AUSTRALIAN PRIMARY HEALTH CARE
RESEARCH INSTITUTE

THE UNIVERSITY OF MELBOURNE
THE UNIVERSITY OF SOUTHAMPTON

WHAT IS THE PLACE OF GENERALISM IN THE 2020 PRIMARY CARE TEAM?

Jane Gunn
Lucio Naccarella
Victoria Palmer
Renata Kokanovic
Catherine Pope
Judith Lathlean

November 2007

ACKNOWLEDGMENT

The research reported in this paper is a project of the Australian Primary Health Care Research Institute, which is supported by a grant from the Australian Government Department of Health and Ageing under the Primary Health Care Research, Evaluation and Development Strategy. The information and opinions contained in it do not necessarily reflect the views or policies of the Australian Government Department of Health and Ageing.

The review team included: Professor Jane Gunn, Dr Lucio Naccarella, Dr Victoria Palmer, Dr Renata Kokanovic, Dr Catherine Pope and Professor Judith Lathlean.

The team acknowledges the input, advice and support of all the key stakeholders throughout the review and the early research assistance of Kate Johnston Ata'ata and Ella Butler.

For correspondence regarding this report please contact:

Professor Jane Gunn (j.gunn@unimelb.edu.au)

Australian Primary Health Care Research Institute (APHCRI)

ANU College of Medicine and Health Sciences

Building 62, Cnr Mills and Eggleston Roads

The Australian National University

Canberra ACT 0200

T: +61 2 6125 0766

F: +61 2 6125 2254

E: aphcri@anu.edu.au

W: www.anu.edu.au/aphcri

ACKNOWLEDGMENT 2
INTRODUCTION 5
APPROACH 8
APPROACH TO REVIEW AND SEARCHES 8
Electronic Database Searches 9
Website Searches 10
Key Stakeholder Discussions 11
SEARCH RESULTS 11
METHOD: NARRATIVE REVIEW AND SYNTHESIS 14
RESULTS 16
SUMMARY OF LITERATURE 16
Empirical Studies 17
Review Papers 20
Commentary / Viewpoint Papers 22
Cost-effective Papers 23
Stakeholder Consultations 23
Emergent Themes from Stakeholder Transcripts 24
SYNTHESIS OF FINDINGS 27
Developing a Conceptual Model of Generalism 27
The Continuum 28
FINDINGS 32
POLICY OPTIONS 34
INCREASING THE IMPORTANCE AND STATUS OF PRIMARY CARE GENERALISTS 35
ENHANCING EDUCATIONAL CONTENT AND SETTINGS THAT STRENGTHEN A GENERALIST PRIMARY CARE WORKFORCE 36
BUILDING AND TRANSFERRING EVIDENCE ABOUT STRATEGIES THAT STRENGTHEN GENERALISM IN THE 2020 PRIMARY CARE TEAM 36
REFERENCES 37
APPENDICES 43
APPENDIX 1 - SCOPING EXERCISE: LIST OF 16 PAPERS 43
APPENDIX 2 - INITIAL SCOPING STAGES: DIMENSIONS OF GENERALISM IDENTIFIED IN LITERATURE CONTENT ANALYSIS 44
APPENDIX 3 - GENERALISM SCOPED THROUGH PROGRAM LOGIC APPROACH 45
APPENDIX 4 - STAKEHOLDER CONSULTATIONS 46
APPENDIX 5 - INTERVIEW SHEET FOR STAKEHOLDERS AND QUESTIONS ASKED 48
APPENDIX 6 - THE 133 THEMES FROM THE LITERATURE 49
APPENDIX 7 - COST-EFFECTIVENESS RELATED PAPERS 51
APPENDIX 8 - IDENTIFICATION OF POLICY OPTIONS THROUGH BUSE ET AL., (2005) FRAMEWORK 54
APPENDIX 9 - LEXIMANCER CONCEPTUAL BREAKDOWN OF 16 STAKEHOLDER INTERVIEWS 60

List of Tables

Table 1: Information Sought and Search Terms

Table 2: Definitions used to Categorise Papers

Table 3: Summary of the Core Literature Identified on Generalism and Generalist Approaches

Table 4: Summary of the Core Literature Identified on Cost-effectiveness

Table 5: Seven Phase Approach to Narrative Review

Table 6: Who is a Generalist?

Table 7: What is a Generalist Approach?

Table 8: What is Generalism?

Table 9: Overview of UK and US patient perspectives on Primary Care

List of Figures

Figure 1: Results of the Literature Search

Figure 2: A Continuum of Generalism: The Foundation of a Philosophy of Practice

Figure 3: Conceptual Model: The Essential Dimensions of Generalism

Figure 4: Strategic Framework for Strengthening Generalism in the Australian Primary Care System

INTRODUCTION

> ...Another woman who went to a number of different specialists and ended up coming into me in a terrible mess. She was on three different non-steroidal anti-inflammatory drugs from three different rheumatologists she seemed to have got herself into. She had Diabetes which was very poorly controlled and she was taking two, you know, acid suppressing agents for her stomach because she had gone to all these specialists and they just kept adding things to her list. I just thought, talk about a mess! I then told her not to take anything extra from any specialist until she checks it with me because it was such a mess...you really have to be able to focus on that person and really think about it. Give them some thinking time. Otherwise if she just comes in and her Diabetes is out of control and I increase her insulin we are not going to get anywhere. The other thing I know about that particular woman is, even though she is 70 years old or something, she is looking after her grandchildren because her daughter died of leukaemia. That just makes it impossible for her to do the right things by herself, so, you know of course you have got to consider all that as well...that is what we do, I reckon, GPs and we do it well...and I think to me, that's what generalism is all about".
>
> Stakeholder Participant (2007).

Several factors become apparent from this opening recount. In primary care, which includes health care workers such as general practitioners, nurses and allied health staff who have first and often long-term contact with people at the community level, patients present with multiple problems and a variety of treatment options are often appropriate. Multiple service providers may be involved in someone's care. Consultations take more time when there is co-morbidity, and the social and personal dimensions to a person's well-being impact on a person's ability to 'do the right thing,' as mentioned by the GP above. Importantly though, the recount highlights the holistic focus from one set of generalists -- general practitioners -- the complexities they face and the uncertainties within which they work. Complexity, uncertainty, and undifferentiated problems are realities that all generalists share in the provision of primary care and the coordination of care between specialist services can be a large part of the generalist's role. These characteristics of the generalist, the approaches to care, and how this translates to accessible, equitable and cost-effective treatment, and health outcomes in primary care are the focus of the systematic narrative review of international and national literature on generalism that is reported here.

An important question to ask is why this review of literature on generalism and its place in primary care now? Given that debates about the benefits of generalist or specialist care are not new, why conduct a review of the international literature available on the place generalism in the 2020 primary care team? Internationally primary care settings have changed, in Australia there has been a shift from single practice GP clinics to multi-doctor medium sized entities, to large corporate health groups. In the UK, there has been recognition that management of both acute and chronic conditions in primary care is more possible than was previously the case. Technological developments have provided the potential to reach a definitive diagnosis through primary care generalists rather than having to refer to specialists (National Institute of Health Research, 2007). There are changes internationally to all health care systems.

Most people understand primary care to be the first point of entry to the health care system, it is community based, and in Australia this is largely made up of general practice. While the review acknowledges that there are a number of professions that adopt a generalist approach, particularly in terms of looking at social and personal context and having a broad knowledge base and generalist skill set, the term 'generalist' has long been applied to those working within the tradition of family medicine (indeed primary care and generalist is often treated synonymously). Many of the debates that can be identified are repeatedly about workforce supply and the devaluation of family within a bio-technically dominated system. McWhinney's (1989: 20) *Textbook of Family Medicine,* for example, notes that despite it being obvious that a healthy organisation requires a good mix between specialist and generalists, 'many influential voices in medicine [have] questioned the value of a medical generalist'.

In the contemporary health delivery context old challenges of adequate remuneration, workforce supply, getting the skill mix right still exist. But, new challenges have also emerged and while the opening recount illustrates that co-morbidity is common in general practice, it also intimates how delivery of care between specialists and generalists risks fragmentation when a patient can have, "*three different rheumatologists she seemed to have got herself into".* The coordination of care will pose a significant challenge for the 2020 primary care team and single, disease specific responses will not be able to cover all of the multiple needs of patients (Fortin et al., 2006).

Primary care in Australia is in transition. Internationally, calls are being made to include a more multidisciplinary skill mix in general practice so that more disease management and prevention can occur through generalist services rather than costly specialist services (National Institute Health Research 2007). The Australian government has implemented a range of health care policies since 1999 to strengthen primary care. For example, under the Enhanced Primary Care Strategy, Medicare Benefit Schedule (MBS) items were introduced for coordinated care specific items such as care planning and case conferencing to improve the health of older Australians and people with chronic and complex needs (Commonwealth Department of Health and Ageing, 2005). The introduction of the Better Outcomes in Mental Health Care Initiative was developed to provide better mental health outcomes for Australians by improving access to evidence-based high quality mental health care, seeing more training and education initiatives for general practitioners and the implementation for the access to allied health professional for care (Hickie and Groom, 2002). In 2001, the Rural Health Strategy announced support for practice based nurse employment and more funding to improve access to allied health professionals through GP referrals. In 2004 new MBS items were announced to allow GPs to claim the specific tasks undertaken by practice nurses (Commonwealth Department of Health and Ageing, 2004b).

More recent developments have seen the introduction of the National Chronic Disease Strategy introduced in November 2005 to improve management, prevention and care of chronic disease in Australia through integrated service provision and multidisciplinary care. There is an expectation that GPs, through primary care, will provide prevention and intervention services. This is coupled with the introduction in November 2006 of the Better Access to Mental Health Care Initiatives which has seen new MBS items implemented so that psychological and other allied health treatments for mental health may be bulk billed (Commonwealth Department of Health and Ageing, 2007). On September 11, 2007 Health Minister Tony Abbott announced $1 million funding to the General Practice Student Network for mentoring and promotion of general practice as a career destination choice (Media Release, 2007).

These policies indicate a strong commitment to strengthening generalist approaches, however, in spite of developments the literature continues to indicate that there is 'an under-valuing of the generalist skills required to assess a broad range of health problems and manage them in a patient-centred way' (Harris and Harris 2006: 3). The profession of the general practitioner in particular is becoming less attractive for undergraduate medical students (Callahan and Berrios 2005), but this is not a new phenomenon. Haggerty in 1963 noted that in the US for example, 'lower prestige, less money, less research activity, fewer hospital privileges, and time pressures as the reasons for the declining number of medical students interested in pursuing careers in general medicine'. The persistence of a professional malaise will need to be addressed if generalism is to drive the 2020 primary care team.

A major problem to understanding generalist approaches is that the term has largely been conceptually defined in direct opposition to specialists. This has contributed to a dualistic formulation and understanding of the two practices and if a dualism is that which divides a concept into two, then the concept of good medical care has been divided between specialist and generalist approaches to care. The Macquarie Dictionary (2007) for example, calls a generalist, 'a person with broad education and ability to grasp concepts in various fields (as opposed to specialist)'. Boundary crossings and interdisciplinary knowledge are all commonly referred to characteristics of the generalist. However, when the term specialist is used expert knowledge or a devotion to one subject or one pursuit, or 'advanced medical qualifications in a nominated field of medicine' appears (Macquarie Dictionary, 2007). The Dictionary does not oppose specialists with generalists.

The wording used in these definitions is subtle but important, generalists pursue and are also devoted to one subject -- patient care -- but it is not considered or represented as an advanced medical qualification in the same way that specialist knowledge is. The way that generalist fields have been represented may contribute to the underlying sense in which professionals might feel undervalued and little understood.

This report is timely. Policy development at the National and State level requires that generalism is well conceptualised and understood. There is also a need to ensure that the primary care workforce is sustainable and of the highest quality and safety. Generalism is at a crossroad. Governments recognise the importance of strong primary care to ensuring cost-effective equitable, health care systems, yet the field of generalism appears to be losing its appeal as a career destination, especially for medical practitioners. The story of generalism begins with Grumbach's (2003: 4) own concerns, written only 4 years prior

> It is said that when students enter medical school, they care about the whole person, and by the time they graduate all they care about is the hole in the person. Current medical education inculcates the dominant values of modern medicine: reductionism, specialisation, mechanistic models of disease, and faith in definitive cure…these values are part of a wider societal march toward reductionism and specialisation.

This review explores some of these issues and debates as presented in the published literature and via the views of stakeholders consulted. But due to the diverse nature of the topic it has not been possible to conduct an entirely comprehensive review of all of the literature. That said, the review attempts to bring together the material selected to provide a coherent representation of the essential dimensions of generalism and its place in the 2020 primary care team. This review and synthesis puts forward a conceptual model of generalism as 'a philosophy of practice'. It starts from Grumbach's (2003: 4) premise that specialisation trends are apparent across society, 'the fractioning automotive repair shops into engine, transmission and exhaust specialists and the need to find 3 different lawyers to prepare a will, settle a property dispute, and incorporate a small business' are examples of this. Generalist approaches provide a different world view to the dominant technical and specialty driven one.

APPROACH

APPROACH TO REVIEW AND SEARCHES

The review initially aimed to answer five questions:

1. What are the essential dimensions of generalism?
2. Which of these dimensions of generalism are essential for a cost-effective primary care system?
3. What are the consequences (intended or unintended) that need to be considered if generalism were to be replaced by the primary care team?
4. What health concerns are most effectively addressed by a generalist approach?
5. How could the essential dimensions of generalism be incorporated into a primary care team?

As the summary of literature will present and explain in the following sections, generalist approaches have been treated in a fairly fragmented manner within the literature and there is no readily available and coherent definition of generalism within primary care. Certainly, as the introduction noted, McWhinney's (1989) work on family medicine has provided foundational theoretical and practical understanding of the role of general practitioners and Starfield's (1994) definition of primary care has come to be accepted by many in the field as an appropriate explanation of the setting at least. Starfield (1994: 1129) defines primary care as, 'first-contact, continuous, comprehensive, and coordinated care provided to populations undifferentiated by gender, disease, or organ system'. Finding a similarly coherent explanation of generalism within primary care is, however, more difficult; though a good starting point is Pellegrino's philosophy of family practice developed between 1965 and 1988 (Brody 1997).

The review began with a scoping exercise to develop understandings and explore what material might be available for the five questions. This was fitting with the narrative review and synthesis method which is based on a seven phase approach as articulated by Mays, Pope and Popay (2005). This includes: initial scoping, stakeholder consultation, independent reviews, thematic analysis, and literature synthesis, implications for policy analysis, stakeholder feedback and dissemination of the information. More detail on the phases as applied to this review is provided in Table 5.

Initial scoping involved reading 16 papers related to generalism, generalist approaches and primary care (see Appendix 1). Key authors such as Donohoe (1998), Heath and Sweeney (2005), Ferrer, Hambidge and Maly (2005), Larson, Grumbach and Roberts (2005), Moore (1992), Pellegrino (1978) Starfield, Shi and Macinko (2005) provided insights into comparisons between generalist and specialty care, medical generalists, the future of generalism in medicine, the disappearance of generalists, and primary care systems and health care. Broader readings such as Cross and Prusak's 'The People Who Make Organisations Go – Or Stop' provided general information on the need for generalists within organisational settings but the largely business focussed nature of this discussion limited the usefulness of this text.

The selection of the 16 articles enabled the development of methods for the review and initial templates for documentation of emerging descriptions and themes around generalist approaches. These were collated in line with the original five review questions: What does generalism look like? What do generalists do? How do generalists do it? What are the outcomes of a generalist approach? And, what are the consequences of generalism? (see Appendix 2). It became clear, however, that there would be limitations to answering all five questions from the available literature set and that question one provided the most scope for this review. Papers on cost-effectiveness were still reviewed in these stages and a summary of these is presented in Table 4. Some of the cost-effective papers were relevant to the review because they provided insights into the dimensions of generalism and a generalist approach and so these are reported on within the literature summary also.

Searches of electronic databases (Web of Science; MEDLINE, PubMed and Google Scholar), combined with searches of primary care stakeholder websites and discussions with key stakeholders in primary care (including policy makers, general practitioners, general practice representatives, and consultation with the World Association of Medical Editors (WAME)) (see Appendix 4 for list of stakeholders) were used to answer the question: *what are the essential dimensions of generalism?* Stakeholders were involved in two phases of consultations which are explained below.

Through this approach, the review sought to 'identify studies that provide[d] the richest description of the significant properties of a particular topic: [generalist approaches and generalism] (Mays, Pope and Popay 2005: 4). Because narrative reviews have the flexibility to incorporate different types of evidence, the team gathered and identified quantitative and qualitative information relevant to the study. The narrative review and synthesis aimed to collect published literature in international peer reviewed journals yet also used reports and discussion papers published by government agencies to gain background understanding and to inform the findings from literature review and synthesis and to develop the policy options.

In the first stages, the review attempted to identify the meta-narrative of generalist approaches to inform the selection of essential dimensions of generalism. For Greenhalgh et al., (2004: 583) a meta-narrative is defined as, '[t]he unfolding "storyline" of research in a particular scientific tradition (defined as a coherent body of theoretical knowledge and a linked set of primary studies in which successive studies are influenced by the findings of previous studies). Certainly, there were studies on generalist approaches that fit the criteria with linked sets of primary studies influencing a successive one, but there were not any that defined generalism within primary care. We set out to identify the meta-narrative of generalist approaches that would make it possible to conceptualise generalism within primary care to establish the essential dimensions.

Electronic and website searches, including consultations, were conducted in parallel. The findings from each component informed additional approaches and every attempt was made to embed stakeholder contributions and feedback into the review. The following sub-sections detail the approach to electronic searches of databases and websites, including the consultations held with stakeholders. This is followed by further discussion of methodological approaches employed in the review and synthesis of literature.

ELECTRONIC DATABASE SEARCHES

The search terms were established to address the five review questions in accordance with the first and second stage of a narrative review as outlined by Mays et al., (2005). MeSH and non MeSH terms were applied to electronic databases, some were extended to broaden the parameters as the terms "generalism" and "generalist" are referred to as different things in various settings. Table 1 outlines the information sought and search terms used.

Table 1: Information Sought and Search Terms

Information Sought	Terms used
Generalism – what is it?	"Generalism" and/or "Generalist"
Generalist Approach / Generalism – where does it happen?	"General practice" and/or "primary care" and/or "family practice" and/or "primary health care"
Generalism – what are the dimensions?	"physician's role" and/or "dimensions" and/or "approaches" and/or "practices"
Generalism - consequences of it?	"consequences" and/or "comparison" and/or "evaluation studies" and/or "outcomes assessment" and/or "cost-effectiveness"

Terms such as 'dimensions', 'approaches', and 'practices' generated large quantities of literature with limited relevance to the review. By adding the term 'physician's role' to the search more relevant documents emerged.

There was little literature available on the consequences of a generalist approach, in particular, no randomised control trials (RCTs) particularly evaluating the cost-effectiveness question were available. MeSH terms 'evaluation studies' and 'outcomes assessment' were added to search parameters to extend this, but did not provide any further evidence of RCTs. This seemed to be an understandable gap given that no coherent interpretation was available of the essential dimensions of generalism to address this question.

