WESTERN SYDNEY AREA HEALTH SERVICE

B. SAME DAY SERVICE PLAN

September 2001
PART B: SAME DAY SERVICE PLAN

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EXECUTIVE SUMMARY

The Challenge for Western Sydney Health

Public patient ambulatory and same day surgical demand is projected to increase substantially in the Western Sydney Health Area over coming years. It is projected that same day separations across the Area will more than double from about 61,000 separations in 1998 to over 124,000 in 2011. Activity growth is brought about by an increased proportion of day only activity and forecast population growth, with total Area residents projected to increase to 760,000 people in 2011 from 667,000 in 1997. Much of this population growth is occurring in the Rouse Hill sector of the Blacktown and Baulkham Hills LGA’s.

WIN Program

Western Sydney Health is responding to the public health service delivery challenges associated with rapid population growth and the aging of its community, changing expectations and models of health care services together with the need for facilities across the Area to be upgraded. This Area-wide strategy is known as the Western Integrated Network (WIN) Program.

Westmead Hospital is at the centre of the upgraded health facility network although the other Area facilities are to be improved under the WIN Program. Westmead Hospital is to be substantially upgraded and modernised. A wide range of acute and tertiary services will be enhanced and expanded including ambulatory procedure services.

The WIN Program will provide the Western Sydney Health Area with a 104% increase in day only episodes and a 110% increase in day only beds equivalents from 99 to 209.

Same Day Service Plan

This Same Day Service Plan defines a dispersed services model with integrated care centres planned to be developed at Auburn Hospital and Rouse Hill (new facility) as well as ambulatory services in Blacktown and Mt Druitt Hospitals. This plan will lessen the growth in demand on Westmead Hospital compared to what would otherwise occur. Westmead Hospital will, however, still experience very significant activity growth.
1. INTRODUCTION

The Same Day Services Plan has been prepared as part of the service delivery strategy for the Western Integrated Network (WIN) Program, Area-wide asset strategy with a planning horizon of 2011. The WIN Program is being developed in response to the WIN Strategy developed in 1998. The aim of the WIN Strategy is to provide a comprehensive range of services through a network of hospitals, ambulatory care and community health facilities to meet the Area’s growing and aging population. This is to be achieved by:

- a service response that aims to redistribute services to meet the Area’s changing demographic profile, improve equity of access, increase sufficiency in the Blacktown LGA, and improve efficiency; and
- an infrastructure response that aims to re-engineer and equip facilities to provide care using contemporary service delivery systems.

The purpose of the Same Day Service Plan is to provide an Area-wide strategy for the delivery of same day services to 2011, consistent with the aims of the WIN Strategy. In developing the Plan consideration has been given to relevant literature and policy documents including ‘What a Difference a Day Can Make – Same Day Surgical and Endoscopic Procedures Policy’\(^1\) and those recommendations of the NSW Health Council\(^2\) that have implications for the delivery of same day services. Visits have also been made to a range of same day service facilities in NSW and Victoria with information gathered about others.

The development of the Same Day Service Plan has occurred in parallel with the development of the service delivery strategy for the WIN Program. Development of the service delivery models for the Area’s clinical streams and the same day service delivery strategy has been an iterative process with models proposed by selected clinical streams informing the development of a preferred same day service model and the emerging same day service model in turn serving as a reference point for the review of clinical stream service delivery models.

The Plan identifies those procedures to be delivered on a same day or ambulatory basis and proposes a range of contemporary settings for same day service delivery. A range of service delivery options are identified for economic appraisal resulting in the recommendation of a service and associated asset strategy for the delivery of same day procedural services by Western Sydney Health to 2011.

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2. DEFINITION OF SAME DAY SERVICES

For the purpose of this Plan, same day services are defined as³:

- planned admissions for surgery to be undertaken on the day of admission where the patient is discharged on the same day;
- planned admissions for medical diagnostic and treatment procedures undertaken on the day of admission, where the patient is discharged on the same day;
- admissions via emergency requiring an assessment, investigative or treatment procedure, where the patient is discharged on the same day; and
- initial and follow-up diagnosis and treatment for same day services.

The current plan includes same day services as defined above and non-admitted same day services provided on an outpatient basis and requiring a similar service delivery environment. Procedures identified as non-admitted same day services are listed in Appendix A2.1.

Because of a strong organisational relationship, perioperative services both same day and day of surgery admissions will be addressed in the Plan.

The Plan excludes emergency patients awaiting transfer to an inpatient unit.

