AUSTRALIAN PRIMARY HEALTH CARE RESEARCH INSTITUTE

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SYSTEMATIC REVIEW OF COMPREHENSIVE PRIMARY HEALTH CARE MODELS

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BACKGROUND AND RATIONALE

In 2005, the Australian Primary Health Care Research Institute (APHCRI) established its Stream Four research program, aimed at systematically identifying, reviewing, and synthesising knowledge about primary health care organisation, funding, delivery and performance and considering how this knowledge might be applied in the Australian context. This research stream continues to address the three high level priorities of APHCRI:

- Innovation in State/Commonwealth relationships
- Innovation in funding arrangements for new or existing services/models
- Innovation in organisation and linkages within the Primary Health Care sector

A number of research groups across Australia were funded as part of this program and three groups were funded under the topic area: "Innovative models for comprehensive primary health care service delivery".

The Research Centre for Primary Health Care and Equity at UNSW, which was one of the groups funded, has a long history in undertaking national and state primary health care policy research in Australia and this experience has shaped the focus and scope of this current review on major system-wide initiatives.

The introduction of initiatives across a system illustrates a significant political commitment to particular types of reforms beyond trials, pilots, demonstration projects or regional/local specific initiatives. They commonly involve complex interventions which act on complex social systems and are very dependent on context and implementation (Pawson et al., 2005). A focus on system-wide approaches helps with understanding the broader policy environment and context in which particular initiatives are implemented, what the major reforms and specific initiatives are trying to achieve, their history and evolution, as well as the linkages and interactions between them and other elements that comprise the system. Taking a systems approach enables a focus not only on the outcomes of particular initiatives but also the larger picture of inputs, processes and the outputs which contribute to understanding not only what works, but for whom, why, under what circumstances and in what respects (Pawson et al., 2005).

The contribution that a well functioning and effective primary health care system can make to improving the health of the population and reducing health inequalities is supported by international evidence. Primary care has been shown to have an independent effect on improving health status and reducing health inequalities (Starfield B, 1994, Macinko et al., 2003). Other research shows that primary care may mitigate the adverse effect of income inequality on health status (Bunker et al., 1994, Shi et al., 1999, Macinko et al., 2003). Furthermore, countries with strong primary care infrastructure have lower costs and generally healthier populations (Shi et al., 1999, Bunker et al., 1994).

In addition to the country-level evidence for primary health care, there is also a growing body of evidence, of varying quality, that supports the contribution of types of primary health care services and providers, the roles they play and integrated ways of working to improvements in access to primary health care, clinical, functional and self-reported outcomes, quality of care, and patient satisfaction (McDonald and Hare, 2004).

In response to the growing evidence-base supporting primary health care, coupled with common challenges being faced, a number of countries have embarked on significant primary health care reforms. In particular, similar challenges being experienced are:

- an increased proportion of gross domestic product (GDP) spending on health and inappropriate use of hospital services for ambulatory care sensitive conditions
- the ageing of populations and an increasing burden of chronic disease, along with a growing evidence base supporting different combinations of care and the need to intervene earlier to prevent disease
- problems with inequitable access to primary care services (a mixture of geographical mal-distribution of services, financial impediments and the traditional small practice size which hinders the capacity of general practice to address a community's comprehensive needs)
- a lack of integration of primary care services with other parts of the health system, resulting in poorly coordinated and duplicated care

In Australia, the major drivers for primary health care reform are similar to other countries, but the particular contextual issues that influence nature of reforms in Australia include:

- Primary health care workforce issues: an ageing GP workforce; shortages in outer urban, rural and remote areas; and increasing proportion of health workers choosing to work part time
- System issues: the complexities of having two levels of government responsibility for primary health care funding, organisation and management; the differing Commonwealth and State/Territory priorities; the commitment to consumer choice in primary care provider; unique geographical characteristics with different implementation issues and challenges in urban, rural and remote areas; and the lack of a national primary health care policy framework or strategic direction (Powell Davies et al., 2003)

Despite the differing health system structures and funding systems, which have implications for how the reforms are implemented, there are a number of common themes and developments being pursued to reconfigure primary health care internationally. These include:

- a refocus of primary health care more towards prevention and ongoing management to address changing patterns of health and disease
- defining a core range of primary care services for defined populations
- improving 24/7 access to essential primary care services
- greater focus on planning and delivering services for geographically defined populations
- a mixture of changes to funding, workforce and organisational structures.

Coupled with these changes have been movements in a number of areas, from a) solo GP to more practice-based approaches, b) single discipline to multidisciplinary approaches, c) medical treatment to holistic management, including self care, d) a focus on individuals to population approaches, and e) practitioner autonomy to greater accountability for performance and outcomes.

A common thread across the reforms is the centrality of general practice and encouragement and support of the willing and efforts to achieve consensus, whilst not allowing opposition to stop the effort (Marriott and Mable, 2000).

While systematic reviews synthesise the evidence from high quality research studies and have contributed to the body of knowledge of what can work under trial conditions, these reviews tell us less about the experience of implementation and the outcomes achieved in real life settings, where a myriad of factors come into play that have a profound influence on the extent to which initiatives are implemented as designed and achieve their aims. This type of evidence is commonly found in evaluations, usually commissioned by government in the early-mid stages of their implementation. However, with few exceptions (Chapman et al., 2004, Simoens and Scott, 2005a) there has been little focus on bringing together the findings from a number of initiatives introduced across systems and seeing what can be learned. The current review of system-wide initiatives in the selected countries attempts to address this gap.

FOCUS OF REVIEW

The focus of this review has been on system-wide reforms in Australia, Canada, United Kingdom and New Zealand intended to promote access to more comprehensive primary health care through collaboration across the range of primary health care providers. Systems-wide initiatives were defined as significant national and or state/provincial wide initiatives that have been intended to make primary health care more comprehensive, with a specific focus on multidisciplinary approaches across the range of primary health care providers, and that have significant funding attached to their implementation. In some countries, funding and policy responsibility for primary health care is at the national level (e.g. United Kingdom, New Zealand); in others this may be at a jurisdictional level (e.g. Canada); and in Australia this is a mixed Commonwealth/State responsibility.

Primary health care was defined according to its core functions and characteristics:

- First point of contact with the health system for the majority of the population
- Operates as a gateway to other parts of the health system through referrals
- Provides generalist services across the spectrum of care, with an emphasis on episodic care for common time limited health problems, anticipatory preventive care, the early detection of and intervention for risk factors, and the ongoing management of chronic conditions
- Provides comprehensively for the major health needs of individuals/families/ local communities across the lifecycle
- Incorporates a focus on psychosocial care
- Provides continuity of care over time and over episodes
- The use of multidisciplinary approaches (Centre for Health Equity Training Research and Evaluation (CHETRE), 2005)

The research questions were informed by a conceptual framework that was first developed by the University of New South Wales team members (Powell Davies et al., 2006) and which was modified during this review. The framework described the elements of a comprehensive primary health care system using program logic as the following diagram illustrates:

Diagram 1:

Context and values (underpinning the health system/country) **Major goals and aims (of change strategy)**			
Goals & aims of specific initiatives	**Infrastructure:** Systems/ Capacity	**Outputs:** (Service delivery)	**Outcomes:** Access ┊ Health gains
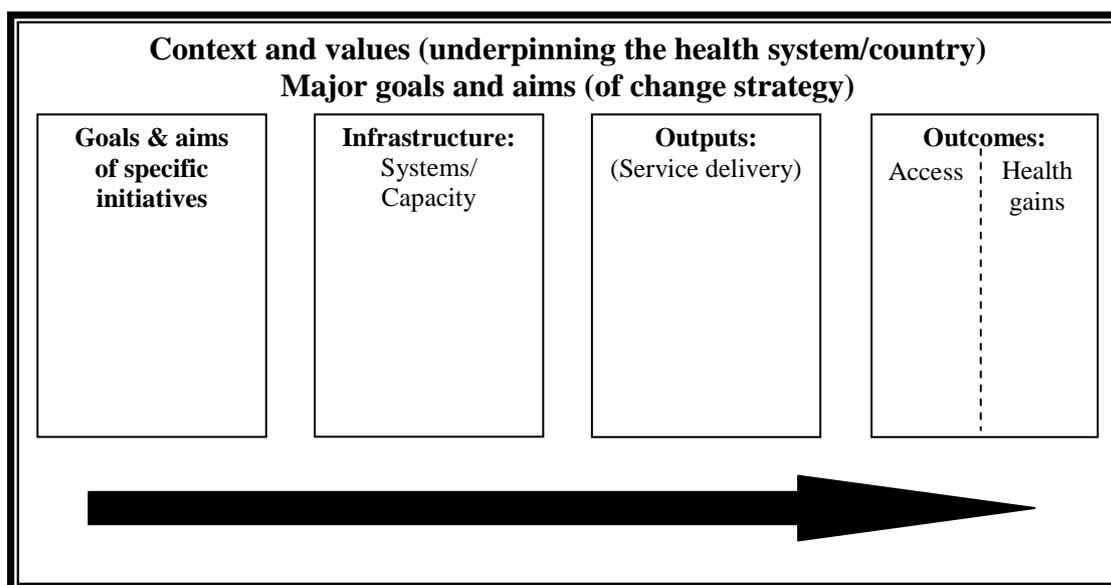
The elements of the framework are:

- the operating context: the context and values that underpin and shape the other elements, and the goals and aims of major system wide initiatives designed to promote comprehensive primary health care
- the goals and aims of specific initiatives
- the capacity and infrastructure that enables and supports the service delivery changes, including resources (e.g. financing and funding systems); policy and leadership; structures (including governance, partnerships, defined roles and responsibilities); systems and tools for communication, information sharing and decision support; workforce supply and training; (NSW Health, 2001, Joint Advisory Group on General Practice & Population Health, 2001)
- the service delivery changes that are made to meet the specific aims and objectives
- the intermediate and longer term outcomes achieved (Watson et al., 2004), including a) improved access to/utilisation of services, b) patient/client health outcomes and satisfaction, and c) costs

The research questions evolved over time and were informed by the initial scoping of the literature and consultations with key informants (see Appendix 6.2). This iterative approach is one of the hallmarks of the narrative review approach used in this review (Lavis et al., 2005). The final questions addressed were:

1. What have been the major system-wide initiatives to promote access to more comprehensive primary health care through collaboration across the range of primary health care providers?
2. What is known about the implementation, effectiveness and efficiency of the initiatives?
3. Are there elements/characteristics common across the initiatives that contribute to their impacts?
4. What are the implications for developing more comprehensive primary health care in Australia?

The following results section summarises the findings in relation to questions one and two, with the discussion section being the focus of questions three and four.

METHODOLOGY

The approach to the review was informed by a series of papers that focussed on synthesising evidence for management and policy-making (Pawson et al., 2005, Mays et al., 2005, Lavis et al., 2005).

Initially the research questions were refined (Appendix 6.3). This was an iterative process throughout the study. Part of this process involved defining the scope of the study i.e. comparable countries and time period.

QUESTION REFINEMENT

In order to identify other comparable countries the following factors were taken into consideration: economic structure, social structure, demographics and a recent history of primary health care reform. The USA was not included in the review as it does not have a comprehensive primary health care system; it is hard to distinguish primary from secondary care; and providers serve populations that are defined through the purchase of health insurance.

There were few countries in Europe, other than the United Kingdom, where teamwork and collaboration across the range of primary health care workers, are strong features. Other countries identified included Bulgaria, Finland, Latvia, Portugal and Sweden (Boerma and Dubois, 2006). However, these countries were excluded from this study due to the complexities of their system; their multiple levels of government; and devolved responsibility for primary health care, which is unlike that found in Australia. There was also the difficulty of identifying key contacts in each country, which was crucial for this type of review.

APPROACH

Initiatives were initially identified through the knowledge of research team members, broad literature searches, searches of government web pages and consultations with key stakeholders.

A two stage approach to data collection was used to answer the research questions. Initially, each initiative was described using literature that focussed on their background, characteristics, and implementation. This literature mainly came from policy documents, reviews and government endorsed reports. Saturation point was reached through reviewing a relatively small number of key papers.

The second stage of the research looked at the implementation and effectiveness of each initiative. This required a wider breadth of papers and was carried out using a more traditional systematic review approach. This was supplemented by web page searches and personal contacts to identify especially government-commissioned studies which may not have been published; a method highlighted as being important in systematic reviews of complex evidence (Greenhalgh and Peacock, 2005).

KEY INFORMANTS

Key informants were engaged to ensure an understanding of the context and nuances of each initiative. This was done primarily through email and telephone contact. The main roles of the informants were to: ensure that all initiatives had been identified; review initiative descriptions; ensure the identification of all evaluation studies; and look at the implications for Australia (Appendix 6.2).

Furthermore, representatives from across Australia were invited to a workshop, held at the end of August 2006. This forum was used to help understand the initiatives, the context in which they are operating and the implications for Australia of successful initiatives being used elsewhere (Appendix 6.2).

The use of key informants both remotely and through the workshop was found to be a powerful way to ensure optimal coverage of the subject.

SEARCH STRATEGY

The search sought to identify both published and unpublished studies. A broad search of the Ovid databases was conducted initially using generic terms to identify the relevant search terms. As each database had its own indexing terms, individual search strategies were developed for each database. During the development of the search strategy, consideration was given to the diverse terminology used and the spelling of keywords as this would influence the identification of relevant studies. A combination of keywords and Medical Subject Headings (MESH) was used as it has been found to be most powerful for these types of reviews. In order to ensure complete coverage of the literature the search strategies were developed to be sensitive (broad) rather than specific. The databases searched included Medline (1995-2006), CINAHL (1995-2006), EMBASE (1995-current), PsychInfo (1995-2006), Current Contents Connect (1995-2006) and the Cochrane Library up to and including 2006 Issue 2. The search terms used are outlined in Appendix 6.4.

Database searches were initially run using generic search terms. More comprehensive searches were run using key words that had become apparent through the identification of the initiatives. A combination of keywords and Medical Subject Headings (MESH) was found to be most powerful. Searches were sensitive (broad) rather than specific in order to ensure complete coverage of the literature.

Website searches
Focussed website searches were conducted on sites identified by research team members or key stakeholders. A list of websites searched is given in Appendix 6.5.

Search Limitations
All searches were limited by the following criteria:
- papers published from 1995 onwards (it was felt that most change in primary health care has occurred since this point in time)
- papers that referred to primary health care in selected countries: Australia, Canada, United Kingdom and New Zealand
- papers published in English, due to time and funding constraints

Inclusion criteria

To be included, studies needed to refer to the specific initiatives that were the focus of the review, and the organisation and/or delivery of comprehensive primary health care through collaborative approaches across a range of primary health care practitioners.

Article selection

Two assessors reviewed every search result (title and abstract) and classified each result into three categories: yes; no; or maybe, depending upon the above criteria. Articles classified as maybe were discussed between the two assessors to determine their final status. When a decision regarding inclusion could not be made on the abstract and/or title, articles were ordered.

Articles were excluded if they did not report findings that related to the focus of the review. There were a number of instances in which there were two or more papers reporting on a particular study (for example, the study report and a journal article). In these cases, the journal article was included, unless the study report provided additional relevant information, in which case they were also included. In some instances where there have been regular program reviews/evaluations conduced on initiatives, the more recent reports provide an assessment of changes over time. In these instances, the earlier reports have not been reviewed. Furthermore, some articles that were single site case studies that were originally considered were excluded if they did not provide additional insights to findings from more representative studies.

The reference lists of articles retrieved were hand searched (snowballing) in order to identify additional literature.

Quality

Due to the nature of the questions under review, the majority of the publications identified were descriptive studies or reports. These types of studies are ranked at the lower level of the National Health and Medical Research Council's (NH&MRC) levels of evidence for clinical interventions: Levels III and IV. Quality criteria based on this scale were not used as it was felt that papers with important and relevant information would be excluded from the study.

However, studies were excluded if there was insufficient information included on their study design and methods.

Table 1. Summary of data sources

Quality criteria/evidence criteria	Objective patient data	Admin data	Patient reported data	Provider reported data	Total
National administrative data	0	6		1	7
Local administrative data	2	9	0	0	11
Quantitative methods, representative sample	0	0	3	40 (50%)	43
Quantitative methods, unrepresentative sample	0	0	5	22 (27%)	27
Qualitative methods	0		2	17 (21%)	19
TOTAL	2 (2%)	15 (14%)	10 (9%)	80 (75%)	107

Note: 19 studies involved more than one data source
75% of studies used provider reported data, of which 50% were representative samples; 27% were unrepresentative samples; and 21% were qualitative studies.
Only 9% of studies used patient provided data, and 2% objective patient data.

Table 2. Summary of study designs for each initiative

Initiative	Descriptive studies	Control groups	RCTs
Australia			
Divisions of General Practice	2	1	0
Primary Care Partnerships	3	0	0
Primary Health Care Networks	1	0	0
Community health services	3	0	0
Aboriginal community controlled health services	0		
GP funding			
• Enhanced Primary Care	10	0	0
• Service Improvement Payments	1	0	0
• Access to Allied Psychological Services	6	0	0
• More Allied Health Services	0	0	0
Practice Nurses	2	0	0
United Kingdom			
Primary care groups & trusts	19	0	0
Local health care cooperatives	5	0	0
Community health partnerships	0	0	0
Personal medical services	10	1	1
General medical services	2	0	0
Practice-based commissioning	0	0	0
Primary care mental health workers	3	0	1
Community matrons	0	0	0
New Zealand			
Primary Health Organisations	5	0	0
Primary Care Organisations	11	0	0

Data extraction

Data extraction was undertaken in two phases. Initially, the initiative descriptions were written up. Then the initiative evaluations were summarised using a data extraction tool developed by the team (Appendix 6.6). The outcomes of interest were the types of initiatives that have been implemented for delivery of comprehensive primary health care and objective or subjective measurements of the impact of the initiatives on infrastructure, service delivery, access/utilisation, and health outcomes.

RESULTS

INTRODUCTION

This section presents the findings from the two stages of the review. The first stage of the review involved identifying and describing the major system-wide initiatives in each of the countries and the contexts in which they have been introduced and implemented. The second stage involved reviewing what is known about their implementation and impact and outcomes. The findings for both stages are grouped by country, and due to the nature of the studies and the heterogenous nature of the initiatives, they have been presented in a narrative format (See Appendices 6.7 and 6.8 for more detailed evaluation results).

Seventeen initiatives were identified across Australia, United Kingdom and New Zealand that met the inclusion criteria of being system-wide reforms that had a focus on improving access to more comprehensive primary health care through collaboration across the range of primary health care providers. While there has been considerable focus on primary health care reform in Canada, the main responses have been time-limited demonstration or pilot projects or regional initiatives that have not been applied across the system as a whole. See Appendix 6.9 for a summary of the major initiatives in selected provinces.

