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Review

A rapid review of the impact of commissioning on service use, quality, outcomes and value for money: implications for Australian policy

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Abstract. The aim of this systematic review was to assess evidence of the impact of commissioning on health service use, quality, outcomes and value for money and to consider findings in the Australian context. Systematic searches of the literature identified 444 papers and, after exclusions, 36 were subject to full review. The commissioning cycle (planning, contracting, monitoring) formed a framework for analysis and impacts were assessed at individual, subpopulation and population levels. Little evidence of the effectiveness of commissioning at any level was available and observed impacts were highly context-dependent. There was insufficient evidence to identify a preferred model. Lack of skills and capacity were cited as major barriers to the implementation of commissioning. Successful commissioning requires a clear policy framework of national and regional priorities that define agreed targets for commissioning agencies. Engagement of consumers and providers, especially physicians, was considered to be critically important but is time consuming and has proven difficult to sustain. Adequate information on the cost, volume and quality of healthcare services is critically important for setting priorities, and for contracting and monitoring performance. Lack of information resulted in serious problems. High-quality nationally standardised performance measures and data requirements need to be built into contracts and ongoing monitoring and evaluation. In Australia, 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.

Additional keywords: contracting, planning, primary health care, purchasing.

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Introduction

Commissioning is a term that has only recently gained currency in Australian policy. While there is no single authoritative definition of commissioning (Newman *et al.* 2012; Dickinson 2015), it 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). The core process of commissioning involves three main areas of activity: strategic planning, contracting services, and monitoring and evaluation (Fig. 1).

Commissioning health services emerged in the United Kingdom (UK) in the late 1980s (Bovaird *et al.* 2012) and has been followed by other countries, for their own reasons. In the UK, commissioning was implemented in an attempt to use market forces and introduce non-government and private providers to bring innovation into a highly centralised system. In parts of Eastern Europe, it has been used to move away from exclusively state-run health services towards greater private sector provision. In the United States (US) it has been used to organise affordable health care for people within specific health insurance arrangements (military veterans who have received care from the Veteran's Health Administration, employees, Medicare recipients and members of Health Maintenance Organisations).

The policy reasons for considering a greater role for commissioning in Australia are described in the Reform of the Federation discussion paper (Australian Government 2015) and the paper by the Primary Health Care Advisory Group (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 healthcare 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 care packages for older people or those with chronic conditions or

What is known about the topic?

- Several reviews of commissioning in the healthcare sector have been conducted previously, but there has been limited consideration of commissioning as it might be applied in the Australian health system.

What does this paper add?

- There is limited evidence of the effectiveness of commissioning, impacts are highly context-dependent and there is significant work to be done in various areas to support commissioning in Australia.

complex needs, and to provide services that will avoid or reduce hospitalisation. This requires the ability to combine different sources of funding, and rationalise often conflicting systems of accountability between the Commonwealth and the states. Pooling funds and jointly commissioning services is one way of achieving this. Further impetus comes from the interest of private health insurers in providing support services for members who may become users of hospital services.

There have been several reviews of different types of commissioning in the healthcare sector but limited consideration of commissioning as it might be applied in the health system in Australia. This paper draws on a rapid systematic review of the evidence on the effectiveness of commissioning conducted in July and August 2015 to consider lessons for Australia. The specific research questions were:

(1) What national and international forms of commissioning primary care at jurisdictional or local/regional level have been shown to be effective, for which population groups and in what contexts?
(2) What are the impacts, risks and unintended consequences associated with these?

Drawing on the evidence, we consider which aspects of commissioning could be applied in Australia and what regulatory, governance, policy and funding arrangements might be required to support them.

Methods

A rapid review was conducted, consistent with accepted methodology (National Collaborating Centre for Methods and Tools 2014). The project team put together a comprehensive search strategy and set of search terms (Box 1). Searches were conducted in Medline, Embase, CINAHL, Informit and the Cochrane Database of Systematic Reviews. Hand searching of key journals (*Health Policy*, *Health Services Research and*

Fig. 1. Elements of the commissioning cycle. Adapted from SA Health Clinical Commissioning Intentions (2013–17) (O'Brien 2013).

