DEPARTMENT OF HUMAN SERVICES

Effectiveness Unit, Quality and Care Continuity Branch,
Acute Health Division

DEVELOPMENT OF OPTIONS FOR MAINSTREAMING MATERNITY SERVICES PROGRAM FUNDING

Final Report

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CONTENTS

1 SUMMARY ... 2

2 STUDY AIMS AND OBJECTIVES ... 4

2.1 STUDY AIMS ... 4

2.2 OBJECTIVES OF THE CONSULTANCY ... 4

3 METHODOLOGY ... 5

3.1.1 STAGE 1 – PRE-PROJECT ACTIVITIES ... 5
3.1.2 STAGE 2 - DATA COLLECTION THROUGH A FOCUSED LITERATURE REVIEW ... 6
3.1.3 STAGE 3 - DATA COLLECTION THROUGH CONSULTATION WITH KEY PLAYERS ... 6
3.1.4 STAGE 4 – FUNDING MODEL OPTIONS DEVELOPMENT ... 7

4 CONTEXT AND KEY ISSUES IN RELATION TO MATERNITY SERVICES IN VICTORIA ... 9

4.1 INTRODUCTION ... 9

4.2 INCORPORATING QUALITY INTO THE FUNDING FRAMEWORK ... 9

4.2.1 CONTEXT OF QUALITY WITHIN THE FUNDING FRAMEWORK ... 9
4.2.2 DIMENSIONS OF THE QUALITY FRAMEWORK ... 10
4.2.3 THE MATERNITY SERVICES PROGRAM ... 10

4.3 POLICY CONTEXT OF MAINSTREAMING MATERNITY SERVICES PROGRAM FUNDING ... 11

4.4 KEY ISSUES IN MATERNITY SERVICES PROVISION AND FUNDING IN VICTORIA ... 12

4.5 SUMMARY AND CONCLUSIONS ... 12

5 RECENT TRENDS IN SERVICE DELIVERY AND FUNDING ... 14

5.1 INTRODUCTION ... 14

5.2 AN OVERVIEW OF CHANGE IN HEALTH CARE SERVICE DELIVERY SYSTEMS ... 14

5.2.1 PHASE ONE – 'NATIONAL HEALTH' MODELS ... 14
5.2.2 PHASE TWO – PRIMARY CARE MODELS ... 14
5.2.3 PHASE THREE – PATIENT-CENTRED CARE MODELS ... 15

5.3 TRENDS IN KEY HEALTH SYSTEM POLICY DRIVERS ... 15

5.3.1 GENERAL TRENDS ... 15
5.3.2 REFORMS AND POLICY TRENDS IN VICTORIA ... 15

5.4 APPROACHES TO FUNDING HEALTH SERVICES ... 17

5.4.1 FUNDING APPROACHES – A CLASSIFICATION OF CORE ELEMENTS ... 17
5.4.2 FEATURES, ADVANTAGES AND DISADVANTAGES OF DIFFERENT FUNDING APPROACHES ... 20
5.4.3 MODIFYING AND MEASURING FUNDING METHODS – 'SUB-COMPONENTS OF METHODS' ... 23

5.5 INTERNATIONAL APPROACHES TO MATERNITY SERVICES FUNDING ... 25

5.6 NEW ZEALAND ... 25

5.6.1 GENERAL CHANGES TO THE NZ HEALTH SYSTEM ... 25
5.6.2 MATERNITY SERVICES IN NZ ... 26

5.7 CANADA ... 29

5.8 UNITED KINGDOM ... 30

5.9 SUMMARY AND CONCLUSIONS ... 32

6 STAKEHOLDER PERSPECTIVES ... 34

6.1 INTRODUCTION 34
6.2 BROAD THEMES EMERGING FROM STAKEHOLDER CONSULTATIONS....................34
6.2.1 SERVICE GAPS AND ACCESS AND EQUITY AND ACCESS ENHANCED BY MSEP....................34
6.2.2 BUDGET DEVOLUTION ISSUES AND ACCESS TO BUDGETS 34
6.2.3 COST AND REVENUE ISSUES 35
6.2.4 AMBULATORY CARE FUNDING ISSUES 35
6.2.5 COMMUNICATING THE MSEP EXPERIENCE AND EVIDENCE-BASE TO THE FIELD....................36
6.3 PARTICULAR ISSUES FOR RURAL REGIONS....................36
6.3.1 REALISTIC CHOICE OPTIONS....................36
6.3.2 COST DISADVANTAGES IN RURAL AREAS 36
6.3.3 POSTNATAL CARE SERVICES AND SMALL RURAL HOSPITALS 37
6.3.4 WORKFORCE ISSUES....................37
6.4 ACTION AREAS 37
6.4.1 RESOURCE ALLOCATION ISSUES 37
6.4.2 GENERAL COSTING ISSUES 37
6.4.3 SPECIFIC COSTING ISSUES....................38
6.5 SUMMARY AND CONCLUSIONS....................38
7 CORE ATTRIBUTES OF A FUNDING MODEL FOR MATERNITY SERVICES 39
8 CANDIDATE FUNDING STRATEGIES 46
8.1 INTRODUCTION 46
8.2 QUARANTINED FUNDING....................46
8.3 FUNDHOLDER MODEL....................46
8.4 DISCRETE PROGRAM MODEL 47
8.5 MAINSTREAM FUNDING, SPECIFIED CARE MODALITIES, SPECIFIED PERFORMANCE INDICATORS 47
8.6 MAINSTREAM FUNDING, SUPPLEMENTARY CASEMIX PRODUCTS, SPECIFIED PERFORMANCE INDICATORS....................48
9 APPRAISAL OF CANDIDATE FUNDING STRATEGIES 49
9.1 COMPARATIVE ANALYSIS - TABULATION 50
9.2 COMPARATIVE ANALYSIS - DISCUSSION 54
9.2.1 DESIGN ATTRIBUTES 54
9.2.2 EQUITY ATTRIBUTES....................54
9.2.3 SERVICE DEVELOPMENT ATTRIBUTES 54
9.2.4 IMPLEMENTATION ATTRIBUTES 54
9.2.5 RESPONSIVENESS ATTRIBUTES....................55
9.2.6 MANAGEMENT ATTRIBUTES....................55
9.3 ELABORATION OF THE PREFERRED FUNDING APPROACH 55
9.3.1 GENERAL DISCUSSION....................55
9.3.2 STRENGTHS OF THE PREFERRED FUNDING APPROACH....................57
9.3.3 WEAKNESSES AND CHALLENGES....................57
10 DETAILED SPECIFICATIONS OF THE PREFERRED FUNDING MODEL....................59
10.1 DEFINITION OF ADDITIONAL CASEMIX PRODUCTS....................59
10.2 THE POTENTIAL APPLICATION OF CO-PAYMENTS 62
10.3 SUPPLEMENTARY NON-CLINICAL PERFORMANCE INDICATORS....................64

10.4 REPORTING AND SERVICE AGREEMENT REQUIREMENTS 66
10.5 TASKS, RESPONSIBILITIES, AND TIMETABLE 67
11 RECOMMENDATIONS 70

1 SUMMARY

This document represents a report of the 'Options for mainstreaming Maternity Services Program Funding' (MSP) project. The document provides an overview of MSP in the context of the Department's quality and funding framework, provides an analysis of recent trends in service delivery and funding (globally and in Victoria), and specifically examines maternity service arrangements and funding strategies in NZ, Canada, and the UK. This contextual background suggests that when Victoria is compared with other health systems, it is at the forefront of reforms directed at outcome measurement. The Department's quality framework reflects this emphasis. It seems that a major 'next step' in Victoria will be to integrate this outcomes oriented framework into a funding framework that presently emphasises outputs. The mainstreaming of MSP funds, although relatively small at $14M, is an early candidate for this fusion of outcomes and outputs.

In an effort to seek insight from the published literature on potential directions and strategies for MSP funding, the recent experiences of NZ, Canada, and the UK were reviewed. Each of these health systems is either undergoing major reform (eg UK), has recently done so (eg NZ), or is planning major structural change (eg Canada). In each case, the drivers for change are unique but share some commonalities – for example, the desire to seek sustainability, particularly funding; the desire to improve quality of care; and the desire for greater levels of service integration and collaboration between providers and professions. In each nation, maternity services are delivered and funded in different ways. In each case, maternity services and their funding mechanisms are explicitly targeted for reform (except possibly NZ where most reforms appear to have already been undertaken).

In considering possible funding strategies for MSP, a number of strategies were employed. Firstly, experiences elsewhere (see above) were examined. Secondly, the views of stakeholders were heard. Thirdly, a conceptual framework for assessing potential approaches was developed. This framework emphasises a number of critical elements that must be addressed: design attributes, equity attributes, service development and quality attributes, implementation attributes, responsiveness attributes, and management attributes.

Five possible funding approaches were identified and considered against the attribute groups of the conceptual framework. The candidate models include: maintenance of current quarantined funding arrangements; a fund holder type approach; development of a separate maternity program (akin to current arrangements); a mainstreamed approach where casemix products are defined along with centrally defined care modalities; and a mainstreamed approach where new casemix products and performance indicators only are specified.

On balance, the analysis suggests that mainstreaming of MSP funding, if coupled with new casemix products, is the preferred approach. We have termed this a 'bundled payment' method. This approach however, has some shortcomings. Some of these shortcomings relate to the usual problems of introducing something with new or poorly understood features (eg product definitions, prices). Other shortcomings relate to the unsuitability of 'one-size fits all' approaches to diverse settings (eg rural hospitals). Strategies to overcome these shortcomings are suggested.

We offer the following recommendations in relation to options for the mainstreaming of maternity services program (MSP) funding.

- ***Recommendation 1***. It is recommended that the Department move towards a system of mainstreaming MSP funding using a 'bundled payment' approach (see Sections 9.3 and 10 for detailed specifications). The 'bundled payment' approach includes payment for the antenatal, intrapartum, and postnatal components of care. The precise nature and extent of payment for each component of care will depend on clinically driven categories or classes.

- ***Recommendation 2***. It is recommended that because of the need to undertake a range of preparatory activities prior to implementation of a 'bundled payment' system for MSP, implementation be deferred until July 2003 (July 2002 had originally been proposed).

- ***Recommendation 3***. It is recommended that a number of preparatory tasks be undertaken by the Department prior to implementation of 'bundled payment' funding in July 2003. The key tasks are described in detail at Section 10.5 of this report. In brief, the key tasks, responsibilities, and time frames are as follows:

    - A range of activities relating to 'product definition' is to be guided and/or undertaken jointly by the Quality and Care Continuity Branch and Funding and Financial Policy Branch areas of the Department. These activities include clinical elements and should be initiated as soon as practicable following acceptance of this report. The 'product definition' tasks should aim to be completed by January 2003;

    - In order to ensure that prices attached to each care component are fair and equitable, a number of 'product costing' tasks are required. These costing activities will be managed by the Funding and Financial Policy Branch area of the Department and should be concluded by March 2003;

    - The 'bundled payment' model needs to be supported by a system of measuring performance. Accordingly, a range of 'performance measurement' tasks is required. The Quality and Care Continuity Branch and Funding and Financial Policy Branch areas of the Department will guide these tasks and will complete their work by April 2003.

- ***Recommendation 4***. It is recommended that the Department develop a strategy for managing any unintended consequences that might arise from the new funding model. In particular, consideration should be given to the implementation of a 'no loss adjustment' strategy (see Sections 5.4.3 and 10.2 for a discussion) for providers that might experience financial duress following a funding change. The use of 'no loss adjustment' strategies in these circumstances would generally be viewed as transitional or short-term arrangements only.

- ***Recommendation 5***. It is recommended that the Department investigate a range of specific costing and funding issues identified mainly in rural service settings. The main issues identified are described in Section 6.4 of this report. The aim of this recommendation is to determine whether claimed systematic cost penalties in rural areas would warrant the application of separate co-payments under a 'bundled payment' environment (see also Section 10.2 for more detail in relation to this issue).

- ***Recommendation 6***. It is recommended that the Department investigate and respond to any identified needs for training and/or education in budget/resource allocation methods within hospitals. The main issue are described in Section 6.2.2 of this report.

2 STUDY AIMS AND OBJECTIVES

2.1 STUDY AIMS

The project aims to '...develop options to incorporate current Maternity Services Program funding into ongoing funding and to examine the impact of current and possible future funding arrangements in the light of the objectives of the Maternity Services Program (MSP)'.

The present project has been developed '…to explore appropriate methods for ensuring that recurrent funds allocated to the MSP…can be allocated in a way that meets the objectives of the MSP and is consistent with Victorian Government policy'.

2.2 OBJECTIVES OF THE CONSULTANCY

The following material is repeated from the consultancy briefing papers.

- Identify options which are congruent with the Acute Health Division's funding and purchasing policy approach and consistent with the objectives of the Maternity Services Program, to fund acute and ambulatory services for antenatal, intrapartum and postnatal care in Victoria, for implementation at the conclusion of the four year Maternity Services Program. Identify in detail the advantages and disadvantages of options, making clear the likely impact. Selected options should include at least one viable option that could be implemented with minor modifications to current arrangements. An initial scoping of these issues is provided in a Discussion Paper.

- In developing options, consider any components of maternity services provision, for example, services to groups of consumers with particular health needs which have additional system and resource allocation implications.

- Outline work that would be need to be done, and processes that would need to be put in place, to implement the selected options. This includes issues that need to be addressed to ensure that the annual cost weight study and accounting protocols adequately capture the cost of providing quality maternal care.

3 METHODOLOGY

In summary, the project employed a mix of research strategies. The following stages were undertaken for the MSP mainstreaming project.

3.1.1 STAGE 1 – PRE-PROJECT ACTIVITIES

A critical stage in the conduct of a research study of this type is to identify, resolve, and agree on issues, uncertainties, methodologies, reporting arrangements, budget considerations, project management, information security and other matters. The following issues were addressed by the client and the project team at the start of the project.

BASIC ISSUES

- Clarify objectives and purpose of the study
- Identify other 'right-to-know' audiences
- Confirmed study team
- Contractual matters

INFORMATION ISSUES

- Required information
- Data collection procedures, instruments, and protocols
- Information sources
- Participant selection
- Follow-up procedures to assure adequate information
- Provisions for assuring the quality of obtained information
- Provisions to store and maintain security of collected information

REPORTING AND MANAGEMENT ISSUES

- Project timetable
- Roles and responsibilities for the evaluation
- Project management
- Progress, interim, and final outputs
- Data handover
- Project budget

3.1.2 STAGE 2 - DATA COLLECTION THROUGH A FOCUSED LITERATURE REVIEW

An early and important step in the project was the conduct of a focused review of the literature relating to the funding of maternity services.

The ***aims*** of the literature review were to:

- Understand the experience and performance of relevant funding models and systems in use;
- Understand expert opinions on what works and does not work in relation to funding maternity services across sectors and settings;
- Identify criteria for assessing the suitability of various funding model options;
- Understand the nature and extent of emerging ideas and models proposed for funding primary care generally, and maternity services in particular.

The review ***scope*** included:

- The current funding model framework;
- Alternative funding models currently in use within the health and related sectors;
- Emerging funding models proposed for use in cognate primary health care and similar settings; and
- How performance measurement and quality improvement concepts and practice are encompassed within the various funding models identified.

The information ***sources*** for the review included:

- Published literature (both Australian and international) relating to maternity services, including performance to date of existing arrangements;
- Unpublished and limited circulation reports and other documents specifically relating to maternity services (eg as identified by key players and the Department);
- Broader contextual materials relating to primary health care reform and maternity services reform in Australia;
- Policy positions relating to complex service arrangements (eg across settings, hard-to-define concepts such as what constitutes an episode of care etc), quality improvement, and related topics (eg position papers of the States, Commonwealth, the main professions and disciplines); and
- Other sources as identified during the project.

3.1.3 STAGE 3 - DATA COLLECTION THROUGH CONSULTATION WITH KEY PLAYERS

This phase was considered critical to the success of the project. The aim of the consultation exercise was not to repeat these efforts but to focus specifically on issues around funding models, and how reforms can proceed.

The ***objectives*** of this consultation phase were to:

- Seek experiential and expert opinions relating to the current maternity services environment in Victoria (where applicable to particular key players). This included information in relation to general perceptions

of the current service environment; information in relation to the strengths and weaknesses of current arrangements; barriers to improvement; and suggestions for improvement to the current services and funding framework; and

- Seek views on alternative funding models that might be introduced. Informants were asked to justify their nomination and to suggest a process for implementation where possible.

The ***basis for defining key players*** was inclusive and agreed with the Department at the start of the project.

The list of informants included:

- Clinicians (all major disciplines in the major antenatal, acute, post-acute phases of care);
- Service providers (eg managers and casemix staff);
- Professional and peak body organisations;
- Academic experts in the areas of health economics, quality improvement, and performance measurement theory and practice;
- Consumers as represented through recognised representative organisations (eg Consumers' Health Forum);
- Relevant Government agencies (eg Commonwealth Department of Health and Aged Care, Australian Institute of Health and Welfare).

The ***methods*** for consulting with key players reflected the circumstances and needs of informants. The following methods were employed:

- Structured face-to-face interviews (one to one, group, as required). An interview protocol was developed;
- Structured telephone interviews (generally as follow-up only and one-to-one);
- Focus workshops (particularly where larger numbers of key players needed to be contacted); and
- Invited submissions (where informants were asked to submit any relevant information).

The ***outputs*** of this phase included:

- An assessment, from the perspective of key players, of the performance, barriers to improvement, and options for improvement of the existing maternity services funding arrangements;
- Suggestions by key players for the introduction of alternative funding models for maternity services.

3.1.4 STAGE 4 – FUNDING MODEL OPTIONS DEVELOPMENT

The ***objective*** of this stage was to produce a document detailing all key future options for funding the MSP in Victoria.