In Australia, two state-based initiatives were included even though they did not strictly meet the inclusion criteria. The NSW Primary Health Care Network pilot project was included as it was an example of a network model that differed from the approach implemented in Victoria. There is interest in a number of jurisdictions in network models and the evaluation highlights some important learnings and implications. GPs in Victorian community health services were also included as a recent initiative aims to enhance this relationship.

General practice fund-holding in United Kingdom, although an important initiative, was excluded, as it ceased in 1997. However, given its similarities to practice-based commissioning, reference has been made to the research evidence on primary care fund-holding especially in the discussion section (see section 3.4).

Table 3. Summary of initiatives by country and number of study articles

Initiative	Number of study articles	Publication years	Study date
Australia (N=7)			
Divisions of General Practice	3	2000-2005	1996-2004
Primary Care Partnerships	3	2001-2005	2002-2005
Primary Health Care Networks	1	2005	2003-2005
Community health services	3	1998-2005	1991-2001
Aboriginal community controlled health services	0		
GP funding			
• Enhanced Primary Care	10	2001-2005	2000-2002
• Service Improvement Payments	1	2004	2002-2003
• Access to Allied Psychological Services	6	2003-2006	2001-2005
• More Allied Health Services	0		
Practice Nurses	2	2004-2005	2004
United Kingdom (N=8)			
Primary care groups & trusts	19	1999-2004	1999-2003
Local health care cooperatives	5	2001-2005	1998-2000
Community health partnerships	0		
Personal medical services	12	1999-2005	1998-2001
General medical services	2	2006	2004-2005
Practice-based commissioning	0		
Primary care mental health workers	4	2003-2006	2002-2005
Community matrons	0		
New Zealand (N=2)			
Primary Health Organisations	5	2003-2005	2002-2005
Primary Care Organisations	11	1996-2005	1994-2002

Of the seventeen initiatives, thirteen had publications providing evaluation data on their implementation.

Community Matrons and Practice-Based Commissioning in United Kingdom and community health partnerships in Scotland are recent initiatives and have not yet been evaluated. No articles or publicly available reports were located that evaluated the Aboriginal Community Controlled Health Services or the More Allied Health Services program in Australia. While both the GP and pharmacist components of the Home Medication Review program have been evaluated, the report of the GP component was not available.

There are a number of health system characteristics across the selected countries that are the backdrop to the reforms over the past decade or so. These are summarised in the table below. The more country specific history and contexts are provided in the results sections for each country.

Table 4. Selected characteristics of health systems by country

Country	Health expenditure (as % of GDP) 2001[1]	Level of government responsible for primary health care	Predominant provider payment	Patient enrolment	Number of GPs per 1,000 people (2000/2001)[1]
Australia	9.3	National (general practice) State (community health services)	Fee for service (GPs, private allied health practitioners) Incentives Salaried (community health services)	No	1.3
Canada	9.7	Provincial	Fee for service (GPs) Salaried (community health centres)	No	0.8
United Kingdom	7.6	National	Capitation Fixed allowances Quality Salaried (as an alternative to capitation)	Yes	0.6
New Zealand	8.1	National	Capitation Salaried (not-for-profit PCOs)	Yes	1.0

AUSTRALIA

Overview of history and context for reforms

The Australian health system is characterised by differing management responsibilities and a mix of private and public provision. The Commonwealth has major responsibility for general practice and the States/Territories have responsibility for hospitals and the network of publicly funded community health services. These characteristics coupled with a predominantly general practice fee-for-service payment system and commitment to ensuring consumer choice, have a significant influence on the reform process and development of system-wide responses. Australia is also characterised by a large land mass and a population that is concentrated along the eastern sea board. This profile has a profound effect on the supply and provision of health services. Despite improvements in material and living conditions and in morbidity and mortality, there are still patterns of health inequalities remain, most pronounced in the Indigenous population.

The General Practice Strategy released in 1992 aimed to "enhance the role of general medical practitioners beyond individual patient care, and to promote better integration of GPs with the rest of the health system" (General Practice Consultative Committee, 1992). The thrust of the Commonwealth reforms since then has been to enhance the capacity of general practice and to strengthen their collaboration with other health service providers. This is especially true in relation to improving the management of chronic disease through a mixture of financial incentives, program funding, grants, and workforce initiatives designed to improve access to GPs and other primary health care practitioners, building practice capacity and quality, providing practice support and education (including information management/technology), introducing standards and

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[1] Taken from Australian Institute of Health and Welfare (2004) *Australia's Health 2004,* AIHW, Canberra.

accreditation and other quality improvement programs, and strengthening research capacity and the evidence-base. Initiatives designed to overcome Commonwealth/State funding fragmentation have also been trialled, but have not been implemented across the system. However, as many commentators have observed, the lack of a national primary health care policy or strategic framework continues to impede the development of a national and comprehensive approach to primary health care (UNSW et al., undated, Powell Davies et al., 2003).

Common priority areas for State/Territory-funded community health services have included: improving the integration between primary health care and specialist/acute services; reducing avoidable use of hospitals; better management of chronic and complex conditions; and improving service coordination across the range of primary and community health services. There is some evidence that these developments are impacting on workloads and service delivery patterns of community health nurses (Kemp et al., 2002, Kemp et al., 2005).

Table 5. **Summary of results for Australian initiatives**

Initiative	Impact on infrastructure Provider satisfaction [2]	Impact on service delivery Provider satisfaction [3]	Impact on access/ utilisation	Impact on health outcomes Patient satisfaction	Other impacts
Divisions of General Practice (3)	✓✓✓	✓✓			
Primary Care Partnerships (3)	✓✓	✓✓			
Primary Health Care Networks (1)	✓	✓			
Community Health Services (3)	✓✓✓	✓✓	✓✓		✓✓
Aboriginal Community Controlled Health Services			None		
General Practice funding incentives (17)	✓✓✓✓✓ ✓✓✓✓✓	✓✓✓✓ ✓✓✓	✓✓✓✓ ✓✓✓	✓✓✓✓ ✓✓✓	
Practice Nurses (2)	✓✓	✓	✓		✓

✓ = number of articles which report one or more findings that relate to this aspect

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Divisions of General Practice

Divisions of General Practice were established in 1992 as voluntary, GP member based organisations. There are currently 120 across Australia. They aim to support the development of general practice in the following areas: enhancing quality and evidence based care, improving access, encouraging integration and multidisciplinary care, focusing on prevention, early intervention and better management of chronic disease, and ensuring a growing consumer focus (Commonwealth of Australia, 2004). Their focus has shifted over time from GPs to practices. They vary in size and their boundaries are not aligned with other relevant planning or service delivery boundaries, nor are they formally integrated with State-funded health services. In 1998, seven State Based Organisations and a peak national organisation were established as part of the network to provide leadership, representation, advocacy, policy and program support and to liaise with the Commonwealth and State health authorities. In 2005, following a national review of their roles, performance-based contracts and a National Quality & Performance System was introduced (Australian Government Department of Health and Ageing, 2005) which replaced the previous three year outcomes-based funding contracts, introduced in 1998/9. Divisions are funded according to a weighted population formula and in 2002/03 their core allocation was in the vicinity of $125 million (Richardson J et al., 2005). They are also budget holders for some national initiatives, including those that improve the access of GPs to other primary health care providers.

There were three publications reviewed for this initiative. Whilst annual surveys of Divisions have been undertaken since 1993/94, the national review of the role of Divisions made extensive use of these surveys as an integral part their methodology, hence only the annual surveys after this time were included.

Impact on infrastructure

Divisions have been most effective in achieving their core aim of supporting general practice. They have had a strong focus on engagement with GPs as members and in governance arrangements. In 2001/02, 95% of GPs were members of Divisions (Review Panel, 2003). However, there has been considerably less involvement of other health professional groups, consumers or community groups in governance arrangements (Kalucy et al., 2005, Review Panel, 2003) which has, in part, been attributed to less engagement by Divisions in broader primary health care reform (Review Panel, 2003).

There have been only modest achievements in collaboration with other health services. This has been difficult to achieve and the focus has been mostly on specific initiatives, where there are incentives for GPs to participate (Kalucy et al., 2005). There was little evidence on the extent to which Divisions collaborate with state-funded primary health care services to improve access. Non-aligned boundaries with other health services and the size of Divisions have limited collaboration (Review Panel, 2003).

Impact on service delivery

Most evidence on the role of Divisions in supporting general practice is related to specific Commonwealth initiatives for which there have been funded programs directed to practices or to Divisions as a vehicle for implementation. Half provide direct patient services in mental health and/or diabetes, and many provide practices and patients with access to allied health professionals, have supported practices to develop chronic disease management programs, and more recently have increased their focus on prevention activities. However, while many are involved in addressing after hours primary medical care access, few have addressed financial and locational barriers to

access (Kalucy et al., 2005). Other factors which have influenced the nature and range of Divisional activities include support from GPs (Rogers WA and Veale B, 2000).

Impact on access and health outcomes

No evidence was found on the attributable impact of Divisions in improving access to primary health care, improving the health and well being of patients/populations, their impact on other parts of the health system or provider satisfaction. However the findings for GP funding initiatives (see below) do include evidence of improved access to psychologists and practice nurses, most of who are contracted though Divisions

Primary Care Partnerships (Victoria)

Primary Care Partnerships were established in 2000 and are voluntary alliances of predominantly state-funded primary health care agencies. General practice has been involved through Divisions of General Practice rather than through participation by individual practices/GPs. They aim to address fragmentation within the primary health care system and reduce hospitalisation through better planning and service coordination (Department of Human Services, Victoria, 2001, Department of Human Services Victoria, 2000, Department of Human Services Victoria, 2004). There are thirty-one across Victoria, with most extending to two to three local government areas. However, they are not always aligned with other health service boundaries. Each Partnership receives limited funding, with some funds held centrally to support policy and infrastructure development, including for example the development of planning templates, guidelines, service directories. The funding goes to a lead agency nominated by the Primary Care Partnership. The overall funding allocation per year is approximately $1million.

There were three publications reviewed for this initiative that were government commissioned evaluations undertaken the same group.

Impact on infrastructure

Primary Care Partnerships are seen as a successful vehicle for facilitating change within and across state-funded agencies, with the major focus being on building the capacity and infrastructure of member agencies to support improved planning and primary health care coordination. Improved planning for health promotion across the catchment has also occurred (Australian Institute for Primary Care, 2005).

Relationships and communication across member agencies has improved over time; an important precondition for better service coordination. However, while communication between GPs and other primary health care providers in the network has improved, the clarity and timeliness of communication between these two groups has remained variable, and even after several years a third of the Partnerships were still at the early stage of strengthening communication links with general practice (Australian Institute for Primary Care, 2005).

The development of information and communication systems and tools to facilitate access to services and support service coordination within the Partnerships has improved over time (Australian Institute for Primary Care, 2005). Significant change management and restructuring within member agencies has been required to meet the aims and objectives along with education, training and support (Australian Institute for Primary Care & Centre for Development and Innovation in Health, 2002).

Impact on service delivery

By their third year of operation, there was evidence that the aim of improved service coordination was beginning to be realised, especially in those Partnership agencies which provide home and community care services (Australian Institute for Primary Care, 2003), and between 2002-2005 the use of care plans for intensive service users had increased (Australian Institute for Primary Care, 2005).

Impact on access and health outcomes

There were no findings that related to health outcomes or impacts on other parts of the health system.

Primary Health Care Networks (NSW)

Eight Primary Health Care Networks were established in NSW as two-year pilot projects between 2002 and 2005. These were voluntary alliances of primary and community health service providers that aimed to improve the coordination of primary health care services to a defined population that is characterised by high needs or disadvantage. Five were in rural areas and three were in outer urban/urban areas. In most instances the lead agency was the regional health authority, although in one Network the lead agency was the Division of General Practice. Of the eight networks, two were specifically focused on dementia. The total funding over the two-year period was $1.3 million.

There was a single evaluation report for this initiative

Impact on infrastructure

There were major impediments that limited the capacity of the Networks to affect sustainable and system changes (Jan Smith + Associates P/L, 2005). These barriers included a lack of agreement or clarity about their purpose and roles and the extent to which they complemented rather than duplicated existing collaborative structures and initiatives. The networks were also hampered by a lack of shared governance, had little strategic support and promotion from other levels, the membership benefits were not always clear, and they were not always well aligned with other boundaries for planning (Jan Smith + Associates P/L, 2005).

Impact on service delivery

Over the two years the Networks were funded there were some important achievements in improved coordination with other service providers through the use of single assessments and integrated referral pathways and documented care plans. However, these developments were isolated and fragmented rather than connected or integrated with other initiatives (Jan Smith & Associates P/L, 2005).

Impact on access and health outcomes

There were no findings on the impact of Primary Health Care Networks on access to comprehensive primary health care, health outcomes or other parts of the health system

Community Health Services

Victoria there has been a recent emphasis on enhancing the role of GPs (Victorian Government Department of Human Community health services are the major state-funded part of the primary health care sector and they vary in size, location and service provision. In most states they tend to be part of regional health structures, although in Victoria, some are community-controlled organisations (Burgell Consulting Pty Ltd et al., 2002). They aim to promote, improve and maintain the health and well being of local communities (NSW Health, 2002, South Australian Department of Human Services, 2003, Queensland Health, 2002). Community health services range in size from one person rural community nursing outposts to large multidisciplinary centres in urban areas. They generally do not include GPs, although community health services in Victoria and to a lesser extent South Australia do. They provide a range of primary health and more specialised community health services across the life span, with particular focus on the early childhood years and older age groups for chronic disease management, rehabilitation and palliative care. They are increasingly playing an important role in alternatives to hospitalisation. In Victoria there has been a recent emphasis on enhancing the role of GPs.

The lack of publications reporting on the implementation and impact of community health services was striking. While articles were found that reported changes in service delivery patterns in a single region over time (Kemp et al., 2002, Kemp et al., 2005), or the range of evaluations undertaken in community health services in a metropolitan area (Jolley et al., 2004), no articles were located that evaluated community health services across a jurisdiction. The exception was the three articles that evaluated Victorian community health services, with a specific focus on their relationship with GPs.

Impact on infrastructure

Just under one-third to one-half of mainly metropolitan services, employ/contract GPs on either a fee-for-service or salaried basis (funded through fee-for-service payments) (Swerissen et al., 1998, Burgell Consulting Pty Ltd et al., 2002). There was no preferred model - both had the potential to achieve outcomes and to break even financially (Burgell Consulting Pty Ltd et al., 2002). This group of GPs are more likely to refer their clients to allied health professionals than their colleagues in private practice (Bayram C et al., 2006, Burgell Consulting Pty Ltd et al., 2002) and to work in collaboration with other members of the community health team and other community services in response to complex social health problems (Burgell Consulting Pty Ltd et al., 2002). Collaboration tends to rely more on informal than formal mechanisms and the different client information systems and performance monitoring arrangements for both groups were felt to impede effective collaboration (Burgell Consulting Pty Ltd et al., 2002).

Impact on service delivery

There was considerable variation in the extent of the involvement of GPs in the full range of community health services and infrequent involvement in prevention (Burgell Consulting Pty Ltd et al., 2002). This may be because many are employed for specific programs, rather than for general primary medical care practice (Swerissen H et al., 1998).

In Victoria, community health services and GPs expressed dissatisfaction with their relationship, and while one-third of community health services had developed specific eligibility protocols for one or more of their services, few had considered systematic and ongoing involvement of private practice GPs in the development of these protocols

(Swerissen H et al., 1998). However, this is a general rather than specific finding for the group of GPs working in community health services.

Impact on access

General practitioners in community health services were more likely to service disadvantaged groups and clients with complex heath needs than their colleagues in private practice (Bayram C et al., 2006), and the variation in cost performance suggests that in comparison with private practice colleagues, they provide longer consultations associated with greater levels of need and complexity (Burgell Consulting Pty Ltd et al., 2002). They often provide the only affordable and accessible medical services for low income residents in rural and remote communities (Burgell Consulting Pty Ltd et al., 2002).

Impact on health outcomes

There were no findings on health outcomes for service users.

Impact on other parts of the health system

In one of the few examples of articles that reported on the impact on other parts of the health system, no significant differences were found in ordering rates of pathology tests or imaging by GPs in community health services compared to their private practice colleagues (Bayram C et al., 2006).

Aboriginal Community Controlled Health Services

Aboriginal Community Controlled Health Services (ACCHSs) are initiated and run by the local Indigenous community. ACCHSs range from large multi-functional services employing several medical practitioners and providing a wide range of services, to small services without medical practitioners, which rely on Aboriginal health workers and/or nurses to provide the bulk of primary care services (National Aboriginal Community Controlled Health Organisation (NACCHO)). In 2000/01 there were 107 health services across Australia which were controlled by Aboriginal communities (Hunter et al., 2005). ACCHSs aim to:
- To improve access to and appropriateness of a full range of primary health care services for Indigenous communities by creating a culturally appropriate environment.
- To improve community decision making and control (self determination) over the management and delivery of health services to Indigenous people.

Bartlett and Boffa, (2005) identified the lack of coordination and cost shifting between the States and Commonwealth as barriers to the effective implementation of services.

There were no publications located that evaluated the impact of Aboriginal Community Controlled Health Services.

General Practice funding incentives

The GP funding initiatives introduced between 1998-2003 aimed to provide funding for activities to extend the range and quality of GP services, particularly for chronic disease prevention and management, and to improve access to multi-disciplinary care. These functions were not covered by existing fee-for-service payments. There have been four main types of funding arrangements involving payments to GPs, to practices and to Divisions:

- *Practice Incentive Payments* (PIPs) were introduced in 1998 and extended in 2003; *Service Incentive Payments* (SIPs) were introduced in 1999/2000 to fund practice infrastructure and practice nurses; and *Service Outcome Payments* (SOPs) became available in 2001 to fund evidence based care;

- *Enhanced Primary Care* (new Medicare Benefit Schedule items) were introduced in 1999/2000, with extensions over time for: health assessments, multidisciplinary care plans and multidisciplinary case conferencing, including home medicine reviews;

- Divisions were funded to provide access to allied health care for patients with specific conditions (*More Allied Health Services* program), and to psychology services (*Access to Allied Psychology Services*).

The Enhanced Primary Care planning items and the supporting Practice Incentive Payments, Service Incentive Payments and Service Outcome Payments have been designed to encourage more structured and planned care for patients with chronic disease. The supporting work of Divisions has in part worked to improve links between general practice and other services so as to create supportive arrangements for multi-disciplinary care. In 2005 this was modified to introduce items for structured care by the GP and Team Care Plans involving a number of health care providers. Payments were also introduced in 2005 to subsidise care provided by private allied health practitioners to increase access to multi-disciplinary care for people with chronic disease.

There were a total of 17 publications reviewed for this initiative: Enhanced Primary Care (n=10); Access to Allied Psychology Services (n=6); Service Incentive Payment (n=1). No publications beyond 2002 were found for Enhanced Primary Care.