³ This definition of same day service should not be confused with a same day episode which is defined as an episode admitted and discharged on the same day.
3. OBJECTIVES OF THE SAME DAY SERVICE PLAN

This plan addresses the Same Day Service requirements of Western Sydney Health by:

• assessing the volume of demand for services to 2011 and estimating whether additional facilities and/or resources are required;
• devising a model for the delivery of services;
• proposing options for the most appropriate location for the development of additional same day places;
• identifying how the proposed options will improve access, health outcomes and decrease costs;
• appraising, refining and agreeing on the model of service delivery through consultation with the relevant service providers, unit managers, Area and Department of Health representatives;
• determining the scope and volume of services for the proposed Ambulatory Procedures Unit at Westmead Hospital;
• determining the scope and volume of same day services to be delivered in other facilities within Western Sydney Health;
• estimating the potential costs or savings of the preferred service delivery option; and
• devising an implementation plan and time frame.
4. SERVICE PLANNING CONTEXT

4.1 CONCEPTUAL FRAMEWORK

4.1.1 WIN Strategy Asset Strategic Plan for Eastern Sector

The 1998 *WIN Strategy* addresses the need for an Area-wide network of comprehensive health services with the capacity and flexibility to meet local service needs. A key aspect of the plan is the development of ambulatory care and same day services in both hospital and community-based settings. At Westmead Hospital, the University Clinic strategy provides for the expansion of pre-admission and ambulatory services, the collocation of public outpatient clinics and private consultation rooms and expanded endoscopy services to be linked with day procedures services adjacent to the existing Operating Suite. The consolidation of clinical trials clinics in a Clinical Research Centre to be located in an ambulatory care setting is also proposed.

At Auburn Hospital, the strategy provides for the development of short stay, uncomplicated overnight and same day services. Elective surgery and same day services at Auburn are to have sufficient capacity to accept transfers from Westmead Hospital.

Same day services at Blacktown/Mt Druitt Hospital would expand to meet increasing demand, with some district level services transferring from Westmead. The facility capacity at Blacktown Hospital would need to expand whilst the increased demand could be accommodated at Mt Druitt Hospital within the existing facility capacity.

4.1.2 Policy Implications and Literature Review

The underlying philosophy of same day surgery provision has been defined in the NSW Health Same Day Surgical and Endoscopic Procedures Policy:\footnote{loc cit.}

“Same day surgery is based on a “wellness” model of care which assumes that patients prefer to be treated and discharged home on the same day and that surgical care should be of high quality, flexible and provided in an environment that is comfortable and non threatening”.

Options for the delivery of same day surgical and endoscopic services include the following facility types:

- purpose built, stand alone facility;
• self contained unit with dedicated operating room and/or recovery areas within a hospital setting;

• same day procedure unit that shares operating room and/or recovery areas with inpatients; and

• hospital beds designated for same day patients within inpatients units and sharing operating room/recovery facilities with inpatients.

Self contained day procedure facilities incorporating dedicated operating/procedure rooms and recovery areas have considerable support in the literature as representing best practice for the delivery of same day procedural services (Anderson 1992, Chapman 1991 cited in NSW Health, 1999).

With regard to same day admissions, the Report of the NSW Health Council:

• recommended that the implementation of the Department of Health’s target of 60% for all surgery, on a same day basis, be met by 1 July 2001; and

• acknowledges that a move to day-only admissions will have substantial implications for work practices, information technology and the role and design of many hospitals, such as increasing the availability of procedure rooms and operating rooms.

In Western Sydney Health the increasing trend for same day procedures to be undertaken on a non-admitted basis may render the targets for same day surgical admissions unachievable. Although the NSW Health targets have been applied for all demand modelling in this Plan.

None of the literature reviewed addressed the requirements for perioperative services catering for both same day and day of surgery admissions. The development of effective perioperative services is of particular relevance in acute hospital settings where elective admissions requiring an overnight stay are increasingly admitted on day of surgery.

A summary of the relevant policy and research literature is included in Appendix A2.2. A list of procedures identified as a means of progressing day surgery in ‘What a Difference a Day Can Make – Same Day Surgical and Endoscopic Procedures Policy’ (NSW Health, 1999) has been included in Figure 1 in Appendix A2.1.

4.1.3 Contemporary Service Delivery Models

Community-Based Services
In recent years there has been a trend to provide comprehensive ambulatory care services outside the traditional hospital setting.
In Victoria, Integrated Care Centres are being developed in new urban areas with a growing population. The centres are designed to deliver services that meet the needs of the local population and complement those provided by existing hospitals. Services vary between centres. The Cranbourne Integrated Care Centre in the outer south eastern suburbs serves a population of 160,000 and accommodates allied health, community health including mental health, dental and district nursing services. Consulting rooms are available for outreach, public and private clinics. The Centre also includes a private radiology practice, a 20 place day procedures suite, a 10 chair maintenance dialysis unit and a 12 place ambulatory infusion unit. Located in the former council chambers, the Centre has excellent links to transport and community services. A centre at Broadmeadows, in the fast growing northern suburbs provides a similar range of services in addition to having a strong aged care and rehabilitation focus. A hydrotherapy pool is provided at this centre. A third centre is planned for the growing population centre of Frankston.