Two independent reviewers read the abstracts of each article for information that addressed the inclusion criteria which was defined as:

- Articles that linked generalism and a generalist approach as a first contact point and entry to the health care system
- Articles that referred to generalism as the provision of whole-person care, for any problem, in the community setting

Because of the diversity of the field, articles that were disease specific were set aside unless they were judged as relevant to identifying the essential dimensions of generalism.

WEBSITE SEARCHES

The same search terms were applied to relevant primary care stakeholder websites which included: The Royal Australian College of General Practitioners (RACGP); Royal College of General Practitioners, UK (RCGP); New Zealand College of GPs; American Academy of Family Physicians (AAFP); European Forum on Primary Care; Commonwealth Fund; Primary Health Care Research Information Service; Australian General Practice Network (AGPN formerly The Australian Divisions of General Practice ADGP); Australian Practice Nurse Association (APNA); Royal College of Nursing Australia (RCNA); Royal College of Nursing UK; and International Nurse Practitioner/Advanced Practice Nurse Network.

Website documents were used to supplement literature identified from electronic database searches. The documents ranged from position statements, for example, the Draft RACGP (2005) *GPs and General Practice Teams*, the AGPN (formerly ADGP) (2005) *Primary Health Care Position Statement*. Websites also had responses to policy or primary care policies and reports, for example, the RACGP (2005) *Response to the Productivity Commission's 2005 Position Paper: Australia's Health Workforce*; and more recently the RCGP response (2007) *Securing our future health: taking a long term views - The Wanless Report*. Websites also had submissions to primary care workforce reports available, for example, the RACGP (2003) *Submission to the Australian Medical Workforce Advisory Committee: Review of the General Practice Workforce in Australia*. Discussion papers related to funding and the future of general practice and primary care were also available. For example, AGPN (formerly, ADGP) (2007) *Funding general practice-based multidisciplinary team care in Australia* and the RACGP (2007) *General Practice and Primary Health Care in 2015*. Additionally informative material included general practice training curriculum materials, such as, GPET (2007) *Australian General Practice Training: Guide for GP Registrars*.

KEY STAKEHOLDER DISCUSSIONS

The review had two phases to the stakeholder discussions. The first phase invited 16 key stakeholders (see Appendix 4) to be interviewed on the following five questions:

- What is your understanding of generalism or a generalist approach within primary care?
- What issues are confronting and opportunities arising for generalism within the primary care system?
- What documents, websites, and stakeholders are you aware of that are relevant to this review?
- What primary care policy workforce system reforms do you see occurring and of relevance to this review?
- What else are you aware of outside of the Australia primary care system (for example, within Australia or internationally) that is relevant to this review?

Phase one also included consultation with The World Association of Medical Editors (WAME) which resulted in the identification of 100 articles on the value of family medicine through the American Family Physician website. Of these 100, 32 duplicated those already identified from electronic database searches of and 62 were included into the total number of articles found for the review (see Figure 1 below).

Phase two of key stakeholder discussions occurred while the draft report was under review. The intention was to ask the first group of stakeholders, plus some additional key figures in primary care, to provide advice and feedback (see Appendix 4). There were 26 people selected to provide feedback with 18 responding, reasons for declining to provide feedback were largely related to time commitments and availabilities. The review team sought information on important findings from the review, the content of the report, the literature reviewed, and comments on the draft policy options for consideration. Feedback was gained through a semi-structured interview approach (see Appendix 5). Feedback was incorporated as much as possible (especially when similar views were reported by more than one stakeholder) to result in what is presented as a conceptual model of generalism and policy options. Not all stakeholders were able to respond to the draft report.

SEARCH RESULTS

The search strategy identified a total of 596 documents of which 97 papers met the inclusion criteria for identifying the essential dimensions of generalism. Figure 1 outlines the results of the search strategies. The relevant papers included: 74 commentary pieces, 9 reviews and 14 empirical studies. Our literature search revealed no randomised controlled trials (RCTs), empirical studies nor reviews that specifically assessed which dimensions of generalism might be essential for a cost-effective system.

There were 35 papers, represented in Figure 1 also, which were comprised of 17 reviews, 13 empirical studies and 5 commentary papers which were relevant to the topic of generalism and cost-effectiveness some of these papers were used within the review because they enabled further understanding and conceptualisation of the essential dimensions of generalism. All 97 papers were reviewed and articles categorised according to standard definitions applied in peer reviewed Australia medical journals. Table 2 summarises these definitions from those provided by the Medical Journal of Australia in their instructions to authors though some criteria were added for the commentary/viewpoints category.

Figure 1 Results of the literature search

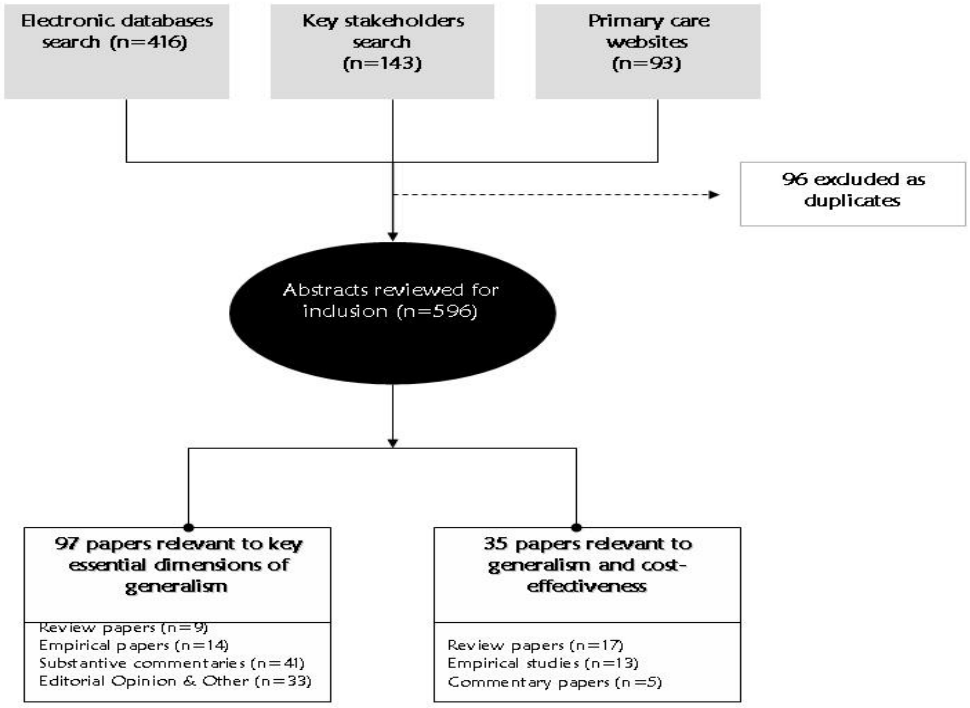


Table 2: Definitions used to Categorise Papers

Editorial / Opinion	An authoritative commentary on topic of current interest.
Commentary / Viewpoints	Expanded authoritative commentary on topic of current interest, [theory informs the discussion].
Review	Critical analysis of topic of current interest. Systematic reviews of literature, comprehensive narrative reviews, analysis of theoretical debates.
Empirical Study	Identifies an objective, outlines study design, methods used and discusses the results of findings.

Table 3: Summary of the Core literature Identified on Generalism and Generalist Approaches

Setting	**Types of Papers**		
	Reviews (n=9)	**Empirical (n=14)**	**Substantive Commentary and Viewpoints (n= 41)**
Country			
US	9	8	24
UK	-	2	10
Australia	-	2	3
Canada	-	-	4
Europe	-	2	-

Table 4: Summary of the Core Literature Identified on Cost-effectiveness

Paper type (n=35)	Paper Focus and Number of papers
Reviews (n=17)	Reviewed primary care to the performance and effectiveness of the health systems and health (n=5)
	Compared generalists with specialist care (n=4)
	Reviewed funding arrangements and effects on primary care behaviour (n=8)
Empirical studies (13)	Compared generalists with specialist care (n=4)
	Compared payment systems and their influence on physician practices (n=4)
	Studied the influence of funding arrangements on GPs (n=5)
Commentary papers (n=5)	Discussed association continuity of care and cost-effectiveness (n=2)
	Discussed the influence of funding arrangements on GPs (n=1)
	Discussed workforce planning and supply (n=2)

Table 5: Seven Phase Approach to Narrative Review

Phase 1. Initial scoping exercise and thematic content analysis of 16 selected papers (see Appendix 1) was conducted to explore what does generalism look like, what do generalists do, how do generalists do it, what are the outcomes of a generalist approach and what are the consequences of generalism (see Appendix 2). The data was formulated within a program logic model (see Appendix 3) also informed by first phase interview responses from 16 key stakeholders about generalist approaches and generalism (see Appendix 4). The review determined that only question one, ***what are the essential dimensions of generalism***, would be possible to answer.

Phase 2. Independent reviewers returned to all papers to undertake a thematic content analysis to confirm, disconfirm, expand and extract further themes which revealed 133 themes and features related to generalism (see Appendix 5). Care was taken not to cluster emerging themes, but to document them as they arose in the literature. 35 Cost-effective papers were found (see Appendix 6), however, without any of the essential dimensions of generalism identified and articulated it was not possible to answer this question.

Phase 3. Grouping and categorising the 133 themes by re-reading a selection of papers following a reduction in the high numbers of editorial and opinion pieces. Conceptual analysis of 16 stakeholder transcripts using Leximancer program to identify dominant concepts and discussion points about generalist approaches and generalism, grouping of explanations and discussion points from stakeholders according to three grouping categories: knowledge, character and practicality (doing).

Phase 4. Synthesis of literature and stakeholder responses to develop a conceptual model of generalism. The conceptual model of generalism was based on three identified essential dimensions of generalism: ways of knowing, ways of being and ways of doing and first explicated through a continuum approach to the dimensions. The themes from the literature combined with stakeholder responses provided the material to describe and define each of the dimensions which resulted in a conceptual model of generalism as a philosophy of practice.

Phase 5. Buse et al's., (2005) policy analysis framework was used to identify actors, context, content and process (Appendix 8). Policy options were informed by background literature collected and developed using the devised conceptual model as an ideal representation of the place of generalism in the 2020 primary care team.

Phase 6. Draft review feedback received from two independent reviewers and second stage consultations conducted with key stakeholders (see Appendix 4). Incorporation of feedback into final report.

Phase 7. Dissemination of information and findings via peer reviewed publications and presentations.

METHOD: NARRATIVE REVIEW AND SYNTHESIS

In spite of the impression of linear progression given by the seven phase approach, narrative reviews are by nature iterative and cyclical. The scoping exercise conducted with the first 16 papers (phase one) enabled the team to identify early in the review process that it would only be possible to answer the first question comprehensively. There was limited evidence to identify exactly which of the essential dimensions of generalism were essential for a cost-effective system and certainly the literature that discussed the future of primary care was not at odds with a generalist approach. In terms of the cost-effective question, the review did identify 35 relevant papers (see Appendix 7) from which 4 were the most beneficial for making a case that generalist based primary care systems are cost-effective but there was not enough evidence about the essential dimensions to answer this question definitively. In spite of these additional questions not being a focus, the review still found material pointing to implications for outcomes and cost-effectiveness. These implications are embedded within the findings and policy options.

To identify the essential dimensions of generalism all the literature gathered and meeting the inclusion criteria (n= 97) was reviewed (phase two). This resulted in the identification of the 133 broad themes that described generalist approaches and generalism in primary care (see Appendix 6). Care was taken to document the 133 themes as they appeared and to note the re-appearance of them within other articles, thus the appendix shows in brackets the number of times that certain terms such as, continuity of care (36) or coordinated care (28) appeared across articles. This phase enabled the review to ascertain generalist approaches, the presence of particular values and principles underpinning generalist practices, and indications of different theoretical (knowledge) influences which appeared to diverge from a solely biomedical, disease focussed treatment of people to a holistic, biographical approach.

The 133 themes and descriptions needed to be presented within a coherent framework or model, so the review team reassessed and thematically analysed them through a grouping and categorisation process. The groups and categories were developed from those which seemed to form within the data itself (phase three). For example, the knowledge and training required for generalists suggested one category ‘knowledge’, the values and principles suggested another category ‘person or character’ and, the material looking at approach suggested a category of ‘practicality’, or ‘doing’. The 133 themes were grouped into these three categories (knowledge, character and practicality) and papers were reviewed a second time to confirm and disconfirm evidence and groupings. This selection of papers was based on a refined selection of commentary, opinion and editorial papers. The large numbers of commentary, opinion and editorial papers made it necessary to distinguish between comments and substantive, or, authoritative commentaries.

Mays et al., suggest that once review questions are refined, the bodies of literature identified and material evaluated for its quality, the next stage is synthesis to reach the aim/s of the study. This is an approach which is primarily characterised by a ‘thematic analysis’ of literature and its synthesis ‘refers to a process in which a narrative (as opposed to statistical) approach is used to synthesise evidence extracted from multiple studies (Mays et al., 2005: 12). Phase four began to synthesise information within what the review termed a ‘conceptual model of generalism’, the conceptual model was developed around the literature reviewed and the feedback from the first phase of stakeholder interviews. 16 stakeholder interviews were analysed using the Leximancer program, a language based program that identifies the key themes, concepts and ideas from unstructured texts with all interviewer questions and dialogue removed.

Leximancer indicates core concepts such as ‘generalist’ and links these with discussion points like ‘approach’, ‘patient’ or ‘care’, so it is possible to see where people discussed generalist and approach, generalist and patient care, and generalist and primary care together (see Appendix 9). Interviewee responses were batched according to stakeholder’s areas of work and read by a qualitatively trained review team member and examined for points of convergence and divergence in relation to the 133 themes. In particular, interviewee responses that described and explained different concepts of generalism were noted down.

Literature and stakeholder responses provided a basis to consider policy option developments (phase five) around the core review question *"What is the place of generalism in the 2020 primary care team?"*. The following stage included feedback from stakeholders on the conceptual model and policy options (phase six) which have been incorporated to formulate this final report. Phase seven will include the dissemination of information via peer reviewed publications and presentations.

RESULTS

SUMMARY OF LITERATURE

When Litsa arrives at the general practitioner she is visibly distressed. She says to the doctor that she has a stomach ache, some pains in her legs and feels down. She also complains of shortness of breath, dizziness and heart pain. As shortness of breath and heart pains are serious symptoms, her GP runs a series of tests to ensure that Litsa is not at risk of a stroke or a heart attack. During that time which takes longer than a general consultation of 15 minutes, Litsa and her GP talk through what's been happening since her last visit. The GP discerns that Litsa's sadness is due to her family being back home in Greece, she has limited social networks in Australia, her English is also at an early stage so its hard to get to know her neighbours and very difficult to find employment. Her leg pains turn out to be somatic markers of anxiety and panic which has onset due to Litsa's social isolation and need for family connections. Her GP can ascertain that Litsa has experienced a loss of identity since she has not been able to find employment in Australia. The GP may need to make contact with a social worker to provide access to support services, she agrees to return for a visit in a week's time. The GP makes a note that she may need a referral to a psychologist to explore some cognitive behaviour therapies (CBT) to manage her anxiety and panic symptoms if these do not resolve with the simple strategies that have been implemented at this visit. She will also need to monitor whether the stomach ache and other symptoms improve.

The striking finding of the review is the dominance of commentaries and opinion pieces relative to empirical studies and reviews (see Table 3) and the small number of Australian studies. Overall published literature in academic journals shows strong support for generalism and the need for generalist approaches in primary health care provision. Generalism, however, has not been explicitly articulated in the same way as generalist approaches within this literature and it seems that there has been a lack of a conceptual framework available that stipulates exactly what the characteristics of generalism are and its place in primary care. Much discussion has also occurred in the context of primary care. The definition of primary care focuses on first contact, coordination, comprehensive, and continuous care, but perhaps unsurprisingly there is little to no reference to generalism explicitly as a philosophy of practice that guides these generalist approaches in the literature. Some authors certainly do refer to non-tangible features of a generalist approach, they make mention of humanistic values and care that is centred around a patient's social context, looking to provide whole of person over simply focussing on identifying a singular disease or condition (Heath and Sweeney 2005). It is this approach that our character in the above vignette, Litsa, holds especially important in terms of the care she receives. Because Litsa's GP cares for her social and emotional well-being as well as her physical health, she knows that there is someone who sees the whole of her person and not just the hole (Grumbach 2003). Her GP is not solely focussed on an organ or disease specific condition and Litsa can feel comfortable to tell her story as her relationship develops over time. The returning visits enable her GP to identify issues and monitor her emotional well-being.

This is what a generalist does. Generalists spend time with a person to look at the bio-psycho-social aspects to narrow down the nature of illness and disease, and the kind of supports that will be needed. A generalist can provide referrals and access to other specialist services that if Litsa was in the US instead of Australia for example, she may find it more difficult to identify where to first seek care. Importantly, what the vignette shows is that Litsa needs the medical training that a generalist approach has, there is not one condition overall that Litsa is troubled by. The GP needs to be able to link her with social support networks. This may involve a social worker and perhaps she will need access to specialist psychological care. As presented in the vignette above, time is required to work through the best approach for Litsa. No one approach alone can provide all of the care that she may require.

Litsa, like any other person, requires access to an equitable health care system that is not beyond her reach due to high costs, she requires a medically trained generalist to determine her health needs including her psycho-social needs. Litsa's case enables us to see the relevance of the RACGP (2005) *Draft Position Statement on GPs and Practice Teams* which notes that general practice teams have always existed but that multidisciplinary teams will be essential in the future to respond to a changing community profile that includes chronic and complex illnesses and an ageing population (RACGP 2007: 1). The setting of primary care is characterised by complexity, both the literature and stakeholder feedback illustrate this.

The following sub-sections present a summary of papers that fit the inclusion criteria for identifying the essential dimensions of generalism. These papers provided the basis from which the meta-narrative of a generalist approach could be illustrated and from this meta-narrative the review conceptualised the essential dimensions of generalism. As indicated in the methods section, 35 papers on cost-effectiveness (see Appendix 7) were identified and reviewed for key arguments relating to cost-effectiveness. Overall, the majority of these papers supported the case that strong primary care systems are cost-effective, but because there was little to no discussion of dimensions of generalism within them it made it difficult, to near impossible, to assess which dimensions of generalism might contribute to cost-effectiveness. Additionally, the systems focus of the papers, while important, did not provide material to identify and develop a conceptual understanding of generalism.

There were 14 empirical studies, 9 reviews and 41 commentaries included in the final review to identify the essential dimensions of generalism. Each sub-section outlines the studies identified and provides a brief appraisal of critical insights that provide understanding of the meta-narrative of generalist approaches and potential policy issues. Following this literature summary, a selection of stakeholder responses is provided from the Leximancer program analysis of 16 transcripts. Literature and stakeholder material is formulated and synthesised in the last section to identify the essential dimensions of generalism and to present the review findings on its place in the 2020 primary care team.

EMPIRICAL STUDIES

The review identified 14 empirical studies consisting of 3 cross sectional studies, 1 national comparative study, 4 qualitative studies (combining surveys, interviews and grounded theory approach), 2 retrospective cohort studies, 3 prospective cohort studies, and 1 RCT based on a prospective follow up. There were additional empirical studies available that compared generalist and specialist care, but the disease specific focus of these meant that overall they did not concentrate on the two inclusion criteria essential to this review.