Impacts on infrastructure

Divisions have played important roles in employing or contracting facilitators, practice nurses and allied health professionals to enhance GP access to other primary health care providers: an important aspect of Enhanced Primary Care, Access to Allied Psychology Services, and Home Medication Review programs (Naccarella et al., 2005). Particular focus has been given to clarifying the roles of psychologists and their relationships with GPs in the contractual arrangements (Pirkis et al., 2005, Morley et al., 2006). GPs have been keen to participate with 15 % registered as eligible for participation in the Access to Psychology Services program within the first 15 months (Hickie et al., 2004). Nevertheless, workforce issues remain an ongoing challenge. A lack of accredited pharmacists has constrained the take up of Home Medication Reviews (Urbis Keys Young, 2005) and the Access to Allied Psychology Services initiative is hampered by ongoing workforce availability issues along with a lack of coordination with other services and a lack of training and support for GPs (Morley et al., 2006).

The role of allied health providers in care planning and case conferences was not fully tapped in the early period, with barriers to teamwork and collaboration including limited understanding of roles and requirements and differing models of practice (Wilkinson et al., 2003a). However, possible reasons for higher Enhanced Primary Care

uptake in rural areas included the better connections of rural GPs with their local community health and related services and supports for rural practices to employ practice nurses and for Divisions to employ allied health providers (Wilkinson et al., 2003b).

The extent to which the implementation of Enhanced Primary Care has been supported by structures and infrastructure elements, such as recall systems, was mixed, especially in the early days, with slow improvements over time (Blakeman et al., 2001b, Blakeman et al., 2001a, Wilkinson et al., 2003a).

Impacts on service delivery

The initiatives where changes to services have been most widespread have been in relation to Access to Allied Psychology Services and the Practice Incentive Payments for practice nurses (see below for findings regarding practice nurses). Over time there has been a significant increase in provider participation rates for the Access to Allied Psychology Services initiative, with benefits including improved relations, collaboration and increased referral options (Kohn et al., 2005).

In the early implementation period, a minority of practices accounted for the majority of Enhanced Primary Care claims (Wilkinson et al., 2003a), with fewer claims for items requiring multidisciplinary involvement (Wilkinson et al., 2002a). Nevertheless, GPs reported satisfaction with improved communication with other health professionals and more comprehensive and consistent care (Blakeman et al., 2002).

Despite the low uptake of Home Medication Reviews, pharmacists and others saw the program as addressing genuine and ongoing community needs and delivering health benefits for consumers. While pharmacists expressed reservations about the adequacy of remuneration, many regarded participation as stimulating and satisfying (Urbis Keys Young, 2005).

In the article on Service Incentive Payments, higher claim rates were associated with larger practices (i.e. with five or more GPs), but they were not associated with practices that use practice nurses (Georgiou et al., 2004).

Impact on access/utilisation of services

The Access to Allied Psychology Services initiative has improved access, with a significant increase over time in the number of patients being seen (Kohn et al., 2005). The profile of consumers has remained fairly consistent, and is well aligned with the target group (Kohn et al., 2005). There has been a higher uptake rates in rural areas (Morley et al., 2006).

While there was a steady increase in numbers of Health Assessments over 2000/01, the uptake of care planning and case conferencing was slower. The number of care plans increased rapidly following the introduction of the Practice Incentive Payments to encourage their uptake (Wilkinson et al., 2002a, Wilkinson et al., 2003a). There was no evidence of lower uptake in disadvantaged areas. However, this pattern does not hold for all jurisdictions. There was evidence of higher uptake of Health Assessments in rural areas in relation to need (Wilkinson et al., 2002b).

While the majority of Home Medication Reviews have targeted the elderly, groups under-serviced included: people who are culturally and linguistically diverse; Indigenous people; and people living in rural and remote areas (Urbis Keys Young, 2005).

Service Incentive Payments for diabetes care were higher for those Divisions with more disadvantaged populations (Georgiou et al., 2006).

Impacts on health outcomes and patient satisfaction
Positive health outcomes have been associated with provision of psychological services (Morley et al., 2006), and evidence that patients appeared to move from severe to mild levels of depression and anxiety (Vagholkar et al., 2006). Consumers were satisfied with improved access to high quality care and believed this had transferred into better outcomes, although co-payments were identified as a potential barrier and source of dissatisfaction (Kohn et al., 2005, Winefield et al., 2003).

Elderly patients and those with chronic conditions receiving Enhanced Primary Care associated care reported improvements in quality of care and knowledge of their condition and management (Lewis et al., 2003). GPs reported achievements with Enhanced Primary Care, including improved patient understanding of their condition and increased patient satisfaction (Blakeman et al., 2002, Wilkinson et al., 2003a). Consumers were also satisfied with receiving Home Medication Reviews (Urbis Keys Young, 2005).

Practice Nurses

The Nursing in General Practice Initiative (NIGPI) was introduced in 2001/02 to: enhance GP access to practice nurses and Aboriginal health workers; improve, affordability, quality, and evidence based practice; assist in primary care integration; and to contribute to better management of chronic disease. Initially eligibility criteria applied to rural and remote areas of workforce shortage. In 2003 and 2006 this was extended to all areas of workforce shortage. In addition to the practice nurse PIP payment to support their employment ($86.6 million), funding was made available for training and support, and for a re-entry and up-skilling scholarship scheme. Payment is capped at one full-time equivalent position per practice.

Prior to this, there were two major funding models for the employment of practice nurses. Employment by the practice or funded via income generated by the GP through Medicare (e.g. Enhanced Primary Care), commonly only seen in group practices, with sufficient infrastructure and capacity to generate sufficient income. The other model involved their employment through the Division and subcontracting to practices on a sessional fee/part time basis. This model was funded by Commonwealth programs and restricted to rural areas. In 2004 Medicare items were introduced for the provision of immunisation and wound care by practice nurses and for pap smears in 2005.

There were two publications located for this initiative.

Impact on infrastructure
The initiative has achieved its objective with a 40% increase in the uptake of Practice Incentive Payments over 2002-2005 and approximately a 30% increase in the number of practice nurses employed (Health care Management Advisors P/L, 2005). Practice nurse roles are characterised by flexibility and adaptability and are shaped by a range of factors (Watts et al., 2004). The initiative has enabled GPs to link more effectively with other health professionals required to support patient care and the majority of GPs and practice nurses saw the role as providing the linkage between the practice and other services, particularly other primary health care services and community services (Health care Management Advisors P/L, 2005).

By 2003, all Divisions offered practice nurse training and support programs, and almost all practice nurses were supported by their Division. Training and education has been largely informal and ad hoc, tailored towards the GP environment and focussed on the national health priority areas. However, there has been minimal education to assist GPs to work effectively as a team with practice nurses (Watts et al., 2004).

Practices nurses are also believed to be more viable in larger practices and many GPs indicated that their employment had little impact on their fees (Health care Management Advisors P/L, 2005).

Impact on service delivery
They have enabled a greater throughput of patients, have increased the availability of GPs in 45% of practices and, through the use of recall systems and education, have had a positive impact on the management of chronic disease (Health care Management Advisors P/L, 2005). GPs who recruited practice nurses were positive about their role in delivery of clinical services and were keen to expand the role (Health care Management Advisors P/L, 2005).

Impact on access and health outcomes
There were no articles that reported on the impact on access to comprehensive primary health care or health outcomes.

UNITED KINGDOM

Overview of history and context for reforms

Primary care in United Kingdom has been subject to considerable reform in recent years. The focus during the early to mid 1990s was to increase competition within the National Health Service (NHS), predominantly through the creation of an internal market. GP fund-holding and other variations were introduced which enabled GPs to purchase secondary care services (Weller and Maynard, 2004). Whilst fund-holding covered up to 40% of the population by 1995 (Iliffe, 1996b) and had led to reduced waiting times and elective hospital admission rates, it was costly and considered unfair (Chamberlain-Webber, 2005), and was dismantled in 1997.

The election of the Labour government in 1997 saw an overhaul of the NHS and substantial primary health care reinvestment to address a number of challenges, including variable quality of care, lengthy waiting times to see a GP and many practices not accepting new patient enrolments. It was during this period that collaboration replaced competition as a significant policy theme (Benson et al., 2001).

A major structural reform was the establishment of Primary Care Groups in 1997 which became Primary Care Trusts in 1999 (Department of Health, 1997). This placed primary care at the centre of the NHS and has involved a substantial shift in power. Primary Care Trusts integrate family health services and community health care within one organisational structure.

District health nurses and health visitors are sometimes attached to practices and sometimes they are area-based. The former provide a range of home-care type services and the latter provide more public health type functions, including immunisation, health education and health promotion services. Practice nurses are also employed by practices, and larger practices have the capacity to employ a broad range of allied health staff. The 1990 General Medical Services contract saw a substantial rise in the numbers of nurses working in practices and an extension of their role to incorporate chronic disease management and some preventive care, Jewell and Turton (cited in Iliffe, 1996a). Workforce modernisation and flexibility have been key strategies for addressing a number of challenges. In particular, there has been a focus on extending the roles of nurses (Department of Health, 1999, Avery and Pringle, 2005, Department of Health, 2002a), pharmacists (Avery and Pringle, 2005) and allied health professionals.

There has also been a trend towards larger practices of seven or more GPs, although single practices still account for one third of all practices in England (RCGP, 2005).

Primary Care Access Targets have been established and this has stimulated the development of a range of primary care nursing developments, including walk-in clinics and a national 24 hour telephone advice line (NHS Direct).

Improving quality of care has been a major policy focus and has included the development of national service frameworks in a number of areas which set minimum standards for the delivery of health services (Department of Health, 2002b). Financial incentives for improved performance have also been introduced as part of the new General Medical Services contract, which incorporates the Quality and Outcomes Framework.

Important principles that run through much of the recent reforms include an emphasis on a patient-led and locally driven NHS and patient choice. Despite the considerable upheaval and ongoing primary health care reform processes, public confidence in primary health care, including GPs and other health professionals remains high (Health care Commission and Picker Institute, 2005).

Following political devolution, the health systems of Northern Ireland, Scotland and Wales have diverged from those in England. In Scotland, although organisations termed Primary Care Trusts were developed, they did not have the same responsibilities (e.g. no commissioning responsibility) as in England (Hopton and Heaney, 1999, Benson et al., 2001), and they were subsequently abolished. The major thrust of Scottish reforms is a focus on partnerships, integration and redesign with the intention that care is delivered locally, access should be improved, inequalities in health tackled, and workforce and facilities are fit for purpose (National Health Service Scotland, 2003).

Table 6. Summary of results for British initiatives

Initiative	Impact on infrastructure Provider satisfaction[4]	Impact on service delivery Provider satisfaction[5]	Impact on access/utilisation	Impact on health outcomes Patient satisfaction	Other impacts
Primary Care Groups/Trusts (19)	✓✓✓✓ ✓✓✓✓✓ ✓✓✓✓✓ ✓✓✓	✓✓✓✓ ✓✓✓✓			✓
Local Health Care Cooperatives (5)	✓✓✓✓✓	✓			
Community Health Partnerships			None		
Personal Medical Services (12)	✓✓✓✓ ✓✓✓✓ ✓	✓✓✓✓	✓✓✓✓	✓✓✓	✓✓
General Medical Services Contact (2)	✓✓				
Practice-Based Commissioning			None		
Primary Care Mental Health Workers (4)	✓✓✓✓	✓	✓	✓✓	✓✓
Community Matrons			None		
Practitioners with Special Interests			None		

✓ = number of articles which report one or more findings that relate to this aspect

Primary Care Groups/Trusts

Primary Care Groups were established from 1997 as a new structure within the NHS and were originally set up to bring general practice more closely into the NHS. Over time they have evolved into Primary Care Trusts and have assumed greater devolved responsibility for providing community health services, developing primary health care services and commissioning secondary health services for their populations. Primary Care Trusts have geographical boundaries, and have managerial responsibility for primary care within those boundaries, including contracting with GPs to provide primary care services. Their other aims were to improve access to primary health care; integrate primary and community health care by bringing together GPs and community nurses; to work in partnership with other agencies to promote the health of the local population, reduce health inequalities; and to provide support to practices and clinicians to improve premises, information systems, multidisciplinary education and training and clinical governance. There are now approximately 300 Primary Care Trusts across England. The introduction of practice based commissioning has called into question the role of Primary Care Trusts especially as service providers of community health and public health services (Smith and Mays, 2005a)

There were 19 publications that met the inclusion criteria and none beyond 2003. Twelve of these relate to the three national tracker surveys undertaken between 1999/2000 to 2001/2002.

Impact on infrastructure

Early on, primary care commissioning was not seen by health authorities as a major driver of change, with the shifts from secondary to primary care perceived as being piecemeal and not underpinned by resource shifts (Craig et al., 2002). Most early progress involved commissioning of community and community health services (Wilkin et al., 2002, Regen and Smith, 2002, Regen et al., 2001), but there was less progress in engagement or developing partnerships with other services or primary care professionals other than GPs or nurses (Wilkin et al., 1999, Regen and Smith, 2002, Glendinning et al., 2001). Relationships between social workers, GPs and community health services improved over time (Glendinning et al., 2001), although barriers for greater intersectoral collaboration included the differing geographical boundaries (Holtom, 2001, Wilkin et al., 2002, Glendinning et al., 2001).

Most Primary Care Groups had mechanisms for consulting with communities and consumers (Alborz et al., 2002), and these developed over time, mainly through Community Health Councils. However, involving lay people, non-government organisations or local authorities in the work of Primary Care Trusts has taken longer to evolve (Wilkin et al., 2001b), and Community Health Councils have now been abolished. Nurses were represented on Primary Care Group/Trust boards from the early days, but they reported that they had not been well prepared for this new role and perceived that their influence on decision making was limited (Dowswell et al., 2002a, Regen and Smith, 2002, Dowswell et al., 2002b). As of 2006, neither GPs nor nurses are entitled to be represented on boards.

Primary Care Groups/Primary Care Trusts also made progress in developing capabilities to undertake their role in health improvement, and demonstrated an increasing commitment to addressing poverty/deprivation as priorities, but faced shortages of skilled staff, for example public health staff (Gillam et al., 2001).

Consistent with a strong national focus on clinical governance, from the start Primary Care Groups/Trusts had an emphasis on clinical governance (Wilkin et al., 1999, Regen et al., 2001) and on influencing culture change within practices (Willcocks, 2003) through collecting and sharing information on quality and encouraging practices to participate in learning activities (Wilkin et al., 2001b, Wilkin et al., 2002). While most GPs recognised the centrality of Primary Care Groups/Primary Care Trusts in management and accountability, few believed they would be much affected personally, other than some erosion of autonomy (Dowswell et al., 2002).

Impact on service delivery

Over time, Primary Care Groups/Primary Care Trusts played a growing role in improving access to more comprehensive primary health care and extending the primary care team. Even by 1999/2000, a number of Primary Care Groups' members reported the development of specific local services that were directly attributable to the work of their Primary Care Groups (Regen and Smith, 2002, Regen et al., 2001), and just under one third had funded health improvement initiatives (Gillam et al., 2001). The National Service Frameworks, especially for coronary heart disease and mental health, were a particular influence on service developments (Regen et al., 2001). There was no evidence that Primary Care Group/Primary Care Trust size was a factor in primary care developments (Wilkin et al., 2003). The integration of practice and community nursing assumed a high priority in primary care development; especially investment in nursing staff (Wilkin et al., 2001b).

A range of initiatives to improve access was introduced, most commonly through reduced waiting times, nurse-led services, extended pharmacist roles, targeting poorly served areas or groups, out-of-hours services, telephone advice lines and information on self care (Audit Commission, 2004, Dowswell et al., 2002b, Wilkin et al., 2001b, Wilkin et al., 2002, Wilkin et al., 2001a, Charles-Jones et al., 2003). There was also a substantial increase in range of services available in primary care including counselling, specialist nurses and GPs and over 80% of Primary Care Trusts had Personal Medical Services schemes in operation (Wilkin et al., 2002); although there was a more limited uptake of complementary and alternative medicines (Thomas et al., 2003). Some practices were introducing nurse triage to manage patients' requests for same day appointments and GPs were moving from a patient centred approach to a more biomedical role as the consultant in primary care in order to achieve improved accessibility and to better manage resources (Charles-Jones et al., 2003).

Impact on access and health outcomes

There were no papers that focussed on the impact or effectiveness of Primary Care Groups/Primary Care Trusts on access or health outcomes.

Local Health Care Cooperatives (Scotland)

Local Health Care Co-operatives were voluntary groups of GPs, community nurses and other health and social care professionals which aimed to coordinate the delivery of services to assigned populations. They were established in 1999 as the operational arm of Primary Care Trusts in Scotland and covered over 98% of general practices. Their objectives were to develop population-wide approaches to health improvement and disease prevention, to improve standards of clinical care and professional development within general practices and to support the development of extended primary care teams (Simoens and Scott, 2005b).

Their scope and functions were determined through discussions and agreement between member practices and the Primary Care Trust. The national development, review and evaluation identified a number of weaknesses as well as strengths of the model. The weaknesses included: the variability in delegated functions and services; scale which had an impact on competency and capacity; public involvement; and lack of coterminous boundaries with local authorities which impeded joint working (Primary Care Modernisation Group, undated). As a consequence they were abolished between 2005 and 2006 to be replaced by Community Health Partnerships. During this period Primary Care Trusts were also abolished in Scotland and area-based NHS boards which had responsibility for purchasing and policy reassumed operational responsibility.

There were five publications that met the inclusion criteria.

Impact on infrastructure

The major finding was of heterogeneity of organisational structures, modes of operation and decision-making and variability in management costs (Simoens and Scott, 2003). Practices located in areas of high need were more likely to join a Local Health Care Co-operative, an unexpected finding, as previous studies suggested that voluntary primary care reform was taken up in more affluent areas (Simoens and Scott, 2005b). Local Health Care Co-operative size varied considerably to what was originally intended (with most being relatively small). The lack of congruent geographical boundaries with local authorities was a major constraint to planning, with some authorities needing to establish relationships with up to 11 Local Health Care Co-operatives (Audit Scotland, 2001).

Boards generally represented a number of disciplines and perspectives, especially GPs and nurses, and more public participation was found compared with Primary Care Groups in England (Audit Scotland, 2001), although this was still limited. There was marginal representation of other services and lay representatives (Simoens and Scott, 2003) which was contrary to the original intent of the policy.

As in England, primary care commissioning was not a major driver of change in the early days (Craig et al., 2002), and in Scotland was not a role of Primary Care Trusts. Early implementation issues for Local Health Care Co-operatives centred on their relationship with the local Primary Care Trust and Health Authority, the extent of budget devolution, who retained any savings made as a result of budget devolution, and the need for Co-operatives to build their internal capacity and capability to achieve their objectives (Goldie and Sheffield, 2001).

Impact on service delivery
More than half of the Local Health Care Co-operatives engaged in some work on reducing inequalities in access. Over two thirds directly managed at least one service, mainly allied health professionals, with the top three being physiotherapy, podiatry and occupational therapy. However, very few managed community mental health services (Audit Scotland, 2001).