In the Hunter Area Health Service, polyclinics have been developed and are planned for the delivery of ambulatory care services. The Toronto Polyclinic (2000 square metres) provides community health including mental health, allied health, rehabilitation, day care, dental, imaging, pre-admission, consulting and after hours primary care services. It is proposed to expand this polyclinic using private investment funds. At Singleton a similar, privately operated, service is planned. A much larger (11-12000 square metres) polyclinic is planned for the Newcastle CBD again this project will use private investment funds. Local community consultation has been a key part of the planning strategy for the establishment of polyclinic services.

In Western Australia, Health 2020: a Plan for Metropolitan Perth provides for the establishment of ambulatory care centres providing specialist outpatient and same day procedural services. Ambulatory care centres are planned for growing outer metropolitan areas not well served by acute hospital services. It is propose that the centres will play a major role in responding to projected growth in same day services.

**Hospital-Based Services**

The recent redevelopment of teaching hospitals in NSW has seen the emergence of a new hospital-based settings in response to new models of service delivery that emphasise patient focused care, integration of services across the continuum of care and efficient service delivery systems.

At Royal Prince Alfred and Concord hospitals integrated clinical service centres will accommodate the clinical services - inpatient, same day and ambulatory – and support functions of each clinical stream. High volume surgical and endoscopic same day activity will be managed by an elective admission/peri-procedure service with direct links to the operating and the endoscopy suites.
At Prince of Wales Hospital an expanded perioperative unit is planned to accommodate perioperative clinics, preadmission, discharge planning and admission functions. The unit is expected to cater for up to 10,000 elective admissions providing a “one stop shop” for medical and surgical procedural services provided on the day of admission. As with Royal Prince Alfred Hospital, outpatient functions have been decentralised and collocate with inpatient, specialist procedural and other service functions to form integrated service units for selected specialty services. This model has been implemented for ENT, urology, cardiac and respiratory medicine resulting in improved service delivery, greater convenience for patients and staff, and improved staff utilisation across service functions. Due to its success, the model is to be extended to other specialties in the future.

The redeveloped St Vincent’s Hospital provides for the reconfiguration of diagnostic, consultative and same day services to create an Ambulatory Care Centre with a patient centred care focus. All services will be located within direct access of the main entry and adjacent patient parking. Core, high volume services including emergency, imaging, general outpatients, outpatient pharmacy and pathology collection, bookings, admission and discharge will be located on the ground floor. An Ambulatory Procedures Unit for day surgery, day of surgery, minor, endoscopy, cardiac, angiography and fluroscopic screening procedures will be located on the next level of the Centre. Specialist ambulatory care services and associated office areas – cardiothoracic, cancer, neurosciences, allied health, dental, HIV, and clinical trials - will be collocated on the level above.

4.1.4 Service Planning Assumptions and Methods

Demand projections to 2011 are based on the preferred scenario for the WIN Strategy identified in the Area’s Asset Strategic Plan (1997). The preferred scenario provides for all secondary and tertiary outflows to Northern and Central Sydney areas to be repatriated to Western Sydney Health with all inflows from those two areas returned to their Area of origin. All other flows are projected on historical trends with no adjustment made to reverse or increase flow levels with the exception of repatriation of 10 renal dialysis bed equivalents to Wentworth Area Health Service, recapture of 11 obstetric beds from outflows to Wentworth Area Health Service, repatriation of inflows from South Western Sydney Area Health Service for 4 medical oncology beds, 1 cardiothoracic surgery bed, 3 neuro surgery beds and 0.2 orthopaedic beds. Adjustments to flows do not apply to “natural” border flows.

The following parameters are applied in the modelling of demand for all service delivery options:

- activity projections for acute services are developed using the NSW Health APPI Planner V4;
- NSW Health same day targets for surgery and endoscopy have been
• with the exception of obstetrics no adjustments have been made to standardised separation ratio utilisation levels and projected decreases in length of stay - in the case of obstetrics a stable ratio is assumed because of the relatively high fertility rate for the Western Sydney Health population;

• surgical or emergency divisions are not provided by APPI, relative proportions for these categories are estimated using locally available inpatient data and standard time-series techniques, and applied to the APPI projections;

• adjustments are made at a service level for counting anomalies for same day activity (ie. same day episodes provided as outpatient occasions) where supporting evidence is provided by the affected service;

• adjustments to flows do not apply to “natural” border flows;

• elective same day bed requirements are estimated using a two person per day rate, over an eight hour day, five days a week operating period (expect for public holidays);

• operating rooms requirements are estimated using actual utilisation times, extracted from Westmead Hospital operating suite data base, applied to projected surgical activity and average plus one standard deviation (SD) procedure times; and

• endoscopy room requirements are estimated by calculating the number of procedures performed at Westmead Hospital per room, determining a SRG fraction adjusted for procedures done on a non-admitted basis and applying a standard of 1,750 procedures per room to the adjusted APPI SRG fraction for gastroenterology and urology.

