an entire care pathway or patient population.

Payment

Examples of payment models discussed in the NHS include capitation, gains/loss sharing and outcomes-based payments. Examples of local and international (where available) applications of these models are provided in the NHS guidance documents.

Capitation

The NHS identifies the following key activities to be undertaken for a capitation model:

1. Identify the patient cohort. This would ideally be a population of more than 5000 (for economies of scale), likely to benefit from co-ordinated care (e.g. chronic conditions) and with some degree of homogeneity in care needs
2. Establish scope, which could include all health plus free social care services (to support integration)
3. Establish the unit price per person for 12 months
4. Agree on risk mitigation, for example excluding high risk outlier patients from the payment arrangement
5. Agree on processes for payment between the capitated budget holder and the other providers
6. Identify performance measures that could influence final payments to provider(s), to ensure an outcomes focus.

An example being applied by commissioners is Capitated Outcome-Based and Incentivised Contracts (COBIC). A COBIC-style contract requires the provider to coordinate the care of individual patients along pathways and across settings. It differs from pure capitation models as seen below.

Key elements to the approach of the commissioner are defined in the article as:

1. Define the population to be covered by the contract
2. Receive advice from the population on their expectations for delivery and combine with the required clinical outcomes
3. Redesign services with clinicians
4. Create a single budget for the population-based service, defining the total amount available for providers
5. Decide on the form of contract (competitive or non-competitive depending on which is more appropriate) (Bell, 2015).

Gains/Loss Sharing

Multilateral gain/loss sharing is suggested as a mechanism to address the issues of payment models that reward activity rather than outcomes or community-based care models. It has the potential to realign individual organisations' financial incentives to system-wide outcomes through providing some degree of protection from the potential loss of income for providers, including acute care providers, during a period of transition to new models of care and associated payments.

Multilateral gain/loss sharing can be combined with payment approaches such as current payment arrangements, a three-part payment approach or capitation. Commissioners and providers can distribute savings or losses resulting from system change between them, and mitigate financial risks. Gains and losses are the difference between the expected and actual cost of delivering care to a defined population. Gain sharing encourages providers to keep the patients in their target population healthy and intervene early to maximise outcomes and reduce costs of care. Gain/loss sharing arrangements are applicable to a number of contracting models.

Outcomes-based payments

This model is seen as particularly applicable in, for example, mental health services, where block funding has been the most common payment model and where significant improvements in patient outcomes are sought. Outcomes-based payment encourages all providers in a healthcare system to work to patient outcome targets by rewarding co-ordinated care where it achieves outcomes. Examples in the United States,

Valencia in Spain and other areas is quoted as evidence that this approach can achieve efficiencies. Payment models combine a fixed core component based on capitation with an outcomes-based component.

Monitoring and Evaluation

CCGs are very recent and most evaluations have focused on the qualitative views of GPs or other stakeholders.

Learning from CCGs

Holder et al published the results of a survey that sought the views of GPs on CCGs. The key findings were:

1. CCG members have mixed views on primary care co-commissioning, with those who held a role in CCG governing bodies feeling more positive about co-commissioning than those who did not
2. Most GPs do not support performance management by CCGs, although the majority do accept the role of the CCG in primary care development
3. Clinical engagement in CCGs is declining, but, is still higher than under PBC, with a minority of GPs believing quality of care had improved and fewer GPs feeling they could influence the work of the CCG
4. There are some positive signs for the future, with most CCG leaders intending to continue in their roles and some interest in involvement from other GPs and practice managers.

They reviewed the progress of CCGs since inception and identified the following work required to increase sustainability of the current commissioning model:

1. Sustain the enthusiasm of clinical leaders by investing in primary care leadership
2. Explore ways to maintain the strength of the GP membership voice in decision making and not focusing on contract management and compliancy to the detriment of that
3. Manage conflicts of interest and develop the role of lay and other non-GP members of governing bodies
4. Clearly delineate between the roles of NHS England and CCGs and ensure this delineation is understood by GP members
5. NHS England ensure CCGs have adequate resources to support their expanded role in primary care development and ensure adequate funding to take on new functions or some CCGs may struggle to fulfil their new roles effectively.

Humphries et al (2014) reported on a review of five case study sites, where Glasby et al identified the following features common to joint commissioning (Dickinson et al, 2013).

- The use of formal structures to increase sustainability in the face of possible internal changes
- Development of shared budgets between organisations where funds are pooled to address the needs of a group or population
- Identification of a lead organisation for particular services
- Co-location of staff across organisations and/or shared roles between organisations
- A joint health needs assessment and planning across involved organisations.