Impact on access and health outcomes
There were no findings on their impact on access or health outcomes.

Community Health Partnerships (Scotland)

Community Health Partnerships have evolved from and replaced Local Health Care Co-operatives in Scotland. Their geographical boundaries should align with local authority boundaries or subdivision boundaries, to facilitate joint working. The requirement for aligned boundaries has been a major driver for the variation in size. Community Health Partnerships are governed by a committee of the NHS Board and their membership includes frontline primary health care staff and a wide range of other stakeholders (Scottish Executive Health Department, 2004).

Their major functions include coordinating planning, development and provision of a comprehensive range of primary and community health services (Scottish Executive Health Department, 2004). Funding for mandated functions will be devolved to the Partnerships. The Partnerships will undertake a mixture of direct provision of services through salaried staff employed by the NHS or indirectly through sub-contracting services from independent Primary Care Contractors (e.g. GPs, pharmacists, dental health practitioners, optometrists) or through commissioning services (primarily but not exclusively from the non profit sector).

A variation of the standard Community Health Partnership model are two Community Health and Social Care Partnerships which are integrated single management models that combine Local Authority social care services with community based health services. The range of delegated functions has expanded accordingly.

By February 2006, 12 NHS Boards had received Ministerial approval to establish Community Health Partnerships, with discussions underway with a further three NHS Boards. (http://www.show.scot.nhs.uk/sehd/chp/Pages/CHPSchemes.htm).

There were no evaluation publications located on this initiative as it has only just begun to be implemented

Personal Medical Services

Personal Medical Services were introduced as a pilot in 1998, with successive waves each year. The scheme was made permanent in 2004. They operate as an alternative to the General Medical Services contract and were a way of enabling greater freedom for practices to address primary care needs of patients through flexible and innovative ways of working and multidisciplinary approaches to patient care. They also aim to address recruitment problems by providing a GP salaried option; supporting an enhanced role for nurses; and attracting GPs and nurses to previously under-served areas (National Health Service, 2004). They are one of the first major initiatives to provide funding to practices rather than GPs. There are two main types: those contracted by the local authority or Primary Care Trust to provide basic services similar to General Medical Services, and those (Personal Medical Services Plus) which are contracted to provide a broader range of services, such as community nursing and services for a particular population group. Legislation has also allowed non-medical providers to establish Personal Medical Service contracts, with a number being nurse-led, though these proved to be short lived.

While over 40% of GPs now work under Personal Medical Service contracts, their uptake is uneven with most practices having Personal Medical Service contracts in some Primary Care Trusts and few in others (Audit Commission, 2003). The future of Personal Medical Services is uncertain with the introduction of the new practice-based General Medical Service contracts in 2004 and practice-based commissioning in 2005, both of which provide greater flexibility and freedom at the practice level to address patients' needs. There is also concern that GP income in Personal Medical Services practices is significantly ahead of income in General Medical Service practices. This was not an explicit or implicit aim of the scheme, and seems anomalous as the great majority of services are identical in Personal Medical Services practices; compared to those operating under the conventional General Medical Services contract.

There were 12 publications that met the inclusion criteria, and none beyond 2001. It is important to note that many of changes described below (e.g. development of nursing roles within general practices) were occurring at the same time in practices operating under the conventional General Medical Services contract. Over time, the distinction between the two has become blurred, and it is not clear what overall gains have been achieved by the significant overall increase in investment in Personal Medical Services practices.

Impacts on infrastructure

Personal Medical Services were characterised by diversity and difference, including in the range of organisational models that developed. They took considerable time to develop and key issues needing to be addressed included building trust, developing teams and changes in personal power, influence and decision-making. The support from Trusts was a necessary part of the process (Walsh N et al., 2002, Shaw et al., 2005).

Personal Medical Services have been successful in recruiting GPs to work in deprived areas (Carter Y et al., 2002), in part through salaried contracts (Sibbald et al., 2002). Salaried GP job satisfaction was comparable to other GPs under the General Medical Services contract, although they did report more problems with professional isolation and working conditions (Sibbald B et al., 2002). However, recruitment, retention and high staff turnover (Leese and Petchey, 2003) remain ongoing challenges.

They enabled a change of cultural values in primary care especially regarding relationships between GPs, nurses and practice staff, although this has not necessarily led to equal partnerships within primary care teams (Riley et al., 2003). Many Personal Medical Services have exhibited marked changes in the roles of nurses. This has been most successful in sites where doctors, nurses and managers have negotiated changes with one another and nurses have received training and support (Walsh N et al., 2002). This took time to establish and get accepted and restrictions regarding prescribing and ambiguities regarding referring to secondary care have been barriers to nurse role development (Walsh et al., 2003, Walsh et al., 2002). None of the original Personal Medical Services pilots which were led by nurses have survived.

Common success factors included teamwork approaches which featured nurses in key roles and supported by protocols; employment of salaried GPs; changes to staff roles and responsibilities, shared culture, clear objectives and leadership (Steiner A et al., 2002, Leese and Petchey, 2003, Campbell et al., 2005).

The emergence of new inter-professional relationships and partnerships provided the basis for intersectoral collaboration (Carter Y et al., 2002, Riley et al., 2003), an important approach to reach and provide appropriate services to vulnerable and disadvantaged groups, although these achievements were not uniform and were slow to develop.

Key barriers to providing additional services centred around a lack of funding and staffing, and difficulties in setting budgets (Leese and Petchey, 2003).

Impact on service delivery
Personal Medical Services developed a variety of flexible approaches to providing services in order to meet primary care needs of their local communities (Chapple et al., 1999, Carter et al., 2002). However, those sites targeting minority ethnic groups found progress was slow (Carter Y et al., 2002). In sites with an explicit focus on vulnerable populations there was a shift towards a more community oriented/public health model (Riley et al., 2003). Both Personal Medical Service and General Medical Service practices made quality improvements in basic primary care provision, chronic disease management, and to a lesser extent the primary care of older people. There were greater improvements in Personal Medical Service sites that had a specific objective to improve certain aspects of care, for example mental health (Campbell et al., 2005), and in particular had developed protocols and became more patient focussed (Steiner A et al., 2002). Patients' assessment of their quality of primary care did not differ, except for continuity of care (i.e. care provided by the same GP) which declined at a faster rate for Personal Medical Services practices (Steiner A et al., 2002). However these findings need to be set in the context of wider improvements in service delivery across primary care services as another study found Personal Medical Services made fewer service delivery changes to improve access than General Medical Services practices (Steiner A, et al., 2002).

One study looked at cost implications and found an average annual increase of 5% in funding to Personal Medical Services over and above what General Medical Services received; this was mainly due to staff costs (Steiner A et al., 2002).

Impact on access
Some Personal Medical Service sites achieved modest improvements in access and enhanced availability of services to previously under-served groups, (Walsh N et al., 2002, Sibbald B et al., 2002, Carter et al., 2002).

Impact on health outcomes

While mental health scores improved slowly but steadily in some sites, they remained well below those set by the National Service Framework for Mental Health (Steiner A et al., 2002). Two studies on a single nurse led Personal Medical Services site reported continuing high levels of patient satisfaction over time (Chapple et al., 1999, Chapple, 2001).

One study looked at cost implications and found an average annual increase of 5% in funding to Personal Medical Services over and above what General Medical Services received; this was mainly due to staff costs (Steiner A et al., 2002).

General Medical Services contract

The new contract for GP services was introduced in April 2004 and has involved a shift from GPs to practices. The new contract allows practices to specify which services they will provide above essential or core services. The aims include: allowing practices greater flexibility to determine the range of services they wish to provide; supporting the delivery of a wider range of higher quality services; and empowering patients to make the best use of primary care services. Practices receive additional income for quality in relation to defined chronic diseases and for the organisation of primary health care services, with quality defined through the Quality and Outcomes Framework. Patients are no longer registered with an individual GP, but with the practice.

The contract specifically supports developing the roles and careers of practice nurses and managers. Practice nurses will be encouraged to take on new roles in chronic disease management and preventative care. The global sum payment arrangements allow practices to develop a greater skill mix with more nurses, pharmacists and allied health professionals involved in the practice team.

For GPs, the biggest change introduced by the new General Medical Services contract was that they no longer had responsibility for providing out of hours care. The responsibility for this transferred to Primary Care Trusts who contract with local organisations (which may include local GPs) to provide services out of hours.

There were two publications that related to this initiative.

Impacts on infrastructure

The Quality and Outcomes Framework of the 2004 General Medical Services contract led to a major increase in GP income (in the order of 25% increase in gross income), and was associated with considerable activity to meet the quality targets. Quality scores were very high in the first year of the contract, with practices earning 83% of the available financial incentives. Socio-economic and demographic factors and practice characteristics had only small effects on practices' achievement of the quality clinical indicators (Doran et al., 2006). A smaller study found that practices serving deprived populations and larger clinical teams, were associated with higher quality scores, with the latter being the most important determinant; although team composition was not a factor (Sutton and McLean, 2006).

Practice-Based Commissioning

Practice-based commissioning was launched in three waves: initially there was a national wave to recruit one Primary Care Trust per Health Authority area, waves two and three were regional waves to recruit remaining Primary Care Trusts (Department of Health, 2006) with the aim for universal coverage by end of 2006. Practice-based commissioning aims to improve quality, improve the patient experience, reduce inequality and provide value for money (Department of Health, 2006). It involves giving primary care clinicians (including GPs, Practice Nurses, community nurses, midwives, dentists, pharmacists and allied health professionals) more freedom to develop innovative high quality services for patients and reshape boundaries between primary and secondary care (Department of Health, 2006). It is also a major strategy to put front line clinicians in the driving seat that has not been realised through Primary Care Trusts (Lewis, 2004). All participating practices are to receive an indicative budget covering an agreed scope of services and an incentive payment (Department of Health, 2006). The scope can involve prescribing, community services, mental health and other services (Department of Health, 2006).

There were no evaluation publications located for this initiative as it has only just begun.

However, in all but name, it is effectively a re-introduction of fund-holding. While systematic reviews of fund-holding in the mid 1990s were equivocal as the impact of the scheme, later research suggested more positive findings including shorter waiting times for GP fund-holder patients, reduced rates of elective hospital admission and lower increases in prescribing cost; however, transaction costs of fund-holding were high and there were inequities in take-up (Lewis, 2004).

Primary Care Mental Health Workers

Primary care mental health workers are a new category of worker designed to strengthen primary mental health care. Their purpose is to help GPs manage and treat common mental health conditions in all age groups though a mixture of client and practice teamwork and community roles (Department of Health, 2003). The positions were announced in 2002, with the expectation that 1000 would be in place by 2004.

Primary Care Trusts receive a weighted capitation payment to support the appointment and retention of two–to- three Primary Care Mental Health Workers and their associated training costs. Funding is also provided to establish new training programs. Progress with recruitment has been slower than expected, and by July 2004 there were just over 50% of workers in place or funded for appointment later in 2004 (Appleby, 2004, Harkness, 2005).

There were four publications that met the inclusion criteria.

Impact on infrastructure

The lack of career paths and low levels of remuneration have been identified by Primary Care Mental Health Workers as affecting motivation and retention (Harkness, 2005, Crosland et al., 2003). A mixed picture is emerging in regards to their roles and relationships. The roles appear to vary considerably with lack of agreement, ambiguity and a lack of clarity about relationships with other mental health staff, and hence potential for role conflict (Bower et al., 2004). A third of workers were not well integrated into primary care teams, as was the original aim (Harkness, 2005), and few

were having contact with other primary health care workers, including GPs, who were unclear about their roles (Crosland et al., 2003). They seemed to work most effectively where there was mutual satisfaction with the role, regular feedback between the practice and Primary Care Trust, clear lines of communication with a senior staff member and protected time to discuss issues with the practice (Lester et al., 2006).

Impact on service delivery
The below target employment achievement has had a flow on effect, with fewer new clients seen than expected (Harkness, 2005).The early signs are that they are seeing clients in the target groups with the majority presenting for common mental health problems. However, rather than being the first point of contact, 50% of clients are referred from specialist mental health services (Harkness, 2005). Less than 20% are referred on for further mental health treatment (Harkness, 2005), suggesting that the referrals to the workers are appropriate and the position can play an important role as an intermediate layer between primary and secondary mental health care (Lester et al., 2006).

Impact on access and health outcomes
The one article that reported on the types of patients seen found that few were a) children; b) aged 65 and over or c) from ethnic minority backgrounds (Harkness, 2005). While it is perhaps too early to tell whether the work of Primary Care Mental Health Workers is clinically effective, a cluster randomised controlled trial comparing Primary Care Mental Health Workers with usual care found no differences in mental health symptom scores or use of the voluntary sector and high patient satisfaction (Lester et al., 2006).

Community Matrons

Community Matrons are a new nursing case management role aimed at improving the health and quality of life of the frail elderly, preventing premature death and reducing the number of emergency hospital visits (Department of Health, 2005b). They provide one-to-one support to the most vulnerable patients; monitor their patient's health and co-ordinate the care and support that patient's need to achieve a better quality of life (Department of Health, 2005b). It is expected that each Community Matron will have caseloads of between 50 to 80 patients (Department of Health, 2005a). They will work across health and social care services and the voluntary sectors to ensure that services are integrated and complementary and are expected to be both independent and supplementary prescribers (Department of Health, 2005a). The initiative target is for 3,000 community matrons to be in place across England by March 2007 (Department of Health, 2005b). An evaluation of a pilot program of nine Primary Care Trusts concluded that the program increased access to care through an additional range of services and was popular with patients, but did not reduce hospital admissions (Sheaff et al., 2006).

There were no publications located for this initiative as it is only beginning to be implemented.

NEW ZEALAND

Overview of history and context for reforms

The background and context to the primary health care reforms of the 1990s and into the early 2000s included a lack of integration between primary care providers; an uncertain and often confrontational relationship with governments; uncontrolled growth and demand-driven funding, especially for laboratory and pharmaceutical services; a lack of collective accountability for cost and quality of care; underdeveloped and underused information management/technology systems; and little community participation in primary health care development (Malcolm et al., 1999).

The reforms of 1993 introduced a 'quasi'-market model into health, involving the establishment of a stand-alone purchasing role and increased contracting and competition between providers for contracts. The reforms were very unpopular (Cumming and Salmond, 1998), but in primary health care they did result in some positive changes, in particular:

- the shift of primary health care providers onto explicit contracts, increasing their accountability
- the development of networks of primary health care providers (especially amongst GPs, but also amongst not-for-profit community-governed primary health organisations)
- the use of new forms of funding such as capitation, budget-holding and global budget-holding

Despite these developments, a lack of clear direction for primary health care and concerns over poor access to primary health care arising from high user charges led to the release of a Primary Health Care Strategy in 2001 (King A, 2001). This Strategy was released not long after the establishment of 21 District Health Boards responsible for planning, providing hospital and community health services and contracting with primary health care and community service providers. The Strategy is aimed at developing a strong primary health care system, in order to improve health and to reduce inequalities in health.

There are three major organisational and policy changes occurring to implement the Primary Health Care Strategy:

- increased government funding for primary health care to reduce fees and increase subsidies
- the development of Primary Health Organisations as local non-government organisations which serve the needs of an enrolled group of people
- introduction of capitation funding for Primary Health Organisations (Cumming et al., 2005)

Two forms of Primary Health Organisation funding were initially created – access funding for disadvantaged enrolled populations and interim funding for the remainder. Since 2003, the government has provided further funding; has focused on increasing subsidies for particular age-related population groups in interim-funded PHOs; and has contracted for the majority of the new funding to be passed on in the form of reduced user charges. In addition, a separate funding arrangement has been established for those with chronic illnesses, known as 'Care Plus'. All Primary Health Organisations also

receive additional funding for services to improve access, for management costs, and for health promotion.

Table 7 Summary of results for New Zealand initiatives

Initiative	Impact on infrastructure Provider satisfaction[6]	Impact on service delivery Provider satisfaction[7]	Impact on access/utilisation	Impact on health outcomes Patient satisfaction	Other impacts
Primary Health Care Strategy/Primary Health Organisations (5)	✓✓✓✓	✓	✓✓✓✓	✓	
PCOs:	✓✓✓✓	✓			
• **Independent Practitioners Associations (5)**	✓				
• **Not for Profit Community Governed (6)**	✓✓✓✓	✓	✓✓		

✓ = number of articles which report one or more findings that relate to this aspect

Primary Health Organisations

Primary Health Organisations are local level organisations which are funded on a capitation basis by district health boards for the provision of essential primary care services to an enrolled population. They are required to develop services that will be directed towards improving and maintaining the health of the population as well as providing first-line services to those who are unwell. It is left up to Primary Health Organisations and practitioners to decide how practitioners are paid. With patient user fees still in place, practices continue to receive funding from both public and private sources, and through a mix of payment types. They are also required to involve their communities in their governing processes; to involve all providers and practitioners in influencing decision-making; and to be not-for-profit (King A, 2001). Primary Health Organisations are also to be held more fully accountable for performance in relation to intermediate health outcomes, with a performance management framework coming on stream during 2006. They vary considerably in size, with just under half having less than 20,000 enrolees (Hefford et al., 2005).

There were five articles that evaluated the implementation and early impacts of the Primary Health Care Strategy, including Primary Health Organisations. It was not useful to separate out the impacts of the different components of the Strategy as they are so interrelated.

Impact on infrastructure
There is strong support for the Primary Health Care Strategy and its goals amongst a range of stakeholder groups (Perera et al., 2003, Cumming et al., 2005). Although some GPs were concerned about their roles and the long-term financial implications, other practitioners have come to believe that the financial prospects are more positive

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[6] Refers to provider satisfaction with infrastructure changes

[7] Refers to provider satisfaction with service delivery changes

(Cumming et al., 2005). Public awareness of Primary Health Organisations is growing, and there is widespread community support for the Strategy; especially the focus on keeping people well, the use of a greater range of health professionals, and community consultation (Wyllie, 2004).

Most of the focus of Primary Health Organisations has been on establishing governance and management arrangements, systems and other infrastructure to the support their capacity and relationships with practices. An ongoing challenge has been the time, effort and money spent on management and establishing/upgrading systems and infrastructure, including patient enrolment data and information management systems (Cumming et al., 2005).

Primary Health Organisations and practices are still working out referral and linkage mechanisms to other community-based services (Cumming et al., 2005). Individual practices vary in the degree of nursing development, depending mainly on the preferences of the employing GPs. Workforce capacity for both GPs and nurses is seen as a major issue for the immediate future (Cumming et al., 2005). While Care Plus allows full utilisation of nursing skills and increases nursing profiles, input from GPs and nurses varies, and can be constrained by funding, time and practices' support of autonomous nursing practice (CBG Health Research Limited, 2004).

Most Primary Health Organisations are still in the early planning stages for new services and improved enrolment data was assisting with this (Cumming et al., 2005, Perera et al., 2003).