Box 1. Search terms

1. commissioning.mp.
2. exp Contract Services/ma, mt, og, sd, ut [Manpower, Methods, Organisation and Administration, Supply and Distribution, Utilisation]
3. procurement.mp.
4. exp Group Purchasing/mt, og, ut [Methods, Organisation and Administration, Utilisation]
5. commissioning health services.mp.
6. exp Value-Based Purchasing/ec, og, ut [Economics, Organisation and Administration, Utilisation]
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, Organisation and Administration, Supply and Distribution, Utilisation]
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 Organisations/
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')

Policy, and *Health Economics*) and citations from key papers was also conducted. Relevant website searches from Australia, the US, the UK, New Zealand and Europe, and consultation with key experts in each of these countries, identified grey literature.

Only studies conducted since 2005 that incorporated key aspects of commissioning of primary healthcare services with a focus on purchasing services at the primary and acute care interface or chronic disease management, disability or mental health were included in the review. Studies had to report on key elements or activities of a local/regional level commissioning process as well as 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/enabler to implementation (inclusion and exclusion criteria are contained in Appendix S2 available online as supplementary material).

Five researchers (JM, KG, MH, RK, CJ) extracted data from the peer-reviewed literature. The quality of studies was not formally assessed. The commissioning cycle (planning, contracting, monitoring) formed a framework for analysis of the literature and impacts were assessed at individual, subpopulation or population levels.

Results

Following exclusion of duplicates, 444 papers were identified in the initial search and, of these, 408 that did not meet our criteria were excluded (Fig. 2). Many of these were descriptive papers that drew on expert opinion to describe various approaches, related policies or reforms, or which explored some aspect of commissioning such as clinician involvement. Several of these papers were retained as background to the review and, together with 20 grey literature reports, were used to consider the regulatory, governance, policy and funding arrangements that might be required to support commissioning in Australia. Thirty-six papers were reviewed.

Characteristics of identified studies

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

As shown in Table 1, included studies covered a range of different commissioning organisations, including primary care trusts (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 US, and district health boards in New Zealand. Studies were predominantly qualitative, involving cases studies and interviews and/or surveys of the perceived impacts, levels of engagement, success factors, barriers and enablers to commissioning, or satisfaction among different stakeholder groups. Five 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.

Focus of studies on the elements of commissioning

Sixteen studies addressed at least one of the elements of the commissioning process (Table 2). No studies of monitoring were identified. In relation to planning, there was a strong focus on the importance of comprehensive needs assessment for groups and populations (Elvey *et al.* 2006; Shaw *et al.* 2013). Six studies addressed priority setting and rationing. Marks *et al.* (2011) found limited use of priority setting tools (decision support) for resource allocation. Priority setting needs to be embedded in routine planning and budgeting processes (Robinson *et al.* 2012*a*, 2012*b*) and provide support for disinvestment as well as