The ***development*** of the document was informed by the literature review, the analysis of consultations with key players, and from the process of analysis and synthesis.

The ***contents*** of the document include:

- Background and context;
- Current arrangements for MSP funding in Victoria (and comparable services elsewhere in Australia);
- Criteria for assessment of funding models and their attributes;
- Review of relevant literature relating to current Australian arrangements, alternative models, emerging ideas etc;
- Analysis of consultation process;
- Summary of identified potential MSP models (attributes, current use, other criteria as defined);
- Assessment of potential models against criteria;
- Short list of candidate MSP funding models;
- Detailed description of short-listed models (described and appraised in terms of design attributes, equity attributes, service development attributes, adaptive and responsiveness attributes, management attributes, and implementation attributes); and
- Suggested process to take to validation phase (see next major section).

The key ***output*** of this stage was the production of an interim report ('options paper'), structured in accordance with the consultancy brief and other agreed advice from the Department.

Following the production and dissemination of this options paper, the following stages occurred:

- Stage 5 - Consolidation of recommendations through further consultation with stakeholders
- Stage 6 - Framework to review preferred funding model options
- Stage 7 – Final evaluation of funding model options. This stage consolidated the work of Stages 4-6. Recommendations for future MSP funding were developed.

4 CONTEXT AND KEY ISSUES IN RELATION TO MATERNITY SERVICES IN VICTORIA

4.1 INTRODUCTION

The following information describes the funding and quality context of the current project. In addition, a number of issues of particular relevance to the funding of maternity services are briefly outlined.

4.2 INCORPORATING QUALITY INTO THE FUNDING FRAMEWORK

The following material has been extracted from the Department's current hospital funding guidelines[1].

4.2.1 CONTEXT OF QUALITY WITHIN THE FUNDING FRAMEWORK

'…In recent years the Department has developed a strong focus on quality of care. New programs have been funded in a range of areas to promote safety and improve access, care and outcomes for consumers using Victoria's acute and sub-acute health services. Health services have received additional funds through multi million dollar programs in specific areas such as maternity services; infection control; hospital access; hospital in the home; and effective discharge. The development of a systemic, strategic approach to quality improvement has been guided by the principles articulated by the Taskforce on Quality in Australian Health Care and the key action areas identified by the National Expert Advisory Group on Safety and Quality in Australian Health Care. The Department now contributes substantial funds to the Australian Council for Safety and Quality in Health Care to help develop a national approach to strengthening consumer involvement; fostering clinical best practice and enhancing innovation; strengthening accreditation; measuring quality and outcomes; and promoting accountability for quality'.

'At a local level there has been a strong focus on improving state wide systems for effective delivery of quality care; developing performance indicators for measuring health care quality; improving information available to consumers and the general public; and encouraging the use of health care practices that are known to improve outcomes. Boards of metropolitan health services now have specific responsibilities to ensure that effective and accountable systems are in place to monitor and improve the quality and effectiveness of health services. Additional resources have been allocated to provide infrastructure support for a range of special purpose groups that will work to improve safety and quality in specific areas such as the new infection control co-ordinating centre, and Consultative Councils established to examine preventable causes of mortality and morbidity. The new Statewide Quality Committee will review information from across the system relating to quality of care, identify system wide issues and advise on whether appropriate actions are being taken by hospital management and Boards. The Committee will liaise closely with the national Australian Council for Safety and Quality in Health Care to ensure that state actions are consistent with national approaches'.

'To assist Government in evaluating health service performance with respect to quality, a Quality Framework is being introduced. This is consistent with that developed by the National Health Performance Committee to report to Australian Health Ministers. The Quality Framework is designed to provide a structure to approach and appraise health service performance. Performance indicators previously in use or currently in development are now placed under the various dimensions of care quality within the framework. Health services will be required to measure and monitor their performance in delivering quality health care according to this framework. There will be a focus on working to ensure indicators in each of the dimensions are consistently gathered and reported so that services will be able to compare their performance with similar organizations. In areas where quantitative

[1] DHS (2001), 'Victoria - Public Hospitals Policy and Funding Guidelines 2001-2002'

indicators are currently unavailable or inappropriate, regular reporting of progress in quality improvement will occur'.

'While there will continue to be a focus on state wide programs aimed at improving specific aspects of care quality, for metropolitan health services, the funds previously received for a range of quality improvement initiatives will form part of a general quality fund that also incorporates additional funding for developing good systems of clinical risk management. For the 2001–2002 financial year, regional and rural health services will continue to receive separately identified funding for these initiatives, although reporting on progress against these initiatives will be consolidated as for metropolitan health services.'

4.2.2 DIMENSIONS OF THE QUALITY FRAMEWORK

'The quality dimensions included in the framework incorporate the following areas:

Access – the ability of people to obtain health care at the right place and right time; includes performance monitoring and quality improvement action to improve in key areas such as emergency services, elective surgery, critical care, neonatal and sub-acute services.

Appropriateness – health care provided is relevant to the patient's needs and based on established standards. This includes performance monitoring and quality improvement action taken in areas such as disease specific and maternity services clinical indicators, sub-acute patient management and timeliness of emergency and elective treatment.

Effectiveness – health care achieves its desired outcome. This includes performance monitoring and quality improvement action taken in areas including maternity services.

Safety – the potential risks of an intervention or the environment are identified and avoided or minimised. This includes performance monitoring and quality improvement action taken in areas such as clinical indicators, clinical review, general adverse event monitoring, relevant coroner's recommendations, infection control and prevention, and cleaning standards.

Acceptability – health care that provides respect for and is orientated to the needs and wishes of patients and their carers. This includes performance monitoring and quality improvement action taken in areas such as patient satisfaction.

Continuity of care – the ability to provide continuous, coordinated care across programs, practitioners and organisations over time. This includes performance monitoring and quality improvement action taken in areas such as discharge effectiveness and links with community service providers.

Organisation of systems for quality improvement – a health care organisation's capacity to provide infrastructure such as workforce, facilities and equipment, be innovative, and respond to emerging needs. This includes performance monitoring and quality improvement action taken in areas such as hospital accreditation and implementing innovative or recognised good practice in patient management'.

4.2.3 THE MATERNITY SERVICES PROGRAM

'The Maternity Services Program enters its fourth and final year in 2001-2002. The many positive benefits resulting from the increased focus on maternity services have been confirmed by the recent Review of Maternity Services Enhancement Plans conducted by the Centre for Development and Innovation in Health. It was particularly pleasing to note that service provision has improved for women with special needs and that there has been rapid growth in the provision of postnatal services especially for lactation and domiciliary care. It is now a community expectation that all women receive appropriate postnatal domiciliary visits'

'In 2001–2002 health services and hospitals will be expected to continue implementing their Maternity Services Enhancement Plans and to actively promote multi-disciplinary collaboration and consultation across maternity services. By the end of 2001–2002 each metropolitan health service and rural region should have in place at least one major model of maternity care that promotes continuity of care. Health services and hospitals should include progress reports as part of their consolidated reporting on quality initiatives'.

'Strategic initiatives for 2001-2002 include:

- development of options for mainstreaming of Maternity Services Program funding;
- implementation of performance indicators for public maternity services;
- dissemination and publication of the key results of the Survey of Recent Mothers 2000;
- implementation of the collaborative project conducted by the three teaching maternity providers to develop consensus evidence based guidelines for the provision of antenatal care; and
- development of improved consumer information'.

4.3 POLICY CONTEXT OF MAINSTREAMING MATERNITY SERVICES PROGRAM FUNDING

The following material has been extracted from the consultancy briefing papers.

'An appropriate method needs to be identified for ensuring that recurrent funds allocated to the Maternity Services Program ($14.3M per annum) by the State Government could be effectively rolled into recurrent funding in a way that meets the objectives of Maternity Services Program and is consistent with Victorian Government health policy. The objectives of the Maternity Services Program are:

- Promoting measurable improvements in the continuity and quality of antenatal, intrapartum and postnatal care, individualised to the needs of particular women
- Providing women with increased birthing options and with evidence based information on the benefits and risks associated with different options,
- Encouraging improvements in models of care in line with best available evidence; and
- Improving outcomes through appropriate performance measures and service audits'.

'In addition to $14.3M allocated directly to service providers to improve maternity services at hospital level, a number of initiatives are underway to support service improvements, including the development of Maternity Services Performance Indicators, changes to the organisation of care, support for a multi-disciplinary, collaborative approaches, provision of consumer information, a state wide survey of recent mothers, and guideline and protocol development for antenatal care'.

'The funding issues arise for two reasons. At the conclusion of the four-year program in 2002/2003, the $14.3M recurrent funding needs to be built into ongoing funding arrangements. It has also become clear that there are some limitations with the current funding structure, which involves six different programs/funding sources for different types, or elements, of maternity care. In particular, these arrangements appear to cut across the objectives of the Maternity Services Program. It therefore may be timely to consider a more thorough review of the impact of current funding arrangements on the quality of care provided, the cost benefit of current models, and canvass alternative models and options'.

'Developments over the last decade to reform funding for acute inpatient and outpatient services through the introduction of casemix funding have been important in producing major changes. The next issue for maternity services is how to build on these changes in a way that improves patient care and that sits appropriately within the general framework of health services funding'.

4.4 KEY ISSUES IN MATERNITY SERVICES PROVISION AND FUNDING IN VICTORIA

In a recent DHS discussion paper, a range of key issues has been discussed that specifically relate to maternity services and how these are funded[2]. The key issues identified in the discussion paper are outlined below:

- A lack of clarity with respect to the definition of an 'episode of maternal care', and thus how these services should be funded
- A need for maternity services funding mechanisms to provide incentives to provide quality, and evidence-based maternal care
- The role of geographical and socio-economic factors (eg capacity to co-pay) on equity of access to maternity services, particularly antenatal services
- Impact of Victoria's twin-system (ie VACS and non-VACS) non-admitted patient funding arrangements on the supply of public antenatal care services
- Problems of service coordination and integration that appear to be linked to the existence of multiple funding systems for maternity services
- The inexorable rise in the importance of new technology in maternal care, and increasing demands for services such as antenatal screening, both leading to higher cost pressures
- The complexities of Commonwealth-State funding, and in particular, the associated impacts of cost shifting, and service delivery fragmentation
- The capacity of present-day hospital costs data relating to complex services (covering the continuum of antenatal, intrapartum, and postnatal maternal care), to provide an adequate basis for generating reliable cost weights (and hence funding)
- The frequently claimed perverse and /or negative impacts of casemix funding on the range, access to, and quantum of maternity services provided by public hospitals
- Practical difficulties by hospital-based maternity service program managers in securing sufficient resources for providing maternity services – difficulties that are claimed to be associated with hospital-level resource allocation practices (ie system transparency and hospital management and accounting practices)

4.5 SUMMARY AND CONCLUSIONS

The mainstreaming of the Maternity Services Program budget is an early example of the evolution of funding systems beyond outputs and towards outcomes. The quality framework sets the parameters within which the quality dimension can be incorporated within the funding environment. On the other hand, the present acute

[2] DHS (2001), Discussion paper 'Perceptions about the organisation of maternity care'

hospital services funding framework sits within its own philosophical paradigm, and with that, constraints and restrictions on what might be possible.

The present funding environment (from numerous perspectives - ie design, complexity, performance etc) present a number of challenges to how the funding of maternity services in both a casemix and outcomes-oriented environment, might proceed. The next section provides an overview of how health systems have evolved in structure and in how they are funded. This overview examines general and Victorian trends.

5 RECENT TRENDS IN SERVICE DELIVERY AND FUNDING

5.1 INTRODUCTION

The purpose of this section is to provide an overview of recent trends in which health systems generally, and Victoria in particular, has evolved in recent years. The implications for the mainstreaming of MSP are discussed also.

5.2 AN OVERVIEW OF CHANGE IN HEALTH CARE SERVICE DELIVERY SYSTEMS

The World Health Organisation (WHO) defines health systems as '…consisting of all the people and actions whose primary purpose is to promote, restore or maintain health'[3]. WHO defines health care systems as having three main objectives: firstly, to improve the health of the population they serve; secondly, respond to the population's expectations; and thirdly, provide financial protection against the costs of ill health.

Many health systems, including the Australian health care system, are based on principles of non-discriminatory access, provision of the best available care, at no direct cost to the user, and where prevention is emphasised[4]. In attempting to build a health system based on these principles, Victoria (along with most other health systems), has experienced a number of health reforms in recent years. WHO identifies three distinct yet overlapping generations of reform that have been pursued by developing and developed countries from the mid-20th century to the present day. These are briefly discussed as follows.

5.2.1 PHASE ONE – 'NATIONAL HEALTH' MODELS

The first phase was characterised by the establishment of national health care systems, which by the late 60's and early 70's, were under growing strain on their resources as demand for hospital-based care grew at an almost exponential rate. Public funding of health care was stretched, and studies conducted across the world indicated, '…half or more of all inpatient spending went towards the treatment of conditions that could often have been managed by ambulatory care'[5].

5.2.2 PHASE TWO – PRIMARY CARE MODELS

The second wave of reforms focused on the introduction of health care models that provided for a more cost-efficient and equitable distribution of what was becoming acknowledged as 'limited/capped' funds. The emphasis of the new reforms was to ensure that the new models of care provided for greater access to services, and were also responsive to the community's needs and expectations; provided services for those in most need of health care, and were affected in an integrated manner. Primary health care models formed the crux of the new set of reforms promoting public health, preventative medicine, education of the community and freer access to essential medical supplies. Within developed countries, primary care has been closely associated with the general/family practitioner, the introduction of nurse practitioners and the provision of community nursing and health services.

One of the growing criticisms of current primary health care reforms has been its inability to satisfy the demands of the community. Arguments have been put forward that primary health care models are designed to focus on

[3] World Health Organisation (2000), *World Health Report 2000*

[4] World Health Organisation (2000), *World Health Report 2000.* (As early as 1944, the British National Health Service issued a policy stating that 'everybody, irrespective of means, age, sex or occupation should have equal opportunity to benefit from the best and most up to date medical and allied health services available, adding that those services should be comprehensive, free of charge and promote good health as well as treating sickness and disease').

[5] Barnum H, Kutzin J (1993), *Public hospitals in developing countries: resource use, cost, financing*

meeting the needs of the people, which often do not necessarily reflect what they want. This is not surprising, given that both the first and second phase of reforms have been largely supply driven.

5.2.3 PHASE THREE – PATIENT-CENTRED CARE MODELS

The current wave of reforms seeks to follow the patient through the health care system. Developments of clinical pathways are not new within developed countries. The challenge is in defining a model with the ability to match resources to this pathway. Some countries have experimented with various service delivery models, where general practitioners are budget holders and responsible for the planning and purchasing of health services for their patients. Invariably one of the major constraints in progressing this reform as rapidly as the previous waves lies in the availability of reliable and robust information systems to support the tracking of patients.

WHO has concluded that '…the world is currently experimenting with many variants [of service delivery models], and there is clearly no best way to proceed. However, the industry is in need of developing a framework that assesses the health system's performance and enables purchasers, providers and patients to understand the factors that contribute to …provision of services; development of resources… required for the system to work; mobilising and channelling finances; and ensuring that the individuals and organisations that make up the system act as good stewards of the resources entrusted to their care'[6].

5.3 TRENDS IN KEY HEALTH SYSTEM POLICY DRIVERS

5.3.1 GENERAL TRENDS

A number of observers have noted similarities in a number of advanced health care systems. In one analysis[7], the following broadly similar policy drivers were identified as features of OECD health systems in the last decade or so:

- Maintaining and improving access to health care;
- A focus on cost control;
- A focus (in some health systems) on cost shifting; and
- An emphasis on changing decision-making systems.

5.3.2 REFORMS AND POLICY TRENDS IN VICTORIA

Throughout the 1990s, the Victorian Department of Human Services (and antecedents) implemented a number of major reforms. The key reforms, strategies, and areas with increased emphasis are noted below:

- Increased emphasis on service agreements, performance monitoring, and services evaluation is evident from the early 1990s;
- The creation and later reconfiguration of Health Care Networks;
- Significant investments in information technology and information management aimed at improving performance and accountability (eg introduction of AIMS in 1994; a major IT strategic review in 1997);

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[6] World Health Organisation (2000), *World Health Report 2000*

[7] Tuohy CH (1999), *Accidental Logics – the Dynamics of Change in the Health Care Arena in the United States, Britain, and Canada*, Oxford University Press, New York

- Major reforms in the funding of acute hospitals were introduced in 1994. Case-based payments now exist for acute inpatients, ambulatory patients, and public hospital rehabilitation cases. The funding models continue to be refined over time; and

- Development of comprehensive strategies in relation to mental health services, illicit and licit drug usage, and suicide prevention. In these examples, equivalent national strategies also exist. Victoria has been at the forefront of reforms that have informed development of national strategies (eg illicit drugs, mental health).

The Victorian health system is influenced by three major groups of drivers: demographic, technological, and policy-based. The Victorian health system is influenced in varying ways by all of the global policy drivers outlined above. An interpretation of some of the apparent trends in these policy-based drivers is briefly discussed below. Two key groups of drivers - demography[8,9] and technology[10] - are widely recognized as important demand and supply-side influences on health systems and are not discussed here.

In Victoria, it is apparent that a range of drivers embracing both service reconfiguration and policy dimensions has emerged in recent years. The 1990s and early 2000s are characterised by two major phases in terms of policy responses to demand and supply management issues.

In the first phase (roughly approximating the first half of the decade), the principal policy intervention in the Victorian health system focused on microeconomic reform. This phase was characterised by the introduction of output-based funding (initially hospital inpatient products), and progressively, contestability. This first phase was not exclusively one focused on microeconomic reforms. It is apparent that the early to mid 1990s also included a number of reforms within the mental health, the aged care, and the rehabilitation sectors.