It is particularly important to note that studies that gave preference to specialist treatment or outcomes for disease specific conditions were not excluded because of the preferential focus of the paper, but rather they were not beneficial in terms of answering the question: what are the essential dimensions of generalism? Empirical studies that did meet the two criteria, particularly those from the US, often repeat concerns with inequities and inefficiencies in the health care system and the burgeoning costs of medical care due to direct access to specialists and their direction of patient care. The empirical studies debate the benefits of generalists playing a gatekeeper role, some evaluate the sorts of career choices that are being made by medical graduates, the outcomes generalist approaches compared with specialist care, and patient views on preferences.

3 cross sectional studies were available to the review. Two of these papers focussed on patient perceptions of care; Grumbach et al., (1999) and Schwartz et al., (1998), with Diette et al., (2001) conducting a cross-sectional survey to establish whether care for asthma was more consistent with guidelines if specialists or generalists were responsible. Not unsurprisingly Diette et al's., (2001) study found that specialist care for asthma was more consistent with national guidelines for treatment. In terms of consistency, it would seem that specialists need only be aware of a minimal set of guidelines that influences their scope of practice, whereas the multi-morbidities addressed by a generalist means multiple guidelines.

Moreover, adherence to guidelines tells us little about the quality of patient care provided by specialists and generalists. Schwartz (1998: 430) explored a patient perspective on quality of care for multiple sclerosis finding 'strikingly few differences between Primary, Single Specialty and Comprehensive Care for MS patients'. Grumbach et al., (1999) also surveyed patients to assess attitudes, ratings and perceptions of barriers to specialty referrals, their study revealed overwhelming findings that '94% of patients valued the role of primary care physician as a source of first contact care' (Grumbach 1999: 261). These two studies acknowledge that between specialist and generalists some aspects of care differ, but they do not suggest that generalist care is sub-standard. Likewise, none of the papers advocate for specialists to become generalists, or vice versa, instead they attempt to highlight the education, training and questions for further research to better understand the differences of care provision.

Many of the papers were concerned with such differences between care because of escalating medical care costs. This rising cost has been argued to have increased the role of primary care physicians, particularly in the US setting (Schwartz 1998). One national comparative study across 13 industrialised countries by Starfield and Shi, (2002) illustrated that strong primary care systems based on a generalist approach work best in terms of equity, access and cost-effectiveness. While primary care physicians and a primary care system founded on a generalist approach are said to be the answer to blown out medical care costs, there still appears to be a sense in which the professional career pathway for generalists is undervalued and not a preferred option for medical graduates.

The latter issue prompted Martin et al., (2004) to complete a national qualitative study in the US using interviews and focus groups to 'transform and renew the specialty of family medicine' (Martin et al., 2004: S4). This study emerged from the Future of Family Medicine (FFM) project established from 7 national family medicine organisations in 2002 and it resulted in the identification of core values for a New Model of practice to improve the health care of the nation. The authors proposed new rules be established for the 21st century for the US health care system centred on: 1) shifting care away from that which is primarily based on visits, to care that is focussed on continuous healing relationships; 2) moving variability away from being driven by professional autonomy to being customised by patient needs and values; 3) shifting control away from professional to patients; 4) moving decision-making away from that which is based on training and experience to evidence-based; 5) seeing safety as a system property instead of doing no harm as an individual responsibility; 6) anticipating needs instead of reacting to these; 7) decreasing waste instead of seeking cost reduction; 8) encouraging cooperation amongst clinicians instead of preference given to professional roles over the system.

Martin et al., (2004) also point to another important transition being called for in the US; the medical home. The concept of the medical home is re-visited within the findings section, but it reinforces that the issue of declining medical graduates taking up a generalist career will need to be addressed if this kind of approach is to be successful.

Interestingly, Dewitt et al's., (1998: 257) tracking of what influences career choices amongst medical graduates provides a different perspective on the sense of decline in graduates being interested in generalist career pathways. Through a structured survey and interview they found that 68% of study subjects remained generalists. The characteristics listed as important in career choices were: 'breadth of knowledge or skills required, breadth of clinical problems addressed in practice and opportunity for continuity of care' (Dewitt et al., 1998: 258). Contrary to dominant views that speciality care is more difficult than the generalist in terms of knowledge base and skills required, the authors found that generalist graduates 'expressed the idea that practice was more difficult than specialty practice, because of a less-defined knowledge base and more uncertainty' (Dewitt et al., 1998: 260).

But, does generalism risk being subsumed within a largely bio-technical domain where generalist approaches are not really appreciated? Meyer et al., (2000: 188) noted in their study that 'generalists are currently providing services that in the past were deemed the realm of specialists, particularly in the rural fee for service environments'.

In their retrospective cohort study of patients who received gastrointestinal endoscopies or a colonoscopy from generalist physician, they found that procedures performed by generalists in these areas were focussed on particular populations and procedures of relatively low complexity compared with those provided by specialists. The critical issue, according to Meyer et al., (2000) is to evaluate whether the outcomes of these endoscopies differ or not between those performed by generalists and specialists (Meyer et al., 2000: 194). Meyer et al's., discussion of this topic does not reveal any critically important differences outside of coming to understand that the complexity of procedures might differ between the generalist and specialist. It does, however, provide an important acknowledgement that 'market forces and maturing technology' are changing the nature of services provided through primary care.

In contrast to Meyer et al's., findings in another retrospective cohort study by Christakis et al., (1994) revealed calls for increases in the number of generalist physicians. Christakis et al., (1994: 8) found that in their study group specialists were retraining as generalists and while many have examined why generalists specialise, the trend of specialists moving to generalists is one that has been little examined or researched according to them. Illustrating the lack of concordance in the field, Meyer et al., (2000: 190) argued in contrast to this that 'the role that specialist play in the provision of generalist services has been well documented', though it is interesting that the two articles used by Meyer et al., to substantiate their claims are from 1979 and 1983.

A prospective cohort study by Lowe et al., (2000: 339) sought to explore ways to build complementary skills of these professional groups. They found that it is possible for 'generalists and specialists working with the framework of a defined admitting policy and with equal access to resources, to provide the same quality of care and clinical outcome' (Lowe et al., 2000: 344). This view was supported by another two prospective cohort studies. Page et al., (2003) examined quality of generalist vs. specialty care for people with HIV on antiretroviral treatments and Smith et al., (1996) explored the development and evaluation of a model of health care for HIV positive patients involving specialist, hospital based teams and primary care health teams. Page et al., (2003) found that general practitioners can provide equally adequate care with access to knowledge specific to HIV treatment. This was supported in Smith et al', (1996: 419) work who went to great lengths to point out that, '[their] aim was not to turn general practitioners into experts in HIV medicine who could then initiate and supervise specialist treatment regimes. Rather, [GPs] responded to [their] interventions by dealing almost entirely with the non-specialist aspects of general medical care'.

This paints a picture of a health care system where both specialists and generalists are needed. Carr et al's., (2004: 83) Australian study of how GPs treat schizophrenia compared with community mental health staff found that there was a need for 'greater acknowledgement of the valuable and complementary role of GPs'. Certainly, Smith et al., (1996) found that distinguishing between the roles of professionals, in their case hospital based doctors and general practitioners, was of considerable benefit to patients. Carr et al., suggested that mental health services could work more effectively with GPs in areas such as, improved communication to facilitate better access to services, more advanced skills training for mental health nurses and recognition of the support for carers and patients alike. The challenges of subspecialisation for generalists are very real in terms of the increase of mental health patients in general practice, the rise of chronic heart diseases and other complex illnesses.

For this reason Kumar and Gantley's (2007) conducted a study in UK primary care setting using a grounded theory interview approach to establish the need for genetics training for primary care physicians. With growing requests from patients about genetic susceptibility to common diseases such as colon and breast cancer 24 of the 30 respondents supported subspecialty training. They said 'in the context of established genetic diseases general practitioners saw a clear role for themselves, using family histories collected in specific circumstances' (Kumar and Gantley 1999: 1412). Indeed, the 'general practitioners ability to integrate patient experiences with genetic and other biomedical knowledge is a key generalist skill' (Kumar and Gantley 1999: 1413). Overall, many of these empirical studies have acknowledged the benefits of the generalist skill set in supporting disease specific conditions.

Moreover, generalist graduates have suggested that the complexity and range of illnesses that people present with make the discipline a challenging and dynamic career pathway that requires a particular kind of person.

Kumar and Gantley's (1999) study illustrates that the combination of biomedical and biographical knowledge of the generalist is a complimentary skill that could provide preventative measures for genetic susceptibility. This sub-section has illustrated some important aspects of the meta-narrative of the generalist approach, and intimated some of the policy issues faced in terms of education, training, skill-set mix and where generalism is placed in the 2020 primary care team. We now turn to the review papers to formulate this narrative more thoroughly.

REVIEW PAPERS

A small number of systematic, non-systematic, comparative and policy reviews were found culminating in a total of 9 review style papers. There were three systematic reviews, three non-systematic reviews, one comparative review, and two policy level reviews in total.

Three systematic literature reviews were identified these were written by, Smetana et al., 2007; Go et al., 2000; and Harrold et al., 1999. Smetana et al., (2007) reviewed the literature available on comparisons of outcomes resulting from generalist versus specialist care for discrete medical conditions. They concluded that more research about the role of generalists and specialists was required to inform policy reforms and that specialty favoured studies might not consider 'physician volume or experience, information technology support, care management programs, and integration into health delivery systems' (Smetana 2007: 18). Go et al., (2000) claimed, however, that patients treated with coronary disease by specialists probably have better outcomes. The setting of Go et al's., paper was in a hospital making it difficult to assess the implications for primary care general practitioners. Harrold et al's., (1999: 499) study also focussed on the treatment of heart disease suggesting that 'specialists were generally more knowledgeable about their area of expertise and quicker to adopt new and effective treatments than generalists,' they acknowledged though that there is a need for more research to examine if such patterns of care translate to superior outcomes for patients.

In spite of this tendency to favour specialty treatment for disease specific conditions, both Go et al., (2000) and Harrold et al., (1999) argued that generalists and specialists are required in the health system. They did not make a case for specialists to replace generalists, but rather to establish how diseases ought to be treated and managed. In Harrold et al's., (1999) case this related to the organisation of the health system in terms of how care will be coordinated and in Go et al's., (2000) view it will be innovative methods that assist generalists and cardiologists to improve the use of proven therapies and raise the overall quality of care. The importance of generalists was supported by Smetana et al's., (2007: 18) review where they argued that 'generalists practice remains a critical element of the health care system, not just for acute illness care but also for the management of the many patients with chronic illness'.

The review found 3 non-systematic literature reviews by Zgibor and Orchard (2004) Donohoe (1998); and Moore (1992). Zgibor and Orchard's (2004) study examined differences in treatment between specialist and generalist care for Type 1 diabetes. While the review was a disease specific study, it was included within the literature because of the systems focus in terms of care provision and not simply concentrating on the disease. In light of this they advocate for improved access to primary care providers through education, access to ancillary professionals, and the dissemination of models of care used in diabetes specialty clinics into the primary care setting (Zgibor and Orchard 2004: 237). In a setting where diabetes and other chronic diseases are on the rise and most people enter the system through their general practitioner prior to acuity, it will be important to find ways to improve and enhance the management and treatment of diseases in primary care.

The challenge is how disease specific models and single disease focussed guidelines can be adapted for use in primary care where patients present with multi-morbidities. Likewise, the questions of how to develop and implement co-management models will be important to consider particularly when studies such as Donohoe's (1998) suggest that specialty treatment costs are higher.

His review specifically compared generalists and speciality care in terms of costs reporting that the overuse of diagnostic and therapeutic modalities by certain specialists led to increased costs with either no benefit or added risks to patients. Moore's (1992: 365-6) paper supported the position that generalists are accessible to patients, better at coordination and the integration of complex processes of medical care, they can handle psycho-social problems, and the broad knowledge and skills required provide a firm basis to respond to the multidimensional nature of patient problems. He considered this in relation to the sub-specialist debate, where the final case made was that generalist did have an important role to play in primary care, particularly in terms of revitalising the perceptions of medicine as healing and comforting (Moore 1992: 374). Both papers raise questions about what is required for generalists to treat and manage disease specific conditions, but underlying this is the problem that not every condition, disease and aspect of illness can in fact be managed by one person alone.

The review identified 1 comparative review paper by Starfield, Shi and Macinko (2005: 466-67) which contended that primary care systems that are strong, well supported by government, based on universal or near universal coverage, with low or no co-payments for health services, have a percentage of physicians who are not primary care (ancillary health staff), and have professional earnings of primary care physicians related to those of other specialists, are cost-effective. The review noted that this study is well referenced across the literature where people make a case for primary care to deliver cost-effective, equitable and accessible health care. The authors outline some of the challenges for primary care that will undoubtedly have relevance for the Australian setting. These are: the recognition and management of co-morbidity, the prevention of adverse effects of medical interventions, maintaining a high quality of the important characteristics of primary care practice, and the improvement in equity in health services and in the health of populations (Starfield et al., 2005: 486).

Ferrer et al., 2005 and Stille, 2005 in 2 policy level review papers note the difficulties, however, of coordinating care within increasingly complex health systems. For Ferrer et al., (2005) this issue relates to developing a systems approach over an individual one to reduce the fragmentation of care. Stille et al., (2005: 700) identify how coordination of care is both a core function within primary care and a defining feature of generalist physicians, though structural issues create barriers to achieving this. Stille et al., (2005: 705) conclude that there is a need to develop definitions and measurement of coordination as there is 'limited objective evidence showing its benefits'. The important issues for training revolve around communication and collaboration, and for Ferrer et al., (2005) there is a need for generalists and specialist to work more closely because as the evolution of roles over time will change.

These 9 review papers make a case for generalists to play a coordinating role in the provision of people's care across primary care team settings. This appeared to be the case regardless of whether the outcomes for treatment for disease specific conditions were found to be higher in specialist care than generalist care, and vice versa (Cf. Zgibor and Orchard 2004). An interesting point was made by Starfield et al., (2005: 486) in their conclusion where they argued that, 'professional specialty groups in the United States have made little if any attempt to define the practice of "specialism" or the circumstances that should lead to seeking care from specialists' (Starfield et al., 2005: 486). This is a noteworthy point in light of the way in which generalism and generalist approaches have had to continuously make a case for their role and importance in primary health care. In Moore's (1992: 372) view the problem is linked to the way in which the marketplace favours specialism.

The sense of urgency and alarm in much of the international literature about the devaluation, loss and downfall of generalism within primary health care systems can be linked to earlier issues identified at the introduction of this report. Some of these relate to the way in which generalism has always been measured in opposition to specialism with specialists being seen as advanced or more expertly trained. Others relate to political and economic forces which have pushed technical focus and specialism over generalism. It is striking that generalists, the people who provide first contact, continuous care in relation to the social context of individuals and communities have had to justify and define their roles so much. This latter theme is repeated in commentary and editorial papers identified for the review.

COMMENTARY / VIEWPOINT PAPERS

Seventy-four papers were listed as commentary pieces in the early review stages, of which 41 of these were included in the literature review. These consisted of a range of papers written in different styles and included: discussion papers, reports, editorials, opinion pieces, articles on generalist curriculum issues, commentary pieces and papers on personal values, international primary care systems, transitions affecting general practice and papers on the bio-psycho-social model. Some of the 74 papers could clearly inform a discussion of generalist approaches, for example, the review gained a sense early on that personal values would be important to understanding the generalist approach. This was indicated in the initial scoping exercise of the 16 papers in phase 1. The difficulty with the values paper, for example, was that it did not directly explicit the discussion of personal values in the relation to generalism and this too was the case for a large proportion of what the review termed “commentary” pieces.

Additionally, it might have been possible to employ Borrell-Carrio, Suchman and Epstein’s (2004) bio-psycho-social model paper in terms of analysing generalist approaches, as the review identified early on that this model was central to primary care physicians and their practices, but the focus was not on generalist systems of primary care and did not assist in the identification of essential dimensions of generalism as a result. Likewise, the issue of generalist curriculum is an important discussion topic in relation to the future of generalism within primary care but some of those papers were set in the US and others in the UK where education systems and processes are somewhat different to Australia. To cover the issue of generalist curriculum would require a review concentrating solely on this topic where systemic differences could be noted and appreciated in better depth.

In light of the above, the review established that only the substantive, authoritative commentary style papers would be selected including papers that fitted more with the style of “viewpoint”. In Table 2 the review noted that expanded authoritative commentaries consisted of pieces written on a topic of current interest and we included additional criteria that theory informed the discussion. The former part of the criteria would assist in understanding the meta-narrative of generalist approaches because the review would be able to identify how generalism had been of interest over time and the kind of debates that had ensued. The latter part of the criteria, informed by theory, would assist to identify the essential dimensions of generalism. In addition to this, the commentary and viewpoint papers still needed to meet the inclusion criteria linking generalism and generalist approaches as first contact in the health care system and to explicate generalism as the provision of whole-person care, for any problem, in the community setting.

Many of commentary and viewpoint papers were useful to identifying generalist approaches because they described the explicit roles, functions, responsibilities of generalists which included the themes of provision of first contact care, accessible, coordinated, continuous, integrated, comprehensive whole person care (Starfield 1994, 1996; Starfield and Shi 2005; Schroeder 2002; Larson et al., 2004; Rivo, 1993; Harris and Harris 2006).

Of the 43 more substantive commentary papers, there were a smaller subset of papers (n=9) that sought to challenge current perceptions of generalists based on their explicitness or measurability by reflecting on the more invisible or tacit dimensions of generalist practice. These are discussed in turn. The 8 papers ranged from reflections from distinguished general practice educators and researchers such as Eduardo Pellegrino (1978) in the US and Ian McWhinney (1989) in Canada to papers that described the key roles, functions and domains of general practice such as, Green et al., (2004) and Haynes and Phillips (2001) in the US and theoretical pieces seeking to describe and classify the theoretical principles or underpinnings of the intellectual basis of general practice. These included works by Heath and Sweeney (2005); Sweeney and Heath (2006); Thomas (2006), Greenhalgh (2007) from the UK, and Stephens (1982) from the US; and Strasser (1991) and Martin and Sturnberg, (2005) from Australia. This set of papers (some of which comprised book chapters) articulated themes around the values and principles underpinning generalism. An additional three key commentary papers played a crucial role in the development of the essential dimensions of generalism.

These were papers by Sweeney and Heath (2006), Thomas (2006) and Green et al., (2004) they are discussed in the following section which explains the conceptual development of the model.

COST-EFFECTIVE PAPERS

Of the literature identified on cost-effectiveness and generalism (n=35), three review papers provided evidence for the contribution of primary care to the cost-effectiveness of health care systems, but none of the literature had (RCTs) nor evidence to answer the question of which of the essential dimensions of generalism provide a cost-effective health care system. The three review papers that contributed to seeing primary care as cost-effective were a paper by Starfield et al., (2005) which reviewed studies of the supply of primary care physicians and found that in the US, areas with higher ratios of primary care physicians to population had much lower total health care costs. Starfield also identified six key mechanisms to account for the cost effectiveness of primary care, namely, (1) greater access to needed services; (2) better quality of care; (3) a greater focus on prevention; (4) early management of health problems; (5) cumulative effect of the main primary care delivery characteristics and; (6) role of primary care in reducing unnecessary and potentially harmful specialist care.