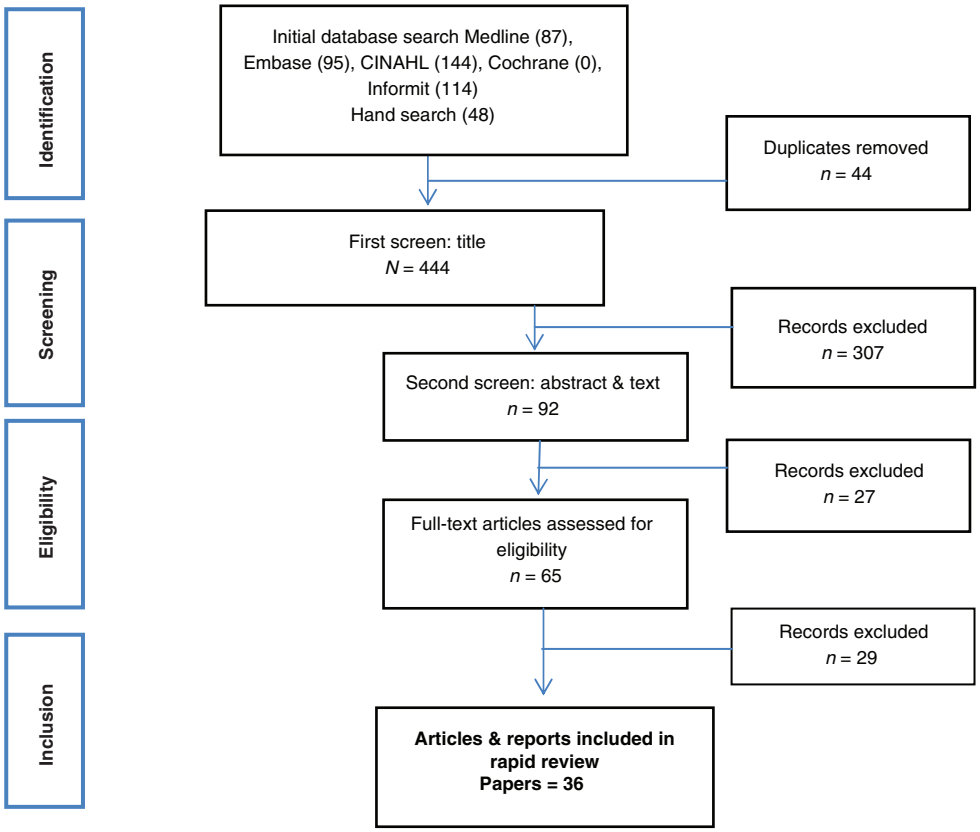

Fig. 2. Search strategy results.

investment decision making (Rooshenas *et al.* 2013). Shaw *et al.* (2013) found that commissioning care, especially long-term care, is time consuming and complex, and supported best by an incremental approach.

Studies of contracting focused predominantly on partnerships supporting commissioning of specialist services for subpopulation groups (Freeman and Peck 2006) and the impact of service and contract design on improving models of care. Slater and White (2007) found that PBC supported service redesign to improve models of care. Freeman and Peck (2006) reported that service users perceived that commissioning in PCTs had improved specialist models of care for mental health, and drug and alcohol services. CCGs were not supportive of outsourcing contracting or other support functions as these were perceived to potentially lead to fragmentation and increased transaction costs (Petsoulas *et al.* 2014). Alternative Provider of Medical Services (APMS) contractual processes were time consuming, expensive and perhaps unsustainable (Coleman *et al.* 2013).

Ly and Glied (2014) showed that in the US, contracting opportunities conferred significant benefits on physicians, although they added 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.

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 Table 3, individual care for specific populations is commissioned in the US. At the subpopulation level, services have been commissioned for people with specific needs such as children, or specific services such as 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.

Evidence of impact of commissioning

There was very limited evidence to assess the impact of commissioning on service use, outcomes or value. Of the seven relevant studies related to commissioning at individual, group and population level (Dusheiko *et al.* 2006; Freeman and Peck 2006; Goldman 2010; Salmon *et al.* 2012; Barnes *et al.* 2013; Ly and Glied 2014; McLeod *et al.* 2015), three studies described impacts on health service use, one on outcomes, one on quality and two on value for money.

With respect to service use, Barnes *et al.* (2013) found that in the context of inappropriate treatment of routine childhood

Table 1. Included studies by commissioning organisation, study type and focus

AFR, accountability for reasonableness; APMS, Alternative Provider of Medical Services; CCG, clinical commissioning group; DHB, district health board; HLP, Healthy Living Pharmacy; PBC, practice-based commissioning; PBMA, Program Budgeting and Marginal Analysis tool; PCT, primary care trust; PDSS, Personal Dental Service Scheme; NHS, National Health Service; RCT, randomised control trial