Disease Management Programs & Integrated Care in Germany

Background on the German system

The German health system is a Bismarck system. Since 2009 it has been compulsory for all German citizens and long-term residents to have health insurance. There are two main types of health insurance for Germans:

1. The public statutory health insurance scheme (SHI) – 'Gesetzliche Krankenversicherung' (GKV) for those earning below an income threshold. It is operated by approximately 150 competing sickness funds (SFs) and dependents of the insured are covered by the same scheme. Although individuals above the threshold can elect for private health insurance up to 85% remain with SHI
2. Private health insurance plan whereby individuals are insured on a per person basis. Once an individual has taken private health insurance they can no longer return to SHI. For this reason private insurance companies are legally obliged to offer a basic package of services for a similar price to the GKV scheme. 10 per cent of the population is covered by private health insurance
3. Other schemes cover the remaining 5% of the population. These include schemes such as the scheme for soldiers.

Both statutory health insurance funds and private health insurance companies must accept any applicant. General practice is delivered by physicians who are mandatory members of regional Associations, which negotiate contracts with SFs, are responsible for organising care, and act as financial intermediaries (Civitias, 2013).

DMP Model

Disease Management Plans (DMP) have been in place in Germany since the early 2000s and are implemented by SFs through contracts with providers. Changes were made to the payment models for SFs and physicians in 2009, but the basic model has remained the same. SFs are paid an incentive to enrol suitable patient into a range of chronic disease management programs, which include elements of patient selection, co-ordinated care, patient education in self-management and evidence-based treatment. The funds contract physicians to provide the care on behalf of their members. There are some incentives paid to physicians as well.

Sickness Funds can design their own programs, but they must be based on the following evidence-based national guidelines:

- Definition of enrolment criteria and process
- Treatment according to evidence-based care recommendations
- Quality assurance through feedback to physicians, peer review and patient reminders
- Physician and patient education
- Use of an electronic medical record
- Evaluation
- Accreditation by the Federal Agency for Insurance every three years.

Strategic planning

The DMP model is nationally driven and is guided by nationally accepted evidence-based guidelines. The implementation of the treatment programs is through regional contracts between statutory health insurance providers and contracted physicians. Physicians are audited and authorised by the German Federal Social Insurance Authority. There is local flexibility for health insurers to develop their own programs, as long as they comply with the nationally determined requirements. They play a role, with physicians, in identifying and targeting those members who are eligible for and would benefit from DMP. There are DMPs in:

- Asthma
- Chronic-obstructive pulmonary disease (COPD)
- Breast cancer
- Type 1 diabetes mellitus
- Type 2 diabetes mellitus
- Coronary heart disease (CHD), including a module on chronic heart failure ("Gemeinsamer Bundesausschuss," n.d.; "What are disease management programs (DMPs)?" n.d.).

Contracting/Procurement

In 2009 the payment model for the DMPs changed. Before 2009 SFs received a higher compensation for patients enrolled in a DMP. As of 2009 current incentives are:

- SFs receive a flat administration fee for each enrolled patient (lump sum)
- Physicians receive specific flat rate payments for:
    - First documentation
    - Ongoing documentation
    - Care co-ordination
    - Patient education
- For enrolled patients, co-payments are waived.

This model recognises the large number of chronic conditions that require higher/more co-ordinated levels of care and uses a risk supplementation approach which fits within the broader ambulatory care payment model as described below.

- Sickness funds make a global payment to each regional physician's association in whose region their insured persons reside. This payment is based on patients' average utilisation of services and is meant to cover the remuneration of all SHI-affiliated physicians in a given region
- Each regional physician's association distributes this payment among its GPs and specialists on a fee-for-service basis according to the Uniform Value Scale, which lists all reimbursable services and their relative weights expressed in points. A payment ceiling is set quarterly for each physician and adjusted for:
    a) Physician's specialisation
    b) Total number of cases he or she treated during the same quarter of the previous year
    c) Age of his or her patients.

Points for services provided within this ceiling – or "Case-Volume Age-Based Cap" (CVAPC) – are reimbursed with a uniform nation-wide conversion rate per point, guaranteeing a fixed payment. Services provided beyond the CVAPC are reimbursed at a lower rate. The CVAPC attempts to overcome the limitations of pure capitation or FFS by providing physicians with an incentive to accept patients with higher risks without providing unnecessary services (Blümel, 2010).