4.2 ASSESSMENT OF NEED

4.2.1 Service Population

Same day services are generally considered secondary, therefore, in this Plan the service population is the residents of Western Sydney Health. The Area has a population of approximately 667,000 people (1997). During the planning period the population is expected to grow by 18% to 760,000 in 2011.

4.2.2 Demographic Overview

The largest increase in the population is expected to be in the 45-69 age group (43%), followed by the 70+ age group (34%) with growth expected in all age groups. The greatest growth in population is expected to occur within Blacktown with an additional 64,000 people by 2011, followed by Baulkham Hills with an additional 16,000 people. Most of this growth will be generated
by the establishment of the new Rouse Hill city in the north-west sector of the Area. Urban consolidation and renewal across the Area will provide significant growth in all other LGA’s ranging from about 9,000 people in Holroyd to 13,000 people in Auburn.

4.2.3 Health Status Overview

The Western Sydney Area represents a microcosm of “Average Australia” with good to very good levels of health in Baulkham Hills and northeastern Parramatta, average to slightly poor levels of health in the Parramatta and Holroyd areas and poorer levels of health in the Auburn, Blacktown and Mt Druitt areas. Overall, the Area has high levels of public hospital utilisation, which is associated with the poor socio-economic status of many of its residents. Generally, the Area has higher than expected levels of cardiovascular and respiratory illness and higher than expected rates of premature deaths, particularly those related to cardiovascular disease, lung cancer, and – a lesser extent- accidents.

4.2.4 Service Delivery Factors

High population growth, particularly in the risk age groups of 40-65 and 70+, high levels of public hospital utilisation and rapid technological change in the provision of hospital services will place unprecedented demand on the Western Sydney Health to provide high quality, accessible and efficient same day services. The range and scope of services that will be provided on a same day basis will require expanded capacity across all health service facilities. Traditional models of service delivery will not be adequate to accommodate the increased throughput and volumes needed to respond to demand.

4.3 PROJECTED DEMAND

Phenomenal growth in same day activity is projected. Same day activity is expected to grow from 61,115 episodes in 1998 to 124,229 in 2011, an increase of 104% for the Area. Projected same day episodes and beds for 2006 and 2011 are compared with 1998 below by facility should the existing model of service delivery continue, as detailed by clinical stream in Appendix A2.5.

Projected Same Day Episodes and Bed Equivalents excluding Sub and Non Acute for Current Model

<table>
<thead>
<tr>
<th>Facility</th>
<th>1998</th>
<th>2006</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Episodes</td>
<td>Beds</td>
<td>Episodes</td>
</tr>
<tr>
<td>Westmead Hospital</td>
<td>25,254</td>
<td>45</td>
<td>42,282</td>
</tr>
<tr>
<td>Auburn Hospital</td>
<td>4,952</td>
<td>8</td>
<td>6,528</td>
</tr>
<tr>
<td>Blacktown Hospital</td>
<td>22,054</td>
<td>36</td>
<td>37,349</td>
</tr>
<tr>
<td>Mt Druitt Hospital</td>
<td>8,854</td>
<td>10</td>
<td>12,499</td>
</tr>
<tr>
<td>Total</td>
<td>61,115</td>
<td>99</td>
<td>98,659</td>
</tr>
</tbody>
</table>
The highest growth in activity will be in the following clinical streams:

- the renal and urological stream due mainly to rapidly increasing demand for maintenance renal dialysis and to a lesser extent increasing demand for endoscopic urological procedures;
- acute medicine due mainly to rapidly increasing use of endoscopic procedures in gastroenterology and respiratory medicine;
- cancer including haematology due to rapidly increasing demand for chemotherapy and bone marrow transplants for cancer; and
- speciality surgery with large growth in demand for ophthalmological and orthopaedic procedures.

High volume service related groups showing the greatest increase in volume of same day episodes to 2011 are:

<table>
<thead>
<tr>
<th>SRG</th>
<th>Increased Episodes</th>
<th>% Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renal dialysis</td>
<td>14,287</td>
<td>108</td>
</tr>
<tr>
<td>Medical oncology</td>
<td>11,083</td>
<td>255</td>
</tr>
<tr>
<td>Gastroenterology</td>
<td>9,876</td>
<td>132</td>
</tr>
<tr>
<td>Haematology</td>
<td>1,856</td>
<td>62</td>
</tr>
<tr>
<td>Urology</td>
<td>1,286</td>
<td>81</td>
</tr>
<tr>
<td>Cardiology</td>
<td>1,090</td>
<td>140</td>
</tr>
<tr>
<td>Orthopaedics</td>
<td>835</td>
<td>92</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>661</td>
<td>65</td>
</tr>
</tbody>
</table>

Emergency

Emergency service projections are based on analysis of the Emergency Department Information System (EDIS) for Western Sydney Health Area acute hospitals (1996-2000) using trend adjusted age utilisation rates applied to the Area’s projected population for 2011. Emergency same day episodes and bed equivalents were discounted from acute inpatient same day projections using a proportional discount, based on ‘source of referral’, to eliminate double counting.