Impact on service delivery
A wide range of new services is being planned under the Primary Health Organisation model. Early research identified preventive services, community-based initiatives including school-based clinics, improved hospital discharge planning services, and funding to increase access for particular groups such as Māori, Pacific Islanders and those on low incomes (Perera et al., 2003).

Impact on access
While opinions varied early on as to whether reduced fees had made a difference in access and utilisation rates (Perera et al., 2003), by 2005, there was evidence that fee reductions had improved access (Cumming et al., 2005), especially for Māori and Pacific Islander groups (Hefford et al., 2005), and in access funded Primary Health Organisations (Wyllie, 2004).

Impact on health outcomes and patient satisfaction
It is still early days and a bit premature to expect the changes to be having an attributable impact on health outcomes. However, some patients have expressed a negative attitude towards nursing consultations associated with Care Plus model (CBG Health Research Limited, 2004).

Primary Care Organisations

Independent Practitioner Associations

Independent Practitioner Associations were originally established during the mid 1990s as networks of predominantly GPs, governed by member elected boards. By the late 1990s, Independent Practitioner Association membership covered over two-thirds of all GPs (Malcolm et al., 1999), but few included other professionals or had community/consumer consultation mechanisms (Malcolm et al., 2000). They aimed to strengthen the bargaining position of general practice and reduce transaction costs, and to improve patient and community health outcomes. Since the release of the Primary Health Care Strategy, Independent Practitioner Associations are now playing a number of new roles. Some are partner organisations in Primary Health Organisations, and some are also providing management support services to Primary Health Organisations.

Not-for-profit community-governed Primary Care Organisations

These are multidisciplinary organisations funded by capitation and providing low cost population focused primary health care services to disadvantaged populations. Their development has occurred in three waves from the late 1970's. By 1999 they served a population of approximately 150,000 with about 60 full-time equivalent GPs. They range in: size, primary health care services and multidisciplinary staffing mix. In some rural areas with high Māori populations, they include the provision of acute and inpatient care. Leadership, networking and advocacy are provided through a national peak organisation, Health Care Aotearoa (HCA), which was formed in 1994 (Crampton et al., 2005a).

There were 11 publications reviewed for these models, five for Independent Practitioners Associations and six for not-for-profit community-governed organisations.

Not-for-profit community-governed primary care organisations

Impact on infrastructure

The location of these organisations in poor urban or remote, predominantly Māori, areas is governed by their objectives (Crampton et al., 2001). They are more likely than for-profit practices to have a community (as opposed to an individual patient) orientation, as evidenced by their focus on community needs assessment, locality service planning and intersectoral case management (Crampton P et al., 2005b). They also employ more doctors and a broader range of professional groups that then their for-profit practice counterparts (Crampton P et al., 2005b), and have higher patient to doctor ratios; possibly accounted for by the expanded role of nurses, service patterns and the incentive structures inherent in capitation (Crampton P et al., 2000a). Irrespective of ownership and governance arrangements, capitation-funded practices also employed more nurses and community workers and more Māori staff than fee-for-service practices (Crampton et al., 2005a). Information systems have been an area of development in both not-for-profit and for-profit practices, including computerised age-sex registers, patient records, recall systems and disease registers (Crampton P et al., 2005b).

Impact on service delivery

There were significant differences in the range of services available in community governed not-for-profit and for-profit practices, with the former providing more group health promotion, community worker, dental health, mental health and ante/post natal and complementary/alternative services. The latter provided more sports medicine,

emergency call outs and specific services for older people (Crampton P et al., 2005b). Furthermore, in keeping with their focus on disadvantaged populations, not-for-profit practices had lower patient charges for all age groups and waived fees for a higher proportion of patients than for-profit practices (Crampton P et al., 2005b).

Impact on access/utilisation

There is higher utilisation by the non-European population, young, elderly and concession card holders than for other groups, but overall utilisation rates are lower than for fee-for-service practices (Crampton et al., 2000b, Crampton et al., 2004).

Independent Practitioner Associations

Impact on infrastructure

Independent Practitioner Associations, especially in their early days, were characterised by variation in size and the numbers of GP members (Malcolm and Powell, 1996). They were GP-led and run, with little consumer or community involvement (Kriechbaum et al., 2002), although this improved over time (Malcolm et al., 2000). GPs were generally satisfied with Independent Practitioner Association leadership, and this was associated with their involvement in Independent Practitioner Association activities (Barnett P, 2003, Kriechbaum et al., 2002) and financial benefits from membership (Kriechbaum et al., 2002). A significant proportion of Independent Practitioner Association members were also in favour of a move to registration/enrolment and capitation payment, and some had experienced these changes (Malcolm and Powell, 1996).

Most Independent Practitioner Associations played an important role in improving the quality of care for patients especially through staff education, guideline development, peer review, clinical audits and patient satisfaction surveys (Houston et al., 2001). GP members continued to rate achieving better health outcomes, making better use of primary care resources and improving and protecting GP status as important Independent Practitioner Association goals, with barriers to their achievement being lack of time and government policies (Malcolm and Powell, 1996, Malcolm et al., 2000). Over time, Independent Practitioner Associations made progress in developing internal and external relationships and networks, including with health authorities, other primary, community and secondary care services; and reported moderate success in establishing new services and development of integrated care initiatives (Malcolm et al., 2000), although there were no findings on the effectiveness or impact of these developments.

DISCUSSION AND POLICY IMPLICATIONS FOR AUSTRALIA

SUMMARY OF CONTEXT AND DEVELOPMENT OF INNOVATIONS BY COUNTRY

Australia

Focus

While there have been many primary health care initiatives aimed at promoting access to more comprehensive primary health care and teamwork, many of these have been local initiatives that have not been generalised or sustained. The major focus of systems-wide primary health care reform has been on general practice and Commonwealth responsibilities. Few reforms have been implemented at a system-wide level for state-funded community health services. Neither has there been a sustained focus on initiatives that address the Commonwealth/State primary health care interface beyond trials or pilot projects. The Primary Care Partnerships in Victoria, the emerging Primary Health Care Networks in South Australia and the Integrated Primary Care Centres in NSW are attempts within these states to improve coordination at a local level between the range of services, but are not joint Commonwealth/State initiatives.

Commonwealth initiatives have focused on establishing regional Divisions of General Practice. These have evolved since their creation in 1993 and are important vehicles for the implementation of national primary health care policy, increasing integration with other state health services and supporting practices to improve accessibility and quality of care as chronicled in the general practice strategy reviews (General Practice Consultative Committee, 1992, Review Panel, 2003, Commonwealth Department of Health and Family Services, 1998).

There have also been a number of funding initiatives to enhance general practitioners' access to practice nurses and other, predominantly private sector, allied health providers where service gaps have been identified. They have all operated within the predominant fee-for-service funding model, and have involved incentives to encourage general practice to adopt a more comprehensive primary health care approach and enhance their collaboration with other primary health care providers. This includes the introduction of new Medicare Benefit Schedule (MBS) items for allied health providers. Funding has also been provided to Divisions to support general practitioners and strengthen the capacity of practices to take up the initiatives.

While there has been considerable effort to address the workforce shortage problems in primary health care especially in rural areas, there have been few innovations in workforce roles in primary health care with the exception of the Nursing in General Practice Initiative.

Evolution and relationships

The evolution of the Commonwealth initiatives illustrates their inter-relationships. The Divisions have provided an important structure through which to encourage and support the uptake of GP funding and workforce initiatives.

For a number of Commonwealth initiatives there are considerable inter-relationships across the three model types:

- The Nursing in General Practice Initiative is a major workforce initiative to enhance access to more comprehensive primary health care, multidisciplinary approaches and collaboration. While the Practice Incentive Payment (PIP) goes to practices, Divisions have a major role in the recruitment, support and education of practice nurses. This is funded through their core grant and payments from practices for provision of practice support.

- The Access to Allied Psychology Services, More Allied Health Services and the Enhanced Primary Care programs are primarily funding initiatives to enhance quality of care in general practice through the involvement of other primary health care professionals. Divisions are also funded, through their core funds, project funds and earnings from practices, to assist with allied health professional recruitment, developing contractual arrangements with practices and referral mechanisms. They also employ facilitators to provide practice support to assist the take up of the Enhanced Primary Care items, including Home Medicine Reviews.

- The Service Incentive Payments/Service Outcome Payments are funding initiatives, that use incentives to encourage the use of evidence based and planned care. These have little intersection with other model types, although as part of their practice support roles, many Divisions assist practices to achieve accreditation and to develop the systems that enable planned care, which are both eligibility requirements for these payments.

GP funding initiatives have also built on and complemented each other. The More Allied Health Services program addressed the need for access to allied health care that was stimulated by the Enhanced Primary Care planning items and access to the MBS for allied health services is contingent on the completion of a care plan.

There is variable formal interaction between Commonwealth and state-funded primary health care initiatives. Different geographical boundaries as well as different community health structures in the different states/territories impede effective planning, service development and coordination. This non-alignment is compounded by different Commonwealth and state priorities and incentives and pushes general practice to refer to private providers rather than to community health services. This is not surprising given the lack of additional funding to community health services to take on this work. Despite these impediments, and the dissatisfaction expressed by both GPs and community health services about their relationship, at a local level there are some examples of collaboration between Divisions and community health services, but this is neither consistent nor sustained across state jurisdictions.

UNITED KINGDOM

Focus

In United Kingdom, there has been a range of system-wide workforce and funding initiatives that have aimed to increase access to comprehensive primary health care through collaborative and multidisciplinary team approaches. The establishment of Primary Care Groups and their evolution into Primary Care Trusts with significant commissioning responsibilities has been a fundamental structural change across the National Health Service (NHS). Primary Care Trusts have also played an important role in building practice capability and culture to assume greater responsibility and accountability for the provision of primary health care services. With political devolution, Primary Care Trusts never had the same level of commissioning responsibility in Scotland and they were subsequently abolished, with the NHS retaining most commissioning responsibility, but devolving a number of primary health care functions and services (and associated staff) to Local Health Care Cooperatives and more recently to Community Health Partnerships, who have limited commissioning responsibility, e.g. for voluntary sector services.

The relevant funding initiatives, including Personal Medical Services and more recently the new General Medical Services contracts and practice-based commissioning, have all allowed increased flexibility in the way in which primary health care services can be delivered to enrolled populations. With this has come increased accountability for performance. Personal Medical Services have been an important vehicle for recruiting salaried doctors to work in under serviced areas, mostly characterised by high levels of social and economic disadvantage.

Across the whole health care system, the three most significant changes in these new contracts are that a) patients are now registered with a practice rather than with an individual GP, b) GPs no longer have responsibility for out of hours care and c) 25% of GP income now relates to the quality targets of the Quality and Outcomes Framework.

In the context of workforce shortages (especially general practitioner shortages), a range of workforce strategies have been introduced including enhancing the roles of primary and community health nurses (Department of Health, 2002a, Department of Health, 1999). The introduction of primary care mental health workers and community matrons are system-wide initiatives to introduce additional workers with specific roles to all Primary Care Trusts. It is not yet clear the extent to which community matrons will strengthen collaboration across the range of primary health care providers.

Evolution and relationships

The major drivers for the evolution of primary care reform in United Kingdom have been the policy focus since the late 1990s on greater flexibility and shifting the balance of power to primary health care, to the practice level and to consumers, although transfer of any real power or influence to consumers has been more evident in rhetoric than in reality.

It was during the 1990s that the separation between funder, purchaser and provider was introduced to varying degrees. GP fund-holding, although abandoned in the late 1990s, contributed to building the capability and changing the culture of general practice. The research evidence on GP fund-holding and other forms of commissioning suggested that the greatest impact was seen in primary and intermediate care, enabling a wider range of practice based services, community-based alternatives to hospital care and new forms of clinical governance and peer review to be developed

(Smith, Mays et al; Dowling, Glendinning et al cited in Smith et al., 2005b). The main political objection to fund-holding was that it introduced inequalities in the provision of health care, and led to a 'two tier' service and this appeared to have been supported by the evidence (Mays, Mulligan et al cited in Wilkin, 2002). Practice-based commissioning has been designed to avoid this, by giving Primary Care Trusts a more strategic role. The re-introduction of a policy which had, in all but name, been abolished five years previously does indicate that central government believes there is considerable potential in giving GPs responsibility for commissioning secondary care services. The evidence from previous experiences indicates that for practice-based commissioning to succeed, GPs require clear incentives, and the main incentives include the potential for practices to extend their role as providers of care in a contestable market (Smith et al., 2005).

Primary Care Trusts have also provided the structure and supports for funding and workforce initiatives. Through their responsibility for contracting and commissioning primary health care services, Primary Care Trusts contracted Personal Medical Services and since 2004 have been responsible for monitoring the new General Medical Services contract with practices. Practice-based commissioning is an extension of the policy drive to shift the balance of power and devolves contracting further down the line from Primary Care Trusts to practices.
While Primary Care Trusts still have both commissioning and provider roles, the policy intention is for them to reduce their provider roles (partly by bringing in new types of contracting with the private sector to provide services, including GP services), but with an increased role in commissioning. So, for example, primary care mental health workers and community matrons might not be employed by Primary Care Trusts in the future.

Primary health care in United Kingdom is the most integrated system of the three countries under review in terms of policy, structures and funding. Unlike Australia and New Zealand, community health services were drawn in early to the reforms and employed through Primary Care Trusts.

NEW ZEALAND

Focus
Over at least the last two decades, there has been considerable local experimentation and the development of primary health care organisations has been supported, but not directed, by government. Prior to the release of the Primary Health Care Strategy in 2001, there were two major forms of primary care organisation. One form involved not-for-profit community-governed organisations funded to provide comprehensive primary health care services, especially to disadvantaged populations, through a multidisciplinary mix of salaried providers, including GPs. The other form was the development of Independent Practitioners Associations, GP-led initiatives whose major aims were to enhance the influence of GPs in a new competitive and contracting environment; strengthen the capability of general practice fund holding, albeit in a limited form; and work with practices to improve the quality of care.

The release of the Primary Health Care Strategy in 2001 saw a significant increase in primary health care funding, the establishment of local level Primary Health Organisations, patient enrolment (at practice level) and capitation funding to Primary Health Organisations. Primary Health Organisations vary considerably in size, legal arrangements and their distribution across the country as with other 'bottom-up'

approaches to primary health care in New Zealand and Australia. For example, in contrast to Primary Care Trusts in England and Divisions in Australia, more than one Primary Health Organisation may operate in the same geographical area. Their key responsibilities are planning and contracting for delivery of primary health care services to their enrolled population.

The major focus of funding initiatives has been to improve access through increased subsidies and reduced fees. New funding was firstly allocated to Primary Health Organisations with more disadvantaged populations (called Access-funded Primary Health Organisations). This enabled these Primary Health Organisations to reduce the user charges their enrolees pay when using services. All enrolees of such Primary Health Organisations paid lower charges, regardless as to whether an individual patient is in fact a member of one of the high needs groups. Over time, further additional funding has been provided to reduce user charges for New Zealanders enrolled in other Primary Health Organisations, with more advantaged populations (called Interim-funded Primary Health Organisations). This additional funding has been provided in waves, increasing the subsidies paid by government to Interim-funded Primary Health Organisations to the same level as the subsidies paid in Access-funded Primary Health Organisations. New funding was provided from 1st October 2003 for specific age related groups, with all age groups benefiting by July 2007.

There has been less focus in New Zealand than in Australia or United Kingdom on workforce models. While practice nurses have been employed for many years, they have not been a significant focus of government reform. However, as part of the Primary Health Care Strategy, eleven primary health care nursing innovations have been funded. These aim to develop the nursing workforce; nursing leadership; and provide enhanced nursing services. An evaluation of these innovations is nearing completion.

Evolution and relationships
The previous history and experiences with primary care organisational structures, limited GP fund-holding in Independent Practitioners Associations as well as patient enrolment and the employment of salaried GPs in not-for-profit community-governed primary care organisations, all contributed to building a culture of support for the introduction of enrolment and capitation-based funding more broadly across New Zealand.

The Primary Health Care Strategy links the recent funding and structural developments and population-based approaches. Primary Health Organisations receive capitation funding for enrolled patients from member practices, additional needs-weighted funding to improve access and subsidies to reduce fees for specific age related population groups. Primary Health Organisations also receive management funding in order to undertake management and administrative functions, including the provision of information on utilisation and intermediate outcomes and to upgrade information systems where necessary.

With the release of the Primary Health Care Strategy and its implementation, the roles of Independent Practitioners Associations and to a lesser extent the not-for-profit community- governed Primary Care Organisations have changed. They are now either part of Primary Health Organisations or, in the case of Independent Practitioners Associations, have evolved into organisations providing management support services to Primary Health Organisations (for example, contracting with District Health Boards, managing enrolment and capitation payment systems, allocating funding to practices,

and collating information on utilisation and performance). Community health services provided through District Health Boards are not yet part of Primary Health Organisation responsibilities, although some Primary Health Organisations have an interest in working with District Health Boards to ensure coordination of services, and some Primary Health Organisations are interested in managing such services themselves.

In relation to practice nurses, New Zealand already had funding in place to support these services, and a key part of the Strategy is to increase the role of nurses generally in delivering primary health care. There has been less focus than in Australia on enhancing access to allied health providers, prior and subsequent to the Primary Health Care Strategy.

There is a hierarchy of relationships and contracts, where the Ministry of Health has agreements with District Health Boards, which in turn have agreements with Primary Health Organisations (as well as with other community providers). Primary Health Organisations may have their own management arrangements (e.g., through employed managers and staff), but some contract with Management Services Organisations, which in some cases are the old Independent Practitioners Associations.

COMMON ELEMENTS

The initiatives identified for this review relate to improving access to more comprehensive primary health care through primary health care collaboration, fall into three basic model types, although in reality, many are a mixture of models. These models types are organisational structures, funding arrangements, and workforce models.

Diagram 2. Primary health care model types

> *Organisational models*
> - Divisions of General Practice (Australia)
> - Aboriginal Community Controlled Health Services (Australia) Primary Care Partnerships (Australia, Victoria)
> - Primary Health Care Networks (Australia, New South Wales)
> - Community Health Services (Australia, Victoria)
> - Primary Health Organisations (New Zealand)
> - Primary Care Organisations: Independent Practitioners Associations, Not-for-profit, community-governed PCOs (New Zealand)
> - Primary Care Groups/Trusts (United Kingdom)
> - Local Health Care Cooperatives (Scotland)
> - Community Health Partnerships (Scotland)
>
> *Funding models*
> - GP Funding incentives (Australia)
> - Personal Medical Services (United Kingdom)
> - General Medical Services contract (United Kingdom)
> - Practice-based commissioning (United Kingdom)
>
> *Workforce models*
> - Nursing in General Practice Initiative(Australia)
> - Primary Care Mental Health Workers (United Kingdom)
> - Community Matrons (United Kingdom)

Organisational structure models

These models are mainly meso-level organisations for supporting development and/or coordination of services and implementing government initiatives at a local level. Other key features these organisations tend to share include promoting cooperation between the range of primary care providers, increased collaboration between primary and secondary providers, and enhanced coordination of administration and budgets (Simoens and Scott, 2005a).