The second phase (which coincided with the second half of the decade and extending into the early 2000s), is characterised by program innovation and practice improvement, and in particular:

- The emergence of new service supply concepts and practice;

- Strategies to manage high demand for services; and

- Strategies to address supply-limiting issues such as additional acute and sub-acute beds, and nurse labour force shortages.

Microeconomic reform extended into phase two, but was accompanied by other initiatives. The early part of this second phase was best characterised by two important initiatives that address the first two broad response domains (ie development of 'new service supply concepts and practice', and 'management of high demand for services') - the Hospital in the Home Program, and the Post-Acute Care Program.

The Department also initiated a diverse range of other activities that can broadly be categorized as the 'development of new service supply concepts and practice'. Examples of new service supply initiatives include the development of integrated care models (eg participation in the Australian Coordinated Care Trials), and the

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[8] In recent years, the Victorian population has grown by more than one percent annually. Between 1998 and 1999 for example, the Victorian population rose by 1.23% or around 57,000 persons. Most of the relative and absolute growth is occurring in metropolitan Melbourne. Between 1996 and 1999, Melbourne's population rose by around 134,000.

[9] In addition to population growth, the Victorian population has aged (in line with Australia generally). In 1996, 12.5% of the total Victorian population was aged over 65 years. By 2006, this is expected to rise to 13.6% of the total. The main explanation for the rapidly ageing population is that the 'baby boomer' generation born between the late 1940s and the early 1960s is now in middle to older age.

[10] The impacts of changes in health care treatments are evident in indicators such as the use of day surgery and day medical treatment. The proportion of same-day hospital patients has steadily risen in Victoria in line with trends elsewhere in Australia and overseas. Much of this shift is attributed to new health technologies.

Primary Care Partnerships Strategy (PCP)[11]. The PCP builds upon the particular strengths and roles of local government in providing primary health care services in Victoria. A further major example of a service supply initiative is the 'nurse practitioner project', which aims to broaden the clinical roles of nurses.

'Service practice responses' have been a significant component of the Department's response strategy of the late 1990s and early 2000s. Examples include the quality improvement program operating in hospitals, the ongoing development and refinement of quality indicators, and the support of the development of health care service delivery protocols.

Policy responses that emphasise the need to address systemic and chronic supply-limiting problems include the opening of new hospital beds and a nurse recruitment and training strategy.

5.4 APPROACHES TO FUNDING HEALTH SERVICES

The preceding discussion focused on recent trends in health care service delivery systems and how these systems evolve in response to a variety of influences, and in particular, policy-based drivers. The following material summarises the major funding mechanisms that have evolved in recent years in health systems such as Australia, Canada, and the USA. The following material is based on a recent Canadian study[12] that examined funding strategies in the context of performance measurement and reporting. The study offers a critique (through a systematic examination of features, mechanisms, advantages, and disadvantages) of the array of contemporary funding methods.

The information presented below, along with a consideration of the DHS quality framework in the context of funding policy, a consideration of MSP objectives, a consideration of known issues in relation to maternity services in Victoria, and a consideration of stakeholder views, suggest a basis for a set funding model principles that could guide development of a funding approach. This is discussed in more detail in Section 7 of this document.

5.4.1 FUNDING APPROACHES – A CLASSIFICATION OF CORE ELEMENTS

Element	Explanation
Scope	Extent to which funding targets money directly for hospital-based acute care, or whether the approach directs money to organisations that provide a variety of health services that includes acute care.
Method	Describes the mechanical elements of the process used to determine the specific dollar amount to be distributed

[11] The PCP strategy '…aims to enable community-based services to achieve high quality outcomes for consumers and deliver improved health and well being for the community. The strategy will support the creation of a genuine primary care *service system* by helping providers and professionals – such as GPs, community nurses, physiotherapists, counselors and home care workers – to work together and coordinate their response to consumers who need a number of different services' (Department of Human Services, Aged, Community and Mental Health, 'Primary Care Partnerships – Information Management Discussion Paper', July 2000, iii.).

[12] McKillop I et al (2001) '*The Financial Management of Acute Care in Canada: A Review of Funding, Performance Monitoring and Reporting Practices*', Canadian Institute for Health Information. Ottawa.

Element	Explanation
Sub-components of Methods	
Method modifiers	When applicable, describes techniques used to adjust the funding allocations determined by one of the funding methods on a retrospective or separate basis.
Data sources	When applicable, describes the premise used by a jurisdiction to obtain the data needed for certain methods

SCOPE OF THE FUNDING APPROACH IN MORE DETAIL

Scope	Description
Comprehensive	Approaches flow money to health service organizations with multi-sector responsibilities that includes hospital-delivered acute care. These organizations may have considerable freedom with respect to how they choose to allocate funds to each sector
Institutional	Approaches flow money directly to specific acute-care hospitals (or groups within a corporate body). Although these organizations may have some discretion over how money will be spent within their organization, they are not usually permitted to re-direct money to other organizations.
Service specific	Approaches flow money to organizations to support the provision of a specific service, or the care of a specific disease. The organization usually has the mandate to provide this care to residents drawn from a wide geographic area. Funds cannot be used for purposes other than the service or disease for which the funds were specifically granted.

METHODS USED FOR FUNDING IN MORE DETAIL

Method	Description
Population-based	Uses demographics or other characteristics of the population (eg age, sex, SES) to determine the relative propensity of different population groups to seek health services.
Facility-based	Uses characteristics of the organization providing care (eg size, type, geographic isolation, occupancy rate) to estimate the cost of operating a health service organization.
Casemix-based	Uses a profile of cases and/or service volumes previously provided (eg AR-DRGs) to estimate the cost to sustain a specified profile of cases and/or service volumes in the future.
Global	Applies a factor to a previous spending figure (or to a forecast value) to derive a predicted spending level for an upcoming period.
Line-by-line	Applies allocation factors on an individual basis to previous cost experiences (or to forecasted costs) to derive a proposed funding level for each line item (eg nursing, drugs) for an upcoming period.
Policy-based	Directs spending to address specific policy initiatives of the DHS. These policy initiatives affect the operation of multiple organizations within the jurisdiction.
Project-based	Flows funds to a single health organization in response to evaluating a proposal from that organization for one-time funding, often for major expenditure.
Ministerial discretion	The Minister decides on the specific dollar amounts to flow to health service organizations.

5.4.2 Features, advantages and disadvantages of different funding approaches

Generalised approach	Advantages	Disadvantages
Population-based approach		
• Assign individuals in population to a specific population group based on nominated characteristics; • Calculate per-capita spending rate for services (or standard service unit costs) for each population group then multiply by size of population group.	• Objective; • Comprehensive	• Complex (eg database linkages); • Can be difficult to implement; • Resource intensive (IT and staffing perspectives); • Potential lack of transparency (ie users need to understand all steps involved).
Facility-based approach		
• Decide characteristics of a facility that influence cost of care; • Fund the facility based at a unit rate for each of the characteristics identified	• Recognises that organizational structure (eg small rural, large urban) can influence the cost of providing identical services; • Allows DHS to create funding incentives (or disincentives) for organizational characteristics that are deemed desirable (or undesirable)	• May not reward utilization efficiencies; • Not responsive to demographic or case mix changes
Casemix-based methods		
• Determine volumes by AR-DRG; • Determine weighted volumes;	• Relates funding to actual services provided; • When used with regional average costs or prices,	• May create an incentive for weighted-case creep

Generalised approach	Advantages	Disadvantages
• Determine average unit price (or cost); • Multiply average unit price by weighted volumes.	creates an incentive to provide care in as efficient manner as possible.	
Global approaches		
• For each health service organization, begin with a base amount (eg prior year's allocation, actual spending); • Adjust amount by a pre-determined factor (eg CPI); • Result is base funding for current year.	• Provides a degree of predictability because the base amount is similar to the current year's base; • Relatively easy to calculate.	• Perpetuates inequities; • Does not encourage more desirable behaviours such as increased efficiency and more appropriate utilization of services.
Line-by-line approaches		
• For each health service organization, begin with a base amount (eg prior year's funding) on a line-by-line basis; • Adjust each line item by a pre-determined factor (eg CPI). Factor for each line item can differ; • Sum the adjusted line items.	• Allows DHS to promote focused policy initiatives via directed funding; • Provides a degree of predictability because the base amount is similar to the current year's base; • Simplicity.	• Unable to determine if past base allocations or spending for line items represent appropriate or efficient spending patterns; • Does not encourage increased efficiency and more appropriate utilization of services.
Policy-based approaches		
• Identify a region-wide or state-wide amount of money to be apportioned; • Using an allocation base	• Permits DHS (either regionally or statewide) to ensure initiatives directed by the government are	• Limited in its ability to be comprehensive across all services within a health service organization;

Generalised approach	Advantages	Disadvantages
appropriate for the specific issue or service requirement, determine for each service provider's portion of the total regional or state allocation; • Calculate actual amount for each service provider.	embraced by service providers; • Focused on specific desired behaviours or delivery of care issues; • Dynamic and timely as this method can be adopted at any time throughout the fiscal year in response to specific event or identified need.	• May be labour intensive in that the method requires identification of an appropriate allocation base and data related to that base from each health service organization.
Project-based approach		
• Request for one-time funding is prepared by a health service organization; • Request is submitted to DHS for review (and perhaps other organizations); • Using various criteria, request is evaluated; • Decision made and communicated; • Department engages in an active monitoring process with the grant recipient to ensure that funds are correctly expended.	• Permits DHS to actively engage with health service organization in the evaluation of funding requests; • Allows government to manage its portfolio of capital expenditures; • Ensures that required expertise to review and monitor significant funding initiatives can be accessed as such specialized expertise may not lie within all health service organizations.	• Approval and review process is often very time and resource consuming for both the government (DHS) and the requesting organization; • Difficult to priortise between competing demands on limited capital resources.
Ministerial Discretion approach		
• Minister is made aware of a situation that is affecting the ability of the health service organization to support ongoing operations; • Minister interacts with Dept to obtain	• Permits governments to direct funds necessary for major system re-design initiatives; • Consistent with policy – allows Govt to demonstrate its policy platform through funding	• Potentially inconsistent – significant changes in funding may occur after elections; • Short-term focus – may only be applied once, or change as policies or governments change;

Generalised approach	Advantages	Disadvantages
information needed by cabinet etc to review the situation. Minister may also receive input from citizens, administrators, care providers etc; • Minister makes funding decision.	decisions; • Representative – recognises the role of officials who have been given an elected mandate to govern; • Participative – allows interested groups to participate in the funding process though lobbying efforts; • Flexibility – removes non-discretionary constraints on decisions that are implicit in other (ie non-ministerially based) funding methods.	• A Govt's strategic direction may not be viewed as being equitable to all parties; • How the funding decision is made is known only to the Minister (or Minister's representatives) and is often not disclosed to the affected parties.

5.4.3 MODIFYING AND MEASURING FUNDING METHODS – 'SUB-COMPONENTS OF METHODS'

METHOD MODIFIERS

Modifier	Description
Penalty / Incentive Adjustment	These are used to increase or decrease funding based on certain performance criteria being met or not met.
Import / Export Adjustment	These adjustments are used to move funds from one health service organization to another when a funding method is not able to fully reflect patterns of providing care.

Modifier	Description
No Loss Adjustment	A no-loss adjustment sets funding equal to the greater of (a) the amount indicated by the new funding approach or (b) the funding that would be announced if the former funding approach were used[13].

DATA SOURCES

Data source	Advantages	Disadvantages
Spending data	• Consistency – there are well established conventions and rules governing the measurement and presentation of accounting information; • Availability – accounting data is routinely collected for health service organizations; • Familiarity – accounting data is easily understood by boards and managers.	• Entrenched bias – there is a limited ability to identify situations of over or under-funding; • Stasis – this data limits the ability to identify funding adjustments related to changes in volume and type of care; • Subjectivity – spending data can be more susceptible to subjective influences than explanatory data.
Explanatory data (ie this describes relationships observed between one or more events or conditions (eg number of neo-natal births) and the expenditure patterns of health service organizations).	• Conceptual – relates spending to factors driving costs; • Objective – less subjective influence or decision making; • Data-based – uses the richness of information captured in complex databases.	• Lack of transparency – depending upon how the model is constructed or presented, it can be difficult for lay users to understand the relationships among the events or conditions; • Perverse incentives – health service

[13] 'No loss adjustment' arrangements may operate in association with 'shadow budgeting' exercises (see Section 10.5 for a discussion of this in the context of the present project). In general, 'no loss adjustment' strategies are short-term (ie one or two years at maximum) and are intended to avoid or minimise any unintended consequences that may arise from a shift in funding strategy.

Data source	Advantages	Disadvantages
		organizations may 'game the approach' and make decisions that maximize benefit to the organization but may not be in the interest of the health system as a whole; • Consequence of error – a misspecification of the model, either as a result of poor data quality or a mathematical error in model design can cause incorrect apportionment.

5.5 INTERNATIONAL APPROACHES TO MATERNITY SERVICES FUNDING

The countries with health systems most often compared with Australia – NZ, UK, and Canada – have recently undergone, or are in the process of reforming their health sectors. Significant aspects of the formerly heavily market-oriented health systems of the UK and NZ are in the process of reform.

5.6 NEW ZEALAND

In New Zealand, virtually the whole decade of the 1990s witnessed a series of significant reforms to how health services were organised and funded. Maternity services experienced significant change also during this period.

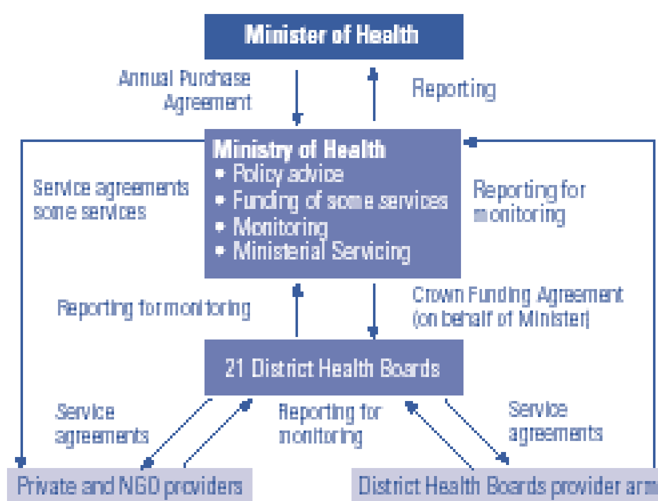
5.6.1 GENERAL CHANGES TO THE NZ HEALTH SYSTEM

At the beginning of the 1990s[14] Area Health Boards (AHBs) were responsible for the provision of public health, secondary and community care services. AHBs did not provide primary care services, although primary care was subsidised by the Government. AHBs were introduced under the Area Health Boards Act 1983. By 1989 the country was covered by 14 AHBs. In 1993 the Health and Disability Services Act introduced a system which separated out the purchasing of health care services from those organisations that provided services. Responsibility for the purchasing of services lay with four Regional Health Authorities (RHAs). These RHAs contracted with providers of services in both the primary and secondary care sectors. The RHAs did not have responsibility for public health services. These were the responsibility of a fifth organisation known as the Public Health Commission. The operation of the health and disability sector at this time reflected an international trend toward market-based systems. The 1996 Coalition Agreement on Health, whilst retaining the purchaser/provider split in health removed the emphasis upon competition between hospitals. In addition, the four RHAs (the Public Health Commission having been dissolved) were replaced by a single Transitional Health Authority that subsequently became the Health Funding Authority (HFA). The board members of the RHAs/HFA were appointed by the Minister of Health and there were no elected members. The RHAs/HFA were however, expected to reflect

[14] NZ Ministry of Health 2001, 'An Overview of the Health and Disability Sector in New Zealand'

the needs of users of services and have a commitment to community consultation. They also retained locality offices across the country.

In 2000, the Government initiated change in the sector that amalgamated the purchase and provision of services in the same organisations and decentralised decision-making to community-focused District Health Boards



(DHBs). The present structure is shown in the following figure.

5.6.2 Maternity Services in NZ

The following material is an edited extract from a recent NZ government publication[15]. In addition to substantial general reforms within the New Zealand health system in the 1990s, maternity services have also experienced significant change. The context for maternity services reform however, has a long history leading up to the general reform period of the 1990s.

Context - 1970-1990

A variety of legislative initiatives in the period 1970 to 1990 reinforced the central role of medical practitioners in the delivery of maternity services. By the late 1970s however, consumers were increasingly challenging this medical control. The Homebirth Association was established in Auckland 1978, asserting a woman's right to choose her place of birthing. Midwives became an effective lobby group in the 1980s. In order to gain registration with the International Council of Midwives, they had established a special interest section of the NZ Nurses Association in 1972. This lead to the development of midwife networks throughout the country, allowing midwives to identify as a separate professional group. The NZ College of Midwives was established in 1989.

The Nurses Amendment Act 1990 permitted midwives to operate as fully independent providers of pregnancy and childbirth services without reference to or supervision by medical practitioners. Accompanying changes gave midwives the power to prescribe, to order laboratory test and to claim maternity benefit payments at the same rate as GPs.

Maternity Services Review 1992-1995

By the early 1990s, maternity services were put under the spotlight because of concern about both cost and quality of care and other service delivery issues. By 1992, it was obvious that payments under the Maternity Benefit Schedule had increased substantially. A 1993 Ministerial Tribunal confirmed a single schedule of

[15] NZ Health Funding Authority 2000, 'Maternity Services: A Reference Document'.

payments for doctors and midwives, rejecting the doctor's argument for separate schedules. The Tribunal increased antenatal, delivery and postnatal fees and decreased labour and travel allowances. This reduced the income of most midwives but it did not limit the growth in the number of women who received parallel care from both a GP and a midwife.