Emergency services same day presentations are projected to increase by 92% whereas the bed equivalent requirement increases by 130% because of the greater acuity of patients arising from the more efficient treatment of patients in the clinics, avoiding the need for Emergency admission. The following table shows emergency bed equivalent requirements for each site.

<table>
<thead>
<tr>
<th>Facility</th>
<th>1998</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Episodes</td>
<td>Beds</td>
</tr>
<tr>
<td>Westmead Hospital</td>
<td>4,834</td>
<td>4</td>
</tr>
<tr>
<td>Auburn Hospital</td>
<td>1,788</td>
<td>2</td>
</tr>
<tr>
<td>Blacktown Hospital</td>
<td>5,059</td>
<td>2</td>
</tr>
<tr>
<td>Mt Druitt Hospital</td>
<td>4,998</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>16,679</td>
<td>10</td>
</tr>
</tbody>
</table>
5. SERVICE DELIVERY FRAMEWORK

A service delivery strategy is derived from two major elements:
• the range, organisation and number of services to be delivered; and
• the distribution and size of services to be provided within the Area.

The planning and operational principles that provide a framework for the development of the service delivery strategy and the preferred service delivery model are outlined in this section.

5.1 PLANNING PRINCIPLES

WIN Program Planning Principles underpinned the development of service delivery options and the evaluation criteria for their evaluation. The WIN Program Planning principles are as follows:
• close proximity and ease of access to services for the majority of patients;
• improved response to patients’ needs, including prevention;
• services to be provided in sufficient volume to meet demand and ensure critical mass;
• balance the principles of equity and efficiency in the provision of services;
• health services networks to provide the least costly care environment;
• Area facilities to be flexible and functional;
• improved resource utilisation in the delivery of services; and
• demonstrated value for money in the delivery of services.

5.2 OPERATIONAL PRINCIPLES

5.2.1 General

The operational principles for the delivery of same day services are as follows:
• the focus of service delivery will be the patient and their carers:
  - “one-stop” same day services will be provided wherever feasible;
- patients requiring admission will be admitted at the point of service delivery, ie: perioperative unit, endoscopy unit etc;
- same day facilities will be accessible via a single entry point with a set down / pick-up area and parking adjacent;
- the service facility will be clearly sign-posted and clearly identifiable both internally and externally;
- services will be delivered in the least threatening and least institutional environment;
- operating hours will be flexible to allow out of hours and weekend access, where required by the service population;
- access to services will be scheduled on an individual appointment basis to maximise patient convenience and minimise waiting times;

• emergency same day services will be provided 7 days per week, 24 hours a day, with admitted patients managed by the appropriate specialty;
• clinician access to same day places is to be maximised;
  - dedicated operating rooms will be available for same day surgery;
  - same day surgery will also be undertaken as part of a mixed operating list where cancellations due to emergency cases are unlikely to occur;
  - medical same day places will be provided for patients requiring minor procedures, blood transfusions and drug therapy;
  - endoscopy, same day, day of surgery and medical same day services are to be configured to maximise throughput and minimise delays to service delivery. In some facilities this may mean dedicated service delivery units; and

• the assessment pre-procedure preparation, counselling and discharge planning services, currently provided by the pre-admission clinic for surgical admissions, will be extended to selected medical procedures to prepare patients physically and psychologically for their procedure and to ensure that appropriate discharge planning and transport needs have been addressed.

5.2.2 Same Day Surgery

• All elective surgery patients will attend a pre-admission clinic for admission preparation (nursing, allied health), surgical assessment/admission, anaesthetic assessment/ education and discharge planning; and
• where appropriate, same day surgery patients will be able to walk from the pre-operative area to the operating room for their procedure.

5.2.3 Same Day Medical Services

• Where volumes indicate, patients requiring medical same day services are to be managed separately from those requiring surgical services to avoid queuing and optimise throughput.

5.2.4 Endoscopy Services

• Where volumes indicate, endoscopy services will be provided in a self-contained endoscopy unit to maximise efficiency of flow and avoid bottlenecks with other same day services. They, however, will be collocated and linked to other same day procedure facilities to ensure efficient use of administration resources;

• where feasible, procedures requiring the use of flexible endoscopes will be centralised within a facility to avoid duplication of cleaning equipment; and

• open access endoscopy will be practised with the patient referred by the general practitioner and not seen until the day of the procedure. Comprehensive assessment and discharge planning procedures will be required to support this practice.

5.2.5 Emergency Same Day Services

• Emergency same day surgery patients will be managed by the same day surgical service following transfer from the Emergency Department;

• emergency same day medical patients will be promptly transferred to the appropriate clinical unit for treatment; and

• for selected services, emergency presentations by previous patients will bypass Emergency with assessment and treatment to occur within the appropriate clinical unit eg. haematology, medical oncology, infectious diseases.