No systematic reviews were located on the effectiveness of these models in promoting access to more comprehensive primary health care and primary health care collaboration. A literature review of UK models (1995-2000) on the definition and extent of integration and supporting factors concluded that little progress had been made in explaining and measuring integration (Simoens and Scott, 2005a). Similar to the current review, the authors also found that collaboration amongst primary care providers and organisations takes time to develop, and was impeded by inadequate representation on governing bodies, inconsistent planning boundaries and the lack of budget integration (Simoens and Scott, 2005a). A policy synthesis on models for organising primary health care concluded that no single model can meet all the anticipated effects of primary health care; there is a trade off between integrated professional oriented models whose strengths include responsiveness, and community-oriented models whose strengths include equitable access to services (Canadian Health Services Research Foundation, 2003).

While the models share a number of characteristics, the findings from the present review illustrate their variability in type of organisation, governance arrangements (type and board membership), legitimacy (voluntary or compulsory membership, degree of purchasing power) and capability. Some, like Primary Care Trusts, are vertical structures that integrate policy and funding, are required to ensure a breadth of stakeholder involvement in decision- making and, through their commissioning responsibilities, have considerable authority to influence service delivery changes.

By contrast, Divisions and to a greater extent Primary Care Partnerships and Primary Health Care Networks, in the absence of funding levers, rely on facilitation, persuasion and engagement with members for their influence. Furthermore, the dual Commonwealth and state responsibilities for primary health care in Australia means that these structures have different geographical boundaries and have no capacity to integrate funding, policy or service delivery across the two systems at the local level. Compounding the structural problems there may be perverse incentives to shift costs which contribute to a culture of mutual wariness and mistrust.

The devolution of commissioning/contracting responsibility to Primary Care Trusts and Primary Health Organisations has been accompanied by an emphasis on accountability and performance management. Primary Care Trust performance has been monitored and publicly reported on since 2001/02, with a focus on key targets, service provision to enrolled patients, access to other services and improving health (National Health Service, 2006). With further devolution, practices are now accountable to Primary Care Trusts for their performance, and a major focus of quality improvement has been the new General Medical Services contract and associated Quality and Outcomes Framework (QOF) with indicators covering quality of care, organisational aspects, patient experiences and additional services (National Health Service, 2005). In New Zealand, the performance of Primary Health Organisations is being monitored through a Performance Management Programme, with indicators covering clinical aspects,

developing organisational capacity and financial performance (New Zealand Ministry of Health). This programme built on the monitoring and accountability requirements associated with the contracting approach introduced into New Zealand for Independent Practitioners Associations and not-for-profit organisations through the 1990s 'quasi'-market reforms.

There has been less attention to performance monitoring and accountability of the primary health care sector as a whole in Australia, with the focus mainly on processes and uptake of incentives. The recent development of the National Quality and Performance System for Divisions, which includes performance monitoring against indicators relating to governance, access, integration and multidisciplinary care, prevention and early intervention and chronic disease management will be a further step, but will not have the same level of enforcement that is possible in the other countries.

Despite their difference, common findings across all structural models were that:

1. They have achieved change in organisation and delivery of primary care but there is less evidence for their impact on quality or outcomes.
2. Their capacity to implement change depends on the levers at their disposal especially the degree to which they fund or commission primary health care service delivery.
3. Increased funding and devolution of responsibility has been accompanied by increased accountability and changes to governance that reduce the influence of general practitioners.
4. New organisations in primary care need time and stability to build capability, trust, culture and systems in sustainable ways.

Funding models

There are important differences in the funding models employed in Australia to those in other countries. This in part reflects the history and context of health system organisation in each country. Australia's approach has been to introduce specific incentives and incremental changes to solve problems with access by filling particular service gaps. For example, there are no mental health services for people with mild to moderate mental health conditions, a gap now partly filled by the Access to Allied Psychology Services program.

The Australian experience contrasts with that of United Kingdom and more recently New Zealand, where primary health care has been contracted/commissioned to deliver core services as well as a broader range of services, depending on local needs, capacities, and service gaps. In both United Kingdom and New Zealand, core services are funded on a capitation basis to practices for their enrolled patient populations. This is more difficult to achieve in Australia because of the lack of patient linkage with practices. 'Quasi' capitation payments to practices for immunisation coverage and diabetes outcome payments to practices have had to rely on defining a 'virtual' practice population. This is not only administratively complex; it does not assist with providing proactive care.

There is some evidence to suggest that payment methods can affect GP clinical behaviour. In particular, targeted payments can stimulate the quantity of particular primary health care services provided (e.g. immunisations). However, we found no evidence from systematic reviews that different payment methods were associated

with improved patient health status (Gosden et al., 2000). There was also variable and insufficient evidence that targeted payments are effective in improving quality of care (Giuffrida et al., 1999). Nevertheless, in theory at least, incentives for evidence based practice (as in the UK Quality Framework) should lead to improved patient outcomes (McElduff P et al., 2004). Under fee-for-service arrangements, GPs may be less likely to delegate care to other providers, unless they too have targeted fees for the care such as with immunisations in Australia (Grefs et al., 2006). While capitation payments may theoretically lead to over-delegation or referral, there has been no research conducted to demonstrate this.

All countries have introduced incentive payments for quality. For example, in Australia the Service Incentive Payments/Service Outcome Payments reward providers for specific aspects of care for particular patients. This has been relatively effective in encouraging GPs to provide some of these services (e.g. care plans and the new team care arrangements, diabetes annual cycle of care etc). However, there have been some relative failures (such as the 3+ asthma plan and case conferencing) where these targeted payments have not overcome patient or logistic barriers (Harris, 2002, Zwar et al., 2005). As new incentives are added, their administration arrangements are becoming increasingly complex (something that led to a major review of 'red tape' in general practice by the Commonwealth government in Australia). There is also a risk that tasks that are not specifically funded (e.g. management of risk factors by practice nurses) may not be performed.

By contrast, the performance targets and practice level incentive payments based on enrolled populations in the UK have a greater potential for building capacity and changed work practices (including delegation of roles within the practice). The new UK General Medical Services contract is based a more holistic framework for quality performance and a broader range of indicators than is used as the basis for incentives in Australia or New Zealand, and encourages a more flexible approach to achieving quality by practices. However, this has only recently been introduced and the evidence for its impact on quality is still not available.

Personal Medical Services, an alternative way of funding general practice, based on salaried or sessional contracts, have been demonstrated to make a significant contribution to addressing access to primary health care especially in disadvantaged and under served communities. These have sufficient similarities to those community health services in Victoria which employ GPs, Aboriginal community controlled health services and the not-for-profit community-governed primary care organisations in New Zealand to suggest that they could be applied in Australia. All these models involve alternative GP payment mechanisms (salaries/sessional payments), capitated/global funding, the incorporation of multidisciplinary approaches, a strong community orientation and community development and intersectoral approaches to address the often complex needs of disadvantaged groups

Despite their difference, common findings across all funding models were that:

1. Incentive payments are used in all countries and have been demonstrated to influence provider behaviour except where there is patient resistance or logistic barriers to their uptake. Their impact on patient outcomes is less clearly demonstrated.
2. Devolution of incentive payments to the primary care organisation level may offer increased flexibility but requires increased accountability. This may be difficult without an effective system of patient enrolment.
3. Capitated payments for a practice population (real or virtual) provide greater opportunities for delegation of roles within practices.
4. Specific payments for specific activities may increase provider activity. Increasing the number of these can become unworkable unless they are part of an integrated framework of indicators such as developed under the new General Medical Services contract in the UK and has been proposed by the RACGP in Australia (Royal Australian College of General Practitioners).

Workforce models

Changing the primary health care workforce skill-mix is receiving considerable attention internationally as a strategy for improving the effectiveness and efficiency of health care. However, there is a lack of evidence on their effectiveness: cost-effectiveness has generally not been evaluated, nor has the wider impact of change on health care systems (Sibbald et al., 2004). Important success factors for changing the workforce skill-mix are thought to include appropriate staff education and training; removal of unhelpful boundary demarcations between staff or service sectors; appropriate pay and reward systems; and good strategic planning and human resource management. Unintended consequences have sometimes occurred in relation to staff morale and workload; co-ordination of care; continuity of care; and cost (Sibbald et al., 2004). There is also an increasing focus on the role of multidisciplinary teams for the provision of quality and comprehensive primary health care and some evidence that such teams, integrated care and enhanced information (through improvements in computing infrastructure) can improve patient outcomes (Wensing et al., 2006). Successful features of home medication review models included a multi-disciplinary approach, and where this was not an integral aspect from the beginning, difficulties were experienced with recruiting pharmacists, GPs and consumer interest. However, evidence from eight randomised controlled trials suggests that home medication reviews, involving community pharmacists, have limited effect on long term health outcomes (Urbis Keys Young, 2005).

Evidence does suggest that appropriately trained nurses can provide the same quality of care and achieve as good health outcomes for patients as doctors (Mundinger et al., 2000, Laurant et al., 2004), at least in the short term (Horrocks et al., 2002). However, a review on the current and future role of practice nurses in heart failure management in Australia, found a lack of information evaluating their role, considerable role variation between practices and significant barriers to their role expansion (Halcomb et al., 2004).

Research evaluating primary mental health care workforce models has found that counselling is associated with modest improvements in short-term outcomes compared to usual care from general practitioners, patients are satisfied and it may not be associated with increased costs; but counselling provides no additional advantages in

the long-term. (Bower et al., 2002). An earlier review did not find that adding mental health workers to primary care teams in 'replacement' models caused a significant or enduring change in provider behaviour. However, there is some evidence of short-term changes in the clinical behaviour of primary care providers when mental health workers work alongside them in primary care settings in a 'consultation-liaison' model (Bower and Sibbald, 1999). In the Australian context, a review (which pre-dated the introduction of the Access to Allied Psychology initiative) concluded that Australia is largely unprepared for collaboration between general practice and clinical psychology, and this is not helped by a lack of inter professional education (Winefield and Chur-Hansen, 2004).

Workforce models commonly involve a mix of substitution, delegation, enhancement or innovation (Sibbald et al., 2006), and supplementation which is a variation of the enhancement approach:

- *Innovation:* e.g. where primary care mental health workers are introduced as a new type of worker, to help GPs manage common mental health conditions and where community matrons are being introduced to case manage a defined population group with complex health needs.
- *Supplementation:* e.g. where allied health workers in Australia are providing or improving access to new or existing services to meet unmet needs, especially in rural areas, and psychologists are providing focused psychological strategies for anxiety and depression.
- *Substitution/enhancement/supplementation:* e.g. where practice nurses in Australia are enhancing GP access to other providers especially in areas of workforce shortage, improving affordability and quality of care and assisting integration with other services in the local area.

United Kingdom has focussed on introducing new workers into primary health care teams for specific population groups. In Australia the focus has been on enhancing access to existing primary health care workforce, especially allied health workers through subsidising the costs of private providers; and expanding the employment of practice nurses, especially in areas of GP shortages.

Understanding what the initiatives are trying to achieve is important for assessing their effectiveness. In the Australian context, there is strong evidence that the introduction of incentives to enhance access to psychological services for people with anxiety and depression has been effective and some evidence of improved health outcomes. However, no articles were located on the impact or effectiveness of the More Allied Health Services program in achieving its aim of improving access. The Nursing in General Practice Initiative is having a positive impact on general practitioner workloads, quality of care and improving linkages with other services, with little negative cost impacts. In United Kingdom, there is less evidence that the Primary Care Mental Health Workers are achieving their aim. They are not well linked with other members of the primary care team, including GPs, half their referrals are from mental health services and they are not seeing the numbers of patients that was expected.

Despite their difference, common findings across the workforce models were that:

1. They all involved enhancing access to a broader range of primary health care providers, and this was more successful in Australia than in the UK, where recruitment of especially Primary Care Mental Health Workers has been slower than anticipated.
2. They all involve a focus on improving quality of care through developing new roles in existing/new professionals. Most models include clinical and practice capacity building roles; the exception being allied health provider roles in Australia where the focus is on the clinical role of (predominantly) private practice professionals.
3. There is more emphasis on defining roles than on other aspects of team work. The development of team-based approaches also requires culture change processes as well as support and education for other team members, patients and the broader community, and this aspect of change often receives little attention.
4. Both UK models involve introducing a new type of worker, whereas the Australian models are more about expanding the access to an existing workforce through increased funding, especially in areas of GP workforce shortages.

LIMITATIONS OF THE EVIDENCE

The majority of papers identified were descriptive, with few designs employing a control group. Thus, in the context of rapidly changing health systems, it is difficult to attribute improvements to the initiatives themselves, rather than other contributing factors. For example, the evidence from Personal Medical Services, where controls were used, suggests that improvements, especially in quality of care, were also occurring in practices funded under the standard General Medical Services contract. Moreover, the majority of studies used provider-reported data, with few using patient data. This corresponds with the greater emphasis in the studies on implementation and less focus on the impact of the initiatives on health outcomes.

The review has been confined to studies that have evaluated specific initiatives and that are available as public documents. This does not tell the complete picture. There is data available from national administrative data sets on, for example, uptake of the More Allied Health Services initiative, but this has not been compiled into research reports. It is also acknowledged that some evaluations on the initiatives have not been made publicly available by government. This may distort the findings of the review.

Many articles reported on studies conducted during 1999 to 2002. This was especially the case for Primary Care Trusts, Personal Medical Services, Enhanced Primary Care and Community Health Services. Thus, the later impacts of these initiatives are harder to gauge from empirical evidence. It also means that some of the results may be out of date and not be an accurate reflection of the current situation.

POLICY OPTIONS FOR AUSTRALIA

Overall messages

Each of the models considered has developed as a result of local historical and contextual factors, and within particular health system structures and funding systems. There have been incremental changes over many years in all three countries that have built on previous developments and many of the initiatives have interacted with each other. Some models are more easy or difficult to get right and easier to implement where a single level of government is responsible for primary health care. These factors provide the opportunities and limitations on what can be achieved in the Australian health system.

Options for Divisions and other structures

There are limitations on the extent to which Divisions can further influence service delivery at a practice or local level, without significant change that involves the rest of the health system. In the absence of commissioning or significant enhancement of their contracting role, their success and effectiveness relies largely on their engagement with and responsiveness to their members.

The same applies to Primary Care Partnerships and Primary Health Care Networks, but even more so. Without funding levers, the most that can be expected of these structures is that they improve service coordination, especially across the range of state-funded services. With these limitations, there is a very real question about the extent to which they can engage general practice and extend service coordination across the primary health care sector as a whole.

This review shows that organisational structures are more effective in changing local service delivery where they control the funds for primary health care through some form of commissioning or contracting. This provides the opportunity and flexibility to develop the range and mix of services, multi-disciplinary team approaches and community-oriented models to meet local population health needs that are appropriate and responsive and for which they are held accountable. This would also be enhanced if the primary care organisations had the ability to tender or chose service providers and to fund provider development, especially where there are limited numbers and range of primary health care providers. These broader commissioning or contracting responsibilities have also been accompanied by broader representation of professional groups, other health and social service agencies and communities in the governance of primary care organisations.

There are risks in introducing commissioning/contracting in the Australian context. It would change the relationship between Divisions and their members, creating tensions with at least some members. Furthermore, introduction in the absence of patient enrolment carries the risk that access to services will not be on the basis of population need, especially if there is no other practice population information available. It will also be difficult to devolve accountability for performance to the practice level (as in United Kingdom and New Zealand).

Options for funding models

Australia is close to reaching the limits of using specific financial incentives to reward quality. This approach inevitably becomes more complex as more incentives are added, making administration more difficult for the government as well as for practices, as the 'Red Tape' Review found. Moreover, uptake is unpredictable, with the potential for a blow-out in costs in an uncapped system, especially for financial incentives that are regarded as most attractive to GPs and consumers.

An advantage of financial incentives is that it enables the uptake of aspects of care in important areas to be measured, for example in the case of Service Incentive Payments for diabetes care. They have also been shown to improve access to a broader range of primary health care providers in a relatively straightforward manner through, for example, well defined roles and referral arrangements. The UK General Medical Services contract provides an alternative model for incentives. This would require a performance framework not yet in place, although the Royal Australian College of General Practitioners (RACGP) has done some work on developing a comprehensive framework for quality in general practice.

Funding of providers through contracts, such as in Personal Medical Services, has been demonstrated to be an effective policy option for improving access and reaching under serviced and disadvantaged populations in United Kingdom. There are also early indications in New Zealand that similar models have enabled greater flexibility in delegating roles and activities of GPs and other providers. Comparable models in Australia are Aboriginal Community Controlled Health Services and the employment of GPs in some Victorian community health services. They could be applied more broadly as a viable strategy to address areas of need and an alternative to incentives and the recruitment of overseas doctors.

Options for workforce models

There are two different approaches evident in this review. The first involves the introduction of new categories of workers to primary health care teams, as in United Kingdom. The second expands or enhances access to existing workers (often in private practice), as in Australia.

The weaknesses of the British approach include the slow recruitment of Primary Care Mental Health Workers and in the case of both Primary Care Mental Health Workers and Community Matrons, their poor practice links. This illustrates the need for the employing authority to work closely with practices before introducing new workers and addressing the human resource management issues, facilitating the cultural change aspects and identifying the systems and structures to support the workers.

The weakness of Australian approach, especially in relation to the More Allied Health Services and Access to Psychology Services programs, has been the lack of teamwork and their reliance on the 'labour market' to bring about shifts in the training and distribution of the workforce. The capacity of the existing allied and nursing workforce to respond to these and the needs of the acute sector is very limited and the development of new categories of health workers will need to be considered.

Either of these models may be used to meet unmet community needs (as in the case of psychologists managing depression and anxiety in primary care) or involve a substitution of roles of other providers (as in the case of practice nurses substituting for GPs in chronic disease prevention and care) thus freeing up their time. Research on the impact of new roles on the workload and work-practices of existing GPs and community health services would help answer this question.