At the same time, concern was expressed about service delivery. A Department of Health publication in 1992 argued for a review of maternity regulations. One of the reasons given was unsatisfactory practice and lack of accountability, demonstrated by two birth incidents, and a belief that there was a significant level of mortality and morbidity associated with pregnancy and childbirth. There was concern that the reformed health sector would increase non-government funded maternity services and the pressure for efficiency gains would compromise quality.

In 1993, the four Regional Health Authorities (RHAs) initiated a joint maternity project. The purpose of the review was to:

- purchase quality maternity services which meet the identified needs of women and their whanau[16] and families, and to provide a range of choices where possible, and
- contain the total costs of maternity services and address the level of duplication and over-servicing.

The subsequent report outlined a framework for maternity care based on women choosing a lead professional. In April 1994, Cabinet agreed to a modular funding model to purchase a 'lead professional' for primary maternity care, separating funding for primary maternity care from facilities and secondary maternity services.

IMPLEMENTATION OF CHANGES – 1996-1998

In 1996, further changes to the maternity services provisions were announced by the joint RHA team (termed the 'Section 51 Notice'). The changes introduced the concept of a Lead Maternity Carer (LMC) who would have overall clinical responsibility for a woman's primary maternity care. Comprehensive service specifications were introduced which reinforced the need for the LMC to involve the woman in planning and managing her care. The method of payment for LMC became modular for the second and third trimesters, labour and birth, and postnatal period. Fee for service continued for the first trimester and for some circumstances (e.g. urgent out-of-hours maternity care where a woman is unable to contact her LMC).

In recognition of the separation of LMC from facilities and secondary maternity services, a comprehensive set of guidelines was developed indicating when to refer to a specialist. The joint RHA team also issued a set of principles regarding access agreements by self-employed practitioners to facilities.

The NZ College of Midwives accepted the new provisions with reservation, expressing concern about both rural and postnatal care. The NZ Medical Association rejected the new provisions.

The RHAs agreed to accept a proposal from the NZ Medical Association to review the new provisions provided six key principles were met:

- information to women so they can make an informed choice of maternity carer
- LMC being responsible for either personally providing all aspects of necessary care or contracting with another provider for those components they could not provide personally
- a set of guidelines clarifying when specialist services are required
- improved accountability through more detailed service specifications
- improved collection of information about maternity services and their outcomes
- a capped total cost.

[16] 'Whanau' is a term used to describe the concept of 'family' in New Zealand Maori culture and society.

A proposal to issue further amendments was received from the NZ Medical Association and NZ General Practitioner Association (NZGPA) four months after the initial changes. This proposal was not endorsed by the New Zealand College of Midwives or HHS and had limited support from key women's groups.

Further changes were introduced in 1998 with the key change being separation of the fee for doctor LMC when using hospital/health service midwifery support services. The Notice requires midwifery input during labour, the birth, and in the postnatal period. Prior to the 1998 change, this meant that a doctor LMC needed to formalise sub-contractual arrangements with midwives, defining the components of service that each would provide and placing a price on the service. However, subcontracts were not generally developed even though Health Benefits Limited (HBL) has the capability of making these payments on behalf of practitioners. Prior to the 1998 amendment, many doctors claimed the full LMC fee and hospital/health service provided doctors with midwifery support services for no payment.

The other significant 1998 change to the Section 51 Notice was removal of ultrasounds from LMC budget holding, placing ultrasounds on a fee for service arrangement. Other 1998 changes were:

- removal of the 'options of care' fee where practitioners had been paid a $10 fee for providing women with unbiased information prior to registering with a LMC
- introduction of a fee for termination of pregnancy assessment, a miscarriage fee and a miscarriage follow-up fee
- introduction of a fee for a non-LMC labour and birth consultation in emergency circumstances in areas where there are no specialist services
- introduction of one postnatal non-LMC GP visit,
- specifying a required number of five to ten postnatal home midwifery visits
- removal of the six week check of the baby from maternity services.

The introduction of the main 1996 reforms was surrounded with controversy. As a result, the declared maternity strategy was to use the Section 51 Maternity Notice as a 'fall-back', moving to regional non-Section 51 arrangements, where possible. Within two years, 21 non-Section 51 LMC contracts had been agreed with approximately 30 percent of all deliveries receiving care from these providers. It was soon realised that these non-Section 51 LMC contracts were generally more costly, administratively time-consuming and provided no demonstrable improvement in health outcomes when compared to the Section 51 Maternity Notice. The Transitional Health Authority agreed that any further non-Section 51 LMC contracts would have to meet the following criteria:

- resolve an inability to access primary maternity services in a particular locality, and
- achieve an identifiable health gain, and
- meet the six basic principles the RHAs had developed in 1996, and
- have a payment system that reflected the pattern of care and not involve advance payments.

Apart from one contract where a formal offer had already been made, there have been no new non-Section 51 LMC contracts since January 1998.

The 1996 changes focused on primary maternity services but these changes had a flow-on effect to other maternity services. The changes separated primary maternity services from facility and secondary maternity services. With the separation of the revenue stream, the facility component was repackaged in price/volume contracts based on volume of deliveries.

Secondary maternity services were funded on Diagnostic Related Groups (DRGs) with a set volume of case weights, except for the four hospital/health services (HHS) in the North Health region which had a funding formula based on the number of deliveries in the catchment area. In 1998/99, the remainder of the country moved to the North Health model.

RECENT OBSERVATIONS

In 1999[17], the Health Funding Authority (HFA) sought a written strategy covering all maternity services in order to recheck the direction and provide certainty to the sector. The strategy review concluded that there is evidence of improved outcomes and maternal satisfaction when there is continuity of care, thereby supporting the LMC concept. The data has shown clinical outcomes and consumer satisfaction to be at least as good for a midwife LMC as for a doctor LMC. The National Health Committee could not find justification for recommending significant new expenditure to reverse the changing makeup of the maternity workforce.

In relation to workforce issues, it was noted that '…the novelty of being a self-employed midwife is diminishing with an increasing number of experienced self-employed midwives leaving LMC work, citing insufficient revenue as their reason. Some self-employed midwives prefer to return to set rosters in HHS while others are opting out of maternity. HHS no longer has a pool of midwives interested in LMC work and overseas recruitment is increasingly difficult due to an international shortage of midwives. Polytechnics are having difficulty finding sufficient suitable applicants to fill midwifery courses'.

In late 2001[18] the NZ Ministry of Health announced that '…maternity practitioners will get a 10.5% overall price increase…'. The rationale for this was stated to be that '…the price increase would encourage maternity practitioners to keep working in the sector…'.Other changes announced simultaneously included a provision preventing LMCs from '…charging co-payments for lead maternity care'; and the ability of women to hold their own clinical notes.

5.7 CANADA

The Canadian health system is probably the closest to the Australian health care system. The Canadian Federal and Provincial governments cooperate to provide a range of medical, hospital, and ancillary services to residents. The broad umbrella system is termed Medicare and is authorised by the Canada Health Act. The federal government has responsibility for:

- Setting and administering national principles or standards for the health care system;
- Assisting in the financing of provincial health cares services through fiscal transfers delivering direct health services to specific groups including veterans and native Canadians; and
- Other health-related functions such as health protection, disease prevention, and health promotion.

The provincial and territorial governments are responsible for:

- Managing and delivering health services;
- Planning, financing, and evaluating the provision of hospital care, physician, and allied health services; and
- Managing some aspects of prescription care and public health.

Each Province has a local implementation of Medicare - often referred to as 'provincial health plans'. In broad terms, the Canadian Medicare system provides free access to essential hospital-based medical, nursing, certain dental services, eye care, and some allied health services. Hospital-based maternity services and some birthing centre services are covered. Exclusions include private beds, and a range of non-essential allied health services. In some provinces and territories, non-hospital based midwife care is not funded under Medicare. More recently, however, Ontario, Quebec, Manitoba, and British Columbia commenced funding midwifery services under Medicare. Typically, midwives provide care to pregnant women before and after birth. They may also manage planned home births and hospital births[19].

[17] NZ Health Funding Authority 2000, 'Maternity Services: A Reference Document'.

[18] NZ Ministry of Health, September 2001, 'Proposal to change maternity contracts – media release'.

[19] Canadian Institute For Health Information 2001, 'Health Care in Canada: 2001', p62

More recently, the Canadian federal government initiated a major review of the Canadian health system, and setting a future agenda. In 2001, the Commission on the Future of Health Care in Canada was established. The broad aim of the Commission is to improve the quality, effectiveness, and viability of health services in Canada. Drivers for the establishment of the Commission include concerns about the scope of public health services, concerns about funding and fiscal viability of the system, concerns of about quality of care and access to care, and concerns about collaboration and roles (at professional levels and at inter-governmental levels).

In early 2002, a number of interim and discussion documents were released by the Canadian government for review by the community. Funding mechanisms are a key feature of the Commission's review process. An extensive community consultation process is currently underway.

5.8 UNITED KINGDOM

The United Kingdom is also presently undergoing substantial reform to its National Health Service (NHS). The UK health system is significantly more centralized than Canada, New Zealand, and Australia. The centralized nature of the United Kingdom state is reflected in the structure of the NHS. The NHS, which was established in 1948, still stands out as the most centrally managed and financed health care system in the world. The central government is not only involved in the financing of health services but is also heavily involved in the management and delivery of services.

In 2000, the UK Government set out its plans for modernising the health service and delivering better services to patients, through improved quality and efficiency, offering prompt high quality treatment and care built around the needs of individuals. Two broad strategies underpin the modernization program. Firstly, a Modernisation Board has been established to drive the whole process. Secondly, ten taskforces have been established to focus on 'what' services need to be focused on, and 'how' this should happen. Six taskforces will focus on 'what' services will be addressed. These 'what needs to be done' taskforces will focus on:

- Coronary heart disease;
- Cancer;
- Mental health;
- Older people;
- Children;
- Waiting times and access to services.

Four taskforces have been established to examine 'how' modernization can best proceed. Their focus areas are:

- Workforce issues;
- Quality of care;
- Reducing inequalities and promoting public health; and
- Investing in facilities and information technology.

The development of the new NHS includes the establishment of a rolling program of National Service Frameworks (NSF)[20]. Each NSF is defined around the key focus areas of the six 'what needs to be done' taskforces. National Service Frameworks are to be developed for:

- Cancer;
- Coronary heart disease;
- Diabetes;
- Long-term conditions;
- Mental health;
- Older people;
- Paediatric intensive care;
- Renal; and
- Children.

An NSF for children's services is expected to be developed and released for discussion in 2002.This NSF will take key NHS Plan values - modernisation, breaking down professional boundaries and partnership between agencies - and apply them to services for children. It will cover maternity and social services, and child & adolescent mental health services. It will look at prevention, care and treatment and will set out general principles and standards for children's services; using realistic examples to illustrate care pathways and make them live.

The NSF will deal with some important cross-cutting themes, and in particular, tackling inequalities and access problems; supporting children with disabilities and special needs; involving parents and children in choices about care; integration and partnership, including breaking down professional boundaries; and children growing up - for example, the transition to adult services. Each NSF will be developed with the assistance of an expert reference group that will bring together health professionals, service users and carers, health service managers, partner agencies, and other advocates. In an NHS sponsored July 2001 workshop aimed at defining the scope of the Children's NSF, participants identified a range of issues relating to maternity services. These included:

- There have been numerous initiatives and reports in the past, but little evidence of any resulting change.
- No one document focuses on maternity, so the high-profile NSF will trigger high expectations of delivery.
- Shortages of resources and workforce: there is a gap between national targets and the resources for local delivery, eg. midwives are said to lack the time to work on smoking in pregnancy.
- The common ground between children's services and maternity services: the need for the NSF to encourage consumer involvement.
- The need to make the NSF child- and pregnant woman-focused;
- The need to make connections for better co-ordinated services;
- The need for services that are comprehensive (not "bolt on") and integrated (in thinking and working);

[20]UK Secretary of State for Health 2000, 'The NHS Plan" A Plan for Investment, A Plan for Reform', HMSO

- The need to trust each other and focus on outcomes (quality, not just quantity);
- The importance of the antenatal period; and
- The need to give women a real choice.

The reference groups for each NSF will adopt an inclusive process to engage a range of views. The Department of Health will support the reference groups and manage the overall process.

To set national standards and define service models, each NSF will include an assessment of the health and social care needs to be addressed; the evidence on effective and efficient interventions and organisational arrangements; the present position and the issues to be tackled; resource implications; and the timescale for change. The national standards will be underpinned by a clear statement of the evidence base. This will draw on existing research, and may require further work to be commissioned. The NSFs will include performance measures against which progress will be assessed.

The NHS Plan also includes a number of separate reforms intended to address maternity services. An early initiative involves the granting of authority to nurses to prescribe a limited range of medicines. It is planned that later, the NHS will extend both the range of medicines which can be prescribed and the numbers of nurses who can do so. The introduction in 2001 of 'Patient Group Directions', which enable nurses and other professionals to supply medicines to patients according to protocols authorised by a doctor and a pharmacist, will mean that by 2004 a majority of nurses should be able to prescribe. It is also proposed that midwives will develop their role in public health and family well-being. They will work with local doctors and nurses in developing maternity and child health services and other projects.

5.9 SUMMARY AND CONCLUSIONS

The available evidence from the literature relating to macro-level health system structures and funding strategies suggests that Victoria is at the leading edge of the third phase of health system evolution. Policy initiatives of the 1990s and early 2000s clearly point in the direction of patient-centred models of care and new care modalities generally. As with most health care systems however, funding strategies in the acute health sector are still largely output-based. It is clear that in the recent past, the Department has started to move towards an approach that blends outputs and outcomes. The outcome dimension is essentially centred on the quality framework, and the next steps for maternity services are likely to represent an early attempt at integration of quality requirements within the larger output-based funding paradigm that has dominated most of the 1990s.

A review of recent events in comparable health systems such as NZ, Canada, and the UK, all point to reforms in health system design and funding. Some of the stated reasons for health system reform have common themes. Key commonalities include:

- The need to address workforce supply and sustainability;
- The need to improve service integration, collaboration, and quality; and
- The need to develop sustainable funding strategies.

In each system reviewed, maternity services have either been substantially reformed or are the present focus of reform. Some of the reform agendas explicitly address maternity services (eg NZ); others such as the UK have incorporated maternity services within the scope of other services. New Zealand has probably experienced the most significant reforms in relation to maternity services provision and funding. Notwithstanding the key reforms in NZ however, maternity services currently face significant workforce pressures, particularly in relation to the midwife labour force. In Canada, it is apparent that the Federal government is concerned in its reform agenda for health, to ensure that inequalities and access to services across Canada are minimized. A good example is that

of maternity services where some Provinces and Territories do not fund access to antenatal midwife care, whereas some jurisdictions have recently amended their local Medicare implementations to include maternity services. In the UK, large-scale service configuration and modernization reforms are proposed for the 2000s. Maternity services are not separately addressed by its own NSF, and are embraced within a larger NSF addressing children.

In the context of the present study, recent trends elsewhere suggest that the present study can benefit from a focus on two main areas[21]. Firstly, any future options for the mainstreaming of maternity services program funding should encourage greater service integration, enhanced collaboration, and improved quality. Secondly, any future funding options need to aim towards long-term sustainability. These broader contextual imperatives have significantly influenced the conceptual approach to identifying and assessing future funding options for the MSP program.

[21] Broader issues around workforce supply and workforce sustainability (a third theme of recent trends in health services funding in comparable nations) cannot be systemically addressed or resolved through revised MSP funding mechanisms. These workforce issues however, are discussed in the next section, and underlie broader systemic issues, particularly in rural areas.

6 STAKEHOLDER PERSPECTIVES

6.1 INTRODUCTION

The following material summarises the key issues that have arisen from consultations with a range of stakeholders. The implications of these issues for the mainstreaming of MSP are discussed also.

6.2 BROAD THEMES EMERGING FROM STAKEHOLDER CONSULTATIONS

A range of issues repeatedly emerged during consultations with stakeholders. Most of the key issues summarised in the DHS Discussion Paper (see Section 4) were raised by stakeholders. Additional or supplementary comments are noted below.

6.2.1 SERVICE GAPS AND ACCESS AND EQUITY AND ACCESS ENHANCED BY MSEP

A number of stakeholders (particularly those from non-VACS funded hospitals) commented that the Maternity Services Enhancement Program (MSEP) had created the opportunity to address deficiencies and gaps in standard service delivery. Of particular note were deficiencies and gaps in antenatal services, especially the provision of shared care.

A key concern for stakeholders relates to how MSES-enabled service enhancements would be able to continue under conditions of mainstreamed MSP funding. A critical success factor for MSES has been the identified or targeted nature of the funding. This is discussed in the next sub-section.

6.2.2 BUDGET DEVOLUTION ISSUES AND ACCESS TO BUDGETS

The recent DHS discussion paper (see Section 4 above) identified a key issue in relation to how MSP funds would be accessed by program managers 'on the ground'. For some stakeholders, there is concern and scepticism over how program managers would be able to secure their 'rightful share' of casemix funding in order to deliver a comprehensive package of maternity services[22].

It seems that an underlying problem for some program managers is that the culture of hospital management (at least in some hospitals) is seen as too 'top-down' or centralised in terms of resource allocation decisions. In this hospital management environment, programs such as maternity services invariably fare poorly in terms of being able to secure sufficient funding. Key contributory factors suggested by stakeholders include:

- Poorly defined local budget allocation rules, including the absence of business unit accounting that would facilitate equity in budget allocation;
- Inadequate costing information relating to the provision of antenatal and postnatal care services in particular. This weak knowledge base results in a weakened capacity to bid for budget resources;
- The service composition of maternity services is uniquely defined at each hospital. In effect, maternity services suffer from imprecise product definition. The almost idiosyncratic manner in which maternity services is defined assures a poor basis with which program managers can bid for budget allocations. This is exacerbated by the problem of defining an 'episode of care'; and

[22] The material raised in this sub-section is not claimed to be a universal issue. For example, internal funding allocation protocols, business unit budgeting, and related matters are said to be equitable and transparent. This appears to be especially true in larger hospitals.