Commissioning organisation	Study type[A]	No. of studies	Study focus
UK PCTs ($n = 12$) Comparing PCTs with other types of commissioning ($n = 4$); APMS ($n = 1$); HLP ($n = 1$); PDSS ($n = 1$)	11 qualitative, 3 mixed method, 2 quantitative including 1 RCT	18	Qualitative: collaborations between PCTs for commissioning secondary care services (Baxter *et al.* 2007; PCT case study); characteristics of commissioning managers (Checkland *et al.* 2012; PCT); perceptions of value of priority-setting tools (decision support) for resource allocation (Marks *et al.* 2011; PCTs); commissioning services for long-term conditions (Shaw *et al.* 2013; PCTs); priority setting and rationing in PCTs (Robinson *et al.* 2012; PCT case study); AFR framework to aid decision making (Bravo Vergel and Ferguson 2006; PCT); comparisons across commissioning models in Germany and UK (Sheaff *et al.* 2013; PCT and other); views of CCG versus PCT commissioning (Turner *et al.* 2013; PCT and CCG); are GPs best placed to deliver equity and excellence? Comparing GP commissioning with PCT (Gridley *et al.* 2012; PCT and other); APMS contractual processes (Coleman *et al.* 2013; UK APMS); commissioning dental services through PDSS (Newton *et al.* 2006; PDSS); barriers and enablers to commissioning (Bradley *et al.* 2006; PCT survey); engaging pharmacy in pharmaceutical needs assessment for commissioning pharmacy (Elvey *et al.* 2006; PCT) Quantitative: cluster RCT examining impact of commissioning on smoking cessation and entrance of new market players (McLeod *et al.* 2015; PCTs); PBMA for purchasing (Wilson *et al.* 2007; PCT) Mixed methods: redesigning children's services (Barnes *et al.* 2013; PCT); use of external consultants by NHS commissioners (Naylor and Goodwin 2011; PCT interviews and survey); commissioners viewed HLP scheme as an effective model with which to deliver increased volume, quality and reliability of community health services (Kennington et *al.* 2013; HLP)
Fundholding practices ($n = 1$); PBC ($n = 2$); CCGs ($n = 7$)	1 quantitative; 9 qualitative	10	Quantitative: impact on cost containment and service use (Dusheiko *et al.* 2006; fundholding) Qualitative: barriers to PBC (Checkland *et al.* 2009; PBC); PBC as a service redesign tool (Slater and White 2007; PBC); investigating disinvestment practices (Rooshenas *et al.* 2013; CCG); exploring development of CCG (Checkland *et al.* 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 and Willcocks 2014; CCG); what governance structures are forming under the CCG model, how are they engaging members and serving the population they represent? (Checkland 2013; CCGs); attitudes of CCGs to outsourcing commissioning functions (Petsoulas *et al.* 2014; CCGs); do GPs bring value to commissioning? (Perkins *et al.* 2014; CCGs); development of world-class commissioning in UK – lessons for CCGs (McCafferty *et al.* 2012; CCGs)
Joint commissioning	Quantitative	2	Challenges to implementation of joint financing of health and social care, perception of value for money 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 and Peck 2006)
Municipal contracting (Finland)	Qualitative	1	Rationale for purchasing from private sector (Tynkkynen *et al.* 2012)
Managed care contracting (USA)	Mixed method	2	Physician satisfaction and impact on practice of managed care contracting (Ly and Glied 2013); implementing bundled payments (Hussey *et al.* 2011)
Accountable care (USA)	Case studies	2	Strengths and weaknesses of accountable care (Song 2014); accountable care costs (Salmon *et al.* 2012)
DHB (NZ)	Qualitative	1	Decentralising resource allocation (Ashton *et al.* 2008)

[A]Quantitative/qualitative/RCT/mixed method/case study.

Table 2. Study findings on the elements of commissioning for individuals, subpopulations and populations

AFR, accountability for reasonableness; APMS, Alternative Provider of Medical Services; CCG, clinical commissioning group; PBC, practice-based commissioning; PBMA, Program Budgeting and Marginal Analysis tool; PCT, Primary Care Trust