5.2.6 Post Acute Community Care (PACC) Services

• Post Acute Community Care (PACC) services will be integral to the delivery of many same day services, particularly emergency, surgical and chronic care services - the PACC team and referring specialties
require access to patient assessment and review facilities in acute hospitals.

5.2.7 Information Services

- Information technology will be utilised to support timely service delivery and rapid transmission of information to key members of the patient care team. Information technology options could include:
  - electronic clinical record keeping and storage;
  - single entry patient information, bookings, scheduling and admissions;
  - online Recommendation for Admission (RFA) for referring practitioners;
  - expert systems;
  - point of care systems (including clinical pathways); and
  - data marts.
- The proposed Westmead Ambulatory Procedures Unit will aim to utilise information technology innovations to enhance the continuum of patient care, thorough the incorporation of information technology advancements in patient management and clinical innovation.

5.3 DEVELOPMENT OF PREFERRED SERVICE DELIVERY MODEL

Through consultation with key stakeholders, review of the literature and policy and visits to ambulatory care facilities in both New South Wales and Victoria (see Appendix A2.3), a preferred service delivery model was developed for the delivery of same day services. Unlike the current service delivery model the preferred model provides for same day services to be delivered from both hospital-based and community settings.

Flow charts have been developed to illustrate current patient processes at Westmead Hospital and preferred “patient processes”. Flow charts for an endoscopy unit, pre-admission clinic and perioperative unit are included in the Appendix A2.4 of this Plan.

5.4 PREFERRED SERVICE DELIVERY MODEL

The preferred service delivery model for delivery of Same Day Services in the Western Sydney Health is presented in Figures 1 and 2 in Appendix A2.1.
This model proposes that same day services are delivered in a range of new hospital and community based health care settings.

Three new hospital-based settings for same day services are proposed; they are an Ambulatory Care Centre (ACC), an Ambulatory Procedures Unit (APU) and a Comprehensive Clinical Centre (CCC).

**Ambulatory Care Centres (ACC)** would be provided at selected acute hospitals to accommodate high volume, high throughput ambulatory care services including outpatient clinics, pathology clinical services, and pharmacy. Such centres would have a highly visible dedicated external entry and drop off point with easy access to public parking. Complementary services, located within the centre, may include a private consulting suites, cashier, retail outlets and a health information service. The centre should be located adjacent to, or within ready access of Imaging.

**Ambulatory Procedures Units (APU)** would be provided in selected acute hospitals for the delivery of same day surgical, and endoscopic procedures. Perioperative services will typically be provided within the Ambulatory Procedure Unit. The ideal unit would be closely associated with the operating suite, emergency department and imaging, and have linkages to inpatient units. At Westmead Hospital an Ambulatory Procedures Unit would be located within the Ambulatory Care Centre, as shown in the following diagram.

**Comprehensive Clinical Centres (CCC)** would be developed at selected acute hospitals for selected specialty services. Comprehensive Clinical Centres
provide for the delivery of hospital-based same day services as part of an integrated clinical service. Same day procedural areas would be collocated with the inpatient overnight services, outpatient and clinical support areas to form a discrete health problem focused clinical service centre. Comprehensive Clinical Centres would be established where:

- a highly specialised environment with specialised technology and staff is required;
- operational or service efficiencies can be gained;
- sufficient volume justifies the collocation of related service functions; and
- continuity of care will be significantly improved.

It is proposed that same day services for cardiac, cancer, neurosciences, respiratory medicine, chronic care, and aged care and rehabilitation are provided from Comprehensive Clinical Centres at Westmead Hospital, as shown in the following diagram. A Comprehensive Clinical Centre for cardiac is proposed at Blacktown Hospital in the future.

The model proposes the development of community-based Integrated Care Centres (ICC) providing a comprehensive range of community health, ambulatory care and same day services in addition to complementary government, non-government, private sector and commercial services, as
shown in the following diagram. Integrated Care Centres will include an Ambulatory Care Centre and in some cases a Satellite Dialysis Unit.

Integrated care centres are proposed where:

- there is a need to establish basic health services to respond to the needs of a newly established or growing population that is inadequately serviced by existing hospitals; or
- it is not feasible to establish or continue to deliver overnight and same day services in the traditional general hospital setting due to changes in technology, health services efficiency and service delivery networks.

The model also proposed the development of Dual-site Hospital and Community Services, involving the delivery of integrated packages of acute and chronic care provided across the hospital and community setting by professionals working in both environments. Examples of proposed dual-site ambulatory services include antenatal, paediatric, chronic care and palliative care.

Under the preferred Area-wide Same Day Service Delivery Model, as shown in the following diagram, same day services will be delivered from:

- Ambulatory Care Centres and Ambulatory Procedure Units at Westmead, Blacktown and Mt Druitt Hospitals;
- Comprehensive Clinical Centres for selected specialty services at Westmead and Blacktown Hospitals; and
- Integrated Care Centres incorporating an Ambulatory Procedures Units
on the Auburn campus and at Rouse Hill and a Satellite Dialysis Unit at Rouse Hill.