A second paper by Engstrom et al., (2001) reviewed 45 studies that compared different aspects of primary care with specialist care. They found that primary care contributed to improved public health, as expressed through different health parameters, and a lower utilisation of medical care leading to lower costs. Primary care physicians were found to take care of many diseases with the same quality and often at considerably lower cost than specialists. The conclusion was that the way primary care was organised was important in respect to reimbursement by capitation, more group practices, higher personal continuity and having generalists as primary care physicians.

The third paper by Moore (1992) compared specialists with generalists in relation to the performance of health systems. He pointed out that no studies directly measured the effects of primary care practitioners on total health care costs, but indirect associations suggested that generalists are moderate in costs, whereas specialists raise them. Moore also claimed that systems that use full-time generalists to provide primary care will be more cost effective those that rely on sub-specialists. This was supported by evidence that sub-specialists always charged more for primary care and that primary care generalists reduced costs by having a moderating effect on hospital and specialist admissions.

These papers illustrated that primary care is cost-effective however, they were not focussed on generalist dimensions. Thus, it is difficult to assess which of the essential dimensions of generalism are required for a cost-effective system, particularly as there has not been adequate conceptualisation of what the essential dimensions of generalism are. The following section presents the development of a continuum of generalism and a conceptual model of generalism based upon the narrative synthesis of literature.

STAKEHOLDER CONSULTATIONS

The methods section outlined how the 16 stakeholder interviews were analysed using the conceptual language analysis program Leximancer. This program is designed to analyse text to reveal the dominant concepts that interviewees discussed within their transcripts. Appendix 9 shows a full breakdown of the conceptual terms used by interviewees to discuss generalist approaches and generalism, which includes the number of times these terms were mentioned by them.

Initially responses were batched according to each stakeholder's area of work and their responses cross-referenced in line with categories formed for grouping the themes: knowing, character and practicality (doing). The stakeholders were purposively sampled to gather perspectives from practitioners on the ground and in light of this it is likely that instances of disconfirmation of themes might be minimal. The cohort consisted of academic GPs (n=4), general practice organisations (n=3), policy makers (n=2), a non-government consumer representative (n=1) and a small selection of GPs (n=5).

The three categories, as outlined, had been used to group the disparate themes and this made it possible to consider where interviewee responses fit in relation to them. Instances of confirmation and disconfirmation were sought to provide further qualitative understanding of generalist approaches and generalism. Qualitative material produces vast amounts of material and in this kind of narrative review and synthesis it would be too large a task to include everything relevant mentioned by participants, the following tables thus provide only a small selection or snapshots of the stakeholder perspectives that assisted to develop the conceptual model. The responses are framed within three tables pointing to information that is relevant on the three categories: knowing, character (identity) and practicality (doing). Each table is followed by a brief discussion of key points that emerge from the responses and an explanation of what was relevant from these in relation to development of the conceptual model.

EMERGENT THEMES FROM STAKEHOLDER TRANSCRIPTS

Table 6: Who is a Generalist? (Character)

A generalist? (character)	
A particular personality type, or has a certain character	"I don't know if there is a specific type of generalist personality but one gets the impression that there is" (Interviewee 1).
Has particular values	"Selection and screening for general practice might be really important because you might want a person who likes the whole not the parts" (Interviewee 9).
Takes account of person and context	"Part of being a generalist is not only taking into account, but almost being driven by the patient's context as opposed to super specialisation" (Interviewee 11).

The responses gesture to a sense in which people see that being a 'generalist' is part of holding a particular identity. This identity is formulated around certain character traits and personality types according to interviewee one, but for interviewees nine and 11 it is the ability to see the person as a whole, not only their disease that is important. In particular, generalists in these two responses are driven by the contextual circumstances of someone's life and this social context plays an essential role in the provision of their care.

Though these only represent a very small number of the stakeholder responses, it does intimate that their might well be generalist values and principles, and these values and principles might well frame or underpin the generalist approach. In order to identify some of these values and principles in terms of what the essential dimensions of generalism are, the following table presents some additional stakeholder responses to illustrate further what being a generalist means.

Table 7: What is a Generalist Approach? (Knowledge)

A generalist approach is? (knowledge)	
Providing whole person care	"I think for the standard run of the mill general practice it is just the sort of whole person, family care in the community setting" (Interviewee 7). "This is not knowledge about the condition in general but knowledge about this patient in particular and their current situation and where they are being treated and what they are being prescribed and what is happening to them" (Interviewee 10).
Being tolerant of uncertainty and complexity	"The patient presents and they can present with a problem that can be right across the range and the number of problems that can be across the range…but it is the GP who can suss that out and work it out in the context of the patient's social context" (Interviewee 4). "I think it has to do with the co-morbidity and the other complicating factors of the patient care" (Interviewee 10).
Translating complexity	"I mean the health care system is more and more complicated. A generalist is someone who can decipher it a little bit as well" (Interviewee 4).
Generalist	"Yes we value technology. I think that it is a threat to generalism, particularism is, it tends to be driven by technology and it is very seductive because we live in an information age" (Interviewee 11). "The way I understand it, a generalist approach is that…I would sort of describe it as…a non-specialist or non-specialist care delivered by a solo practitioner possibly with a practice nurse so that the sort of care that would be typically delivered we would regard as that being typically delivered by a GP" (Interviewee 2).
Intuitive	"Understanding the symptoms and treating the patient. In other words, it is possible to treat a patient successfully without ever knowing what you have treated and we do that all the time" (Interviewee 11).
Primary health care provision	" GP in my mind is a primary health care provider who any patient who thinks that anything is wrong with them can walk in off of the street and the GP has the ability to be sufficiently generalist to, you know, sort out undifferentiated symptoms and formulate a provisional diagnosis" (Interviewee 6).

Here again, it is possible to see the themes of whole person, family and community based care repeated and the importance of patient-centred approaches for the generalist. We note that uncertainty and the ability to be comfortable with this and to translate the complexity of health systems to people are characteristics of generalism. Respondents here flesh out what generalists do in their work in terms of treating people with undifferentiated problems for whom it might often be difficult to distinguish between problems and issues. Again, values and principles are gestured to within the responses but they remain implicit rather than explicit where respondents attempt to articulate what they think generalism is these become a little more identifiable.

In Interviewee 2's response to what is a generalist approach, the definition provided is one of exclusion and thus makes the view of the generalist a little narrow. The review in particular made note of this definition and attempted to come up with something that captured what appeared from the literature reviewed, reports and discussions, to be diverse, active and not based on exclusionary criteria.

Table 8: What is Generalism? (Practicality / Doing)

Generalism is? (practicality/ doing)	
Being a gatekeeper	"In the Australian context gatekeepers is one of the **core values of General Practice**, here GPs are **gatekeepers**, but I am **not sure that there are core values of generalism**" (Interviewee 1).
Undifferentiated problems	"**Sorting out** what people's problems are when they come through that door, which it could be **anything**, any part of the body, and that is what generalism is to me. That is what I think people in the UK would define generalism as" (Interviewee 5).
Providing continuous care	"The **whole person** thing is about the **social aspects of care**, about the **continuity**. About the doctor knowing you on a regular basis so that when you do walk through the door they can say, "well this problem is important, but is it related to the other thing that I saw you about last year"? You know, that is the important part of generalism as well" (Interviewee 5).
Having a humanistic viewpoint	"My hunch is that if you ask what is the salient issue that makes those people good it is that they can take this **specific clinical dimension** and **locate it in a holistic dimension**…the Department comes from a mechanistic viewpoint but the profession comes from a humanistic viewpoint" (Interviewee 9). "I think that what [some] want to do is say, can we get rid of continuity, can we get rid of first contact, can we get rid of gatekeeping, and my hunch is that might be the wrong argument. It might be that you have got to have the constellation, if you loose any one element of the constellation you are in trouble" (Interviewee 9).
Comprehensive care provision	"The concept of **comprehensive, whole patient, continuing care** which is a GP definition…So if you look at generalism as a concept it incorporates all of those principles" (Interviewee 14).

The respondents repeat that generalism is about gatekeeping, providing comprehensive and continuous care. They certainly make mention of both the term “generalism” and the approach of “generalists” as being humanistic centred, socially oriented in terms of care, holistic and based on longitudinal relationships. In one response not listed in the Table the interviewee repeated the need to see ‘consumers in the context’ because ‘you are confronted by a range of problems of which specific health issues manifest and the solution is not necessarily as simple as a clinical intervention’ (Interviewee 4). The response reinforces the undifferentiated nature of generalist care and it is evident that some, such as interviewee 9, bureaucratisation and mechanistic approaches from some risks loosing site of the centrality and importance of humanistic values. Indeed, their responses show that it is the combination, the constellation, of all things encompassed by generalists that are critical. Yet, uncertainty is also present in people’s responses when they come to describe and characterise generalism and a generalist approach.

For example, interviewee 1’s response in Table 1 suggests that being a generalist takes a particular kind of personality. Here, however, their response to what they think generalism is shifts. They say that they are “not sure that there are core values of generalism”. The response illustrates two themes we have already mentioned in the literature and context of this review, there is not a cohesive definition of generalism used and referred to by everyone and the field appears unsure of its own values and which principles can guide generalists in an increasingly biotechnical dominated environment. Part of this may be attributable to the fact that generalism is a rather contextual phenomenon, an approach that requires the ongoing interaction of all of the parts and no one element missing. Interviewee 9 intimates this in their response. They are concerned about the mechanistic viewpoint clashing with the humanistic viewpoint of the profession. The response shows how generalism and generalists reflect a complex adaptive system, a system that is ‘a collection of individual agents with freedom to act in ways that are not totally predictable, and whose actions are interconnected so that one agent’s actions changes the context for other agents’ (Plesk and Greenhalgh 2001). These stakeholder themes and responses assist to now synthesise the literature.

SYNTHESIS OF FINDINGS

DEVELOPING A CONCEPTUAL MODEL OF GENERALISM

The development of a conceptual model of generalism began with the grouping and categorisation of the 133 themes (see Appendix 6). Phase 3 of Table 5 (an outline of the stages of the narrative review) showed that these themes provided a broad, fragmented and fractured understanding of the generalist approach from which it was possible to consider what the essential dimensions of generalism might be. The repeated appearance of continuity of care, whole person approaches, co-ordination of care, first contact, disease prevention, and being tolerant of complexity and uncertainty implied a definition, but by no means provided an overarching one. Certainly, as has been mentioned, Starfield’s (1994) work has gone a long way toward developing a coherent definition of primary care itself, however, the role of the generalist within this and how generalism figures within primary care is still open to debate.

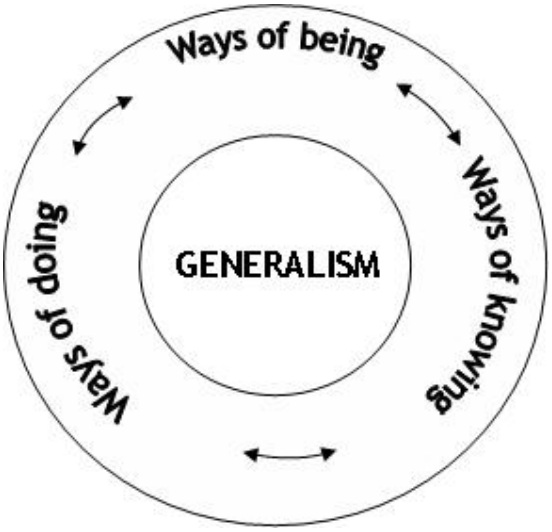
This lack of clarity around roles in particular is confirmed by a recent scoping exercise undertaken by the UK National Institute of Health Research designed to examine the role of generalists in end of life care (National Institute of Health Research 2007). That National Institute of Health Research (NIHR) found that the term generalist has many different meanings, where some see generalists as those who work in primary care and others see them as working in secondary or tertiary care settings. Overall, the UK NIHR recommended further exploration of different generalist models in the context of palliative care, but a gap seems to exist in terms of a generalist framework or model being readily available.

The following section presents the synthesis of the literature reviewed and stakeholder responses from the first phase of consultations presented within a continuum. This is followed by a discussion of how the conceptual model of generalism as a philosophy of practice was developed based on these syntheses. The 133 themes provided some insights into possible groupings and categories of generalist approaches, many of the themes seemed to be able to fit or were interrelated within three groups or categories called: knowledge, character and practicality.

The 133 themes were reviewed and grouped within these categories and the literature was cross-checked to confirm appearance of themes. The stakeholder responses assisted to identify confirmation and disconfirmation of these. It was possible to identify three working and interrelated dimensions called: *ways of knowing (knowledge), ways of being (character) and ways of doing (practicality)*. Figure 2 shows how these dimensions were formulated within a continuum to emphasise and highlight the continual interaction between them. The interaction of all three of these dimensions is what the review presents as a philosophy of practice called generalism.

THE CONTINUUM

Figure 2 A Continuum of Generalism: The Foundation of a Philosophy of Practice



The three dimensions were synthesised within a continuum to enable the review to intentionally move way from representations of generalist practice as a series of fragmented and fractured activities to seeing these within a complex whole. All three dimensions are informed by, and shaped around, particular kinds of values and principles that enable practitioners to have a philosophy of practice.

For example, “ways of knowing” was devised to refer to the knowledge base that literature and stakeholder participants discussed as particular to a generalist approach. In other words this is the epistemological (knowledge) base that informs generalism. The literature supported the position that there is a generalist knowledge base which guides practice. Zubialde and Aspy (2001) note how generalist approaches are at odds with linear, reductionist thinking that has characterised the so-called ‘hard sciences’. This is because the generalist is guided by certain values and principles about health, well-being and the delivery of service. To capture this distinctive position, the review used the phrase “ways of being” to capture the importance of different values and principles to generalists that shape their professional identity. In philosophical terms this refers to the ontological aspect of generalism, those questions around the nature of being a generalist.

Any given philosophy of practice requires values that are held in common by practitioners in their practices. The importance of representing the dimensions through the continuum was to highlight the need to see these parts as interrelated and overlapping. By this we mean that generalist practice is informed by particular knowledge bases which may be at odds with scientific reductionism, pointing to certain value positions in terms of practitioners and hence informing how practice is conducted. To illustrate the conduct of generalist practice, the phrase 'ways of doing' was employed. This illustrated the activities undertaken by generalists in terms of providing access to health care, developing longitudinal relationships, treating the whole person and acting across clinical boundaries. It is possible to see from this how practical activities are informed by the theoretical understandings of 'knowing' and 'being'.

The direct relationship between the themes and these dimensions are explained in greater detail in following sections where we map out the conceptual model of generalism that the review formulated. In order to develop this conceptual model, the review team re-assessed 97 core papers to confirm and disconfirm the earlier 133 themes identified which assisted in grouping them within dimensions. Figure 3 here represents the final conceptual model of generalism as a philosophy of practice and how the literature informed the development of this synthesis.

By presenting this model the review does not intend for this to be representative of all existing models and approaches to generalism, as indicated by some stakeholders, many might call themselves a generalist and not hold the values articulated within the model or practice according to these. It must be emphasised that the model is an ideal representation of the essential dimensions of generalism which when combined form a philosophy of practice.

Figure 3 Conceptual Model: The Essential Dimensions of Generalism

Dimensions of Generalism	Explanations: the key features
Ways of Being (Ontological Frame)	**Virtuous character:** holds ethical character traits of compassion, tolerance, trust, empathy and respect.
	Reflexive: interdependent, reflects on judgments and biases, lifelong learner.
	Interpretive: processes of interpretation are used to understand patient with an emphasis on the contextual factors, use of multiple health systems languages, active listener, autonomous decision-maker, good communication skills.
Ways of Knowing (Epistemological Frame)	**Biotechnical:** uses scientific and rational evidence, high index of suspicion, bio-medically driven, technically focussed, uses advanced information systems.
	Biographical: concentrates on lived-experience and life-story, family, carers, community and social knowledge all provide evidence.
Ways of Doing (Practical Frame)	**Access:** accessible, first-contact point, gatekeeper, provides referral.
	Approach: balances individual versus population needs, consultation-based, holistic, comprehensive, flexible, adaptable, acts across clinical boundaries, provides early diagnosis, interdisciplinary team approach, negotiates and coordinates services, integrates knowledge, promotes health through education, prevents disease, is culturally sensitive, provides patient-centred care, minimises service inequities, reduces service fragmentation.
	Time: provides continuity of care over whole of life cycle.
	Context: community-based, uncertain, complex, deals with undifferentiated multiple problems of patients, acute and chronic care.

Clearly the concept of the generalist is and has been discussed at length in literature, but when it comes to understanding "generalism" and its place within primary care, this is difficult to find. There is plenty of debate within philosophy and ethical theory though about "generalism" contrasted with "particularism". In ethical theory generalism means that the 'very possibility of moral thought and judgement depends on the provision of a suitable supply of moral principles,' whereas particularism states that no supply of moral principles is required for moral thought and judgement (Dancy 2004: 73). Generalism as articulated in primary care fits with the generalist approach that Dancy refers to. The literature and stakeholder interview responses illustrate how moral principles figure as important to moral thought and judgement in generalist care particularly given the uncertainty of generalist settings. This does not mean that moral principles are not important for specialists indeed, in terms of questions of morality, ethical practice ought to be given equal weighting for both specialists and generalists. However, 'the uncertainty inherent in general medicine' (Dewitt et al., 1998: 259) will require principles as guides to achieve equitable, accessible and affordable health care.

As the literature summary indicated there were a core number of commentary papers that provided foundational work for the development of the conceptual model of generalism. In particular, Sweeney and Heath's (2006) 'Taxonomy of General Practice' paper illustrated that there is a lack of debate within the literature about the theoretical principles behind general practice and implications of these features. Based in the UK, Sweeney and Heath (2006: 386-7) put forward a taxonomy of general practice which described three interrelated domains of knowledge: technical generalism referring to the need for generalists to have unique and broad ranging diagnostic and management clinical skills to deal with undifferentiated problems in an inherently uncertain environment; evidentiary generalism referring to how generalists employ two knowledge bases, biomedical and biographical, in treatment and diagnosis; and reflexive generalism involving the clarification of one's assumptions, being self-conscious about one's judgements and inescapable bias, an actively considering the impact of those on the consultation conducted.

Building on this initial assessment of the different knowledge bases used, Thomas (2006) argued that when general practitioners listen, reflect and diagnose they use three different fundamental theories of knowledge: positivism, the perspective that expects the world to be ordered simply and to be predictable; critical theory, positing that truth is expected to be there but hidden by superficial or transient truths; and constructivism, maintaining that truth is co-constructed. Thomas (2006: 451) emphasises the need to focuses on assumptions that underpin general practice by examining the nature of reality (i.e. ontology -- or the assumptions made by different beliefs about reality) and the generation of knowledge (i.e. epistemology -- seeking to define knowledge within a particular belief about reality; and methodology -- or the study of ways of knowing within a particular belief about reality.