Target	Planning • Accessing needs and market capacity • Resource and risk analysis • Strategic plan	Contracting • Service and contract designs • Contract implementation • Provider development	• Monitoring and supporting patient choice • Managing contracts • Managing performance
Individual		<u>Service and contract designs</u> Physicians who contract more with managed care have higher income and spend more time in patient care, modest demand for time outside patient care and have lower perceived adequacy of time with patients (Ly and Glied 2014) US Managed Care	
Subgroup	<u>Assessing needs and market capacity</u> 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 a wide-scale change (Shaw *et al.* 2013) UK PCT	<u>Provider development</u> PCT partnerships for commissioning mental health, and drug and alcohol services, perceived by user groups as having a positive impact on service models (Freeman and Peck 2006) UK PCT	
Population	<u>Assessing need and market capacity</u> Pharmacy needs assessments undertaken by 90% of PCTs and high levels of local pharmacist engagement in the process (Elvey *et al.* 2006) PCTS <u>Resource and risk analysis</u> Limited use of priority-setting tools (decision support) for resource allocation (Marks *et al.* 2011) UK PCT Using PBMA tool can help prioritisation and understanding the opportunity costs of purchasing decisions (Wilson *et al.* 2007) UK PCT Adopting the AFR framework can improve fairness and consistency of decision making processes, reducing PCT to legal challenges (Bravo Vergel and Ferguson 2006) UK PCT <u>Strategic plan</u> Priority-setting processes need to be embedded in budget management and address disinvestment as well as investment strategies (Robinson et al. 2012*a*) UK PCT Priority-setting processes are perceived to be compartmentalised and peripheral to planning and need to address disinvestment as well as investment strategies (Robinson et al. 2012*b*) UK PCT Disinvestment of low-value care is difficult to achieve due to lack of opportunities, capacity, training and methods; sustainable methods needed to support disinvestment practices (Rooshenas *et al.* 2013) UK CCG	<u>Service and contract designs</u> APMS contractual processes were transactional contracting as opposed to relational contracting and were time consuming and expensive, and perhaps unsustainable (Coleman *et al.* 2013) UK APMS Service design new model of care for children leads to reduction in admissions and costs (Barnes *et al.* 2013) UK PCT External support for increasing input of clinical knowledge can improve the quality of commissioning (Naylor and Goodwin 2011) UK PCT CCGs not supportive of outsourcing contracting or other support functions as they are perceived as potentially leading to fragmentation and increased transaction costs (Petsoulas 2014) UK CCGs Rationale for purchasing from private sector to benefit municipality (Tynkkynen *et al.* 2012) UK PCT PBC as a service redesign tool for implementing better models of care (Slater and White 2007) UK PCT	

Table 3. Services commissioned at individual, subpopulation and population level

Level	Services commissioned
Individual	Medical services USA (Salmon *et al.* 2012)
Subpopulation	Children's' ambulatory care UK (Barnes *et al.* 2013)
	Chronic disease care for the elderly Finland (Tynkkynen *et al.* 2012)
	Mental health, drug and alcohol UK (Freeman and Peck 2006)
	Financing disability, mental health and community equipment UK (Goldman 2010)
	People with long-term conditions UK (Shaw *et al.* 2013)
Population	Pharmacy UK (Bradley *et al.* 2006; Elvey *et al.* 2006)
	Dental UK (Newton *et al.* 2006)

conditions, service redesign led to reductions in emergency admissions for children. A study of joint commissioning for health and social care services demonstrated no change in length of stay, reduced hospitalisation or delay in transfer of care (Goldman 2010). A third study of fund-holding practices demonstrated reduced emergency and elective admissions (Dusheiko *et al.* 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 (Freeman and Peck 2006). One study, a randomised trial as part of PCT commissioning, demonstrated improvements in smoking rates (McLeod *et al.* 2015). Two US studies involved analysis of economic benefit. A study of US managed care reported improved physician incomes and time with patients but little overall improvement in value (Ly and Glied 2014). A study of accountable care in three practices showed reduced costs and improved quality of care (Salmon *et al.* 2012).

Factors found to facilitate or impede commissioning

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

Discussion

In Australia, commissioning has been used largely to fill gaps in primary healthcare service delivery for individuals and subpopulations rather than as a framework for mainstream health services. For individuals, services not included in Medicare, such as home care (Veterans' Home Care) and disability care (National Disability Insurance Scheme) have been commissioned. For subgroups, commissioning has focused on conditions where there is a problem of access to high-quality specialist care – for example, for people with severe mental illness or diabetes, or those in palliative care. For populations, commissioning has tended to centre on groups not otherwise adequately served – in particular, 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 Coordinated Care Trials in the 1990s and evaluations of existing programs, such as the After Hours Other Medical Practitioners program.