The preferred service delivery model has a number of advantages when compared with current arrangements for the delivery of same day services:

- access to, and amenity of, ambulatory and same day services improved through development of “one stop shops” in the form of Comprehensive Clinical Centres, Ambulatory Care Centres and Integrated Care Centres;
- the provision of health care settings designed for integration of service delivery;
- improved patient outcomes facilitated by continuity of care across health care settings;
- staffing efficiencies gained through collocation and/or integration of related functions;
- an enhanced range of ambulatory & same day services offered in the community; and
- potential savings in recurrent costs through the provision of least cost care in an integrated setting.
The disadvantages of the preferred service delivery model relate to the costs and risks associated with its implementation. These include:

- the need for significant organisational change and associated redeployment and training of staff;
- a requirement for a greater range of capital infrastructure which may contribute to increased operating overheads; and
- the requirement for capital expenditure to redevelop existing and establish new service settings.
6. SERVICE AND ASSET IMPLICATIONS

Based on the preferred service delivery model, in which Integrated Care Centres are provided at Auburn Hospital and Rouse Hill, the projected same day episodes and same day bed equivalents for 2006 and 2011 would be redistributed as follows, details of which are set out in Appendix A2.6.

Projected Same Day Episodes and Bed Equivalents excluding Sub and Non Acute for Preferred Model

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Westmead Hospital</td>
<td>25,254</td>
<td>45</td>
<td>42,282</td>
<td>79</td>
<td>51,147</td>
<td>96</td>
</tr>
<tr>
<td>Auburn Hospital</td>
<td>4,952</td>
<td>8</td>
<td>10,174</td>
<td>18</td>
<td>13,045</td>
<td>24</td>
</tr>
<tr>
<td>Blacktown Hospital</td>
<td>22,054</td>
<td>36</td>
<td>33,703</td>
<td>57</td>
<td>34,659</td>
<td>55</td>
</tr>
<tr>
<td>Mt Druitt Hospital</td>
<td>8,874</td>
<td>10</td>
<td>12,499</td>
<td>12</td>
<td>15,762</td>
<td>14</td>
</tr>
<tr>
<td>Rouse Hill ICC</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>9,785</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>61,115</strong></td>
<td><strong>99</strong></td>
<td><strong>98,659</strong></td>
<td><strong>167</strong></td>
<td><strong>124,399</strong></td>
<td><strong>209</strong></td>
</tr>
</tbody>
</table>

The number of same day bed equivalents for the preferred model compared with the current model in 2011 reduce by 32 for Blacktown Hospital, distributed between the Integrated Care Centres at Auburn Hospital and Rouse Hill.

In summary, the same day bed equivalents excluding Sub and Non Acute between 1998 and 2011 would increase as follows:

<table>
<thead>
<tr>
<th>Facility</th>
<th>1998</th>
<th>2011</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Westmead Hospital</td>
<td>45</td>
<td>96</td>
<td>51</td>
</tr>
<tr>
<td>Auburn Hospital</td>
<td>8</td>
<td>24</td>
<td>16</td>
</tr>
<tr>
<td>Blacktown Hospital</td>
<td>36</td>
<td>55</td>
<td>19</td>
</tr>
<tr>
<td>Mt Druitt Hospital</td>
<td>10</td>
<td>14</td>
<td>5</td>
</tr>
<tr>
<td>Rouse Hill ICC</td>
<td>0</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>99</strong></td>
<td><strong>209</strong></td>
<td><strong>110</strong></td>
</tr>
</tbody>
</table>

At Westmead Hospital non-surgical same day places for cancer, cardiac, aged care and rehabilitation, chronic care, and neurology services would be located within Comprehensive Clinical Centres. Medical oncology places (23) would be provided within the Westmead Comprehensive Cancer Centre with haematology places (10) provided within a Haematology Clinical Centre to be collocated with the Westmead Comprehensive Cancer Centre. Endoscopy places (23), including those required for bronchoscopy and urology, and surgical (15) places would be located within an ambulatory procedures unit. Acute renal dialysis places (14) would be located within the Critical Care Zone of the hospital. Emergency same day places (9) will be provided by the Emergency Department, with rapid transfer to the relevant unit when a procedure is required. Clinical management in these cases will be undertaken by the unit involved.
The Integrated Care Centre at Auburn Hospital will provide for an 11 place satellite renal dialysis unit and a 10 place Ambulatory Procedures Unit comprising 5 endoscopy and 4 surgical beds.