Green et al., (2004) was part of the US Future of Family Medicine taskforce who were asked to develop a strategy to transform and renew the specialty of family medicine. The group identified the core values of family medicine; key characteristics of family medicine; and developed a new model of family medicine based on key characteristics. The core values of family medicine include a commitment to: continuous; comprehensive; compassionate and personal care, concerned with the whole person, and understanding that health and disease involves the mind, body and spirit and depends in part on the context of patients lives as members of their family and community (S41) The key characteristics of family medicine included: a deep understanding of the dynamics of the whole person; a generative impact on patients lives; a talent for humanising the health care experience; a natural command of complexity; and a commitment to multidimensional accessibility (S43). The key characteristics underpinning a new model of family medicine were: patient-centred care; whole person orientation; a team approach; elimination of barriers to access; advanced information systems; attractive, convenient and functional offices; focus on quality; and equitable reimbursement (S44).

Collectively, the three papers strongly suggested that traditional characterisations of generalism which refer to the explicit activities of generalists do not adequately reveal, capture nor value the tacit, at times invisible, multidimensional, dynamic conceptual and theoretical world views of generalists. These are important aspects of generalism. Questions of identity and the sorts of values and principles underpinning generalist care were presented in more implicit than explicit ways throughout the literature, but certainly show a commitment to generalism as a philosophy of practice. There have been some attempts to develop moral principles to guide generalist system developments, for example, Zubialde and Aspy (2001: 350-6) list seven principles which they feel are central to operationalising a new generalist paradigm in health care:

- Dedication to Goal-Directed Models of Care
- Dedication to Interdisciplinary Team Approaches
- Dedication to Communication Skills that Enhance Integration
- Commitment to a Spirit of Mutual Cooperation that Networks Resources and Information
- Commitment to Longitudinal Relationships
- Commitment to Personal and Organisational Mastery that Emphasises Lifelong Learning Skills
- A commitment to the development of leadership skills

Zubialde and Aspy (2001) note that these principles emphasise focusing on collaboration with individuals and communities to elicit, optimise and achieve their personal health goals. They believe that there needs to be recognition that the complexity of health issues cannot be met by one provider or health discipline itself and that relationships are what forms the integral basis of integration. In their view good relationships rely on good communication and the spirit of mutual cooperation is central to innovation and positive change. The networking of resources creates the most value when it is coupled with high levels of relational (horizontal) integration. Contrary to an obsession with short-term solutions, longitudinal relationships are required to adapt information to the context of the individual. There is a need to understand that knowledge is not simply the acquisition of facts, but focuses on what is needed for change and growth. In this setting of complexity, leadership will be of critical importance in resolving complex issues.

These seven principles are guides to achieving optimal generalist based health care and they are fitting with and can be achieved by implementation of the ideal conceptual model of generalism as a philosophy of practice underpinning approaches, training and education in primary care. Views from patients and consumers confirm that what is valued more in terms of quality of care outcomes are more tacit, non-tangible aspects formed through humanistic values and social care oriented principles. The stakeholder responses attempt to articulate these values in the above section and we note that Coulter's British study of what patients want from primary care and the 8 dimensions of patient-centred primary care articulated by the Picker Institute in the US reinforce these. Table 9 provides an overview of these patient-centred care perspectives which we feel supports an argument to ensure that the essential dimensions of generalism underpin primary care teams now and in the future.

Table 9: Overview of UK and US patient perspectives on Primary Care

COULTER (2005) UK PERSPECTIVE	PICKER INSTITUTE (1993; 2006) US PERSPECTIVE
• Fast access to reliable health advice; • Effective treatment delivered by trusted professionals; • Participation in decisions and respect for preferences; • Clear, comprehensible information and support for self-care; • Attention to physical and environmental needs; • Emotional support, empathy and respect; • Involvement of, and support for, family and carers; • Continuity of care and smooth transitions.	• Respect for patient's values, preferences and needs; • Information and education; • Access to care; • Emotional support to relieve fear and anxiety; • Involvement of family and friends; • Continuity and secure transition between settings; • Physical comfort; • Coordination of care.

FINDINGS

> "In terms of, you know, specialist/generalist things I think the fee for service system [in Australia] has probably harmed that in a way because it does encourage a culture of each little thing extra you do you want to pay for." Interviewee 5 (2007).

A common theme represented in the literature is that a generalist approach as articulated through a strong primary care system does provide cost-effective, continuous, coordinated and comprehensive health care over and above speciality care (Starfield 2005). If these are goals for primary care, then, having a clearly conceptualised understanding of generalism as a philosophy of practice to guide the field seems critical.

The review and synthesis of literature on generalist approaches and the place of generalism provides some preliminary considerations but none of these can be represented as definitive or comprehensive given the disparate nature of the topic. In the first instance, the introduction acknowledged that the literature reviewed for the development of this conceptual model has arisen from a literature based informed by and written by medically trained GPs. This does not mean that the model does not have synergies with generalist nursing roles, indeed, the review team notes plenty, but the question of medical training does distinguish some generalists from others in the field.

The synthesis of the literature revealed a dominant focus on 'ways of doing', the generalist approach, over 'ways of knowing', and in particular, 'ways of being'. It is in the interaction of the latter two dimensions of generalism combined with doing that a philosophy of practice evolves. Similarly to Stange's (1998) observations about family practice, generalism as a philosophy of practice is poorly understood. While there is not one agreed upon definition of generalism apparent in the literature, one of the core repeated themes is that it is the particular application of different knowledge and evidences to disease specific treatment and diagnosis that produces quality of care outcomes in the whole of population (Heath and Sweeney, 2005). In addition to this, conceptualisation of generalism will benefit from further consultation with literature that has discussed generalist approaches from a philosophical perspective.

Greenhalgh (2007: 9) in the opening chapter of *Primary Health Care Theory and Practice* suggests that the core values of primary care are holistic, balanced, patient–centred, rigorous, equitable, and reflective. If primary care in Australia is to maintain universal access and equitability for all in the community, then, it is certainly possible to conclude that there are synergies between the core values of primary care and having a philosophy of generalism underpin the development of this. This would suggest that all of three of the dimensions of generalism are going to be essential within the 2020 primary care team.

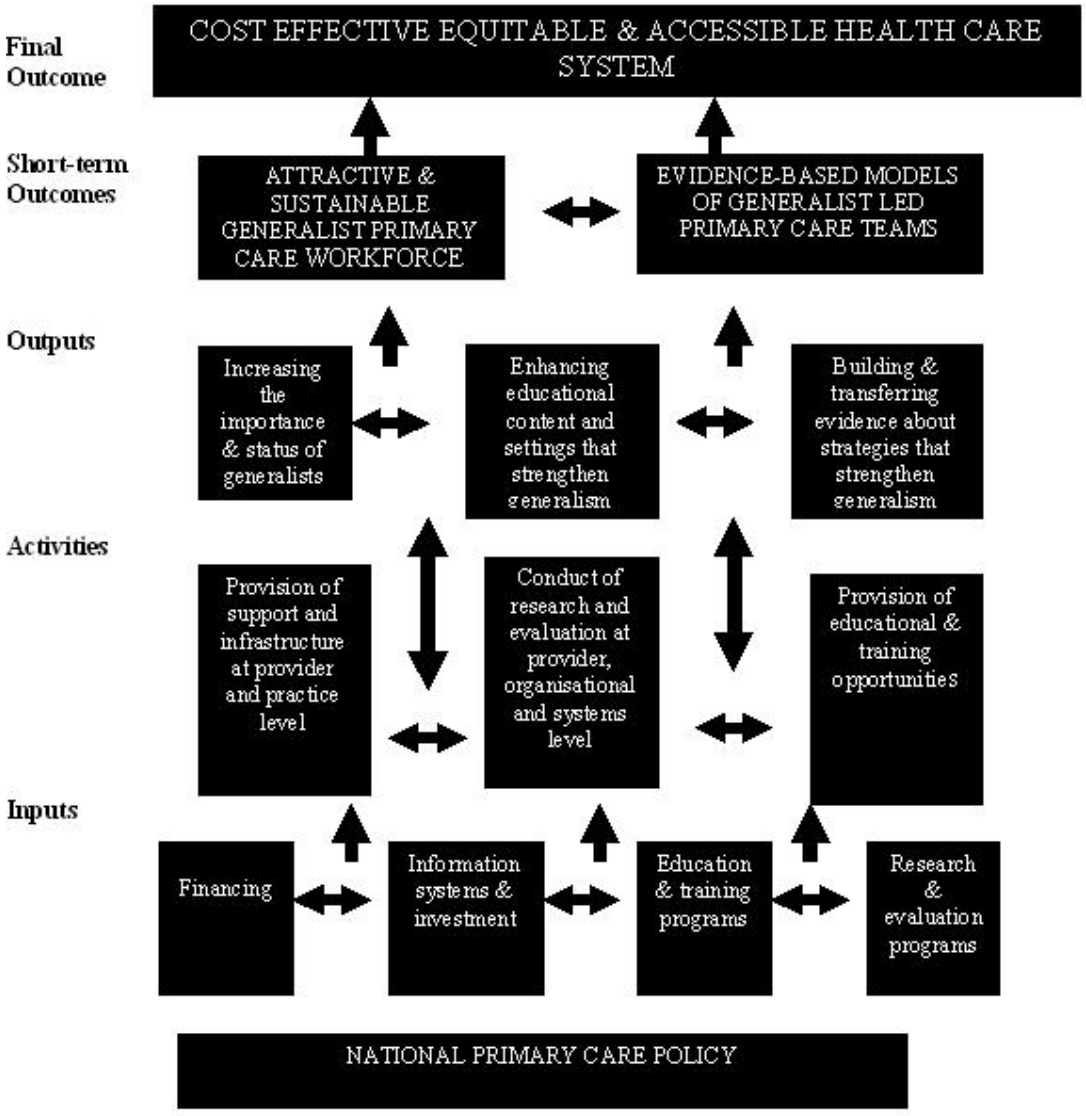
Literature from the UK indicates changes to general practitioner's work over the past three decades and a shift toward the management of chronic disease. Some have suggested that these shifts indicate a reconfiguration of general practitioners 'as medical specialists and consultants' (Charles-Jones, Latimer and May 2007: 71). A trend that, Charles-Jones et al., argues, that risks the unique and distinctive basis of social or biographical medicine on which the practice is based. Notwithstanding, some authors have gone so far as to say that generalist based primary care is cost-effective, certainly in the case of increased specialist costs (Starfield 1994). This has, however, been a debate largely framed within an either or generalist versus specialist care argument and one that can be traced back through the storyline of generalism. As Greenhalgh (2007:1) has argued, 'different problems in primary care require different perspectives, based on different conceptual and theoretical models'. The advantage of generalism is the diversity of people who are trained to respond to patient's social contexts and who embody virtues of trust, empathy and respect, these seem to be critical foundations of an equitable, affordable and cost-effective health system.

Literature thus supports a generalist approach, but the only comparative studies that are available have been conducted within the US health system where there is not universal access to health care unlike Australia, the UK or Canada. As indicated in earlier sections, there are implications of the findings from this literature review that are relevant to the original 5 review questions, these have informed the development of the policy options presented in the following section and others provide the opportunity for further research. In particular, investigation of generalism as part of a complex adaptive system is one of implication of the review. The policy options are based on our findings that generalism can be embedded as a philosophy of practice that underpins primary care teams in both the present and the future. The values and kind of care delivered through generalism do provide the basis for an equitable, accessible and affordable health care system.

POLICY OPTIONS

This section presents potential policy options for the Australian context that have emerged from the literature review and synthesis. In order to frame policy options, the review team reflected on the policy context using a policy analysis framework developed by Buse et al., (2005). Appendix 8 shows the development of the options within this framework in more detail. Figure 4 shows a strategic framework to strengthen generalism in primary care. This is followed by the policy options which have been framed at the level of *outputs,* and the specific policy options at the level of *activities* with possible avenues for implementation noted where appropriate. This is based on an acknowledgement that certain *inputs* are required to achieve the *short-term* and *final outcomes*.

Figure 4 Strategic Framework to Strengthen Generalism in Primary Care



Health care systems based upon a generalist primary care workforce underpinned by generalism will be well equipped to deliver cost-effective, equitable and accessible health care.

Three areas of policy options have emerged from the review to guide the development of the above vision:

- Increasing the importance and status of generalists
- Enhancing the educational content and settings that strengthens a generalist primary care workforce
- Building and transferring evidence about strategies that strengthen generalism in the 2020 primary care team

We recognise that the policy reforms are not mutually exclusive and changes are required at three levels: the individual practitioner, at the practice level, and the system level. To achieve the above policy options the review found that the development of a NATIONAL PRIMARY CARE POLICY to provide the overarching vision, purpose, measures of success and a coordinated funding approach is required.

The Australian government is moving to a 'whole of government' and 'joined up government' approach to address a variety of social, health and economic issues. Condition specific policy responses and single disease focused strategies risk creating silos though and limit the recognition made within international literature that the number of patients presenting with multi-morbidities and chronic conditions is on the rise. Multimorbidity is the rule rather than the exception, particularly in general practice (Fortin et al., 2006; 2005a; 2005b). Developing responses to this will be assisted by:

INCREASING THE IMPORTANCE AND STATUS OF PRIMARY CARE GENERALISTS

There is a noted decline in graduates choosing generalist careers within the literature. Policy options to encourage more graduates to take the generalist career path include:

- *Clear and attractive career pathways for generalists*. The government with the higher education sector and the RACGP, AMA, AGPN, ANF, RWA, ACRRM, GPET and APNA could develop initiatives to demonstrate that a generalist career is a destination of choice for high quality graduates that is challenging and fulfilling
- *Scholarships for generalists to undertake further education and training*. These can be provided through universities or professional organisations such as APNA and GPET
- *Improved remuneration for generalists that recognises the increasing complexity of the work that they do and that supports models of generalist led primary care teams.* Financing models that reward care co-ordination, chronic disease management and evidence-based preventive health care could be further developed
- *A 'summit' to bring together consumers, academics, policy makers and practitioners to develop a blueprint for the development of generalist-led primary care teams in Australia*. APHCRI and RACGP, ACRRM and AGPN could be funded to organise such an event

ENHANCING EDUCATIONAL CONTENT AND SETTINGS THAT STRENGTHEN A GENERALIST PRIMARY CARE WORKFORCE

To practice 'generalism' as conceptualised in this report requires attracting and maintaining highly capable, adaptable individuals who can deal with patients who present with multi-morbidities and a complex mix of social, emotional and cultural issues. Policy options to enhance educational content and settings include:

- *Accredited health education and training programs that address the essential dimensions of generalism at all levels (undergraduate through to postgraduate*). Organisations such as the universities, RACGP, ACRMM, GPET, Royal College of Nursing (Australia) could be funded to do this
- *Medical and nursing curricula content that support generalism and enables a generalist workforce*. The Australian Medical Council and the Australian Nursing and Midwifery Council could undertake a review to assess all medical and nursing curricula for content that supports a generalist workforce
- *Locally based dedicated 'training hubs' for generalist students on community placements*. Practice-based infrastructure grants via the government could further support and strengthen existing training hubs
- *A generalist workforce that is up-to-date with enhanced technologies*. Practice-based infrastructure grants via government could support and strengthen existing training hubs

BUILDING AND TRANSFERRING EVIDENCE ABOUT STRATEGIES THAT STRENGTHEN GENERALISM IN THE 2020 PRIMARY CARE TEAM

The review found limited research and evaluation of strategies designed to strengthen generalism in the 2020 primary care team. Policy options to build the evidence base include:

- *Generalist career pathways that attract high quality graduates*. Research and evaluation studies could be commissioned to develop these pathways
- *Evidence-based models of generalist led primary care teams.* APHCRI or its equivalent could commission carefully evaluated pilot work in the practice setting to support the implementation and evaluation of such models, that could be tested using robust methods such as cluster randomised trials to assess cost-effectiveness. This could also involve the development and modelling of clinical scenarios to examine cost effectiveness of various team configurations. The Government could also fund the implementation and evaluation of support provided by Divisions of General Practice to generalist-led primary care teams
- *Funding mechanisms that support effective models of generalist-led primary care teams for people with multiple morbidities.* The NHMRC, APHCRI or the government could commission strategic research into such funding mechanisms. The cost-effectiveness of developed models should be tested via the gold standard of the randomised trial. The government could also lead a review of Medicare items to ensure they support a generalist workforce though COAG. Research into the capital infrastructure that supports and sustains models of generalist-led primary care teams is also needed
- *Increase the evidence base about the doctor and nurse generalist, their respective roles and interactions within Australian primary care*. Commissioned research and evaluation of initiatives designed to support such working relationships within the Australian primary care setting

REFERENCES

Adair, C. E., E. Simpson, et al. (2006). "Performance Measurement in Healthcare: Part II - State of the Science Findings by Stage of the Performance Measurement Process." Healthcare Policy **2**(56-79).

American Academy of Family Medicine (2004). The New Model of Primary Care: Knowledge Bought Dearly. Official Policy of the American Academy of Family Physicians, Amercian Academy of Family Physicians**:** 1-10.

Anonymous (2006). "The state of US health-care reform." The Lancet **367**: 541.

Ashton, T. (1999). The health reforms: To market and back. Redesigning the welfare state in New Zealand : problems, policies, prospects. J. Boston, P. Dalziel and S. St. John. Auckland, N.Z. ; New York, Oxford Univerity Press**:** xi, 356.

Australian Divisions of General Practice (2002). "An Australian Model for General Practice and GP Financing: Discussion Paper, No. 1, ADGP, Canberra."

Australian Divisions of General Practice (2005). Primary Health Care Position Statement.

Association of American Medical Colleges (AAMC). AAMC policy on the generalist physician. *Academic Medicine* 1993; 68(1); 1-6.

Australian General Practice Training. *Australian General Practice Training: Guide for GP Registrars 2008* AGPT, 2007. http://www.agpt.com.au/pdf/GP_RegistrarsGuide07-web2.pdf

Australian General Practice Network (formerly ADGP). *Funding general practice-based multidisciplinary team care in Australia.* AGPN, 2007. http://www.gpdv.com.au/Documents/Final%20GPDV%20Response_AGPN%20Fundholding_070320.pdf

AGPN (formerly ADGP) (2005) *Primary Health Care Position Statement* www.**adgp**.com.au/Site/index.cfm?module=DOCUMENTS&page_id=6675&leca=16 - 78k

Barondess JA. The future of generalism. *Annals of Internal Medicine* 1993; 119(2); 153-160

Bodenheimer T, Lo B, Casalino L. Primary Care Physicians Should Be Coordinators, Not Gatekeepers. *The Journal of the American Medical Association* 1999; 281(21); 2045-2049

Boerma WGW. Coordination and integration in European primary care. Chapter 1 In Saltman RB, Rico, AS, Boerma WGW, editors. *Primary care in the Driver's seat: organisational reform in European Primary Care.* European Observatory on health Systems and Policies series. 2006; 3-21.

Borell-Carrio F, Suchman A, Epstein R . The Biopsychosocial Model, 25 years later : Principles, Practice and Scientific Inquiry ? Annals of Family Medecine, 2004, Vol 2, N°6: 576-582.

Brody H. Edmund D. Pellegrino's Philosophy of Family Practice. *Theoretical Medicine and Bioethics.* 1997; 18(1-2); 7-20.

Bucholtz JR, Matheny S.C., Pugno P.A., David A., Bliss E.B., Korin E.C. Task force report 2. Report of the task force on medical education. *Annals of Family Medicine* 2004; 2(Supplement); S51-64.

Buse K, Mays N, Walt G. *Making Health Policy* 2005. UK: Open University Press.