- The perception of maternity services (particularly non intrapartum services) within hospitals as 'soft', and thus poorly placed to bid for resources. A number of stakeholders noted that the concept of providing a comprehensive maternity care service within a hospital 'acute care culture' was inherently difficult because of differing philosophies in hospitals around what constitutes the core business of hospitals.

The principal concern voiced by stakeholders is that whilst 'mainstreaming' of MSP funds was a theoretically sound concept, too many practical problems or difficulties exist that would threaten service delivery if the current funding arrangements were changed. Mainstreaming would only be viable if the above issues could be resolved.

6.2.3 COST AND REVENUE ISSUES

Many stakeholders strongly believe that current inpatient cost weights (and hence the revenue base) for maternity services are significantly flawed and require urgent review. This view seems stronger in hospitals where the casemix profile comprises mainly lower complexity cases. For some rural stakeholders, it is claimed that costs have rapidly risen in recent years (eg rising ambulance charges; disproportionately high cost of engaging the services of visiting medical officers etc) to the point where true costs substantially exceed revenues. For some rural hospitals, the cost of intrapartum care alone is a major contributor to high and rising hospital financial deficits.

A number of stakeholders also commented on the relatively rapid pace of change in obstetrics care that has direct impacts on the cost of care. The dominant trends focus on three areas: technological change, practice change, and changing consumer expectations. For example, the service mix is said to be evolving away from more frequent but short antenatal clinical sessions, to a scenario in which women see clinicians less often but for longer periods. In addition, the increasing prevalence of chemically dependent mothers has resulted in more intensive and different approaches to care that have cost implications. The key issue arising from these stakeholder observations is that changes in cost structures have outpaced the pace of change in the casemix funding formulae for inpatient services.

The major implication of the apparent mismatch between actual costs and revenue is that if mainstreaming were implemented without safeguards, services would become limited to mainly intrapartum and postnatal care. The main loser would be antenatal care.

6.2.4 AMBULATORY CARE FUNDING ISSUES

It is apparent from our consultations that views on the virtues of MSP mainstreaming differ somewhat depending on whether the stakeholder works in a VACS-funded hospital or non-VACS funded hospital. In general, the larger VACS-funded hospitals had fewer issues around mainstreaming than did non-VACS funded hospitals. The main exception to this generalisation is where budget allocation processes are claimed to lack transparency in VACS-funded sites.

The key difficulty faced by stakeholders wishing to maintain the delivery of enhanced maternity services in non-VACS funded hospitals is the widely held view that 'they are not funded to provide antenatal and postnatal care services'. Whilst it is true that non-VACS funded hospitals are funded differently from VACS-funded facilities, it is inaccurate to say that these types of services are NOT funded. The issue for these hospitals is ultimately one of how to determine local priorities for funding, and then how to share the budget. A very real problem here is that perception of what is possible or not possible counts for a lot. The widespread view that VACS funding status is a determinant of what can and cannot be provided is a significant perceptual barrier.

The main implication of the VACS funding dichotomy problem is that stakeholders from non-VACS funded hospitals believe that simple mainstreaming of MSP funding would be a deleterious step that would result in service contraction.

6.2.5 Communicating the MSEP experience and evidence-base to the field

Many stakeholders commented on the need for the MSEP experience to translate into an improved evidence base that could more generally enhance clinical and care practice. For these stakeholders, the MSEP had two main benefits. The first benefit was largely around being able to fill gaps in existing service delivery. This type of benefit is largely local and not generalisable. The second benefit arose from being able to add to the clinical and care evidence base. This benefit is viewed as potentially accessible to all providers and thus generalisable.

Stakeholders who share this view see the enhanced evidence base as having the potential for more rigorous definition of the models of antenatal and postnatal care (especially the former). This in turn can evolve towards an evidence-based approach to maternity services product definition. Better definition of the care processes can then be more closely matched to outcome expectations and an enhanced capacity to measure those outcomes.

A difficulty noted by some stakeholders relates to the point at which the Department should cease to be an information resource, and where the Department should start to prescribe service types. For some of these stakeholders, maternity services would be enhanced by greater central office prescription of what service configurations should be provided. For other stakeholders however, central office's role should be more about information provision and setting outcome standards. Under this model, service configuration is seen as a local task.

The main implication of this complex issue for the present project is how the MSEP experience should best translate to practice more broadly. For some stakeholders, the mainstreaming of MSP would be more acceptable if it were accompanied by greater levels of centrally-defined service model definition.

6.3 Particular issues for rural regions

A number of the preceding issues apply to both rural and metropolitan contexts. Our consultations however, suggest that the mainstreaming of maternity services program funding in rural areas may present special difficulties. The primary reason for this assertion is that rural stakeholders face a range of structural and systemic challenges. For these stakeholders, their response to the prospect of MSP mainstreaming cannot be detached from these broader challenges. Some of the key issues raised are outlined below.

6.3.1 Realistic choice options

For many rural hospitals, the ability to provide a minimum acceptable suite of maternity services is strictly limited by geography, workforce availability, and scale of operations. Some rural stakeholders argue that models of care that might be considered as standard in urban contexts, may simply not be attainable in some rural areas. Thus, centrally prescribed service models need to reflect the realities of rural Victoria.

6.3.2 Cost disadvantages in rural areas

Rural stakeholders in general argue that rural cost structures differ from those in metropolitan areas. The key contributing factors are:

- Atypical cost profiles for ambulance services (eg very large recent cost increases); and
- The contractual arrangements (including indemnity issues) and resulting costs associated with the provision of medical services by visiting medical officers (VMO). Some rural hospitals have been forced to enter into high-cost arrangements with VMOs in order to provide ongoing clinical services.

The usual casemix profile of rural obstetrics cases does not provide sufficient revenue flexibility to absorb these higher than usual costs.

6.3.3 POSTNATAL CARE SERVICES AND SMALL RURAL HOSPITALS

Some smaller rural hospitals are mainly providers of domiciliary postnatal care to women who have delivered their babies elsewhere (eg in metropolitan or regional centre hospitals). In these circumstances, the 'receiving' hospital provider of postnatal care agrees a unit price with the hospital that delivered the local mother's child. For these service providers, the staffing mix and resources required to provide services result in high cost structures. In addition, low volume intrapartum care hospitals find skilled staff recruitment difficult.

6.3.4 WORKFORCE ISSUES

All rural stakeholders maintain that one of the key problems faced on an ongoing basis relates to the recruitment, retention, and training of clinical staff. Two areas are of particular concern:

- The supply of suitable medical staff. The numbers of vocationally trained obstetrics and gynaecology medical staff are low and falling in Australia, with only small numbers entering the rural medical workforce. This problem is coupled with declining numbers of general medical practitioners able and prepared to provide intrapartum clinical services. Inextricably linked to this phenomenon is the issue of medical indemnity costs and where these costs are to be borne;

- The supply of qualified midwifery staff. Rural areas struggle to recruit and retain qualified midwives. In addition, smaller hospitals often require their midwifery staff to perform mainstream nursing duties, a requirement that is seen as a barrier to recruitment. In addition, some stakeholders claim that reductions to DHS midwife training grants are a major contributor to labour force problems at present. Similarly, the direct entry midwifery-training scheme in Victoria is seen as a further threat to the supply of midwifery staff in rural areas.

6.4 ACTION AREAS

A number of issues raised by stakeholders appear to warrant early investigation. The areas outlined below are directly relevant to the mainstreaming of MSP funds. We recognise also that these areas have wider implications that may extend beyond maternity services.

6.4.1 RESOURCE ALLOCATION ISSUES

TASKS

- Improving resource/budget allocation procedures and practice in hospitals (in particular, non-VACS hospitals).
- There is a need to know more about recommended practice, actual practice, deficiencies, availability of assistive tools, training etc, and to address any problems

RATIONALE

- Stakeholders claim that resource allocation processes at hospital-level lack transparency, and disadvantage maternity service programs

6.4.2 GENERAL COSTING ISSUES

TASKS

- Quantify costs of care for the main models of antenatal care offered by hospitals (eg midwife antenatal clinic model, others)
- Quantify costs of providing hospital-based postnatal visits

RATIONALE

- Quantification of costs of major elements of *'bundled maternity care'* required for development of cost weights and [potentially], re-allocation of resources from VACS and non-VACS fund pools[23].

6.4.3 SPECIFIC COSTING ISSUES

TASKS

- Quantify costs of inpatient care in rural hospitals, with particular emphasis on claimed areas of abnormally high cost (eg ambulance transfers, cost of VMO services, others)

RATIONALE

- Rural stakeholders claim that actual cost profiles for maternity services (especially inpatient care) are significantly higher than for non-rural areas. Under the suggested mainstreaming of MSP funds model, provision exists for 'price modifiers'[24] that can be used as weights or loadings for factors such as high-cost contexts.

6.5 SUMMARY AND CONCLUSIONS

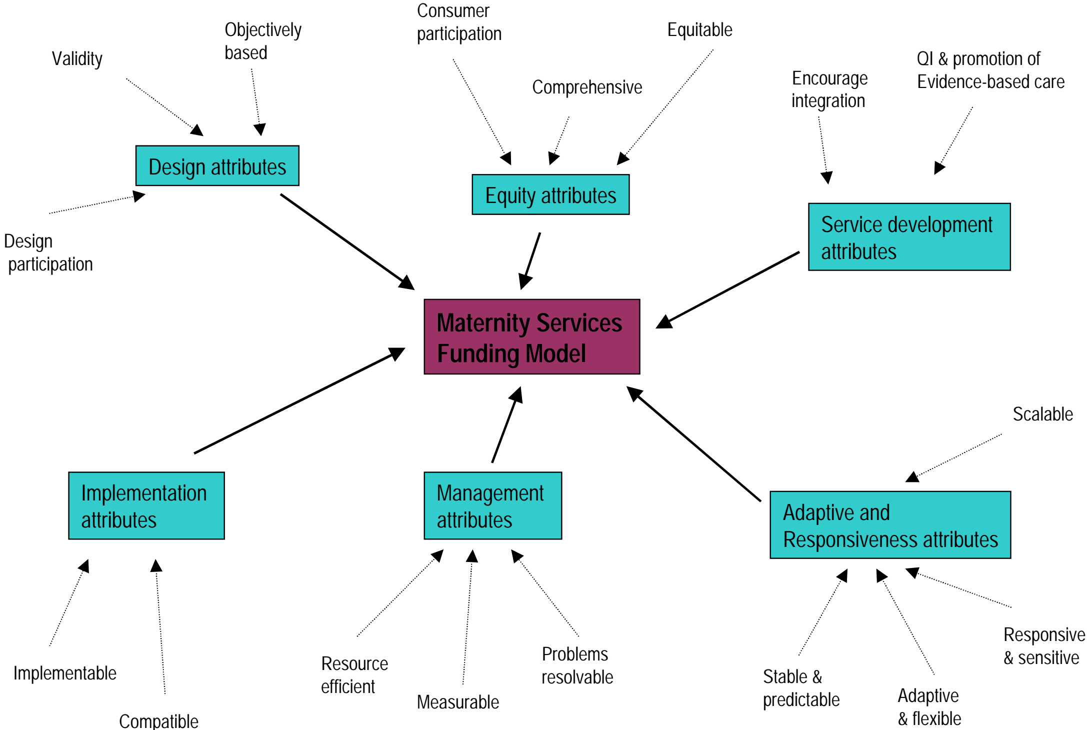
The stakeholders consulted during this project strongly validated the key content issues articulated in the Department's 2001 discussion document. The main additional emphasis that emerges from this process relates to significant issues faced in rural areas, and in particular, issues around costs and revenue, and issues around the medical and nursing workforce. The strongest consistent theme centres on general fear of mainstreaming without safeguards. The types of safeguards suggested by stakeholders emerge in the next section dealing with potential funding models for maternity services.

[23] The 'bundled maternity care' casemix payment concept is discussed in more detail later in this document (see Section 8.6)

[24] The concept of 'Price Modifiers' is discussed in the context of the preferred funding model for mainstreaming of MSP funds – see Section 8.6 of this document.

7 CORE ATTRIBUTES OF A FUNDING MODEL FOR MATERNITY SERVICES

The following candidate attributes have been developed as criteria for use in the assessment of potential funding models for maternity services in Victoria. Some of the suggested attributes are closely inter-related (see following figure), and are discussed below in groups of related attributes.



Desirable attribute	Description	Measurement or verification of attribute (indicators or criteria)
Design attributes group		
General validity	The model must be suitable for the range of services included, including across-care settings. The intrinsic characteristics of the model should satisfy face validity testing with stakeholders, and be consistent with best available evidence for comparable circumstances (ie construct and content validity as assessed from the literature).	Face-validity tested with stakeholders for: • Design • Equity • Service development • Adaptability and responsiveness

Desirable attribute	Description	Measurement or verification of attribute (indicators or criteria)
		• Management • Implementation Model constructs based on published evidence
Design participation	The funding model should be influenced and shaped by all stakeholders affected by the model (ie providers, consumers, professionals, funders, regulators)	Evidence that the model has been developed in conjunction with all key stakeholders and that stakeholder concerns have been addressed
Objectively-based elements	In terms of evidence, identifying and quantifying relationships etc, allocation rules etc.	Model to be fully documented, with particular attention to: • Definition of all elements of model • All relationships between elements to be quantified in terms of direction and magnitude • All assumptions to be described and justified (including use of arbitrary or subjectively determined assumptions, thresholds etc) • All performance criteria and measures to be defined and quantified (including adjustment factors, penalty provisions, incentive provisions etc)
Equity attributes group		
Consumer participation	The model should reward and reinforce provider behaviours that	• Evidence that consumers participate in formulation of

Desirable attribute	Description	Measurement or verification of attribute (indicators or criteria)
participation	encourage consumer participation in healthcare decisions and practices.	participate in formulation of the configuration of maternal care services received • Evidence that consumers participate in satisfaction surveys, care reviews etc
Comprehensive, inclusive approach	The model should minimize exclusions or omissions (in relation to all population groups of interest, providers etc)	• General principle is that funding model applies to all provider types and to all classes of consumer • Where population groups of interest require special consideration or treatment (eg rural providers, Koori populations etc), any variations to the model should be fully documented
Equitable	The model should not perpetuate underlying or pre-existing inequities (for consumers, providers, regions), and should explicitly address equity concerns and equity policy objectives in its construction	• Model to include incentives and/or penalties in relation to achieving targets (eg attainment of set % of shared care packages) • Outcomes and performance criteria for each product and/or package of care to be specified in service agreements • Where additional or supplementary outcomes or requirements for special populations exist, these to be specified
Service development attributes group		

Desirable attribute	Description	Measurement or verification of attribute (indicators or criteria)
Encourage service integration	The model should encourage service integration, and equally, discourage fragmentation and duplication within and between service providers	• Model requires auditable documentation in relation to maternity services care plan that clearly state roles and responsibilities of providers and consumers. Each service element to be quantified and priced. • Evidence of service integration could include: o Use of common assessment tools o Use of common forms, stationery o Agreement on protocols etc o Data exchange and information sharing processes o Resource sharing, staff back-up etc o Other agreed indicators measuring integration
Quality improvement and promotion of evidence-based care	The adoption of quality improvement and use of evidence-based processes should be explicitly embodied in the funding model. The model may accommodate various approaches to quality improvement.	Funding and service agreement to require funded agencies to develop quality improvement strategies. Content could include: • Clinical and care governance processes • Audit and other review processes • Consumer feedback provisions

Desirable attribute	Description	Measurement or verification of attribute (indicators or criteria)
		• Provision for input by other agencies or providers • Service development through horizon scanning, clinical and care practice literature reviews • Participation by clinicians and relevant staff in conferences, workshops etc
Implementation attributes group		
Ease of implementation	The model should be administratively easy to implement and monitor	• Implementation and monitoring requirements will be consistent with other funded products
Compatible	The model should be conceptually compatible with existing health services funding approaches in the Government's jurisdiction	• Model to fit within existing hospital casemix framework
Responsiveness attributes group		
Scaleable	The model should be suitable for varying scales of operation (eg small population groups of interest, organizational, regional)	• Quantum of funds to be based on throughput and unit product price. Where this basis is inappropriate or embeds inequity (eg for small population groups, regional or rural factors etc), any necessary variations or adjustments are to be made as supplements (within output categories) or as different products

Desirable attribute	Description	Measurement or verification of attribute (indicators or criteria)
Adaptable and flexible	The model should have the capacity for adjustment in order to accommodate incentives, disincentives etc, new policy initiatives, issues identified in monitoring and evaluation etc	• Core model to be based (see above) on throughput and price. Adjustment factors can be added, varied as required.
Sensitive and responsive	The model needs to be able to identify and respond to utilization efficiencies, detect changes in underlying demand drivers (eg population change), detect emerging care modalities, detect emerging perverse provider behaviours etc (through reporting and monitoring processes)	• Reporting and monitoring to be based on a combination of standard throughput data (eg inpatient separations) plus specific reporting requirements of funding agreement. Reporting requirements could include: o QI plans, processes, progress o Integration issues
Stability and predictability	The model should avoid potential for excessive volatility from one year to the next. In this respect, the algorithms need to be carefully constructed so as to avoid volatility.	• As model is casemix-based, quantum of funds will reflect historical volumes and current prices. For small providers with annually fluctuating throughputs, longer time series averages may need to be incorporated into model.
Management attributes group		
Resolvable problems	Unintended and other consequences of the model that result in problems or conflicts (eg between providers) should be explicitly addressed either within the model's formulation, or through an independent review process	• Conflict-resolution and arbitration to be provided in terms of funding and service agreements.