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APPENDICES

ABBREVIATIONS

Abbreviation	Name
ACCHS	Aboriginal Community Controlled Health Services (Aus)
APHCRI	Australian Primary Health Care Research Institute
BOIMH	Better Outcomes in Mental Health (Aus)
GP	General Practitioners
MBS	Medical Benefits Schedule
NH&MRC	National Health and Medical Research Council (Aus)
NHS	National Health Service (UK)
PCO	Primary Care Organisation
PIP	Practice Incentive Payments (Aus)
RACGP	Royal Australian College of General Practitioners
SIP	Service Improvement Payments (Aus)
SOP	Service Outcome Payments (Aus)

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Canada	
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United Kingdom	
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RESEARCH QUESTIONS

Original question	Changed question
QUESTION 1	
What is meant by comprehensive primary health care in Australia and other comparable countries?	What has been the focus of system-wide initiatives in Australia and comparable countries introduced in the last ten years which have aimed to improve the access to and delivery of comprehensive primary health care through collaboration between generalist PHC providers/services?
QUESTION 2	
What is the range of models for delivering comprehensive primary health care in Australia and other comparable countries and what are their characteristics?	What's known about implementation of the initiatives, particularly changes in service delivery
QUESTION 3	
What is known about the effectiveness and efficiency of the identified models of comprehensive primary health care service delivery?	What is known about the effectiveness and efficiency of the major initiatives and the elements identified in Q1.
QUESTION 4	
Are there elements/characteristics common across the models that contribute to the effects identified in question three?	Are there elements/characteristics common across the initiatives that contribute to the effects identified in Q2
QUESTION 5	
What are the implications for developing comprehensive primary health care in Australia in light of current and future trends and issues?	Now Q4 (no change to question)
QUESTION 6	
Can the information collected during this research form the basis of a dynamic computer simulation model of comprehensive primary health care?	Deleted as information not appropriate for this analysis

SEARCH STRATEGIES

The following terms were used to search each database. All searches were limited by date (1995 – present) and country (Australia, Canada, New Zealand and United Kingdom – England, Scotland and Wales).

Cochrane systematic Reviews
1. primary health or community health or practice nurse or capitation in title, abstract or keywords, from 1995 to 2006 in all products
2. primary health or community health or primary care in record title, from 1995 to 2006

Medline
1. *capitation fee/
2. *health care reform/
3. division$ of general practice.mp.
4. enhanced primary care.mp.
5. evaluation.mp.
6. exp community health centers/
7. exp evaluation studies/
8. exp fee-for-service plans/
9. exp independent practice associations/
10. exp models, organizational/
11. exp partnership practice/
12. exp primary health care/
13. exp public policy/
14. exp reimbursement mechanisms/
15. expert patient.mp.
16. families first.mp.
17. gp fundholding.mp.
18. health assessment$.mp.
19. home medicine review$.mp.
20. local health care cooperative$.mp.
21. nhs direct.mp.
22. partnership$.mp.
23. PCO.mp.
24. personal medical service$.mp.
25. Primary Health Organisation.mp.
26. population funding.mp.
27. practice incentive payment$.mp.
28. primary care group$.mp.
29. primary care mental health worker$.mp.
30. primary care organisation$.mp.
31. primary care trust$.mp.
32. primary care.mp.
33. primary health care strategy.mp.
34. primary health care transition fund.mp.
35. primary health organisations.mp.
36. service incentive payment$.mp.
37. sure start.mp.
38. third sector.mp.
39. walk in clinics.mp.

EMBASE

1. *capitation fee/
2. community health centre$.mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer name]
3. division$ of general practice.mp.
4. enhanced primary care.mp.
5. evaluation.mp.
6. exp community health centers/
7. exp community health services/
8. exp evaluation studies/
9. exp evaluation/
10. exp fee-for-service plans/
11. exp health care organization/
12. exp health care planning/ or exp health care policy/ or exp health program/
13. exp health care policy/
14. exp health care system/ or exp general practice/
15. exp independent practice associations/
16. exp partnership practice/
17. exp policy/
18. exp primary health care/
19. exp reimbursement mechanisms/
20. expert patient$.mp.
21. families first.mp.
22. gp fundholding.mp.
23. health assessment$.mp.
24. home medicine review$.mp.
25. local health care cooperative$.mp.
26. nhs direct.mp.
27. partnership$.mp.
28. personal medical service$.mp.
29. population funding.mp.
30. practice incentive payment$.mp.
31. primary care group$.mp.
32. primary care mental health worker$.mp.
33. primary care organisation$.mp.
34. primary care trust$.mp.
35. primary care.mp.
36. primary health care strategy.mp.
37. primary health care transition fund.mp.
38. primary health organisation$.mp
39. service incentive payment$.mp.
40. sure start.mp.
41. third sector.mp.
42. walk in clinics.mp.

CINAHL

1. *capitation fee/
2. community health centre$.mp.
3. division$ of general practice.mp.
4. enhanced primary care.mp.
5. evaluation.mp.
6. exp community health centers/
7. exp evaluation studies/
8. exp evaluation/ or exp program evaluation/
9. exp fee-for-service plans/
10. exp health care reform/
11. exp independent practice associations/

12. exp partnership practice/
13. exp primary health care/
14. exp reimbursement mechanisms/
15. exp telephone information services/
16. expert patient$.mp.
17. families first.mp.
18. gp fundholding.mp.
19. health assessment$.mp.
20. home medicine review$.mp.
21. local health care cooperative$.mp.
22. nhs direct.mp.
23. partnership$.mp.
24. PCO.mp.
25. personal medical service$.mp.
26. Primary Health Organisation.mp.
27. population funding.mp.
28. practice incentive payment$.mp.
29. primary care group$.mp.
30. primary care mental health worker$.mp.
31. primary care organisation$.mp.
32. primary care trust$.mp.
33. primary care.mp.
34. primary health care strategy.mp.
35. primary health organisation$.mp.
36. service incentive payment$.mp.
37. sure start.mp.
38. third sector.mp.
39. walk in clinic$.mp.

PsychInfo
1. community health centre$.mp.
2. division$ of general practice.mp.
3. enhanced primary care.mp.
4. evaluation.mp.
5. exp evaluation/
6. exp health care delivery/ or exp health care administration/
7. exp health care policy/ or exp government policy making/
8. exp models/
9. exp primary health care/
10. health assessment$.mp.
11. local health care cooperative$.mp.
12. partnership$.mp.
13. personal medical service$.mp.
14. population funding.mp.
15. primary care mental health worker$.mp.
16. primary care organisation$.mp.
17. primary care trust$.mp.
18. primary care.mp.
19. primary health care strategy.mp.
20. reform.mp.
21. third sector.mp.

Current Contents
TS=(primary health care

WEBSITES SEARCHED

Australian specific information

Adelaide Western Division of General Practice
Australian Division of General Practice
Australian Institute for Primary Care (Victoria)
Australian Institute for Primary Care
Centre for Primary Health Care (Queensland)
Commonwealth Fund
Commonwealth Government
Flinders University, Department of General Practice
Medicare
Ministry of Health (Ontario)
NSW Department of Health
Office for Aboriginal and Torres Strait Islander Health (OATSIH)
Primary Health Care Research and Information Service (primary health care RIS)
Royal Australian College of General Practitioners
South Australian Community Health Research Unit (SACHRU)
Victorian Department of Human Services

Canadian specific information

British Columbia Ministry of Health Services, Primary Health Care
Canadian Alliance of Community Health Centre Associations
Canadian Family Physician
Canadian Health Department
Canadian Health Services Research Foundation
Canadian Institute for Health Information; Canadian Nurse Practitioner Initiative
Centre for Health Economics and Policy Analysis, Canada
Government of New Brunswick, Department of Health
Ontario Ministry of Health and Long Term Care
Saskatchewan Health, Primary Health Services Branch

New Zealand specific information

Ministry of Health
University of Victoria, Health Services Research Centre, Wellington

UK specific information

King's Fund
London School of Hygiene & Tropical Medicine
NHS Centre for Reviews and Dissemination
NHS Economic Evaluation Database (EED)
National Primary & Care Trust
National Primary Care Research & Development Centre, University of Manchester
National Research Register (NHS site)
Primary Care Contracting (NHS)
Scottish Executive Health Department
UK Department of Health
University of Birmingham, Health Services Management Centre

International specific information

British Medical Journal
Cochrane Central Register of Controlled Trials (Clinical Trials)
Cochrane Database of Systematic Reviews (Cochrane Reviews)
Database of Abstracts of Reviews of Effectiveness (DARE)
European Observatory on Health Care Systems
Health Technology Assessment (HTA) Database
Nuffield Centre for International Health and Development
The Cochrane Effective Practice and Organisation of Care Reviews (EPOC)
The Commonwealth Fund

DATA EXTRACTION TOOL

Reviewer:

Date:

Initiative:

Country:

Author:

Date of publication:

Title:

Article type:
NOTE: If you are unsure please contact Julie

☐ Study
☐ Review
☐ Commentary (DO NOT CONTINUE)

☐ Literature review
☐ Systematic review
☒ Other (please state)

Context:
Relevant background to the evaluation/study

Intervention:
If applicable

Aims/objective/research question:

Design & Methods:
Design: describe

Controls:
☐ Yes
☐ No

Study population & size:

Data collection methods:

Study date (month/year):

Main outcome measures (if relevant):

Key findings:

That relate to our focus re improving access to comprehensive PHC & collaboration across the range of PHC providers
FOR PROCESS EVALUATIONS:

FOR IMPACT/OUTCOME EVALUATIONS:
Findings that relate to:
impact on access to comprehensive PHC;
impact on the rest of the health system;
health gain/reducing health inequalities;
costs associated with the impacts

Conclusions/recommendations:
Including common structural/organisational arrangements &/or strategies used that contribute to the findings

Limitations:
Re generalisability etc

Other comments:

References to follow up:

TABLE 8: SUMMARY RESULTS BY INITIATIVE

Organisational Models

Impact on infrastructure:	Impact on service delivery:	Impact on access/utilisation	Impact on health outcomes/ patient satisfaction	Issues
Australia: Divisions of General Practice No. of studies =3, Study dates: 1996/97-2004				
Significant differences in focus & performance, including wider primary health care role (4 B2)	50% provide patient services – mental health/diabetes,			Changes in government finding influences activities (4 B1)
↓ in spending on 6 National Health Priority Areas assoc with change to outcome based funding, but ↑ no. of projects (4 B2)	Most provide access to Allied Health Professionals, have established chronic disease management support programs, and there has been an ↑ in prevention activities (4 B1)			Changes in funding may produce unintended & unexpected results, (4 B2)
Factors affecting project choice include GP support, opportunities to involve and provide services to GPs (4 B2)	↓20% addressed financial/ locational barriers to access, 50% involved in addressing after hours primary medical care access (4 B1)			
Strong GP engagement, but little involvement of other health professionals, consumers in governance (4 B2), (4 B1)				
Most have formal arrangements for collaborating with other health services (4 B1), broader primary health care collaboration is limited by non aligned boundaries & size (4 B2)				
Most provide practice support - IM/IT, accreditation, PNs,				

Impact on infrastructure:	Impact on service delivery:	Impact on access/utilisation	Impact on health outcomes/ patient satisfaction	Issues
practice management, population health information (4 B1)				
Rural divisions have major role in GP recruitment GPs and locum services (4 B1)				
Australia (Victoria) Primary Care Partnerships. No. of studies =3, Study dates: 2003-2005				
Significant change management, restructuring, education, training & support required (3 B2, 4 B1)	Improved service coordination, especially for HACC clients (3 B2, 4 B2)		Consumers satisfied (3 B2, 4 B2)	
Ongoing problems re adequacy of PCP resources, especially staff time (3 B2, 4 B2)	↑ use of care plans amongst intensive service users (3 B2, 4 B2)			
Improved planning for health promotion (3 B2, 4 B2)				
Improved systems/tools for service access & coordination (3 B2, 4 B2)				
Improved working relationships & communication across member agencies (3 B2, 4 B2)				
Communication between GPs & other network providers improved, but still early stage for 1/3rd (3 B2, 4 B2)				
Variety of governance structures (3 B2, 4 B2)				
Australia, NSW: Primary Health Care Networks. No of studies = 1, study date 2004/05 (4 B1 & C)				
Rural focus on addressing workforce shortages	More coordination with other service providers			

Impact on infrastructure:	Impact on service delivery:	Impact on access/utilisation	Impact on health outcomes/ patient satisfaction	Issues
Not integrated or coordinated with other initiatives, lack of shared governance, strategic support & promotion from the DOH, roles/responsibilities not clearly defined				

Australia (Victoria) Community Health Services. No of studies = 3, study dates 1998-2000/05 (4 B1 & 4 B2)

44% of CHSs offer GP services, 2 main models, salaried & private practice co-location. Both can achieve outcomes, at similar cost (4 B2)	GPs in CHS more likely to refer clients to allied health professionals, & work collaboratively with other providers (4 B2)	GPs in CHS often provide only accessible/ affordable medical services for low income residents in rural communities (4 B2)		Variation in cost performance suggests GPs in CHS provide longer consultations assoc with greater levels of need & complexity (4 B2)
In CHS that have GPs there is limited formal, but frequent informal collaboration (4 B2)	Almost half GPs in CHs had other health professionals involved in their care (4 B1)	GPs in CHS more likely to serve disadvantaged clients with complex needs, but variable involvement in prevention (4 B2)		No sig differences in ordering rates of pathology tests or imaging (4 B1)
1/3rd of all CHS had developed eligibility criteria for their services; only 2 had involved GPs (4 B2)	CHS GPs made more referrals to allied health professionals, reflected in higher rates to pharmacists (4 B1)			
Across Victoria, GPs & CHS generally dissatisfied with relationship (4 B2)				

New Zealand: Primary Health Organisation, No of studies =5, Study dates: 2003-2005

District Health Boards supportive of Primary Health Organisation establishment process (4C)	Opportunities for more flexible service delivery, inc longer consultations, more focus on education & prevention (4C) Development of new services dependent on resources available to Primary Health Organisations (4C)	↓ patient co-payments in 'Access Funded' practices (4C) (3B1)	Some –ve attitudes to nursing consultations (4C)	•
While strong provider support, some GPs concerned re lack of recognition of their role (4C)		↑ access to low cost care for Maori/PI groups(2 A1)	44% of pop'n aware of Primary Health Organisations & widespread support for primary	

Impact on infrastructure:	Impact on service delivery:	Impact on access/utilisation	Impact on health outcomes/ patient satisfaction	Issues
			health careS (3 B1)	
Some GPs worried about long term financial implications for themselves & practices; others more +ve re financial prospects (4C)		General agreement that fee reductions had improved access (4C)		
Potential for greater utilisation of nursing role in 'Care Plus', but constraints inc funding, time, GP attitudes (4C)				
Opportunities for enhanced nursing roles but practice variation in nursing development (4C)				
Concern that nursing & medical workforce may be inadequate to tasks required by the primary health care strategy (4C)				
Primary Health Organisation planning for new services, still in early stages, improved enrolment data useful for planning (4C)				
Funding for health promotion & management costs felt to be inadequate (4C)				
Enrolment & payment processes cumbersome (4C)				
Primary Health Organisation management required large input of time & money, including IT/IM systems & infrastructure -				

Impact on infrastructure:	Impact on service delivery:	Impact on access/utilisation	Impact on health outcomes/ patient satisfaction	Issues
with different challenges for small & large Primary Health Organisations (4C)				
Variable governance arrangements, consumers well represented on Boards (4C)				
New Zealand PCOs: Independent Practitioner Associations No. of studies = 5, Study dates: 1994/96-1999				
Generally high satisfaction with Independent Practitioners Associations leadership, associated with GP involvement in Independent Practitioners Associations activities (4 B1), 25% benefiting financially (4 C, 4 B2)	Moderate success in establishing new services and development of integrated care initiatives (4 B1)			
Independent Practitioners Associations member support for patient enrolment & capitation (4 B1)				
Progress in applying clinical governance model re managing clinical activity & resources, and range of QI activities undertaken by Independent Practitioners Associations members & supported by Independent Practitioners Associations (4 B1) (4 B1/2)				
All Independent Practitioners Associations GP led & run, little consumer/ community input (4 C+4 B2), but ↑ over time (4 B1)				
Independent Practitioners Associations characterised by				

Impact on infrastructure:	Impact on service delivery:	Impact on access/utilisation	Impact on health outcomes/ patient satisfaction	Issues
variation in size and the numbers of GP members in the local area (4 B1) GP members rated achieving better health outcomes, making better use of PC resources, improving and protecting GP status as the most important Independent Practitioners Associations goals, with barriers being lack of time and government policies. (4 B1), (4 B1) Moderate success in establishing collaborative external relationships with other providers, inc an effective partnership with Maori & good working relationship with the funding authority. (4 B1)				
New Zealand not-for-profit community-governed PCOs No. of studies = 6 Study dates: 1996/97-2000/01				
Variety of legal structures. Community reps on most, staff reps on 2/3rds, most staff salaried (4 C, 2A2) Location of services based on priority target groups (4 C, 2A2) High patient: GP ratios – possibly due to expanded nurse roles, service patterns & capitation related incentives (4 C, 2A2) More likely to employ a range of staff than general practices (4 B1)	Provide more health promotion, community worker, dental, mental health & ante/post natal care, alternative services than general practices (4 B1) More likely to have intersectoral case management than general practices (4 B1) Reduced financial & cultural barriers to access (4 B1)	↑ utilisation for young, elderly, Community Service Card holders (4 B1), (2 A2). But overall utilisation rates lower than for fee for service practices (2 A2)		

Impact on infrastructure:	Impact on service delivery:	Impact on access/utilisation	Impact on health outcomes/ patient satisfaction	Issues
More likely to have computerised disease registers than general practices (4 B1)				
More likely to do needs assessment, planning, have a range of QI policies than general practices (4 B1)				
United Kingdom: PCGs/Ts: No. of studies = 19; Study dates 1998-2006				
In early days (1998-99), shifts to primary care small, non strategic, not underpinned by resource shifts. Commissioning not seen as a major driver of change (4 B2)	3/4s reported specific local service developments attributed to work of PCG/T (4 B2)			National focus on clinical governance (4C) Ability of PCT to shape general practice relates to history of local relationship (4 B1+B2)
By 1999, most PCGs have structures for community consultation, but not yet effective (4 B1) (4 B2)	Ltd uptake of complementary & alternative medicines (4 B1)			
Low participation by non-board GP members (4 B2) (4 B2) Good progress on clinical governance (4 B1), & culture change re this (4C)	By 2000 majority of PCTs had introduced a range of services & broader mix of staff to improve access (4 B1)			
Nurses report not being well prepared for role on boards, & had limited influence on decision-making (4 B2), (4 B2)	By 2000, most common health improvement initiatives funded by PCGs/PCTs were community development projects, leisure, exercise/recreation & support for carers (4 B1)			
By 2000, PCTs consulting with nurses more - around clinical governance & health improvement, but not around other issues e.g. prescribing & commissioning (4 B1)	Major driver for service development was health improvement, esp 2 NSF:			

Impact on infrastructure:	Impact on service delivery:	Impact on access/utilisation	Impact on health outcomes/ patient satisfaction	Issues
Few GPs believed they would be affected by PCGs, but some erosion of autonomy was expected (4C)	coronary health disease, mental health (4 B2)			
More needed to shift GP focus to wider health improvement agenda (4 B2)				
By 1999, little progress with IM systems, commissioning, planning, partnerships, engagement beyond GPs (4 B2).				
By 2000, progress with IM system development, but still inadequate, practices are sharing information & participating in shared learning (4 B1)				
PC investment priorities inc prescribing support, IT equipment, nursing/medical staff, clinical governance (4 B1)				
History of suspicion & lack of consultation between Health Authorities & GPs has been a barrier to collaboration as have non-aligned boundaries between PCGs and other agencies (4C) (4 B1)				
Early commissioning focus on community service & interface				