Callahan CM and Berrios GE. *Reinventing depression: A history of the treatment of depression in primary care 1940-2004.* Oxford University Press. Oxford; 2005

Carr V, Lewin T, Barnard R, Walton J, Allen J, Constable P, et al. Attitudes and roles of general practitioners in the treatment of schizophrenia compared with community mental health staff and patients. *Social Psychiatry and Psychiatric Epidemiology* 2004; 39(1); 78-84

Charles Jones H, Latimer, J and May, C. Transforming general practice: The redistribution of medical work in primary care. *Sociology of Health and Illness* 2003; 25(1); 71-92

Christakis NA, Jacobs, J.A., Messikomer, C.M. Change in self-determination from specialists to generalist in a national sample of physicians. *Annals of Internal Medicine* 1994; 121(9); 669-675.

Colwill JM, Perkoff GT, Blake RL, Paden C, Beachler M. Modifying the culture of medical education: The first three years of the RWJ generalist physician initiative. *Academic Medicine* 1997; 72(9); 745-75

Commonwealth of Australia. *The General Practice Workforce in Australia: supply and requirements to 2013.* Australian Medical Workforce Advisory Committee. Sydney, 2005.

Commonwealth of Australia. *Australia's Health Workforce, Research Report*, Canberra: 2005. http://www.pc.gov.au/study/healthworkforce/finalreport/healthworkforce.pdf

Commonwealth Department of Health and Ageing. *Enhanced Primary Care Program*. 2005; http:// www.health.gov.au/internet/wcms/publishing.nsf/Content/health-epc.htm

Commonwealth Department of Health and Ageing. *Better Access in Mental Health Care Program*: 2007; http://www.health.gov.au/internet/wcms/publishing.nsf/Content/health-pcd-betteraccess-1.

Commonwealth Department of Health and Ageing. *Nursing in General Practice Program* 2004b; http://www.healthconnect.gov.au/internet/wcms/publishing.nsf/Content/pcd-nursing-index.

Cook DJ, L E Griffith, and D L Sackett. Importance of and satisfaction with work and professional interpersonal issues: a survey of physicians practicing general internal medicine in Ontario. *Canadian Medical Association Journal* 1995; 153(6); 755–764.

Coulter A. What do patients and the public want from primary care? *British Medical Journal* 2005; 331; 1199-1201.

Dancy, J. 2004. *Ethics without Principles* Oxford: Oxford University Press.

DeWitt DE, Curtis JR, Burke W. What Influences Career Choices among Graduates of a Primary Care Training Program? *Journal of General Internal Medicine* 1998; 13; 257-261.

Dickinson JC, Evans, K.L., Carter, J., Burke, K. Task force report 4. Report of the task force on marketing and communications. *Annals of Family Medicine* 2004; 2(Supplement); S75-87.

Diette GB, Skinner EA, Nguyen TH, Markson L, Clark BD, Wu AW. Comparison of Quality of Care by Specialist and Generalist Physicians as Usual Source of Asthma Care for Children. *Pediatrics.* 2001; 108(2); 432-437.

Dixon T. Gatekeeping. *Canadian Family Physician* 1989; 35; 1717-1718

Donohoe M. Comparing generalist and speciality care: discrepancies, deficiencies and excesses. *Archives of Internal Medicine* 1998; 158(15); 1596-1608.

Duckett S. Drug policy down under: Australia's pharmaceutical benefits scheme. *Health Care Financing Review*. Spring 2004; 1-12 http://findarticles.com/p/articles/mi_m0795/is_3_25/ai_n6126944/print

Duff JH. Specialism and generalism in the future of general surgery. *Canadian Journal of Surgery* 1992; 35(2); 131-135

Engstrom S, Foldevi M, Borgquist L. Is general practice effective? A systematic literature review. *Scandinavia Journal of Health Care* 2001; 19(2); 131-144.

Ferrer RL, Hambidge SJ, Maly RC. The essential role of generalists in health care systems. *Annals of Internal Medicine* 2005; 142(8); 691-700.

Freeman G, Hjortdahl P. What future for continuity of care in general practice? *British Medical Journal* 1997; 314; 1870.

Fortin M, Bravo G, Hudson C, Lapointe L, Almirall J, Dubois MF, Vanasse A. Relationship between multimorbidity and health-related quality of life of patients in primary care. *Quality of Life Research.* 2006; 15; 83-91.

Fortin M, Hudson C, Lapointe L, Vanasse A. Multimorbidity is common to family practice. *Canadian Family Physician.* 2005a; 51; 244-245.

Fortin M, Bravo G, Hudson C, Vanasse A, Lapointe, L. Prevalence of Multimorbidity Among Adults Seen in Family Practice. *Annals of Family Medicine.* 2005b; 3 (3); 223-228.

Green IAF, G.E. Family practice in the United States: Position and prospects. *Academic Medicine* 2002; 77(8); 781-789

Green LA, Graham R., Bagley B., Kilo C.M., Spann S.J., Bogdewic S.P., Swanson J. Taskforce 1. Report of the taskforce on patient expectations, core values, reintegration, and the new model of family medicine. *Annals of Family Medicine.* 2004; 2(1); S33-S50.

Go AS, Rao RK, Dauterman KW, Massie BM. A Systematic Review of the Effects of Physician Specialty on the Treatment of Coronary Disease and Heart Failure in the United States. *The American Journal of Medicine* 2000; 108(3); 216-226.

Greenhalgh T. *Primary Health Care: Theory and Practice* Oxford: Blackwell Publishers; 2007.

Greenhalgh T, Robert G, Macfarlane F, Bate P, Kyriakidou O. Diffusion of innovations in service organizations: systematic review and recommendations. *Milbank Q.* 2004; 82(4); 581-629.

Grumbach, K. Chronic Illness, Comorbidities and the Need for Medical Generalism. *Annals of Family Medicine.* 2003; 1(1); 4-7.

Grumbach K, Selby JV, Damberg C, Bindman AB, Queensbury C, Truman A, et al. Resolving the Gatekeeper Conundrum: What Patients Value in Primary Care and Referrals to Specialists. *Journal of the American Medical Association* 1999; 282(3); 261-266.

Haggerty R. Etiology of Decline in General Practice. *JAMA.* 1963; 185(3); 179-182.

Harris M, Harris, E. Facing the challenges: general practice in 2020. *Medical Journal of Australia* 2006; 185(2); 122-124.

Harrold LR, Field TS, Gurwitz JH. Knowledge, Patterns of Care, and Outcomes of Care for Generalists and Specialists. *Journal of General Internal Medicine* 1999; 14(8); 499-511.

Heath I, Sweeney K. Medical generalists: connecting the map and the territory. *British Medical Journal* 2005; 331; 1462-64.

Hickie I, Groom G. Primary care-led mental health service reform: an outline of the better outcomes in mental health care initiative. *Australasian Psychiatry.* 2002; 10; 376-82.

Jones WA, Avant R.F., Davis N., Saultz J., Lyons P. Task force report 3. Report of the task force on continuous personal, professional, and practice development in family medicine. *Annals of Family Medicine* 2004; 2(Supplement).

Kidd MR, Watts I, Mitchell, CD, Hudson, L, Wick, BC, Cole, NJ. "Principles for supporting task substitution in Australian General Practice. *Medical Journal of Australia* 2006; 185(1); 20-22.

Kimball HR, Young, PR. A statement on the Generalist Physicians from the American Boards of Family Practice and Internal Medicine. *Journal of American Medical Association* 1994; 271(4); 31-316.

Knottnerus A. The pivotal role of primary care within the health system. In: General Practice and Primary Health Care Conference; 2006 October 13; Perth, Australia: PHCRIS; 2006.

Kumar S, Gantley M. Tensions between policy makers and general practitioners in implementing new genetics: grounded theory interview study. *British Medical Journal* 1999; 319; 1410-13.

Larson EB, Grumbach K, Roberts KB. The future of generalism in medicine. *Annals of Internal Medicine* 2005; 142(8); 689-699.

Lee RV. The jaundiced eye: Generalism in general. *The American Journal of Medicine* 1995; 98; 304-306.

Linzer M, Myerburg RJ, Kutner JS, Wilcox CM, Oddone E, DeHoratius RJ, et al., Exploring the generalist-sub specialist interface in internal medicine. *American Journal of Medicine* 2006; 119(6); 528-537

Lowe J, Candlish P, Henry D, Wlodarcyk J, Fletcher P. Specialist or generalist care? A study of the impact of a selective admitting policy for patients with cardiac failure. *International Journal for Quality in Health Care* 2000; 12(4); 339-345.

Marshall M, Klazinga N, Leatherman S, Hardy C, Bergmann E, Pisco L, et al. OECD Health Care Quality Indicator Project. The expert panel on primary care prevention and health promotion. *International Journal for Quality in Health Care* 2006; September; 21-25.

Martin CM, and Stemberg J.P. General practice- chaos, complexity and innovation. *Medical Journal of Australia* 2005; 183(2); 106-109.

Marshall M, Klazinga N, Leatherman S, Hardy C, Bergmann E, Pisco L, et al., OECD Health Care Quality Indicator Project. The expert panel on primary care prevention and health promotion. *International Journal for Quality in Health Care* 2006; September: 21-25

Martin JC. The future of family medicine: a collaborative project of the family medicine community. *Annals of Family Medicine* 2004; 2(1); S3-S32

Mays N, Pope C, Popay J. Systematically reviewing qualitative and quantitative evidence to inform management and policy-making in the health field. Journal of Health Services Research and Policy 2005; 10(1); S6-S20.

McWhinney IR. Family Medicine in perspective. *New England Journal of Medicine* 1975; 293; 176-181.

McWhinney IR. The naturalist tradition of general practice. *Journal of Family Practice* 1977; 5(3); 375-378.

McWhinney IR. *A Textbook of Family Medicine* New York: Oxford University Press; 1989.

McWhinney IR. Primary care: core values Core Values in a changing world. *British Medical Journal* 1998; 316(June); 1807-09.

Media Release, MR Minister for Health and Ageing. Promoting General Practice as a Career Destination Choice. 11 September 2007; 1.

Meyer G, Cheng E, Eiting J. Differences Between Generalists and Specialists in Characteristics of Patients Receiving Gastrointestinal Procedures. *J Gen Intern Med.* 2000; 15; 188-194.

Moore GT. The case of the disappearing generalist: Does it need to be solved? *The Millbank Quarterly* 1992; 70(2); 361-379.

Neighbour, R. Of Babies and bathwater. AGPT Conference, Hobart, 2006; GPET.

National Institute of Health Research. Research Summary: care provided by generalists at the end of life: scoping exercise on research priorities. NIHR, 2007. UK: Service Delivery and Organisation Program NIHR. http://www.sdo.lshtm.ac.uk/

National Nursing and Nursing Education Taskforce. *Specialisation and Advanced Practice Discussion Paper: A select analysis of the language of specialisation and advanced nursing and midwifery practice*. Victorian Department of Human Services. 2006; Melbourne, Australia.

O'Neil EH, Seifer S.D. Health care reform and medical education. *Academic Medicine* 1995; 70(1); S37-43.

Olesen F, Dickinson J, Hjortdahl P. General practice - time for a new definition. *BMJ.* 2000; (320); 354-357.

Page J, Weber R, Somaini B, Nostilinger C, Donath K, Jaccard R. Quality of generalist vs. speciality care for people with HIV on antiretroviral treatment: a prospective cohort study. *HIV Medicine.* 2003; 4; 276-286.

Phillips WR, Haynes DG. The Domain of Family Practice: Scope, Role and Function. *Family Medicine* 2001; 33(4); 273-277.

Pellegrino ED. *The academic viability of family medicine*. *Journal of American Medical Association* 1978; 240(2); 132-135.

Perkin RL. Generalism. *Canadian Family Physician* 1993; 39.

Picker Institute. *National Survey of local health services 2006: Summary report of key findings from the study.* 2007. http://64.85.16.230/educate/content/rationale/picker.html

Plesk PE, Greenhalgh T. Complexity, leadership, and management in healthcare organisations. *BMJ* 2001; 323 (15 September); 625-8.

Royal College of Practitioners. *Securing our future health: taking a long term view – The Wanless Report Response.* RCGP, 2007. http://www.rcgp.org.uk/default/aspx?page=2251

Royal Australian College of General Practitioners, *GPs and General Practice Teams.* RACGP, 2005. http://www.racgp.org.au/.../GPworkforceandfundingissues1/Teamsinourgeneralpractices/20060829GPTeams.pdf

Rivo M. Internal Medicine and the Journey to Medical Generalism. *Annals of Internal Medicine* 1993; 119(2); 146-152.

Roberts J. Primary care: core values Primary care in an imperfect market. *British Medical Journal* 1998; 317(July); 186-89.

Roberts J, Snape P, Burke S. Task force report 5. report of the task force on family medicine's role in shaping the future health care delivery system. *Annals of Family Medicine* 2004; 2(Supplement); S88-99.

Rosenblatt RA, Hart LG, Baldwin L, Chan L, Schneeweiss R. The generalist role of specialty physicians - Is there a hidden system of primary care? *Journal of the American Medical Association* 1998; 279(17); 1364-1370

Royal Australian College of General Practitioners. *Response to the Productivity Commission's 2005 Position Paper: Australia's Health Workforce.* RACGP, 2005. http://www.racgp.org.au/nsc/advocacyandsupport

Safran DG. Defining the future of primary care: What can we learn from patients? *Annals of Internal Medicine.* 2003; 138(3); 248-255.

Schroeder S A. The making of a medical generalist. *Health Affairs.* 1985; 22-46.

Schroeder SA. The US Physician Supply: Generalism in Retreat. Bulletin NY *Academic Medicine* 1993; 70(3); 103-17.

Schroeder SA. Primary Care at a Crossroads. *Academic Medicine* 2002; 77(8); 767-773.

Schwartz C, Brotman S, LaRocca N, Lee H. Patient perception of quality of care provided by specialists and generalists. *Multiple Sclerosis.* 1998; 4; 426-432.

Sheldon G F K., J. The health care workforce, generalism and the social contract. *Annals of Surgery* 1995; 222(3); 215-228.

Smetana GW, Landon BE, Bindman AB, Burstin H, Davis RB, Tjia J, Rich E. A Comparison of Outcomes Resulting From Generalist vs. Specialist Care for a Single Discrete Medical Condition: A Systematic Review and Methodological Critique. *Archives of Internal Medicine* 2007; 167(1); 10-20.

Smith S, Robinson J, Hollyer J, Bhatt R, Ash S, Shaunak S. Combining specialist and primary health care teams for HIV positive patients: retrospective and prospective studies. *BMJ.* 1996; 312; 416-420.

SOAR. Six Organisations to Advance the Renewal of Family Medicine - Proceedings of the SOAR Colloquium. In; 2006; Toronto, Ontario, Canada: Health Canada; 2006.

Stange K. The Value of a Family Physician. *The Journal of Family Practice.* 1998a; 46(5); 363-368.

Stange K. Illuminating the 'Black Box': A Description of 4454 Patient Visits to 138 Family Physicians. *The Journal of Family Practice.* 1998b; 46(5); 377-389.

Starfield B, Shi L, Macinko. Contribution of primary care to health systems and health. *The Millbank Quarterly* 2005; 83(3); 457-502.

Starfield B. Is primary care essential? *The Lancet* 1994; 344; 1129-1133.

Starfield B, L Shi. Policy relevant determinants of health: an international perspective. *Health Policy* 2002; 60; 201–218.

Starfield B, Shi L, Grover A, Macinko J. The effects of specialist supply on populations' health: assessing the evidence. *Health Affairs* 2005; W5-97-107.

Stille CJ, Jerant A, Bell D, Meltzer D, Elmore JG. Coordinating care across diseases, settings, and clinicians: a key role for the generalist in practice. *Annals of Internal Medicine* 2005; 142(8); 700-709

Stone MD, Steele G., Doyle J. The push toward generalism: a view from surgery. *World Journal of Surgery* 1994; 18; 738-744.

Strasser R. The origins of general practice. *Medical Journal of Australia* 1991; 155; 609-611.

Sweeney B, I Heath. A Taxonomy of General Practice. *British Journal of General Practice* 2006; May; 386-388

Thomas P. General Medical Practitioners Need to Be Aware of the Theories on Which Our Work Depends. *Annals of Family Medicine* 2006; 4(5); 450-454

Toop L. Primary care: core values Patient centred primary care. *British Medical Journal* 1998; 317(June); 1882-83.

WHO. World Health Organisation. *Mental Disorders Affect 1 in 4 people: Treatment available but not being used.* 2007. http://www.who.int/whr/2001/media_centre/press_release/en/index.html

Wofford J, Wilson MC, Moran WP. The promotion of generalism in medicine: Renaissance or recycling? *Journal of General Internal Medicine* 1994; 9(Dec); 697-701.

Zgibor J, Orchard T. Specialist and Generalist Care for Type 1 Diabetes Mellitus Differential Impact on Process and Outcomes. *Dis Manage Health Outcomes* 2004; 12(4); 229-238.

Zubiald J, Aspy C. It's Time to Make a General Systems Paradigm a Reality in Family and Community Medicine. *Families, Systems and Health.* 2001; 19(4); 345-359.

APPENDICES

APPENDIX 1 - SCOPING EXERCISE: LIST OF 16 PAPERS

1. Boerma, W.G.W. (2006). Coordination and integration in European primary care. Chapter 1 in Primary care in the Driver's seat: organisational reform in European primary care. Ed. Saltman RB, Rico AS, Boerma WGW. European Observatory on health Systems and Policies series.
2. Cross, RP, Prusak, L. (2002). "The people who make organizations go-or-stop." Harvard Business Review June: 105-112.
3. Donohoe M. (1998). "Comparing generalist and specialty care: discrepancies, deficiencies and excesses." Archives of Internal Medicine 158(15): 1596-1608.
4. Ferrer R L, Hambidge SJ, Maly RC. (2005). "The essential role of generalists in health care systems." Annals of Internal Medicine 142(8): 691-700.
5. Heath, I and Sweeney, K. (2005). Medical generalists: connecting the map and the territory. British Medical Journal, 331:1462-1464.
6. Kidd MR, Watts I, Mitchell CD, Hudson L, Wenck BC and Cole NJ. (2006). "Principles for supporting task substitution in Australian General Practice." Medical Journal of Australia 185(1): 20-22.
7. Kimball, H.R and Young, P.R. (1994). A statement on the Generalist Physicians from the American Boards of Family Practice and Internal Medicine. Journal of American Medical Association, 271(4), 31-316.
8. Larson EB, Grumbach K, Roberts KB. (2005). "The future of generalism in medicine." Annals of Internal Medicine 142(8): 689-699.
9. Moore, G. T. (1992). "The case of the disappearing generalist: Does it need to be solved?" The Milbank Quarterly 70(2): 361-379.
10. Neighbour R. (2006). Of Babies and bathwater. AGPT Conference, Hobart, GPET.
11. Pellegrino, E. D. (1978). "The academic viability of family medicine." Journal of American Medical Association 240(2): 132-135.
12. Picker, I. (2007). National Survey of local health services 2006: Summary report of key findings from the study.
13. Schroeder SA (1985). "The making of a medical generalist." Health Affairs: 22-46.
14. Sheldon, G. F. K., J (1995). "The health care workforce, generalism and the social contract." Annals of Surgery 222(3): 215-228.
15. Starfield B, Shi L, and Macinko. (2005). "Contribution of primary care to health systems and health." The Milbank Quarterly 83(3): 457-502.
16. Stille CJ, Jerant A, Bell D, Meltzer D and Elmore JG. (2005). "Coordinating care across diseases, settings, and clinicians: a key role for the generalist in practice." Annals of Internal Medicine 142(8): 700-709

APPENDIX 2 - INITIAL SCOPING STAGES: DIMENSIONS OF GENERALISM IDENTIFIED IN LITERATURE CONTENT ANALYSIS

Initial Scoping Stages
Dimensions of Generalism identified in Literature Content Analysis

What does generalism look like?