Monitoring and Evaluation

Early evaluations of the DMP appeared to indicate favourable outcomes for patients and a reasonable level of engagement from physicians and SFs. Models for diabetes were assed to be congruent with the Chronic Care Model (Wagner). Evaluation indicated the model for COPD enhanced quality of care through improved adherence to guidelines, pharmacotherapy, exacerbations, and self-management education. However, the DMP was not able to prevent an increase in emergency hospital admissions for the stable population in the cohort (Merrig, 2014; Stock, 2011; Szecseny, 2008).

Lessons from DMPs

The RAND Corporation analysed the success factors for DMPs and identified five success factors:

1. Size – larger DMPs benefit from economies of scale and a larger resource pool. Larger DMPs have greater capacity to influence physician behaviour and to gather evidence (sample size) on interventions
2. Simplicity – more successful DMPs have kept administrative processes (such as enrolment of patients) simple and not too restrictive. They have not over-complicated care pathways
3. Patient focus – successful DMPs have identified patients' needs and capability. They have developed programs that are applicable for patients and have built patient capacity through education and self-management
4. Information transparency – clear data requirements and reporting metrics support effective DMPs. In addition to physician level collection and analysis, independent analysis is provided of data by third parties
5. Incentives – these may be financial or non-financial and apply to patients and providers. RAND notes that where there is a fee-for-service model, financial incentives probably remain the strongest form or incentive for physicians.

RAND also notes that it takes time to set up an effective DMP, for example the German diabetes model took six years to develop and implement.

A unique Integrated Care model in Germany – Gesundes Kinzigtal

Gesundes Kinzigtal (Alderwick, 2015) is unique in Germany and is a joint venture between a network of physicians in Kinzigtal and a Hamburg-based health care management company, OptiMedis AG. Gesundes Kinzigtal is responsible for organising care and improving the health of nearly half of the 71,000 population in Kinzigtal in southwest Germany.

Gesundes Kinzigtal has long-term contracts with two German non-profit sickness funds to integrate health and care services across all ages and care settings for their insured populations. Around a third of their member population has enrolled and has access to health improvement programmes as well as health care services.

Health care providers in Kinzigtal are directly reimbursed by the SFs for their services, but Gesundes Kinzigtal shares the benefits of any savings with the Sickness Funds.

Gesundes Kinzigtal has comprehensive coverage in the area and has contracts with:

- 33 GPs and paediatricians
- 27 medical specialists and psychotherapists
- 8 hospitals/clinics
- 11 nursing homes
- 5 ambulatory nursing agencies
- 2 psycho-social care agencies

- 10 physiotherapists
- 16 pharmacies.

In addition to contracts with health care providers, Gesundes Kinzigtal also works with gyms, sports clubs, education centres, self-help groups and local government agencies. Agreements are in place with:

- 6 fitness Centres
- 38 voluntary associations, sports clubs, social clubs etc.
- 4 other partners (Struckmann, 2015).

Some examples of additional preventive health activities available to members include:

- Gym vouchers
- Dance classes
- Glee clubs
- Aqua-aerobics courses
- Health promotion programmes in schools, workplaces and for unemployed people
- 'Patient university' classes to support prevention and self-management.

Gesundes Kinzigtal provides targeted care management and prevention programmes for high-risk groups, such as older people, those living in nursing homes, people with specific conditions, and those with high BMI.

Health professionals are trained to enable patient involvement in their own care. A system-wide electronic health record is in place making patient information available across different providers and in different care settings.

There is evidence of health care cost savings as a result of the initiative (Hildebrandt, 2010).

Other outcomes are described in The Kings Fund report, Population health systems – Going beyond integrated care as:

"… improving health outcomes – most notably, reducing mortality rates for those enrolled in Gesundes Kinzigtal compared with those not enrolled (Busse and Stahl 2014; Hildebrandt et al 2012). There have been improvements in the efficiency of services, as well as people's experience of care.

Gesundes Kinzigtal has also been successful in slowing the rise in health care costs for the population it serves (not simply those who have actively enrolled in Gesundes Kinzigtal). Between 2006 and 2010, it generated a saving of 16.9 per cent against the population budget for members of one of the sickness funds, compared with a group of its members from a different region. One of the main drivers of this saving related to emergency hospital admissions. Between 2005 and 2010, emergency hospital admissions increased by 10.2 per cent for patients in Kinzigtal, compared with a 33.1 per cent increase in the comparator group (Hildebrandt et al 2012)."