Impact on infrastructure:	Impact on service delivery:	Impact on access/utilisation	Impact on health outcomes/ patient satisfaction	Issues
with secondary care (4 B2)				
Higher priority of commissioning, influenced by NSFs (4 B1)				
By 2000, higher priority of integrating practice & community nursing (4 B1)				
Focus on expanded roles of nurses (4 B1+B2)				
GPs moving from patient centred to PC consultant role to achieve access & manage resources (4C)				
By late 2000, ↑ collaboration & sharing of resources amongst practices (4 B1)				
GPs, nurses, AHP believed clinician involvement in the PCT agenda setting was most important, but differing priority areas (4 B2)				
By 2000 PCG/T size not an influence on performance re PC development, QI (4 B1)				
Little capacity to implement new GMS contract – 2003 (4 B1+B2)				
By 2000, 1/3rd PCGs/Ts still have no subgroup that handles commissioning. In those with a				

Impact on infrastructure:	Impact on service delivery:	Impact on access/utilisation	Impact on health outcomes/ patient satisfaction	Issues
sub group, membership is heavily biased towards GPs, community nurses. Other practice staff less well represented. Few involve reps from social services. Most focus on consultations with social services about commissioning community health services (4 B1).				
By 2000 progress in developing capabilities to undertake health improvement role, but face shortages of skilled staff in this area, e.g. public health (4 B1).				
Greater commitment to addressing poverty/deprivation as priorities apparent in 2000 (4 B1).				
CHD & mental health were most common targets for health improvement in 2000 (both priorities of NSF & national PIs) (4 B1)				
Greatly improved relationships between GPs & social workers, community health services & social workers in over 1/3rd PCGs/Ts (4 B1)				
Scotland: LHCCs No. of studies = 5 Study dates: 1998/99-2000				
In early days (1998-99), shifts to primary care small, non strategic, not underpinned by resource shifts. Commissioning not seen as a major driver of	↑ 50% engaged in work to reduce inequalities in access (4 B1)			

Impact on infrastructure:	Impact on service delivery:	Impact on access/utilisation	Impact on health outcomes/ patient satisfaction	Issues
change (4 B2)				
Role tensions between LHCCs & PCTs re planning, how shift to primary care is to be achieved (4C)	↑ 70% manage at least one service, mainly allied health (4 B1)			
LHCC boards represent range of disciplines, including GPs, nurses, & more public participation than PCGs in England, though still ltd, with marginal representation of other groups (4 B1)				
Lack of congruent boundaries with Local Authorities a barrier to collaboration (4 B1)				
Dominant styles of partnership between participating practices were coordination & co-evolution. Good leadership & working relationships were facilitating factors (4 B1)				
Practices from disadvantaged areas over represented in LHCCs (4 B1)				
Heterogeneity of structures, modes of operation, relationships etc (4 B1)				

Funding models

Impact on infrastructure:	Impact on service delivery:	Impact on access/utilisation	Impact on health outcomes/ patient satisfaction	Issues
Australia: EPC: No. of studies =9, Study dates: 1999-2002				
New systems established, eg IT but still limited capacity eg: pt registers (4 2B) Lack of teamwork/lack of support for AHP in EPC claims (4 2B) Variable DGP capacity to support; practice supports include EPC/HMR coordinators & PNs (4C) Lack of established communication mechanisms with other health service providers for care planning, case conferencing (4 B2) Variable contact between GP & pharmacist post HMR review (2 A1, 4 B1, & 3C) Few accredited HMR pharmacists (2 A1, 4 B1 & 3 C)	Minority of practices account for majority of claims (2 A1) GPs satisfied (4 B2) Improved communication with other professionals; more comprehensive & consistent care (4 C) ↓ HMR referrals than was estimated (2 A1, 4 B1 & 3 C)	↑ Utilisation (2 A1) No SES utilisation differences (2 A1) ↑ utilisation in rural areas (2 A1) Low uptake of case conferencing (2 A1) Groups under serviced by HMR include CALD, indigenous, people living in rural and remote areas. (2 A1, 4 B1 & 3 C) Over 70% HMR reaching older people (2 A1, 4 B1 & 3 C)	↑ health lit (4 B2) (4 C) (4 B2) Consumers satisfied (4 B2)	
Australia: Service Incentive Payments (SIPs) No. of studies= 1; Study date: 2002-2003				
SIP diabetes claims ↑ in DGP with more disadvantaged population & in practices with 5+more GPs	- SIP claims for diabetes not associated with practices that use practice nurses			

Impact on infrastructure:	Impact on service delivery:	Impact on access/utilisation	Impact on health outcomes/ patient satisfaction	Issues
Australia: ATAPS: No. of studies = 6, Study dates:2001-2005				
15% GPs registered as eligible to participate in 1st 15 months (2 A, 4 B1) GPs & AHPs satisfied with ↑ referral options & collaboration (4 B1) No preferred model, depends on local needs, all perform well (4 B1, 2A2) More rural than urban projects employ AHP (4 B1, 2A2) Direct referral more common with co-location (4 B1, 2A2)	↑ in participation rates over time by GPs & AHP (1 A2; 4 B1) Most common referrals for anxiety & depression (1 A2; 4 B2)	By 2005, 26,440 patients had accessed the program – an increase from an average of 11.5 per day in 2003 to 46.1 per day in 2005 (1 A2; 4 B1)	↑ consumer satisfaction (3&4B2) +ve outcomes: ↓ severity (1 A2)), no rural/urban diff (2 A2)	Consumers dissatisfied with co-payments, potential barrier (3&4 B2)
United Kingdom: Personal Medical Services. No. of studies =12, Study dates: 1998-2001				
Range of org models established, took time to develop. Trust, decision-making, teambuilding, all issues to address, support from Trusts critical (3&4 B 1) All areas of clinical effectiveness associated with ↑ teamwork, protocol/procedure development, more patient focused, with nurses in key roles (4 B1) Emergence of new professional relationships between GPs, nurses & practice staff (4 B1) (3,4 B 1) (4 C)	Range of initiatives to improve access to care (4 B1) less improvements to practice access than GMS (4 B1) No difference in patient assessment of QoC, except for continuity of care, which declined at faster rate than GMS (3 B1) Improvements in QoC in all areas of care, with greater improvements in sites with specific QoC objectives (4 B1) Progress slow in sites targeting ethnic minority groups (4 B1)	Improved access & availability for vulnerable groups (4 B1) (3&4 B 1) (4 B2) Modest improvements in access (4 B1/2 & 3 B1)	↑ patient satisfaction (4 B2), (3C) Slow & steady improvements in mental health scores, but remain < National Service Framework (4 B1)	Av annual ↑ of 5% over & above GMS, mainly due to staff costs (4 B1) Lack of agreed goals, recruitment & communication problems & hierarchical structures hinder team development (4 C)

Impact on infrastructure:	Impact on service delivery:	Impact on access/utilisation	Impact on health outcomes/ patient satisfaction	Issues
Nurse led/enhanced, salaried GPs & changing roles considered most successful (4 B1) Nurse enhanced role more like nurse practitioner, different to practice nurse or district nurse; but regulatory obstacles (4 C) Salaried GP job satisfaction comparable, but problems with professional isolation & working conditions. (4B1) Salaried contracts successful in recruiting GPs to work in deprived areas (4 B1) (4B1) Clinical competence for GPs, nurses identified & a range of responses used to address (3&4 B 1), (4 C) Obstacles include recruitment, retention & high staff turn over, & lack of funds to provide additional services (4 B1) Incentives rarely linked to objectives, contracts rarely stipulated services to be provided/by whom/when (2 A2)	Nurse/multi-disciplinary team led pilots delivering more community oriented services (4 C) More focus on community-oriented model in pilots targeting vulnerable groups (4 B1)			

Impact on infrastructure:	Impact on service delivery:	Impact on access/utilisation	Impact on health outcomes/ patient satisfaction	Issues
United Kingdom: General Medical Services No of studies N= 2, study dates 2004/05				
↑ in quality scores, with ↑ size of clinical team (2 A2) Smaller practices performed marginally better than larger ones (2 A2) Socio economic & demographic factors had little effect on quality (2 A2)				

Workforce models

Impact on infrastructure:	Impact on service delivery:	Impact on access/utilisation	Impact on health outcomes/ patient satisfaction	Issues
Australia: Practice Nurses: No. of studies N= 2, Study dates 2004				
↑ uptake of PIP, > no. of PNs employed (4 B1, 4 B2) ↑ use of recall systems improved quality (4 B1, 4 B2) ↑ clinical role than previously (4 B1, 4 B2) ↑ linkages between practices & other services (4 B1, 4 B2) All DGP provide PN training & support (4 B1, 4 B2), informal & adhoc, focused on National Health Priority Areas (4 B2) Roles shaped by professional, practice & community characteristics (4 B2)	↑ no. of PN sessions ↑ patient throughput in practices with PNs (4 B1, 4 B2) ↑ available GP time in 45% of practices (4 B1, 4 B2) +ve impact on quality of primary health care provision, through role in HA, care planning for aged and chronically ill (4 B1, 4 B2)			More likely to be viable & sustainable in larger practices (4 B1, 4 B2) Many GPs believe no change in fees assoc with PN (4 B1, 4 B2)

Impact on infrastructure:	Impact on service delivery:	Impact on access/utilisation	Impact on health outcomes/ patient satisfaction	Issues
Low GP awareness of PN training & support (4 B1, 4 B2) Minimal teamwork education for GPs to work with PN (4 B2) Low uptake of scholarship scheme (4 B1, 4 B2)				
England: Primary Care Mental Health Workers No. of studies =4, Study dates: 2002-2005				
Practice teamwork & community work roles valued by managers, colleagues (4 B2) Differences in role expectations & in practice – little broader non client work. Lack of clarity re relationship with other mental health staff (4 B2) Few workers have contact with other primary health care workers (4 B2) Regular feedback between practice & PCT, clear communication lines, protected time to discuss issues with the practice all associated with practice & worker satisfaction with role (3&4 B1) < 50% in place than expected by 2005 (3&4 B1)	Not 1st point of contact (3&4 B1) No's of patients seen below that expected (3&4 B1) Majority of patients seen from target group with common mental health conditions (3&4 B1)	↓ access for children, 65+, ethnic minority groups	No difference in mental health symptom scores (3&4 B1) Higher patient satisfaction levels (3&4 B1)	No difference in use of voluntary sector or health service costs (3&4 B1) ↓ 20% referred on for further Tx Lack of career paths, low remuneration potential barrier (4 B2), (4 B1)

TABLE 8: SUMMARY RESULTS BY AUTHOR

Go to link: **Summary of results by author**

Evidence criteria
1= Objective patient data
2= Administrative data
3= Patient reported data
4= Provider reported data

Research quality criteria
A1=   National administrative data
A2=   Local administrative data
B1=   Quantitative methods representative sample of the initiative related population
B2=   Quantitative methods unrepresentative sample
C=   Qualitative methods

SUMMARY OF CANADIAN REFORMS

Background

Canada has had a universal health insurance scheme since 1963 (known as Medicare), and a federated system of government with the bulk of the health funding going to the provinces/territories through the 'Canada Health and Social Transfer'. With the exception of Ontario, all provinces have established Regional Health Authorities (RHAs) to provide health services. Ontario has 18 District Health Councils which have responsibility for planning, but no responsibility for the delivery of services. Physician remuneration is a provisional government responsibility, and is via a mixture of fee-for-service, capitation payments, salaries and incentives.

Two thirds of family physicians operate in solo or informal group practices (Martin and Hogg, 2004) and there have been relatively few practice nurses or local organisations of physicians. There is a parallel structure of not-for-profit community health centres (with some, but not all employing family physicians).

In 2001 a major review of the health system was undertaken (known as the Romanow Commission).The health system was characterised by:

- A weak central government and a significant decline in the federal share of health funding in the 1990s
- Fragmented health care delivery and little evidence that a 'system' operated.
- Differing physician payment methods, services and outcomes
- Problems with access to primary health care services, due to a mixture of overall workforce shortages and mal-distribution (Romanow, 2002)

The Romanow Commission identified a number of health workforce challenges including supply and distribution, changing roles and responsibilities and the need for a longer term national strategies. The directions for change included changing the scope and patterns of practice to reflect the changes in how health services are delivered; improving access to an appropriate mix of skilled providers in rural and remote areas; improving the information base about the workforce; reviewing education and training and enhancing the focus on more integrated approaches for developing teams; establishing strategies for addressing supply, distribution, education, training and changing skill and patterns of practice (Romanow, 2002).

Primary health care reforms

In the same year as the Romonow Commission, a 5 year $800 million Primary Health Care Transition Fund (PHCTF) was announced, with most of the money going to the provinces on a per capita allocation. The aim of the PHCTF was to support the costs of implementing large scale PHC renewal initiatives to improve access, accountability and integration of services.

There were five funding areas and the major focus of initiatives (in order of priority) was:

- *Developing multidisciplinary teams/approaches*, although there are considerable differences in their scope, focus and composition, with most being physician centred and focused on treatment and management of illness.
- *Chronic disease management*, especially prevention and management of diabetes.
- Increased access: with direct initiatives, such as Telehealth, and as a by-product of other PHC reforms (e.g. improving primary/secondary interface results in improved access to appropriate care).

- *Information Technology*: with the focus being on pilot projects within specific locations within regions and scope including diabetes management, provider integration, electronic health records.
- *Intersectoral collaboration*: many within the health system, others involving other human services sectors, especially social services and education (Kouri and Winquist, 2004).

A national survey in early 2004 found that PHC renewal is still in the early stages and that many initiatives are still in the planning stage (Kouri and Winquist, 2004). There is little national consistency, with each province determining the focus of initiatives and who's involved. Provider resistance especially amongst physicians remains an ongoing issue with the implementation of the reforms, especially those relating to multidisciplinary teamwork. This resistance is a mixture of lack of incentives for their participation in multidisciplinary teams, cultural/attitudinal issues over roles and responsibilities associated with teamwork, and a lack of willingness or capacity to work as part of teams. Many provinces are negotiating with medical associations to develop solutions, which involve a variety of approaches for compensating physicians including block payments, sessional payments, contracts (Kouri and Winquist, 2004).

The Romanow Commission noted that the PHCTF had not created the major breakthrough in required to transform the health system and address the key obstacles and suggested that a better approach would be to: a) provide targeted funding tied to a common nation platform of essential building blocks for primary health care; b) create an impetus and the right incentives for widespread change; c) clearly identify and remove obstacles; d) public accountability through open and transparent public reporting. The essential building blocks they identified were:

- continuity and coordination of care (case managers, service integration, networks, typically providing ongoing care for people with chronic conditions)
- a focus on early detection and intervention
- better information on needs and outcomes (implement electronic health records, link patients & health care providers to patient records & also health information & resources)
- incentives for health care providers to participate in PHC approaches (financial incentives, especially for physicians to work in PHC settings & be paid for comprehensive care approaches
- certainty and stability re PHC initiatives
- recognition of front line staff
- flexibility re organisation, delivery, scope of practice etc
- quality of care especially recognition of time for consultations to give patients the attention they need, develop relationships, reduce errors, achieve better outcomes (Romanow, 2002)

Table 9: Summary of reforms in selected provinces

Province (population)	Reforms
Alberta (3,164,400)	Several waves of funded PHC reforms since 1997 Mostly short term regional level demonstration projects Commitment to evaluation, dissemination of findings & learning Local Primary Care Initiatives: Eight-year agreement signed between government, regional health authorities & Alberta Medical Association Physicians agree to provide required primary care services to defined population. Capacity building funding: including to establish physician & nurse practitioner teams Electronic health record introduced (covers > 5000 providers) 24/7 telephone advice line
British Columbia (4,158,649)	14 demonstration project sites across 5 regions funded as part of PHCTF: Involved establishing Primary Health Care Organisations, which are medical practices providing comprehensive PHC to registered patients through multidisciplinary teams & 24/7 access; and operate under a blended funding model. Recent change of direction to focus more on improving patient outcomes; thus flexibility in models – evaluations found no changes in outcomes with demonstration projects Incentive payments for physicians for quality of care (diabetes, CCF, maternity)
Manitoba (1,164,135)	PHCTF focus has been on: Telehealth; emergency services, PHC & inter-professional training; expansion of information technology structures Provincial government has contributed to topping up PHCTF to support & sustain projects Introduced legislation enabling nurse practitioners to prescribe, order diagnostic tests, do invasive procedures & operate independently with reasonable acceptance by physicians 13 nurse practitioners registered under the new legislation Telehealth phone line available 24/7 across Manitoba in 100 languages Telehealth to provide a faxed report back to patient's PHC provider Collaborative inter-professional training at clinical sites for physicians, rehabilitation physicians, pharmacists, nurses, social workers
Nova Scotia (936,878)	Focus to change from episodic care to PHC Provide health information to practitioners and clients Create remuneration for physicians which is not FFS Change should be voluntary and incremental PHCTF used to: model different ways for physicians to work sponsor research on sustainability of models (some missed opportunities for collaboration with universities and colleges) facilitate multidisciplinary teams including physicians and registered nurses and nurse practitioners Development of electronic patient record progressing Physicians paid under a combination of fee-for-service and salary, with rural incentives.

Ontario (12,280,731)	Strong tradition of various models of family physician/nurse teams & salaried physicians since 1970s: Community Health Centres; Health service Organisations (physician led capitation funded group practices). HSO program halted in mid 1990s, perception that it failed to achieve its objectives of reducing health care costs, improving/maintaining quality. PHCTF has been used to further develop the pre-existing models. Developing a "basket" of services under PHCTF Rural/isolated model where physicians care for entire community & patients are enrolled & paid on a per patient basis Academic model attached to a teaching hospital/university Family Health Networks (FHNs) created March 2001: encouraged physicians to voluntarily work as part of inter-professional teams. Next phase involved establishment of Family Health Teams (FHTs) to support interdisciplinary teamwork initiated late 2004. Core team comprises: family physician, co-located nurse & nurse practitioner. Larger FHTs involve a range of other allied health practitioners FHTs responsible for providing core PHC services to enrolled patients (voluntary enrolment with individual or group of physicians) Physicians funded under 3 existing blended funding models & through incentives Nurses and allied health staff paid for by the Ministry of Health (salaried) – major difference to FHN model, & take up has been much more rapid
Quebec (7,503,502)	Established a system of Family Medicine Groups (FMGs) involving physicians, other health professional and patient registration: aim for entire population coverage Alternative public health care providers of health and social service centres and local service networks (CLSCs) providing comprehensive range of social and primary health care services to defined population (service agreements re range of services to be provided)
Saskatchewan (995,003)	Focus on establishing managed networks and primary health care teams to provide 24/7 for defined population Core PHC services for each regional health authority have been defined Core performance measures established 24/7 telephone advice line