- First contact point with health system (5)
- Undifferentiated illness (5)
- Whole person focus (3)
- Care in context of family and community (3)
- All population groups (2)
- Low technological environment (1)
- All ages (1)
- All genders (1)
- Not organ or disease focus (1)
- Broad health care settings (1)
- Tolerant of uncertainty and complexity (1)
- Not sub-specialised care (1)
- Commitment quality outcome and excellence (1)
- Willing to treat psychosocial problems (1)
- Willing to deal with multiple problems(1)
- End stage of life care(1)
- Broad perspective (1)

What do generalists do?

- Provision of Health Promotion through
- Disease Prevention, Risk behaviours, Counselling(5)
- Deals with Chronic Disease (3)
- Provides diverse, pluralistic, inclusive medical care (2)
- Deal with variety of illnesses (2)
- Knowledge broker (2)
- Triaging of patients (1)
- Provide early diagnosis (1)
- Provide geriatric care (1), palliative care (1)
- Deal with emergencies (1)
- Deal with co-morbidity(1),
- Mental health (1),
- Social and /or environmental issues(1)
- Acts across clinical boundaries (1)
- Assess problems arising between person and environment (1)
- Triaging(1)
- Practices evidence based medicine (1)
- Make confusing whole intelligible (1)

How do generalists do it?

Workforce arrangements

- Standards of education / training (2)
- Strong postgraduate training (2)
- Training in communication and collaboration (1)
- Team work, collaboration with other disciplines(2)

Competencies

- Knowledge of medical science (9)
- Tacit knowledge of health system (4)
- Skills (4)
- Experiential expertise (5)

Value-base

- Respect (2); Empathy (1)
- Responsibility - moral responsibility (3) - longitudinal responsibility (1) – personal responsibility to act across boundaries (1)
- High index of suspicion (1)

Support by

- Government (4); Clinicians (3); Community (2)

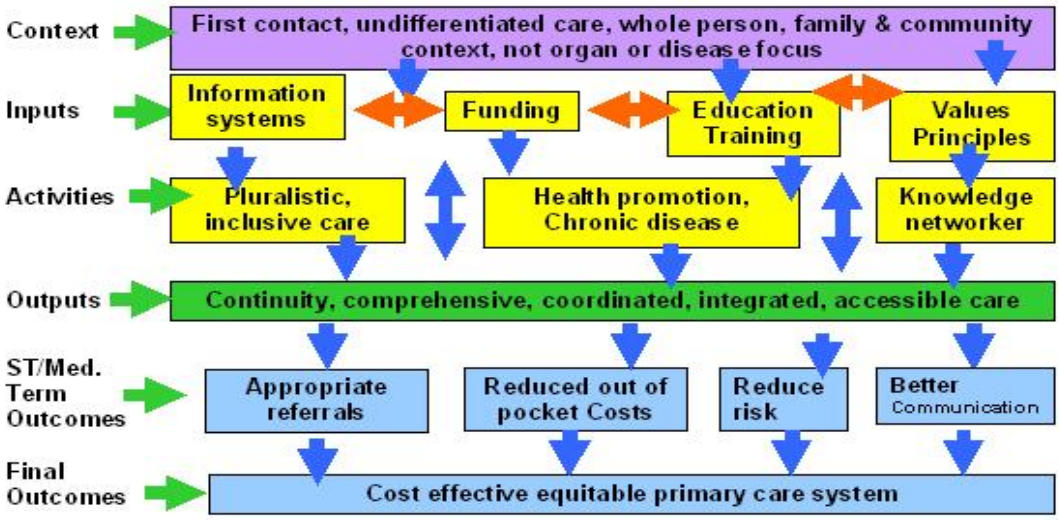
What are the outcomes of a generalist approach?

- Protection of patients (2)
- Efficiency, appropriateness, speciality care (1)
- Minimise risks & possible side-effects (1)
- Reduced cost to patient (1)
- Decline in socioeconomic disparity (1)
- Explains priorities to patients (1)
- Negotiates services for patients (1)
- Interprets multiple languages of health system (1)
- Provides effective communication centre (1)
- Efficiently uses medical services (1)
- Minimises service inequities (1)
- Reduces service fragmentation(1)
- Locus of primary and secondary prevention(1)
- Helps person adapt to changes (1)
- Matches population & individual needs with health and system resources (2)
- Provides optimal care (1)
- Provides equitable health care (1)
- Provides reduced health care costs (1)

What are the consequences of generalism?

- Coordinated care (7) Continuity of care (6) Comprehensive care (6) Integrated care (4)
- Accessible care (3) Patient centred care (1) Culturally sensitive care (1)

APPENDIX 3 - GENERALISM SCOPED THROUGH PROGRAM LOGIC APPROACH



Context – those features of a generalist approach that help to understand what a generalist does.

Inputs - may include the resources that are used to carry out the activities, services and outputs.

Activities - are those processes that are intended to produce specific outputs.

Outputs – are the direct services or products delivered as a result of the activities.

Outcomes - include the immediate (direct outcomes for patients), intermediate (indirect outcomes for patients) and final outcomes attributable to the outputs for which generalists can assume control and responsibility over.

The logic model has multiple benefits. For example, evidence about context, inputs, activities and outputs of generalism are necessary in order to understand the current and evolving state of a generalist approach within the primary care system. More specifically, the logic model can be used to assess whether primary care team-related policies or interventions that influence context, inputs are impacting on the outputs and outcomes of a generalist approach in the desired direction. On a more local level, the logic model could be used to assess the extent to which local general practices are constraining or supporting a generalist approach (or dimensions of generalism).

APPENDIX 4 - STAKEHOLDER CONSULTATIONS

First Phase Stakeholder Consultations

ROLE OF STAKEHOLDER	NAME & REPRESENTATIVE ORGANISATION
Policy Advisers	Dr Brian Richards, Principal Medical Advisor, Medical Benefits Division, Australian Government Department of Health and Ageing (DOHA)
	Dr Rob Pegram, GP and Director of Northern Health Service
Consumer Representative	Mr Russell McGowan, Consumer Representative, Consumer Health Forum / Australian General Practice Network (AGPN)
General Practice Organisations	Mr Ian Watts, Royal Australian College of General Practitioners
	Ms Leanne Wells, Manager, Policy and Development, Australian General Practice Network (AGPN)
	Dr Cathy Hutton, GP Advisor, Australian Medical Association (AMA)
	Judy Evans, President, Australian Practice Nurse Association (APNA)
	Professor Libby Kalucy, Director, Primary Health Care Research Information Service
Academics	Dr Michael Kidd, Professor and Head, Discipline of General Practice, The University of Sydney
	Dr Grant Blashski, Senior Research Fellow, Department of General Practice, The University of Melbourne
	Professor Tony Scott, Professorial Fellow, Melbourne Institute of Applied Economic and Social Research, The University of Melbourne
	Dr Grant Russell, Associate Professor and Clinician Investigator, University of Ottawa Department of Family Medicine, C.T. Lamont Primary Health Care Research Centre, Canada.
Practitioners	Dr Kathryn Robertson, GP and Curriculum Coordinator, The University of Melbourne
	Dr Hubert John Van Doorn, GP and PHCRED Fellow, The University of Melbourne
	Dr Graeme Jones, GP and Director of Rural General Practice Education, The University of Melbourne
Registrars	Dr Rebecca Quake

Second Phase Stakeholder Consultations

ROLE OF STAKEHOLDER	NAME & REPRESENTATIVE ORGANISATION
Policy Advisers	Dr Brian Richards, Principal Medical Advisor, Medical Benefits Division, Australian Government Department of Health and Ageing (DOHA).
	Professor Stephen Duckett, Executive Directory Reform and Development, Queensland Health.
Consumer Representative	Mr Russell McGowan, Consumer Representative, Consumer Health Forum / Australian General Practice Network (AGPN).
General Practice Organisations	Mr Ian Watts, Royal Australian College of General Practitioners.
	Ms Julie Porritt, Principal advisor, Nursing in General Practice, Australian General Practice Network (AGPN.)
	Dr Cathy Hutton, GP Advisor, Australian Medical Association (AMA).
	Mr Bill Newton, Chief Executive Officer, General Practice Divisions Victoria (GPDV).
	Ms Anne Diamond, Mental Health Consultant, General Practice Divisions Victoria (GPDV).
Nursing Organisations	Belinda Caldwell - Chief Executive Officer, Australian Practice Nurse Association (APNA).
Academics	Dr Grant Blashski, Senior Research Fellow, Department of General Practice, The University of Melbourne.
	Professor Tony Scott, Professorial Fellow, Melbourne Institute of Applied Economic and Social Research, The University of Melbourne.
	Dr Grant Russell, Associate Professor and Clinician Investigator, University of Ottawa Department of Family Medicine, C.T. Lamont Primary Health Care Research Centre, Canada.
	Dr John Wakerman, Centre for Rural & Remote Medicine.
	Professor John Dwyer, Clinical Dean, Prince of Wales Hospital, President, Aust. Healthcare Association.
Practitioners	Dr Hubert John Van Doorn, GP and PHCRED Fellow, The University of Melbourne.
	Dr Graeme Jones, GP and Director of Rural General Practice Education, The University of Melbourne.
Registrars	Dr Rebecca Quake.

APPENDIX 5 - INTERVIEW SHEET FOR STAKEHOLDERS AND QUESTIONS ASKED

Stakeholder Interview Sheet

Gen 2020 Review Project

Key Stakeholder Interview Schedule (September, 2007)

Literature Review of the Place of Generalism in the 2020 Primary Care Team

To optimise the utilisation of the review findings for primary care policy making we are keen for you to reflect upon the overall report content and the emerging policy options.

1. Overall what do you think is the most important finding from the review?

2. We would like your comments on each of the three policy option areas and on each of the options individually. With regard to each policy option:

- Do you support it or oppose it, and why?
- Does it impact on you or your organisation?
- Is the option synergistic or not with your organisations directions?
- Would you change or re-word the option? If so how?

Thank you for your time and commitment

For further information please contact: Lucio Naccarella PhD

(03-83444535) or l.naccarella@unimelb.edu.au

APPENDIX 6 - THE 133 THEMES FROM THE LITERATURE

1. Continuity of Care (36)
2. Coordinated Care (28)
3. Comprehensive Care (28)
4. Care: family & community context (22)
5. Whole person focus (20)
6. Accessible care (20)
7. First contact point (18)
8. Tolerant of uncertainty & complexity (17)
9. Disease prevention (18)
10. Undifferentiated Illness (15)
11. General Knowledge (15)
12. Not organ or disease focused (14)
13. Team work (14)
14. Chronic disease (14)
15. Interdependent relationship (13)
16. Deal with variety of illnesses (13)
17. Patient centred care (13)
18. Health promotion (12)
19. All ages (10)
20. Deals with multiple problems (10)
21. Adequate individual compensation (10)
22. Practice clinic design (10)
23. All population groups (9)
24. Treats psycho-social problems (9)
25. All organs, systems (8)
26. Unorganised problems (8)
27. Holistic model of health (8)
28. Patient advocacy (8)
29. Research (8)
30. Gatekeeper (7)
31. All genders (7)
32. Complex conditions & illnesses (7)
33. Health system financing (7)
34. Knowledge of medical science (7)
35. Integrates biomedical knowledge (7)
36. Implied personal relationships (7)
37. Personal continuity (7)
38. Reduced cost to patient (7)
39. Population & individual need match (7)
40. Broad perspective (6)
41. Management (6)
42. Co-morbidity (6)
43. Broad Knowledge (6)
44. Postgraduate Trained (6)
45. General Skills (5)
46. Diagnosis (5)
47. Practice evidence based medicine (5)
48. Communication skills (5)
49. Respect (5)
50. Empathy (5)
51. Government Support (5)

52. Personal Care (5)
53. Negotiates services for patients (5)
54. Efficient use of medical services (5)
55. Provides optimal care (5)
56. Reduced health care costs (5)
57. Autonomous provider (5)
58. End stage of life (4)
59. Non sub-specialised care (4)
60. Early diagnosis (4)
61. Diverse, pluralistic, inclusive care (4)
62. Acts across clinical boundaries (4)
63. Medical records (4)
64. Support by clinicians (4)
65. Care over extended period (4)
66. Geriatric care (3)
67. Mediator: biological & holistic (3)
68. Triaging (3)
69. Lateral thinker (3)
70. Reflect on judgements & bias (3)
71. Adaptability (3)
72. Experiential expertise (3)
73. Responsibility (3)
74. Moral responsibility (3)
75. Minimise risks & side-effects (3)
76. Public health advocacy (3)
77. Primary & Secondary prevention (3)
78. Education for access to care (3)
79. Care over whole life cycle (3)
80. Population health approach (3)
81. Broad health care settings (2)
82. Quality outcomes and excellence (2)
83. Community-based (2)
84. Mental health issues (2)
85. Palliative care (2)
86. Make confusing whole intelligible (2)
87. Tacit knowledge of health system (2)
88. Clinical skills (2)
89. Longitudinal responsibility (2)
90. High index of suspicion (2)
91. Longitudinal care (2)
92. Explains priorities to patients (2)
93. Reduces service fragmentation (2)
94. Cost-effective care (2)
95. Equitable health care (2)
96. Referral (2)
97. Provide care in range of settings (2)
98. Lifelong learning (2)
99. Low stigma environment (1)
100. Focus on present (1)
101. Multidimensional (1)
102. Care - medical professional (1)

103. Listening (1)
104. Reflecting (1)
105. Non-surgical treatment (1) 106. Treatment (1) 107. Episodic management (1)
108. Emergencies management (1)
109. Risky behaviour counselling (1)
110. Patient & environ assessment (1) 111. Patient scheduling (1) 112. Patient registration (1)
113. Larger whole in sum of parts (1)
114. Psychosocial treatment skills (1)
115. Professionalism (1) 116. Protect patients (1) 117. Decrease socioeconomic disparity (1) 118. Multiple language of health system (1)
119. Minimise service inequities (1)
120. Help person adapt to change (1) 121. Additional medical care (1) 122. Broad base diagnostic skills (1) 123. Orders tests (1)
124. Plan & manage care (1)
125. Build patient care teams (1)
126. Patient empowerment (1) 127. Educating professional & trainee (1) 128. Clarity of roles needed (1)
129. Diverse explanatory models (1)
130. Physical comfort (1)
131. Effective communication (1) 132. Teaching and education (1) 133. Atypical illness (1)

APPENDIX 7 - COST-EFFECTIVENESS RELATED PAPERS

Paper type (n=35)	Paper Focus
Review (n=17)	**Reviewed primary care to the performance and effectiveness of the health systems and health (n=5)** • Moore, (1992). The case of the disappearing generalists: does it need to be solved. *The Milbank Quarterly,* 70(2): 361-379. • Engstrom et al (2001). Is general practice effective: a systematic review, *Scandinavian Journal of Primary Health Care*, 19: 131-144. • Starfield et al (2005) Contribution of Primary care to health systems and health, *The Millbank Quarterly*, 83(3): 457-502. • Ginsburg, P., Payment and the Future of Primary Care. *Annals of Internal Medicine*, 2003. 138(3): p. 233-234. • Macinko, J., B. Starfield, and L. Shi, The Contribution of Primary Care Systems to Health Outcomes within Organisation for Economic Cooperation and Development (OECD) Countries, 1970 - 1998*. Health Services Research,* 2003. 38(3): p. 831-865.
	Compared generalists with specialist care (n=4) • Smetana, G.W., et al., A Comparison of Outcomes Resulting From Generalist vs. Specialist Care for a Single Discrete Medical Condition: A Systematic Review and Methodological Critique*. Archives of Internal Medicine*, 2007. 167(1): p. 10-20. • Donohoe (1998). Comparing generalist and specialty care: discrepancies, deficiencies and excesses. *Archives of Internal Medicine* 158(15): 1596-1608. • Harrold LR, Field TS, Gurwitz JH. Knowledge, Patterns of Care, and Outcomes of Care for Generalists and Specialists. *Journal of General Internal Medicine* 1999;14(8):499-511. • Go, A.S., et al., A Systematic Review of the Effects of Physician Specialty on the Treatment of Coronary Disease and Heart Failure in the United States*. The American Journal of Medicine*, 2000. 108(3): p. 216-226.
	Reviewed funding arrangements and effects on primary care behaviour (n=8) • Goseden et al (2000) *Capitation, salary, fee-for-service and mixed systems of payment: effects on the behaviour of primary care physicians*. Cochrane Collaboration. • Gosden T. et al., Paying doctors by salary: a controlled study of general practitioner behaviour in England. *Health Policy*, 2003. 64(3): p. 1-10. • Hellinger F. The Impact of Financial Incentives on Physician Behaviour in Managed Care: A Review of the Evidence*. Medical Care Research and Review*, 1996. 53(3): p. 294-314. • Giuffrida et al., (1999). *Target payments in primary care: effects on professional practice and health care outcomes*. Cochrane Collaboration. • Grep et al., (2006). Managing primary care behaviour through payments systems and financial incentives: Chapter 10 in *Primary care in the Driver's seat:*

	organisational reform in European primary care. Ed. Saltman, R.B., Rico, AS and Boerma, W.G.W. European Observatory on health Systems and Policies series. • Goseden et al (2001). Impact of payment method on behaviour of primary care physicians: a systematic review. *J Health Services research and Policy*, 6(1): 44 • Gosden et al (1999). How should we pay doctors? A systematic review of salary payments and their effect on doctor behaviour. *American Journal of Medicine*, 92:47-55. • Gervas et al (1994). Primary care, financing and gatekeeping in western Europe, *Family Practice*, 121(3): 307-317
Empirical studies (13)	**Compared generalists with specialist care (n=4)** • Franks P, Fiscella K. Primary care physicians and specialists as personal physicians. Health care expenditures and mortality experience*. Journal of Family Practice*, 1998. 47(2): p. 105-109. • Gabriel, S.E., et al., Is Rheumatoid Arthritis Care More Costly When Provided by Rheumatologists Compared With Generalists? *Arthritis and Rheumatism*, 2001. 44(7): p. 1504-1514. • Provenzale D et al., Gastroenterologist specialist care and care provided by generalists - an evaluation of effectiveness and efficiency*. American Journal of Gastroenterology*, 2003. 98(1): p. 21-28. • Rodney, W. and R. Hahn, Impact of the Limited Generalist (No Hospital, No Procedures) Model on the Viability of Family Practice Training. *The Journal of the American Board of Family Practice*, 2002. 15(3): p. 191-200.
	Compared payment systems and their influence on physician practices (n=4) • Simoens, S. and A. Giuffrida, The Impact of Physician Payment Methods on Raising the Efficiency of the Healthcare System: An International Comparison Article. *Applied Health Economics and Health Po*licy, 2004. 3(1): p. 39-46. • Engstrom (2004). *Quality, costs and the role of primary health care*. Linkoping University, Sweden • Selby, J., et al., Differences in resource use and costs of primary care in a large HMO according to physician specialty. *Health Services Research*, 1999. 34(2). • Grignon M, Paris V, Polton D. Influence of Physician Payment Methods on the efficiency of the Health care System, 2002. CREDES. www.hc-sc.gc.ca/english/pdf/romanow/pdfs/35_Grignon_E.pdf
	Studied the influence of funding arrangements on GPs (n=5) • Dusheiko, et al (2006). The effect of financial incentives on gatekeeping doctors: evidence from a natural experiment. *Journal of Health Economics*, 25(3): 449-478 • Goroll et al., (2007). Fundamental reform of payment for adult primary care: comprehensive payment for comprehensive care*. JGIM*, 22:410-15. • Grumbach, K., et al., Primary Care Physicians' Experience of Financial Incentives in Managed-Care Syst*ems. The New England Journal of Medicine*, 1998. 339: p. 1516-1521.