Desirable attribute	Description	Measurement or verification of attribute (indicators or criteria)
Resource efficient implementation and operation	The model should be inexpensive to implement and maintain	• Reporting and monitoring requirements to be annual, and based on secondary data sources where possible. Additional reporting against conditions of funding agreement to be annual also.
Realistic performance measurement	The model should be supported by a mixture of cost-effectively gathered primary and secondary data sources that support monitoring, QI, evaluation, and other key areas of interest to all stakeholders.	• Most data to derive from secondary data sources. Primary data collection to support performance measurement to be restricted to a maximum of two indicators.

8 CANDIDATE FUNDING STRATEGIES

8.1 INTRODUCTION

The following discussion of potential funding model options is based on a consideration of stakeholder perspectives, a review of the broader literature on funding strategies, and the current funding and quality framework of the Department. The main candidate options are outlined below, and assessed in the next major section.

8.2 QUARANTINED FUNDING

In effect, this option represents a continuation of the present arrangements.

The key features of this model and how it might continue to be structured and funded are as follows:

- Inpatient (DRG) casemix classes remain unchanged
- Non-inpatient products (ie antenatal and postnatal care) remain undefined, unquantified, and unclassified for payment purposes
- MSP funding is separately paid to providers and/or regions
- Range of MSP services reflects status quo (ie idiosyncratic implementation by sites and regions of MSEP). Regional and/or inter-site inequities are perpetuated.
- Minimal requirement by the DHS to report on performance
- Limited ability to measure, interpret, and evaluate performance

8.3 FUNDHOLDER MODEL

A commonly observed approach in funder-purchaser-provider health systems (eg UK, NZ, and some Australian States) involves the nomination of a fundholder who will purchase services on behalf of consumers. Fundholder models can assume a variety of forms and complexities. At the simpler end of the continuum, the fundholder may simply act as a third party purchaser where all products and prices are pre-determined from pre-fundholder circumstances. The more complex models see the fundholder as a case manager with a direct involvement in care decisions. These models may employ care planning tools, case management infrastructure, the use of clinical pathways, and a market-oriented approach to purchasing services.

In the context of maternity services, the key features of one implementation of the fundholder model could be as follows:

- Establishment of a fundholder role (may take several forms, including the hospital as fundholder, GP as fundholder, independent midwifery service provider as fundholder). The costs of fund holding need to be budgeted for;
- In a limited implementation of a fundholder model, inpatient casemix classes would probably remain unchanged;

- For informed purchasing decisions, non-inpatient products would require definition, quantification, costing (and pricing);
- Maternity service clinical and care protocols are defined, evidence-based, and quantifiable. These would probably be incorporated into purchasing contracts;
- Requires development of standardised fundholder performance measurement and monitoring criteria in order to manage provider contracts;
- Provides for performance measurement, monitoring, and evaluation.

8.4 DISCRETE PROGRAM MODEL

A number of stakeholders argue that maternity services are complex, large scale, and thus either warrant separate program status, or status within an umbrella women's' health program. The rationale, at least in part, is that episodes of maternal care that embrace concepts of prevention, wellness, hospitalisation, and multiple service providers across the primary and secondary health systems, are not well managed or resourced in acute hospital contexts. Stakeholders argue that maternity service managers are not well placed organisationally to compete for acute hospital funds, and thus find it difficult to provide antenatal services in particular.

Other stakeholders argue that the concept of separate program definition and funding runs contrary to the principles of output-based funding of health services. Any move to excise or earmark present acute hospital funds for redirection to a separate program area is also seen as a risky precedent and backwards step. It also represents a shift in the locus of decision-making (ie in relation to how services are locally provided and resourced) away from agencies, and back towards the Department.

8.5 MAINSTREAM FUNDING, SPECIFIED CARE MODALITIES, SPECIFIED PERFORMANCE INDICATORS

A number of stakeholders submit that mainstreaming of present MSP funds might be acceptable if safeguards by the Department are provided in respect of:

- Specifying the types of antenatal, intrapartum, and postnatal care that must be available to consumers; and
- Specifying a minimum set of performance indicators.

These stakeholders argue that sufficient evidence exists from a variety of sources (eg evidence-based research, potentially through an evaluation of the MSEP) that would allow the Department to specify the types of care that it expects agencies and other providers to provide consumers. Depending on where a hospital currently is in terms of being able to offer the array of specified services, it is argued that the Department may need to provide supplementary funding. How this would be managed is problematic. The supplementary funding may involve a straightforward re-allocation of existing non-VACS and VACS resources towards funding the specified service types. A perceived difficulty with this approach relates to the lack of accurate costing data for non-inpatient care products. Thus, any re-allocation of funds may be arbitrary (at least in part), and may result in tensions within hospitals. As it is unlikely that 'new' money would be available to fund service improvement or enhancement of this type, the re-allocation of funds would be required. A minimum set of performance indicators matching the specified service types would also need to be developed.

As with the previous potential model (ie separate program funding), opponents of this approach argue that under current funding philosophies and guidelines, it would be inappropriate for the Department to assume responsibility

for specification of service inputs and care modalities. It is argued that these decisions around service e configuration and resource allocation are most appropriately managed at a local level.

8.6 MAINSTREAM FUNDING, SUPPLEMENTARY CASEMIX PRODUCTS, SPECIFIED PERFORMANCE INDICATORS

This model attempts to achieve safeguarding of MSP funds through specifying performance indicators, and through the provision of 'bundled packages of services' that would be funded under the casemix model. Under this model, existing inpatient casemix products would remain unaltered but could be supplemented by the addition of sub-classes within AR-DRGs, the use of 'expanded' AR-DRGs (that embrace all pre- and post-acute care services), or by the use of price modifiers. The first approach has been used in Victoria with the addition of additional AR-DRGs. The practical differences between the use of 'expanded' AR-DRGs and AR-DRG price modifiers are minimal. Price modifiers however, have the potential to address a range of other issues – examples include rural or regional loadings, performance incentives, performance penalties etc.

A claimed advantage of this model is that the Department has not removed local decision-making powers from hospitals. The Department's role in this model is to provide sufficient output specificity to assist local decision-making. This of course, is coupled with specified performance indicators.

As a zero-sum budget impact of creating additional output categories or price modifiers is assumed, it is likely that any additional funding may simply involve a re-allocation of existing non-VACS and VACS resources towards funding the new or modified output classes, particularly where these additional classes involve AR-DRG expansion or 'bundling'. The potential for funding to be reallocated on arbitrary criteria exist with this approach also.

9 APPRAISAL OF CANDIDATE FUNDING STRATEGIES

The following table summarises each candidate-funding model against the main criteria or desirable attributes discussed in Section 7 above. A discussion of the relative merits and disadvantages of the various approaches follows.

9.1 COMPARATIVE ANALYSIS - TABULATION

Attribute group	Attribute	Quarantined funding	Fund holder	Discrete program	Mainstream, defined service models, PI	Mainstream, new casemix products, PI
Design	General validity	Possible	Possible	Possible	Possible	Possible
	Consumer participation	Significant participation at local level	Input required at case management model design stage	Input required at program design stage	Input required at model design stage and locally at time of implementation	Input required at casemix product design stage and at local level in terms of implementation
	Objectivity	Combination of evidence-based influences, locally perceived imperatives and priorities	Evidence-base likely to be mainly from case management literature (for detail of model) and from health economics and managed care literature for fund holder and contracting issues	Centrally-defined model will require a mix of design inputs (literature, clinicians, regions, others)	Centrally-defined model will require a mix of design inputs (literature, clinicians, regions, others)	Definition of casemix products and determining cost weight relativities will be key activities.
Equity	Consumer participation	Currently not mandated, variable practice across state	Possible	Possible	Possible	Possible
	Comprehensive	No	Possible	Possible	Possible	Possible
	Equitable	No, existing inequities perpetuated	Possible	Possible	Possible	Possible

Attribute group	Attribute	Quarantined funding	Fund holder	Discrete program	Mainstream, defined service models, PI	Mainstream, new casemix products, PI
Service development	Encourage integration	Not universally; some MESP projects encourage integration	Recent evidence of fund holder model suggests adversarial or competitive style	Possible	Possible	Possible
	Encourage QI and evidence-based care	Not in present form	Possible	Possible	Possible	Possible
Implementation	Ease of implementation	Implementation occurs centrally and locally	Complex, idiosyncratic roll-out	Relatively straightforward	Complex; significant efforts required to negotiate, configure, staff, implement standard care models	New casemix product definitions required; products require costing; coding rules require definition etc
	Compatible	Not consistent or compatible with output-based funding system	Fund holder concept operates in certain DHS functional areas	Not consistent or compatible with output-based funding system	Concept of centrally-mandated service models not compatible with casemix model. Current funding paradigm devolves decision-making about service configuration.	Compatible with casemix funding model
Responsiveness	Scaleable	Separate, quarantined funds directed to small sites may not be viable	Based on client-centred concept. For very small locations, viability may be an issue	Small sites may suffer from scale diseconomies	Centrally prescribed service models may not be feasible for smaller sites. Small sites may suffer from scale diseconomies	Small sites may suffer from scale diseconomies

Attribute group	Attribute	Quarantined funding	Fund holder	Discrete program	Mainstream, defined service models, PI	Mainstream, new casemix products, PI
	Adaptable and flexible	Local priorities may change and may be accommodated by model, but would require renegotiation with DHS	As model is client-centred, service configurations are unique for each client. Model is inherently flexible	Depends on how program is designed, and in particular, the feedback processes via monitoring and evaluation	Central office capacity to be adaptive and flexible, but roll-out changes may be more difficult to adapt	Similar to any other changes in casemix model
	Sensitive and responsive	Probably responsive at a local level but would still require negotiation with DHS. Requires comprehensive monitoring approach	Inherently sensitive and responsive	Not without comprehensive monitoring	Unlikely. Centrally defined model may be responsive but monitoring processes and roll-out strategies would be more difficult.	Possible. Dependent on validity of casemix products. Other wise, similar to any other changes in casemix model
	Stability and predictability	Fixed funding approach inherently stable.	Depends on how global budgets are set.	Probably stable	Casemix type approach may disadvantage small sites if based only on previous year's throughput. May need to use three-year average or similar	Casemix type approach may disadvantage small sites if based only on previous year's throughput. May need to use three-year average or similar
Management	Problems resolvable	Approach to problem resolution varies across sites. Generally not explicitly addressed in current arrangements	Problem resolution can be addressed explicitly in care plans, and at inter-agency level in purchase contracts	Possible. Can be designed-in to program	Possible. Mechanisms can be included in funding and service agreements	Possible. Mechanisms can be included in funding and service agreements

Attribute group	Attribute	Quarantined funding	Fund holder	Discrete program	Mainstream, defined service models, PI	Mainstream, new casemix products, PI
	Efficient	As a separate funding source that requires acquittal, probably not efficient	Depending on choice of fund holder agency, administration costs may be high. This may be offset by some service delivery efficiency gains. Overall, not likely to be efficient to administer.	Separately managed program not likely to be efficiently administered	Likely to be efficient to administer as it is simply part of casemix model	Likely to be efficient to administer as it is simply part of casemix model
	Realistic performance measurement	Difficult to monitor and evaluate because of locally idiosyncratic implementation	Client-level M&E may need to be underpinned by client management system that can provide data. Other aspects of ease of performance measurement can be specified in funding and service agreements	May require distinct M&E processes as program is separate from casemix model	Choice of PI is critical to performance measurement. Ideally, key PIs should be derived from secondary data sources. No more than one or two KPI derived from primary data collection activities	Choice of PI is critical to performance measurement. Ideally, key PIs should be derived from secondary data sources. No more than one or two KPI derived from primary data collection activities. Ability to comply may be slightly lower than 'defined service model' variant of mainstreamed approach

9.2 COMPARATIVE ANALYSIS - DISCUSSION

The following material aims to provide both analysis and guidance in relation to the various funding models. The discussion is structured around the major 'attribute groups' used in the preceding sub-section.

9.2.1 DESIGN ATTRIBUTES

In general terms, all potential models have the potential for their design to include consumer participation. The nature and extent of consumer input however, may differ slightly between models. For example, consumer participation at a local level in a smaller project may focus more on addressing particular service design issues of concern to a smaller consumer constituency. There is thus likely to be a greater focus on specific practical issues. On the other hand, consumers participating in the design of service models intended for wider application across the health system may be confronted with greater complexity in relation to the general acceptability of any proposed models for consumers. There is thus likely to be a greater focus on generalisability issues.

All potential models appear to have the capacity for their design to be based on objective criteria. No model seems to be inherently disadvantaged in terms of the ability to be influenced by clinical and care evidence. The current maternity services program funding model may however, be slightly more likely to be influenced by local priorities and service configuration wishes in the design of small-scale projects, than by a separate and rigorous appraisal of independent evidence.

9.2.2 EQUITY ATTRIBUTES

All candidate-funding models appear to have the potential to achieve equitable outcomes. The quarantined funding approach however, may allow existing regional or site program inequalities to persist. This is because some regions or sites historically applied MSEP funds in different ways. In some cases, MSEP funds were applied to addressing service gaps and deficiencies – in a sense, the funds were not used for 'enhancement'. In other examples, funds were applied more in the direction of service enhancement. It is conceivable that if the current arrangements were to continue, any resulting unevenness in service delivery capacity would be encapsulated into the funding arrangements.

9.2.3 SERVICE DEVELOPMENT ATTRIBUTES

Our analysis suggests that the maintenance of existing arrangements would not be a sound strategy for encouraging service integration, encouraging continuous quality improvement, and encouraging the use of evidence-based care. The evidence for this view is not strong however, and is based mainly on anecdotal sources. There is slightly more evidence to suggest that under artificial internal market conditions (eg such as those that prevailed in the UK and NZ in the early to mid 1990s), provider cooperation, collaboration, and integration was difficult. To some extent, the fund holder model requires the practice of a market-based model in order to offset the higher costs of case management.

The remaining models appear to have the potential to meet the objectives of 'service development' in their design and operation.

9.2.4 IMPLEMENTATION ATTRIBUTES

Two models appear to be more complex than the others in terms of 'ease of implementation', although none can be regarded as simple to implement. The 'fund holder' model is likely to require significant investment in information infrastructure (eg IT), and the development of protocols for providers, case managers[25], and others.

[25] Case management is not a necessary feature of this model in the context of maternity services, but it exists in various forms – for example, the LMC concept in NZ can be viewed as a limited implementation of case management. Case management is generally featured where care needs are complex, are

An overarching organisational infrastructure will also be required to manage the model. Similarly, the 'mainstream, defined service models' approach is likely to require significant investment in roll-out, training, and standardisation of care modalities. The 'mainstream, new casemix products' approach will require investment in the areas of product definition, costing, and coding rules.

In addition to 'ease of implementation', the issue of compatibility of each model with the dominant funding paradigm needs to be appraised. The 'mainstream, new casemix products' model is the most compatible approach, and thus likely to suffer from fewer implementation issues. In general, all other models (with the possible exception of the 'fund holder' approach), are inherently incompatible with output-based funding methods. This is particularly true of those models that prescribe the shape and form of service inputs.

9.2.5 RESPONSIVENESS ATTRIBUTES

All candidate models appear to have potential difficulties with 'scalability'. In this context, the desirable attribute is for the preferred model to operate at various levels. The main difficulty seems to be with smaller sites, where diseconomies of small scale are important.

'Fund holder' approaches appear to be the most 'adaptable' and 'sensitive' to change. Centrally-defined and uniformly implemented models may be readily re-designed but may suffer from difficulties in roll-out and re-engineering clinical and care practices across a large number of sites.

Some models appear more 'stable' and 'predictable' than others. The two 'casemix' based models may be slightly more volatile in impact than other models in smaller sites. In these circumstances, throughput values in service agreements may need to be calculated using a longer time series in order to avoid high annual variances in budgets.

9.2.6 MANAGEMENT ATTRIBUTES

There do not appear to be any inherent reasons why any funding approach is more or less able to incorporate problem resolution mechanisms into their respective designs.

The ongoing cost of administering each model seems to be most efficient in the two 'casemix model' variants, as they are the most similar to the existing funding framework in the acute care sector. The 'fund holder' approach is likely to carry the highest management infrastructure costs of all models.

'Realistic performance measurement' is likely to be met best by the selection of a small number of key performance indicators that are underpinned by secondary data (ie from administrative sources) rather than by primary data collection activities. In this context, this could be designed-in to most models. The exception would be the 'quarantined funds' model where monitoring and evaluation would be difficult largely because of the locally idiosyncratic application of MSP funds. In these circumstances, it is difficult to envisage a straightforward or standardised approach to monitoring and evaluation.

9.3 ELABORATION OF THE PREFERRED FUNDING APPROACH

9.3.1 GENERAL DISCUSSION

Our provisional analysis indicates that no single funding approach is clearly superior in respect of the attributes used to assess the various approaches. The 'quarantined funding' model however, is less robust than most of the alternative models. This approach is particularly weak in respect of:

ongoing, and where the client has a capacity to benefit from the process. For most women, case management is not required to achieve the outcomes sought.

- Design (where design appears more heavily influenced by local factors than by objectively based factors);
- Equity (where local implementations are unique and may perpetuate inequity between regions and sites);
- Service development (where collective practice experience is not effectively able to contribute to quality improvement and better use of evidence-based approaches);
- Implementation (where the 'quarantined funding approach' is conceptually incompatible with the dominant casemix funding model);
- Management (where the large number of different implementations and use of funds requires a tailored management approach at each site or region); and
- Performance measurement (where locally idiosyncratic application of MSP funds makes monitoring and evaluation difficult at overall program level).

Although the 'fund holder model' variant discussed in this document appears to have a number of inherent strengths (eg particularly in relation to design attributes, responsiveness), our provisional view is that this approach suffers from a number of disadvantages (as follows):

- A number of observers believe that the artificial or contrived internal market conditions that seem to be necessary for this approach to achieve efficiencies act against service development, service integration, and collaboration. In effect, it is argued that the system becomes adversarial and competitive rather than integrated and collaborative;
- The relatively high infrastructure needs of this model may result in implementation difficulties (especially speed and ease of roll-out); and
- Effective performance measurement may be best achieved with systems that derive information from client-level management information systems. These mainly case-management type systems can be expensive to establish and maintain.