Internationally, the evidence base for the impact of commissioning was weak. Most studies examined commissioning for populations; few explored commissioning for subpopulation groups or for individuals. There was insufficient evidence to identify any preferred form of commissioning. Although planning, contracting and monitoring are all critical elements in the process of commissioning, the emphasis of studies is on planning, with some attention to contracting but very little on monitoring contracts and performance, or supporting patient choice. The lack of emphasis on monitoring and evaluation may reflect the relatively early stage of development of commissioning.

Grey literature reports cite lack of skills and capacity as major barriers to the implementation of commissioning. Skills are especially important in the securing or contracting domain for procurement, risk and contract management (Figueras *et al.* 2005). Local commissioners and providers need to have the competency for local decision management (Russell *et al.* 2013). This includes priority setting, engagement of the population and stakeholders, quantifying, costing, structuring demand and ensuring services are effective and high quality. Collaboration and partnership, information management, innovation, governance, compliance, accountability, project management and leadership are key (Dickinson 2015). There need to be measures in place to ensure stability of the management workforce as high staff turnover undermines the relationship (Newman *et al.* 2012). This implies significant investment in developing skills in the workforce to be involved in the commissioning process and support (resources and advice) for members in the field.

Successful commissioning also requires a clear policy framework of national and regional priorities that define agreed targets for commissioning agencies. 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.

The European Observatory report 'Purchasing to improve health' (Figueras *et al.* 2005) found that engagement of consumers and providers, especially physicians, is considered to be critically important but has proven difficult to sustain. Providers need autonomy to respond flexibly to contracts (Figueras *et al.* 2005). Much of the backlash against managed care was a result of perceived restrictions on the care that could be provided. Commissioners need the flexibility to be able to respond to patient needs and changing conditions, and to develop innovative solutions. Strict interpretation of competition law in New Zealand made it difficult to develop the long-term contracts and relationships between purchasers

and providers that are necessary for effective commissioning and service continuity (Ashton *et al*. 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 that allows commissioning to be undertaken in partnership with providers, blurring the distinction between commissioners and providers (Shaw *et al.* 2013).

Both providers and consumers need to be informed and have an opportunity to provide input into the commissioning process (Joyce 2015). This takes time but is crucial in building trust and legitimacy for commissioning, especially where difficult decisions have to be made (Dickinson *et al.* 2013). It needs to be clearly driven by policy mandating clinician and consumer involvement in the commissioning process (Sampson *et al.* 2012).

In the countries studied, policy and governance settings are usually defined by government and professional bodies that 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 that can be commissioned for each subgroup of people (Figueras *et al.* 2005). Governments may also define the models of care or healthcare package, including the structure, quality, amount and cost of services. There is usually some restriction of access to services to remain within budget (Mannion 2008). For individual commissioning, this implies some degree of patient enrolment or registration. Excessive gatekeeping that restricts provider autonomy or choice of preferred providers was found to be counterproductive in the US (Ham 2008). More recent models, such as accountable care organisations, have involved a greater choice being offered to providers and patients (Robinson 2004).

It is also important that there is not high variability in uptake of the program by providers, as occurred in UK GP-holding in the 1990s, as this is likely to lead to inequities (Mannion 2008). This needs to be addressed through widespread efforts to engage providers, to monitor uptake both geographically and socio-economically, and to monitor any consequent inequities of access to quality care that may arise.

Adequate information on the cost, volume and quality of healthcare services is critically important for setting priorities, contracting and monitoring performance. Lack of information resulted in serious problems in New Zealand in the 1990s (Ham 2008); these have been partly addressed with the introduction of the Primary Care Strategy in 2001 (King 2001) and subsequent developments. There needs to be clarity of roles and responsibilities and supportive legal frameworks for commissioning. This is particularly important in the context of funds pooling or flexible use of budgets and joint commissioning involving different levels of government or sectors (Newman *et al.* 2012).

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

Conclusions

Little evidence of the effectiveness of commissioning at any one level (population, subgroup or individual patient) is available and observed impacts are highly context-dependent. This review 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. Australia might be wise to start commissioning in areas where the benefits are clearest, monitoring progress carefully and only expanding as experience is gained and all the elements required are in place.

Conflicts of interest

None declared.

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