	• Hollinghurst S., et al., Comparing the cost of nurse practitioners and GPs in primary care: modelling economic data from randomised trials. *British Journal of General Practice*, 2006. 56(528): p. 530-535. • Starfield, B., et al., The effects of specialist supply on populations' health: assessing the evidence. *Health Affairs*, 2005: p. W5-97 - W5 – 107.
Commentary papers (n=5)	**Discussed association between continuity of care and cost-effectiveness (n=2)** • DeMaeserner et al (2003). Provider continuity in family medicine: Does it make a difference for total health care costs, *Annuals of Family Medicine*, 1(3): 144- • Raddish et al., (1999). Continuity of care: Is it cost effective? *The American Journal of Managed Care*. 5(6); 727.
	Discussed the influence of funding arrangements on GPs (n=1) • Forrest, C.B., Primary care in the US: Primary care gatekeeping and referrals: effective filter or failed experiment? *British Medical Journal*, 2003. 326: p. 692-695.
	Discussed workforce planning and supply (n=2) • Maynard, A., Medical Workforce Planning: Some Forecasting Challenges. *The Australian Economic Review*, 2006. 39(3): p. 323-329. • Weinberger, S. *The Overlapping Roles of Primary Care Physicians, General Specialists and Sub-specialists*. In *7th International Medical Workforce Conference*. 2003. Oxford, UK.

APPENDIX 8 - IDENTIFICATION OF POLICY OPTIONS THROUGH BUSE ET AL., (2005) FRAMEWORK

It is widely recognised that policy development and the policy cycle overall is influenced by an array of factors. Buse et al (2005) have developed a policy analysis framework that incorporates factors across four domains: **actors** – individuals, groups, organisations relevant to policy, **context** – the factors which may have an effect on the policy; **content** – the substance or mechanisms that form the policy; and **process** – the ways which the policy is initiated, developed, negotiated, and evaluated. The **Table** provides a summary of the review context using the Buse et al (2005) policy analysis framework.

Review Context

Domains	National Policy Context
Actors Generalism is a complex and multidimensional phenomena, thus actors who may have influence in the policy process may be from within or outside of the primary care profession.	**Actors within the primary care profession:** • Individual primary care practitioners who play a leadership role or are opinion leaders with skills and experiences with regard to how policies transfer into practice; • Primary care profession bodies, such as the RACGP, the AMA and APNA at a national and state level will have an influence on education, training, quality and standards related policies; • University Medical Faculties and Schools, Departments of General Practice and Primary Care; Primary Care Research and Teaching centres or units (e.g., The Australian Primary Health Care Research Institute (APHCRI), the Australian National University; The Primary Care Research Unit (PCRU), The University of Melbourne); • Individual academic primary care research and teaching opinion leaders; • Primary care support organisations at a national (Australian General Practice Network) or state level (e.g., General Practice Divisions Victoria) may also have an influence at practice systems level; and • Australian independent general practice media organisations and print or electronic publications or mediums, such as the Australian Doctor, Radio National etc. **Actors outside of the primary care profession**: • Government sections responsible for primary care and health workforce policy (e.g., Commonwealth Primary and Ambulatory Care Division, the Australian Medical Workforce Planning Committee (AMWAC) and the Council of Australian Government (COAG); • State health departments / branches responsible for general practice and/or primary care (e.g., Victorian Department of Human Service • Consumer lobby groups at national level (e.g., Consumer Health Forum) and state level (e.g., Health Issues Centre); and • Australian independent medical media organisations and print or electronic publications or mediums, such as The Age, Radio National etc.
Context A wide array of contextual factors may have an influence of generalism related policies, thus Buse et al (2005) categories will	***Situational factors*** (refers to transient factors which impact on policy) • Commonwealth Government reports (e.g., Productivity Commission, Commonwealth of Australia, 2005) and COAG (Commonwealth of Australia, 2006) reports; • National Health Workforce Strategic Framework endorsed by

be used including: situational; structural; cultural and exogenous factors.	COAG (Commonwealth of Australia, 2006); • State Government position statements on general practice (e.g., Victorian Department of Human Service Position statement on Working with General Practice); • Current national health policies (e.g., National Chronic Disease Strategy, Mental Health Strategy, Australian Better Health Care Initiative; • The new RACGP curriculum (RACGP, 2007), the Australian General Practice Training (GPET) Guidelines and Guides for GP Registrars will impact on educational related policies; and • The RACGP 'General Practice and Primary Health Care in 2015' discussion paper (RACGP, 2007), the RACGP 'General Practice Teams' draft discussion paper (RACGP, 2006), the AMA 'General Practice Teams position statement (AMA, 2006), and the Australian General Practice Network 'Primary Health Care Position Statement' (AGPN, 2006). ***Structural factors*** • The Australian political system (e.g., Commonwealth / state divide); • Workforce trends - shortages; feminisation; part-time nature of general practice; technological advances as far as treatment, and information exchange; and • Demographic features - ageing population; and the increase in complex and chronic diseases. ***Cultural factors*** • The identity and morale of the primary care professions; • The rapid acceptance of the need to move to a team approach within primary care; and • The focus on chronic disease management within the primary care setting. ***Exogenous factors*** *(* refers to factors that outside of the profession boundaries or that are occurring internationally) • The international trend for the work of GPs shifting to the management of chronic disease; • General practice is being organised increasingly through teams comprising of GPs, practice nurses, administrative practice managers and support staff; and • Global issues such as climate change, pandemics and terrorism.
Content Generalist related policies would need to be cognisant of the content of the current Commonwealth primary care policy reforms	• The content of the current Commonwealth primary care policy reforms that are focussing on funding, organisation, education and governance (e.g., Enhanced Primary Care Strategy, Commonwealth Department of Health and Ageing, 2005); • The Productivity Commission (Commonwealth of Australia, 2005) and COAG (Commonwealth of Australia, 2006) reports that focus on primary care workforce, education, training, funding arrangements would influence the content of policies; • The new RACGP curriculum and Training Standards (RACGP, 2007) would be influential; • The existing primary care vocational training providers (e.g., (the Australian General Practice Training (GPET) regionalised training program); • Reports that emphasise multidisciplinary team work such as the Productivity Commission Report (Commonwealth of Australia, 2005; Australian General Practice Network, 2006,

	RACGP, 2006); • Current national strategies (e.g. National Chronic Disease Strategy) which is based on the Wagner model) which stresses the need for teams explicitly and the role of generalist implicitly, is relevant to the content of policies; and • From a governance perspective, the existence of the National Performance Quality Framework may provide important content relevance.
Process Generalism policies that relate to primary care workforce, education, funding, or organisation need to be cognisant of existing processes in which policies are initiated, developed, negotiated, and evaluated.	To develop and implement policies existing processes include: • the Australian Medical Workforce Advisory Committee that commissioned the Review of the General Practice Workforce (Commonwealth of Australia 2005), the COAG committee; and the Australian General Practice Network - Division of General Practice networks; and the Royal Australian College of General Practitioners Working Groups; and • The RACGP Quality Framework for general practice (Booth et al, 2005) and the National Performance Framework for Divisions of General Practice (Commonwealth of Australia, 2004) would need to be considered in terms of the evaluation of policies.

Generalist related policies would need to be cognisant of the content of current key policy documents. These can be grouped into three categories: national health strategies; government commissioned reports; and profession direction setting papers. The review revealed that generalism and a generalist approach has not been clearly defined and is a complex phenomena, thus likely to lead to many diverse interpretations about the how and what generalist do and their possible roles in the implementation of current policies.

The Table below presents key relevant policies and their implications for general practice.

Key relevant policies and their implications for general practice

Key Policy Areas	Key Recent Policy Documents and Implications for General Practice
National Health Strategies	In 2006 the Commonwealth Government announced a 5 year national package, the **Australian Better Health Initiative** to refocus the health system to promote good health and reduce the impacts of chronic disease, through prevention and early detection. The initiative listed five priority areas and associated strategies, with several specific explicit expectations for general practice, such as: • To support early detection of risk factors and chronic disease, a new MBS item was introduced in Nov 2006 to support GP, assisted by practice nurses to provide health checks to identify patient at risk, to promote lifestyle change, through life scripts or referral to programs. The item also assists GPs and staff in early detection of chronic disease; and • To encourage active patient self management of chronic conditions, the government intends to support the education and training of new and registered GPs in the provision of self-management education. In 2005 the **National Chronic Disease Strategy** was announced to manage and improve chronic disease prevention and care in the Australian population. The strategy list four key priority areas, and associated implementation actions, with several specific explicit and implicit expectations for general practice, such as: • To enhance the early detection and treatment of chronic diseases through primary health care, general practice, is particularly

	encouraged to engage in early intervention, through appropriate screening, use of approaches such as the SNAP framework to identify and address risk factors for chronic disease and support self-management; • To improve early detection for high risk population groups, general practice (specifically GPs) are encouraged to undertake periodic wellness checks, to cover risk factors for chronic disease, probe for co-morbidities such as depression and initiate diagnostic tests and follow-up procedures; and • To better manage people at high risk of chronic disease, encourage the use of patient registers and recall systems. To optimise the integration and continuity of prevention and care, the strategy provides several directions for general practice, for example it: • Encourages general practice to use the new chronic disease management MBS items, which supports GPs to provide management plans and reviews. Items also support multidisciplinary team based care; • encourages general practice to support the use of electronic patient information systems that support integrated service provision according to agree national standards; • explicitly encourages the development and strengthening of primary health care networks and services; • explicitly identifies primary health care, including general practice (given its main entry point into the health system) to develop standard procedures for referral, pre-admission, discharge, and other transfer arrangements between services and sectors; • explicitly identifies general practice amongst other providers as having a key role and responsibility in multidisciplinary health care teams, and the need to promote the use multidisciplinary care planning for people with complex care needs, which incorporates patient and carer participation, and self-management principles; and • Specifically it identifies the need to have a workforce with an expanded range of skills and roles, and implicitly suggests that the PHC, including general practice include core competencies (i.e., person centred approach, communication skills, safety and quality of patient care, information and communication technologies, public health perspective) for chronic disease prevention and care in the education and training and accreditation of health workforce.
Government Commissioned reports	In 2005 the Commonwealth Productivity Commissioned produced a report on **Australia's Health Workforce** (Commonwealth of Australia, 2005). It set out via a National Health Workforce Strategic Framework reforms in five areas: workplace change and job innovation; health education and training; accreditation and professional registration; funding and payments arrangements and quantitative projections of future workforce requirements. The report recommendations do not explicitly identify expectations for general practice, however, they do have implications for general practice education and training, registration and accreditation, and funding. For example: the report recommends: • More responsive health education and training arrangements through: creation of an independent advisory council; a high level taskforce to achieve greater transparency of funding for clinical training; • Integrate the profession-based accreditation of health education and training through an over-aching national accreditation board; • Provide national registration standards for health professions and the creation of a national registration board; and • Improved funding-related incentives for workforce change through: transparent assessment by an independent committee of proposals to

	extend MBS coverage beyond the medical professions; and the introduction of (discounted) MBS rebates for a wider range of delegated services; and addressing distortions in rebates relativities. The 2006 **Council of Australia Governments Report (COAG)** (Commonwealth of Australia, 2006) recognised the challenges facing Australia regarding the health workforce and the need for national systemic reform to workforce and health education structures. The COAG Report specifically recommends the need to strengthen the health system and its infrastructure. It does not specifically identify general practice, but the health workforce in general and advocates the following: • Increased government collaborative effort to retain health staff; • Endorses the National Health Workforce Strategic Framework; • The need to make explicit health workforce requirements of rural, remote areas, and groups working with special needs population groups; and • Acceleration of work on a national electronic health records system.
Profession direction setting papers	The RACGP recently released a discussion paper: **'General Practice and Primary Health Care in 2015'** (RACGP, 2007) to provide key future directions for general practice and primary health care. The paper suggests a spectrum of possible reforms to address workforce shortages and to ensure that careers in general practice, community nursing and allied health are sought after and attracting the brightest graduates. These include: • a single national primary health policy and strategy; • increased investment in general practice and primary health care; • health system restructuring based on empowered individual and communities; • new general practice care models; • integrated primary health care networks and infrastructure; • support for primary health care teams; • appropriate recognitions and reward for the comprehensive high quality generalist, with extended skills and services and practice in areas of need; • investment in e-technology, standards and connectivity; • a return to flexible career pathways and integrated special skills networks; • integrated, sustained and continuously evaluated recruitment and retention strategies with a focus on early recruitment from areas of need; and • Integration of, and investment in clinical practice, education, training, research and development. The paper also suggests that *"the GPs role's remains essentially unchanged at its core, with the necessity for sound generalist training and a holistic patient focussed approach- supported rather than dominated by the evidence base" (*p17) and puts forward several key outcomes of GPs roles resulting from a skilled practice team, enhanced practice systems and e-systems, including: • an expanded capacity to diagnose complex multifactorial presentations and undertake coordinated management and monitoring of chronic and complex illness entirely in the community; • effective oversight of early intervention, health promotion and preventive care strategies developed specifically for the practice population; • protected time required to undertake team development, quality improvement, teaching and frequently collaborative research activities; and

	• Involvement in selected external commitments - local panning, divisional programs and community outreach program. The **new RACGP curriculum (RACGP, 2007)** reflects the RACGP response to the changing context of general practice. The curriculum explicitly aims to: provide the basis for training for medical practitioners to undertake competent, unsupervised general practice; meet the community's primary health care needs; and support the current and future goals of the Australian health care system. The new curriculum framework focuses on three interrelated dimensions: • *The five domains of general practice*: communication, knowledge and skills, population health context, professional role and organisational dimension; • *The learning lifecycle of general practitioner:* undergraduate, prevocational, vocational, and continuing professional development; and • *The context of general practice:* the clinical context in which the knowledge and skills of GPs are applied is visually represented as a 'Star of General Practice' with the 5 domains of general practice In 2005 the Australian Divisions of General Practice (now Australian General Practice Network) released its **Primary Health Care: Position Statement** (ADGP, 2005) to outlines its vision for the role of GPs and Divisions of General Practice in primary health care system reform. The paper states: "The key components of the future primary health care systems are multidisciplinary teams with GPs as essential members". (p18). It also lists key elements of the primary health care system essential for effective teams, namely: • whole-of-practice approaches to education, training and peer support; • Interdisciplinary and multidisciplinary education and training at al levels; • Practice infrastructure payment to support team based care; • Further development of allied health MBS items; and • New MBS items, including preventive health checks, that can be performed by the team

APPENDIX 9 - LEXIMANCER CONCEPTUAL BREAKDOWN OF 16 STAKEHOLDER INTERVIEWS

Concept	Absolute Count	Relative Count
think	464	100%
people	183	39.4%
generalist	143	30.8%
care	100	21.5%
work	98	21.1%
generalism	80	17.2%
General Practice	78	16.8%
person	74	15.9%
GP	72	15.5%
patient	71	15.3%
health	68	14.6%
GPs	64	13.7%
sense	60	12.9%
time	59	12.7%
team	56	12%
approach	56	12%
back	55	11.8%
literature	53	11.4%
terms	52	11.2%
patients	51	10.9%
system	47	10.1%
practice	46	9.9%
context	43	9.2%
specialists	43	9.2%
view	42	9%
interesting	40	8.6%
doesn't	40	8.6%
should	38	8.1%
find	37	7.9%
talk	37	7.9%
doctors	35	7.5%
years	34	7.3%
model	30	6.4%

Academic GPs Conceptual Breakdown

Concept	Absolute Count	Relative Count
think	224	100%
people	108	48.2%
generalist	59	26.3%
generalism	44	19.6%
GPs	41	18.3%
GP	38	16.9%
General Practice	37	16.5%
team	34	15.1%
work	32	14.2%
time	30	13.3%
care	30	13.3%
issues	28	12.5%
doctors	26	11.6%
issue	25	11.1%
back	24	10.7%
person	23	10.2%
specialists	22	9.8%
system	22	9.8%
should	21	9.3%
talk	21	9.3%
kind	19	8.4%
health	19	8.4%
context	17	7.5%
Primary Care	17	7.5%
thinking	16	7.1%
model	14	6.2%

General Practice Organisations

Concept	Absolute Count	Relative Count
think	131	62.9%
people	50	24%
generalist	49	23.5%
care	47	22.5%
work	46	22.1%
person	30	14.4%
patient	28	13.4%
sense	27	12.9%
General Practice	27	12.9%
view	26	12.5%
specialist	24	11.5%
issue	22	10.5%
literature	22	10.5%
generalism	21	10%
practice	20	9.6%
back	18	8.6%
important	18	8.6%
terms	17	8.1%
GP	17	8.1%
health	16	7.6%
approach	16	7.6%
system	15	7.2%
GPs	12	5.7%
management	8	3.8%
specific	8	3.8%
Catholic	5	2.4%

Policy Makers Conceptual Breakdown

Concept	Absolute Count	Relative Count
generalist	72	80.8%
think	59	66.2%
health	26	29.2%
people	24	26.9%
terms	22	24.7%
sense	18	20.2%
care	18	20.2%
patient	16	17.9%
approach	15	16.8%
context	14	15.7%
person	13	14.6%
work	13	14.6%
problem	10	11.2%
give	10	11.2%
job	9	10.1%
deliver	8	8.9%
interest	7	7.8%
set	7	7.8%
aboriginal	5	5.6%
illness	5	5.6%
food	4	4.4%
accommodation	4	4.4%
Health Services	3	3.3%
middle	3	3.3%

General Practitioners Conceptual Breakdown

Concept	Absolute Count	Relative Count
think	130	100%
care	53	40.7%
people	40	30.7%
generalist	39	30%
time	29	22.3%
patients	28	21.5%
patient	27	20.7%
medical	26	20%
work	26	20%
practice	25	19.2%
GPs	25	19.2%
problems	25	19.2%
doctors	24	18.4%
generalism	24	18.4%
GP	24	18.4%
General Practice	23	17.6%
doctor	21	16.1%
thought	20	15.3%
health	20	15.3%
generalists	16	12.3%
role	16	12.3%
interesting	16	12.3%
person	15	11.5%
should	13	10%
problem	13	10%
understanding	12	9.2%