On balance, our provisional view is that mainstreamed funding of MSP funds is the preferred option. In this document, two variants of this model are presented. Our view is that the 'mainstream, new casemix products' model is superior to the 'mainstream, defined service models' variant. The reasons for this are that:

- The 'mainstream, defined service model' variant requires a centralised approach to defining service configurations, and hence inputs. This approach is conceptually at odds with the dominant hospital funding paradigm (which emphasises outputs). Service models and hence inputs are locally configured under this approach;
- Implementation of standard models of care across the system may present implementation challenges (eg significant efforts would be required to negotiate, configure, staff, and implement standard care models in diverse settings); and
- The standardised care model approach may be less responsive than the alternative variant. In particular, large-scale roll-out of changes to care models is likely to be complex and time consuming.

The following sub-sections summarise our analysis of the key advantages and disadvantages of the preferred model.

9.3.2 STRENGTHS OF THE PREFERRED FUNDING APPROACH

The key strengths of the suggested funding approach are considered to lie in the following areas:

- Implementation (where the preferred approach is conceptually consistent with the current output-based funding approach);
- Responsiveness (where changes to service models are locally determined rather than centrally mandated); and
- Management (where the mode of administration is similar to other casemix products).

9.3.3 WEAKNESSES AND CHALLENGES

Although the 'mainstream, new casemix products' model is the preferred approach, our view is that a number of areas will require attention. These areas are expressed as weakness and challenges and are outlined as follows.

DEFINING THE NEW CASEMIX PRODUCTS.

An early task involves the definition of the extended or supplementary casemix products that will form the basis for future funding. The product definition activity needs to refrain from incorporating or implying particular care modalities. For example, the additional casemix products might be simply defined in terms of 'bundled antenatal, inpatient normal delivery, postnatal care' etc. The antenatal and postnatal care components will be defined in terms of 'on-site shared care occasions of service', 'on-site midwife care occasions of service'.

In addition to casemix product definition, provisional output targets require definition. An important task will involve an estimation of the proportions of total output volume for each new category. It is possible that the first iteration may lack precision.

COSTING AND HENCE PRICING THE NEW CASEMIX PRODUCTS

This is likely to be a major challenge, at least in the early years. The main problem appears to centre on the lack of good quality costing data[26].

ARE PRICE MODIFIERS FEASIBLE?

A major issue for mainly rural hospitals is the mismatch between cost of service delivery (particularly the acute inpatient component) and revenue received under the casemix model. The possibility that there are systemic differences between rural and metropolitan hospitals should be explored, and addressed in the funding model. A possible mechanism to address geographic inequities may involve the use of 'price modifiers'. If this were to be implemented, two significant issues must be addressed: firstly, determination of the appropriate amount; and secondly, identification of the source of funds (assuming that new monies are unlikely for this type of price supplementation).

VULNERABILITY DURING ANY TRANSITIONAL FUNDING PHASE

Most stakeholders have concerns in relation to how they will be able to secure access to maternity services funds in a mainstreamed funding context. As discussed earlier in this document, the reasons for these concerns are diverse and complex, and centre mainly on 'winning the battle' for funds at local site level. To some extent, these concerns are inherently addressed by the addition of new casemix products and specification of throughput

[26] Some data do exist – for example, the recent costing study by Homer CS et al (2001) 'Community-based continuity of midwifery care versus standard hospital care: a cost analysis', Australian Health Review 24(1):85-93. Anecdotal evidence from stakeholder s however, suggests that cost differentials between models of care differ from site to site because of local factors, scale issues, and infrastructure costs etc. Accordingly, the 'true' costs of care under different settings are widely perceived to be imprecise with current data.

levels. It is recognised however, that the precision around pricing, throughput volumes, and casemix product volume proportions is likely to be approximate only in the first instance.

ISSUES WITH SCALE AND SMALLER HOSPITALS

A number of smaller hospitals experience relatively large fluctuations in annual birth volumes. Under these circumstances, contracted casemix volumes may need to be based on say three or four year historical averages.

DEFINING SUPPLEMENTARY NON CLINICAL PERFORMANCE MEASURES

The development of a new funding approach may require the inclusion of relevant performance indicators. This is a 'crowded area' and will be approached with caution (see Section 10.3 for an elaboration). This 'crowding' – effectively an area where competition for inclusion exists – is largely because two sets of performance indicators currently or will soon apply to maternity services.

The first group of indicators focus on clinical performance[27,28] and outcomes. These have been the subject of considerable research. A challenging issue has been the July 2001 implementation at hospital level of these core maternity care performance indicators. The second group of indicators focus on non-clinical performance and tend to emphasise efficiency, access, continuity of care, and related issues. These non-clinical performance indicators were pilot-tested in six hospitals and will be implemented from July 2002.

As a significant proportion of underlying data necessary to support the nine clinical indicators derives from primary or special data sources (eg case note audits, Perinatal Data Collection Unit data, record linkage activities), it may not be feasible to implement more than three or four supplementary[29] non-clinical performance indicators in the first instance. It is strongly suggested that any additional non-clinical indicators with complex information collection strategies (eg intensive case note audits; client surveys etc) be deferred until the mainstreaming is smoothly implemented. A more detailed discussion of the role of supplementary non-clinical performance indicators is at Section 10.3 below.

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[27] Quality and Care Continuity Branch (2001) 'Measuring Maternity Care: a Set of Performance Indicators', DHS Melbourne.

[28] The distinction between 'clinical' and 'non-clinical' indicators is to some extent arbitrary – for example, the currently defined clinical indicator '...proportion of women receiving at least one postnatal visit...' may also be regarded as a non-clinical service utilization measure.

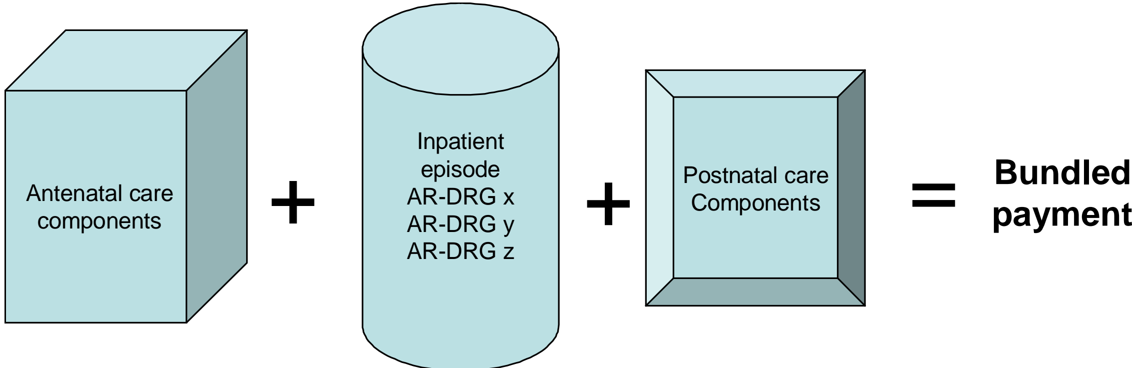
[29] That is, supplementary to the non-clinical indicators that will be implemented from July 2002.

10 DETAILED SPECIFICATIONS OF THE PREFERRED FUNDING MODEL

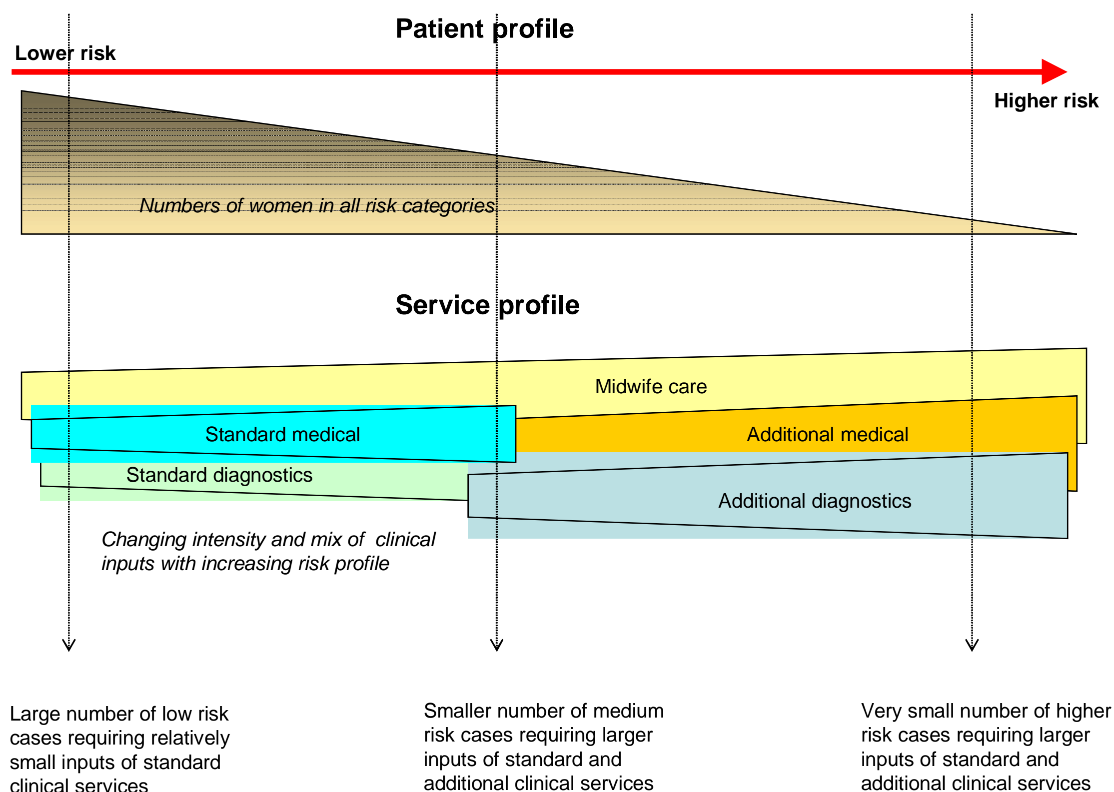
This section addresses the detail of the funding approach in terms of product definition, performance measurement, reporting requirements, and next steps.

10.1 DEFINITION OF ADDITIONAL CASEMIX PRODUCTS

The basic bundled payment model is illustrated in the following figure.



The key components of maternity care for an individual client are influenced by two major sets of factors: clinical (eg risk factors); and choice and/or availability of care model (particularly antenatal care). The final range of agreed products will need to reflect these two dimensions. The following diagram schematically illustrates how care inputs may vary with the client's assessed risk status. The diagram is intended to be illustrative only and does not purport to be clinically accurate for a real population.



In addition to factors that are intrinsic to the client (ie such as risk status), the choice and/or availability of antenatal care model will strongly influence the components of the bundled payment package. The following figure illustrates the major antenatal care models that exist in Victoria at present. Support services (eg diagnostics, allied health etc) have been omitted from the diagram for simplicity.

The example illustrated below is based on a 'hospital-based obstetrician and midwife care' model. For illustration purposes, a hypothetical 'low-risk' client is depicted.

The illustration outlines the core service and support elements that might characterise most low risk clients. Higher risk cases may include other service components or higher levels of service. Different direct service and support inputs would apply under different risk or clinical conditions.

For the purposes of developing a payment system, the standard elements of the antenatal and postnatal care phases are as follows:

Antenatal care

- Assessment (for identifying risk stream where possible in advance and hence care pathways)
- Direct care (medical, midwifery etc)
- Support services (diagnostics, allied health, educational materials, etc)

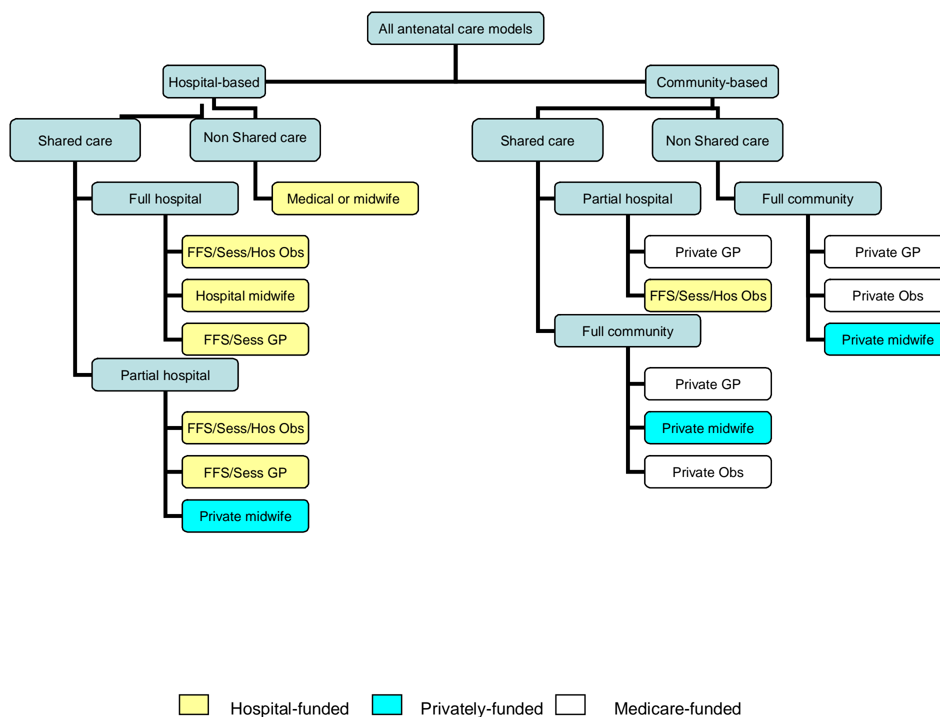
Inpatient care

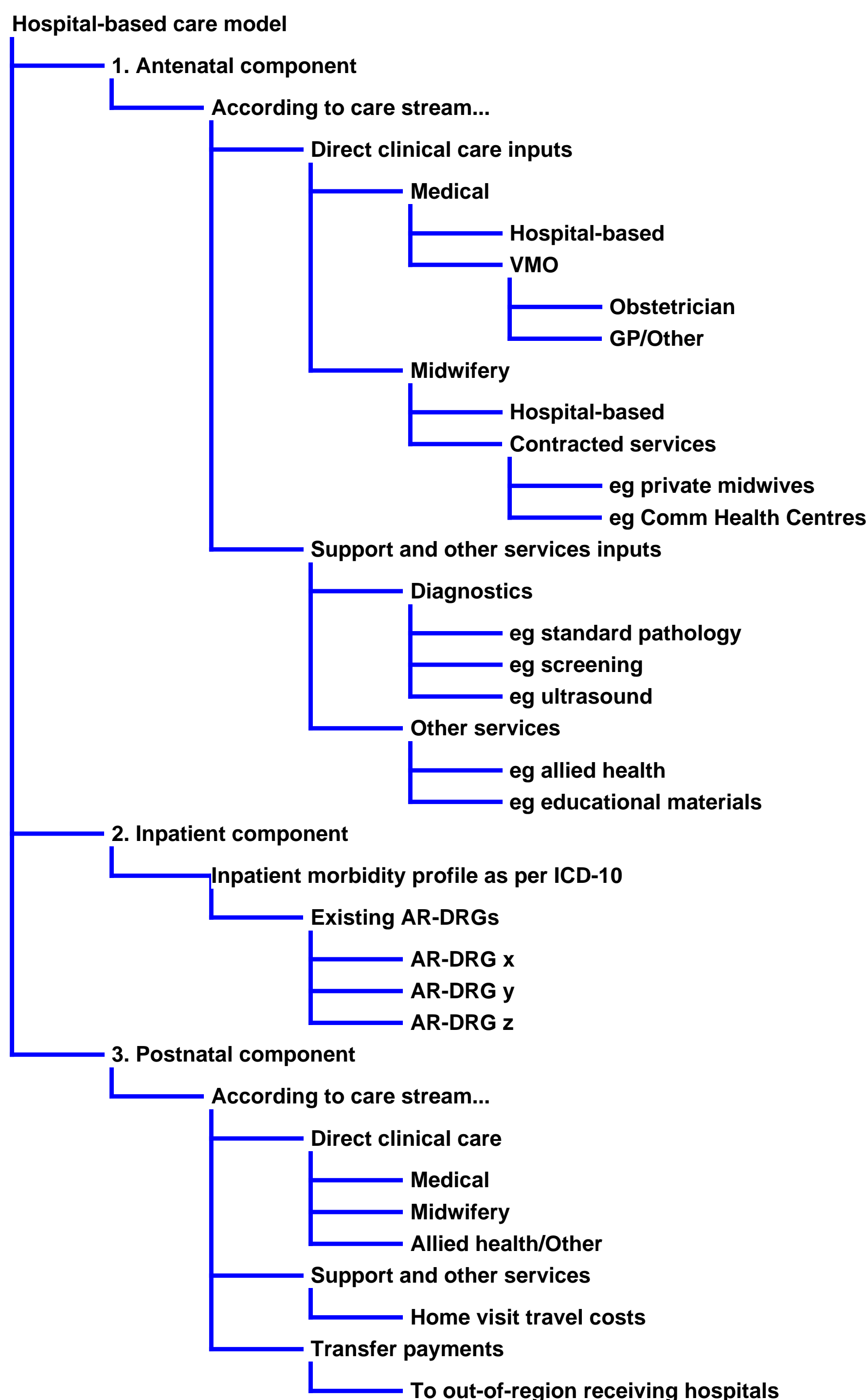
- All existing inpatient care services as classified by AR-DRG

Postnatal care

- Discharge assessment (for identifying referral actions)
- Direct care (medical, midwifery etc)
- Contracted direct care (ie payments to out-of-region receiving hospitals)
- Support services (allied health, home visit travel costs, etc)

The following diagram provides a schematic view of the 'bundled payment' classification logic for a hypothetical client, regardless of risk profile.





10.2 THE POTENTIAL APPLICATION OF CO-PAYMENTS

Although the bundled payment concept seeks to match payment to resource inputs, there may be some circumstances where price adjustments or co-payments may be required. These adjustments can be achieved

through the application of 'price modifiers' or co-payments[30]. The suggested application of payment adjustment factors in the context of maternity services funding is discussed below.

Payment adjustments are generally applied in the following circumstances (see Section 5.4 above in the context of the 'price modifiers' discussion).

- Penalty and/or incentive adjustment - these are used to increase or decrease funding based on certain performance criteria being met or not met.

- Import and/or export adjustment - these adjustments are used to move funds from one health service organization to another when a funding method is not able to fully reflect patterns of providing care.

- No loss adjustment - a no-loss adjustment sets funding equal to the greater of (a) the amount indicated by the new funding approach or (b) the funding that would be announced if the former funding approach were used.

Based on our consultations with service providers, an additional circumstance might warrant the application of a co-payment. This additional modifier can be defined as:

- Abnormal costs adjustment – where a provider that consistently incurs higher than usual input costs is compensated. Examples identified in the course of our consultations include:

    - Ambulance transfer costs borne by the initial admitting hospital (when a patient is transferred to a referral hospital); and

    - Higher than usual medical and associated costs (examples cited include: in some rural areas, VMO contract arrangements are associated with significantly higher costs; in tertiary hospitals with higher proportions of very complex cases; some level two hospitals with abnormal numbers of chemically dependent mothers etc).

In the current context, co-payments may have some potential application in relation to 'import/export adjustment', and 'abnormal costs adjustment'. In relation to the former, the most common circumstance relates to the provision of postnatal care services by smaller hospitals where the delivery has occurred elsewhere. In our view, the present arrangements where contractual arrangements between individual hospitals resolve the issue is probably the most practical solution rather than through centrally administered means.

The remaining potential for co-payment relates to abnormal costs. Our view is that this issue should first be addressed by a systematic assessment of costs data. This assessment should seek to identify any systematic urban-rural differences in maternity service input costs generally, and specific input costs in particular. If this assessment identifies systematic cost differentials, co-payments for general application may be considered. Individual funding arrangements may address unique cost circumstances of individual sites.

The issue of whether 'penalty and/or incentive' co-payments should be considered is a larger policy question that lies outside the scope of the present study. We consider however, that the suggested funding model discussed in this document provides potential for penalty and incentive payment adjustments at a later time if required.

[30] The practical net financial impact of a 'price modifier' is the same as a 'co-payment'. In Victoria, the casemix system has evolved to include 'co-payments' rather than 'price modifiers' where this is warranted. Co-payments are regarded as administratively simpler than price modifiers, and are thus offered as the preferred mechanism for Victoria.

10.3 SUPPLEMENTARY NON-CLINICAL PERFORMANCE INDICATORS

The broad topic of health sector performance measurement is complex, rapidly evolving, and is approached in diverse ways. A broad review of performance measurement is outside the scope of this project[31]. In the context of maternity services however, we offer some suggestions for closer examination and potential implementation of a small number of supplementary non-clinical performance indicators.

Performance indicators are most commonly conceptualised in terms of 'effectiveness' and 'efficiency'. Within the 'effectiveness' category, many authors include the following sub-categories or dimensions: quality, safety, appropriateness, acceptability, consumer participation, accessibility, and technical proficiency. Other dimensions sometimes discussed[32] include: continuity of care, information management to support effective decision-making, education and training for quality, and accreditation of health services. The 'efficiency' category generally comprises the following sub-categories: unit costs of service, staffing profiles, measures of service usage (eg average length of stay, separation rates etc).

It is widely recognised that performance indicators are not equally valid at all scales of operation. For example, some indicators are best suited for analysis at broader scale (eg separation rates), whereas others may be valid for use at individual hospital level (eg average length of stay). This is clearly recognised in the United Kingdom where recent performance measurement initiatives recognise two broad levels – system level measurement, and hospital-level measurement (with some indicators not used for smaller sites). Similarly, in Australia, the concept of 'peer grouping' of hospitals along hospital size, hospital type, and geographical type, reinforces the importance of valid comparator classes when attempting to make use of benchmarking data.

In the United Kingdom, the current conceptual approach to performance measurement in the NHS emphasises quality, efficiency, patient experience, and capacity and capability. These four dimensions apply at both system and individual site level but the particular indicators within each dimension vary somewhat. In general terms, most of the performance indicators can be derived from existing administrative sources[33] and are intentionally designed to be readily measured.

In the current context of the mainstreaming of funding for maternity services, our view is that a small number of supplementary non-clinical performance indicators should be assessed for implementation. An important consideration in forming this view is that the burden for data collection and reporting should be minimised, particularly in the context of the imminent implementation of a suite of non-clinical indicators for maternity services in Victoria.

Given the current context of performance measurement in Victorian maternity services, we suggest that the following indicators be assessed for suitability and possible implementation.

Indicator group or dimension	Possible indicator(s)	Comments
'Organisational management'[34] or 'Capacity and capability[35]	Vacancy rate, midwifery staff	Can be derived from hospital administrative systems

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[31] This topic has been extensively reviewed in an Australian context in the 1999 "Third National Report on Health Sector Performance Indicators" (a report by the National Health Ministers' Benchmarking Working Group to the Australian Health Ministers Conference). This report includes a comprehensive review of international and Australian trends in health sector performance measurement.

[32] For example, the NSW Health Department's approach to measuring quality of health services includes these dimensions.

[33] For example, the core clinical indicators group includes relatively easily measured items such as 'percentage of patients discharged home following a stroke'. Under 'capacity and capability', relatively easily measured indicators include 'sickness absence rates', 'junior doctors working hours', vacancy rate, qualified nursing, midwifery, and health visiting staff'. Some performance indicators however, require seemingly complex assessment – for example, 'data quality' is measured according to a detailed data appraisal protocol.

[34] Term used in Victorian DHS as part of system-wide approach to performance measurement.

Indicator group or dimension	Possible indicator(s)	Comments
Efficiency	Average length of stay (at different peer hospital groupings)	Derived from inpatient morbidity data collection
	Missed outpatient (antenatal care) appointments[36]	This indicator is defined as the number of first outpatient appointments for which the patient did not attend as a percentage of all first outpatients seen. Lower indicator values reflect smaller percentages of non-attendance. The rationale for the use of this indicator is that missed appointments are expensive for the health system and mean that patients do not receive care. There is evidence that missed appointments can be reduced by reviewing appointment and other procedures from the perspective of patients.

Because of widely accepted deficiencies in hospital-level unit costing data, we do not recommend the use of 'reference costs' (comparative unit costs) as a measure of efficiency in maternity services[37]. The data collection, analysis, and reporting burdens are unreasonably high and may be unacceptable to hospitals.

An important issue for consumers relates to 'continuity of care'. Increasingly, 'continuity of care' and 'satisfaction with care' dimensions are seen as important dimensions of quality of care. Both however, are multidimensional concepts that pose challenges for measurement and interpretation. In addition, both concepts rely on primary data collection rather than from derivation from administrative data sources.

We suggest that research and development effort be focused on the development of performance indicators that measure the 'continuity of care' concept as it applies to maternity services. This research and development initiative and a suggested timetable are outlined in Section 10.5 below. A short contextual discussion of some recent work in this area follows below.

In a recent comprehensive review of the concept of 'continuity of care'[38], the authors attempt to define the concept, and provide a framework for its measurement. Some of the key observations and conclusions from the analysis are abridged from the discussion paper. We consider that although the measurement of continuity presently poses challenges in terms of methodology and cost, we suggest that the Department might consider research and development investment in this area. The research and development strategy's aims would be:

- Identify appropriate instruments that are valid and reliable for use in maternity services contexts;
- Devise a data sampling strategy (as distinct from general application in the first instance) and pilot this strategy; and

[35] Broad PI group currently adopted by UK NHS for performance measurement.

[36] This is one of four efficiency performance indicators developed by the UK NHS. The others are: 'reference costs', 'ALOS', and 'day stay rate'.

[37] At least for the present. This may change as data reliability and accuracy improves.

[38] Haggerty J et al (2001), 'Here there and all over the place: defining and measuring continuity of health care'. Centre for Health Services and Policy Research, Health Policy Research Unit Research Reports (HPRU 01:10D), The University of British Columbia, Canada. This paper was commissioned by the Canadian Health Services Research Foundation, the Canadian Institute for Health Information and the Federal / Provincial / Territorial Advisory Committee on Health Services, as background information for a national workshop to develop measurement indicators for continuity of care.

- Refine and implement a longer-term 'continuity of care' data collection strategy for maternity services in Victoria.

The Canadian discussion paper '…explores the different concepts of continuity, their common themes and measurement approaches. A broad survey of the literature confirms that 'continuity of care' is conceived somewhat differently in the primary care, mental health care, nursing, and specialty / condition-specific literatures. There is a wide range of conditions for which continuity of care has been of interest, but only on pregnancy and cancer care is there enough literature to warrant consideration on its own. The essence of continuity in this domain is that it refers to care for a particular condition and/or care provided by specialized provider groups. In pregnancy care, the most common definition is care provided by a known provider for antenatal, intra-partum, and post-natal care. The theme of provider continuity is similar to primary medical care except that care is time limited, relates only to pregnancy, and the providers include midwives and/or specialist obstetricians as well as primary care providers'.

The authors conclude however, '…that there are recurring themes in discussions of continuity of care across disciplines. The **primary medical care** literature emphasizes 'provider continuity' – care from a single physician over extended periods of time regardless of the nature of the health conditions. Continuity results in accumulated medical and contextual knowledge about patients as well as trust and empathy that is built over time'.

'The **mental health care** literature emphasizes coordination of services and the stability of patient-provider relationships. The services to be coordinated often extend to social services such as housing and employment services; the particular demands of coordination led to the idea of case management. A unique feature in mental-health continuity is the emphasis on outreach by providers to maintain contact with patients. Continuity in the **nursing** literature emphasizes information transfer and coordination between nurses to maintain a consistent approach to care and to individualize the care to changing needs. The majority of continuity literature in nursing relates to discharge planning where the transition of patient care from one setting to another involves patient education and communicating the patient's needs to the new caregiver. The **specialty and condition-specific** literature emphasizes a common management strategy recognized by different providers so that services are delivered in a coherent, logical and timely fashion over an illness trajectory'.

'Existing measures of continuity reflect the priorities within disciplines and tend to neglect aspects that are difficult to quantify. Although the general consensus is that continuity is multi-dimensional, most studies focus on a single aspect'. The authors identify the most common measures of principal themes. These are:

'Longitudinal Measures: These attempt to measure provider continuity by the duration of the patient-provider relationship and the degree to which care is mostly received from a single provider or group of providers over time'.

'Consistency of the Management Plan: The most commonly used measure is whether follow-up visits occur as scheduled. Providers' adherence to optimal care at critical points in the management strategy is also used'.

'Informational Continuity: This is assessed by the availability of information, the extent to which a communication method is used and the comparison between transmitted and ideal information'. ·

'Relational Measures: The strength of the patient-provider relationship is most often measured by assessing whether a patient has an affiliation to a particular provider. Recently developed questionnaires measure trust, communication, empathy, and the extent to which a patient feels known as a person'.

10.4 REPORTING AND SERVICE AGREEMENT REQUIREMENTS

The service agreement between the Department and each hospital will specify the following information:

- Definition of all maternity care products covering:

- Antenatal care (including a full description of the various antenatal care models and components);
- Inpatient care; and
- Postnatal care (including the point at which hospital-based postnatal care ceases and care transfers to other service providers where applicable).

Target volumes for all products and components will be specified also. These may initially be non-statistically derived (except for the inpatient component where data are good), but will become more empirically-based over time and as data improve.

In addition, definitions for the following will be provided:

- Exclusions (eg the cost of particular diagnostic procedures such as ultrasound where the use of these procedures is not clinically indicated);
- Outliers (for example, abnormally resource intensive cases that exceed agreed upper limits. The outlier concept is well understood in the acute hospital casemix system. Outliers are generally derived using statistical methods where utilisation data are appropriate and robust. Where data are insufficient, outliers may be defined using consensus or other non statistical approaches – perhaps for an interim period pending data improvements); and
- Products attracting co-payments, and criteria for their inclusion (eg ambulance transfer costs in rural areas etc).

In addition to standard reporting requirements, the maternity services supplementary non-clinical performance indicators will include:

- Service capacity measures (ie midwifery vacancy rates);
- Missed antenatal appointment rates.

The ALOS indicator will be derived centrally from inpatient morbidity data and need not be separately generated by the hospital.

10.5 TASKS, RESPONSIBILITIES, AND TIMETABLE

A number of key tasks and assignment of roles are required. The most important tasks, responsibilities, and periods for completion are suggested in the following table.

Task group	Component activities	Responsibility for coordination	Time frame
Product definition	Review evidence base (eg 'Three Centres guidelines') and define product categories and sub-categories. To be undertaken in association with a clinical reference group; Undertake statistical and other numerical modelling activities in order to assist in the definition of	DHS (Joint Quality and Care Continuity Branch and Funding and Financial Policy Branch activity)	Jan 2003

Task group	Component activities	Responsibility for coordination	Time frame
	product categories (to be based on existing data such as VAED and AIMS) Define outlier and exclusion criteria (using statistical and other means); Define co-payment categories and eligibility criteria		
Product costing	Develop standard costs for antenatal and postnatal care product sub-categories; Review data coding standards, data validity, and data availability in relation to ongoing quantification of new casemix products and sub-products; Review standard costs for inpatient care, with particular attention to hospital 'peer group' differences (rural/urban; size; function); Further refine co-payment criteria if required (after reviewing peer group data); Produce final cost weights for defined products; Undertake budget modelling activities, and revise VACS and non-VACS fund pools as required[39].	DHS (Funding and Financial Policy Branch)	March 2003
Performance measurement	Fully define and refine supplementary non-clinical provisional PIs in terms of: • rationale	DHS (Joint Quality and Care Continuity Branch and Funding and Financial Policy Branch activity)	April 2003

[39] Depending on the outcomes of the budget modelling activities, it may be appropriate for a 'shadow budgeting' activity to be undertaken for a defined period prior to full implementation of bundled funding arrangements. 'Shadow budgeting' is a low-cost alternative to 'no loss adjustment' funding strategies that 'cover' losses due to unintended negative consequences that might be experienced by some funding recipients with major conceptual changes in funding approaches. Although a no-cost (or minimal cost) option, the advantages of shadow budgeting should be assessed against the disadvantages of continued funding of MSP under present arrangements.

Task group	Component activities	Responsibility for coordination	Time frame
	• data sources • calculation • presentation format • frequency of reporting Review current national developments in performance measurement and adapt strategy as appropriate.		
	Undertake research and development study in relation to 'continuity of care' measurement in maternity services context. Specifically: • Identify tools and validate; • Pilot and revise; • Develop data sampling strategy; • Develop implementation strategy	DHS (Quality and Care Continuity Branch)	April 2003

11 RECOMMENDATIONS

We offer the following recommendations in relation to options for the mainstreaming of maternity services program (MSP) funding.

- ***Recommendation 1***. It is recommended that the Department move towards a system of mainstreaming MSP funding using a 'bundled payment' approach (see Sections 9.3 and 10 for detailed specifications). The 'bundled payment' approach includes payment for the antenatal, intrapartum, and postnatal components of care. The precise nature and extent of payment for each component of care will depend on clinically driven categories or classes.

- ***Recommendation 2***. It is recommended that because of the need to undertake a range of preparatory activities prior to implementation of a 'bundled payment' system for MSP, implementation be deferred until July 2003 (July 2002 had originally been proposed).

- ***Recommendation 3***. It is recommended that a number of preparatory tasks be undertaken by the Department prior to implementation of 'bundled payment' funding in July 2003. The key tasks are described in detail at Section 10.5 of this report. In brief, the key tasks, responsibilities, and time frames are as follows:

    - A range of activities relating to 'product definition' is to be guided and/or undertaken jointly by the Quality and Care Continuity Branch and Funding and Financial Policy Branch areas of the Department. These activities include substantial clinical elements and should be initiated as soon as practicable following acceptance of this report. The 'product definition' tasks should aim to be completed by January 2003;

    - In order to ensure that prices attached to each care component are fair and equitable, a number of 'product costing' tasks are required. These costing activities will be managed by the Funding and Financial Policy Branch area of the Department and should be concluded by March 2003;

    - The 'bundled payment' model needs to be supported by a system of measuring performance. Accordingly, a range of 'performance measurement' tasks is required. The Quality and Care Continuity Branch and Funding and Financial Policy Branch areas of the Department will guide these tasks and will complete their work by April 2003.

- ***Recommendation 4***. It is recommended that the Department develop a strategy for managing any unintended consequences that might arise from the new funding model. In particular, consideration should be given to the implementation of a 'no loss adjustment' strategy (see Sections 5.4.3 and 10.2 for a discussion) for providers that might experience financial duress following a funding change. The use of 'no loss adjustment' strategies in these circumstances would generally be viewed as transitional or short-term arrangements only.

- ***Recommendation 5***. It is recommended that the Department investigate a range of specific costing and funding issues identified mainly in rural service settings. The main issues identified are described in Section 6.4 of this report. The aim of this recommendation is to determine whether claimed systematic cost penalties in rural areas would warrant the application of separate co-payments under a 'bundled payment' environment (see also Section 10.2 for more detail in relation to this issue).

- ***Recommendation 6***. It is recommended that the Department investigate and respond to any identified needs for training and/or education in budget/resource allocation methods within hospitals. The main issue are described in Section 6.2.2 of this report.