In the Blacktown LGA, same day services would be provided from Blacktown and Mt Druitt Hospitals and the Integrated Care Centre to be established at Rouse Hill. Of the 38 renal dialysis places to be provided at Blacktown-Mt Druitt Health, 25 will be located at the Regional Dialysis Centre at Blacktown, and 13 will be provided at the Satellite Dialysis Unit to be located at the Integrated Care Centre at Rouse Hill. The balance of same day service places at Blacktown Hospital comprise 4 surgery, including 1 gynaecology, 9 cancer services, 8 endoscopy and 8 emergency. Surgical and endoscopy same day places at Blacktown Hospital will be provided within an ambulatory procedures unit. Chemotherapy same day places would be located with a cancer care unit.

At Mt Druitt day places would comprise 5 emergency, 4 endoscopy and 4 surgery. Endoscopy and surgery places would be located in an Ambulatory Procedures Unit. Dental surgery at Blacktown-Mt Druitt Health would be consolidated at Mt Druitt Hospital. Six same day places, including 2 endoscopy and 2 gynaecology would be provided at the Ambulatory Procedures Unit with the Integrated Care Centre at Rouse Hill.
7. CHANGE MANAGEMENT

The change management principles and strategy to be adopted for same day services are the same as the change management proposal contained in the Area Procurement Feasibility Plan.
APPENDICIES

A2.1 SAME DAY SERVICES AND PROCEDURES

Figure 1 – Non Admitted Same Day Services

For the purposes of this Plan the following services has been identified as non-admitted same day services. Procedures are grouped broad type and then by the specialty or service undertaking them. It is noted these services may also be provided on an admitted basis.

<table>
<thead>
<tr>
<th>ENDOSCOPIC</th>
<th>GASTROINTESTINAL</th>
<th>Colonoscopy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hysteroscopy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Colposcopy</td>
<td></td>
</tr>
<tr>
<td>RESPIRATORY</td>
<td>Bronchoscopy</td>
<td></td>
</tr>
<tr>
<td>UROLOGY</td>
<td>Cystoscopy</td>
<td></td>
</tr>
<tr>
<td>SURGICAL</td>
<td>OPHTHALMOLOGY</td>
<td>Laser surgery</td>
</tr>
<tr>
<td></td>
<td>Cataract surgery</td>
<td></td>
</tr>
<tr>
<td>MEDICAL</td>
<td>CARDIAC</td>
<td>Coronary angiography</td>
</tr>
<tr>
<td></td>
<td>EPS</td>
<td>Cardioversion</td>
</tr>
<tr>
<td></td>
<td>FERTILITY</td>
<td>Embryo transfers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Intrauterine insemination</td>
</tr>
<tr>
<td>HAEMATOLOGY</td>
<td>Bone marrow biopsy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Abdominal centesis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plural centesis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Apharesis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transplant review and follow-up</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- drug adjustment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- platelet support</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- blood transfusion</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- anti-viral therapy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Muscle biopsy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Neurophysiological studies including</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- prolonged studies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- sleep latency</td>
<td></td>
</tr>
<tr>
<td>OBSTETRICS</td>
<td>Amniocentesis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CVS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Downs syndrome screening</td>
<td></td>
</tr>
<tr>
<td>ONCOLOGY – MEDICAL</td>
<td>Chemotherapy</td>
<td></td>
</tr>
<tr>
<td>ONCOLOGY – RADIATION</td>
<td>Radiation therapy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aspiration</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plural biopsy</td>
<td></td>
</tr>
<tr>
<td>PATHOLOGY</td>
<td>Bone marrow aspirations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Glucose tolerance tests</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Venesection</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fine needle aspirations</td>
<td></td>
</tr>
<tr>
<td>RENAL</td>
<td>Renal dialysis</td>
<td></td>
</tr>
</tbody>
</table>
### A2.1 SAME DAY SERVICES AND PROCEDURES

**Figure 2 – Day Surgery Procedures**

The following procedures were identified in the 1999 NSW health publication *What a difference a day can make – Same Day Surgical and Endoscopic Procedures*

<table>
<thead>
<tr>
<th>Category</th>
<th>Procedure Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ENDOSCOPIC</strong></td>
<td></td>
</tr>
</tbody>
</table>
| GI | Gastroscopy – diagnostic  
Closed (endoscopic) biopsy of stomach  
Colonoscopy - diagnostic  
Closed (endoscopic) biopsy of large intestine  
Endoscopic polypectomy of large bowel  
Small intestine endoscopy – investigative  
Esophagogastroduodenoscopy (EGD)  
Proctosigmoidoscopy |
| **RESPIRATORY** | Bronchoscopy – diagnostic  
Closed (endoscopic) biopsy of bronchus |
| **SURGICAL** |  |
| SKIN | Excision/destruction of skin lesion *  
Radical excision skin lesion *  
Excision of nail or nail bed  
Excision pilonidal sinus/cyst |
| EYES | Cataract extraction with/without implant |
| DENTAL | Surgical extraction of tooth |
| **EAR, NOSE & THROAT** | Myringotomy with/without tubes  
Septoplasty  
Closed reduction of nasal fracture  
Adenoidectomy without tonsillectomy  
Excision nasal lesion |
| **BREAST** | Excision of breast lump  
Open biopsy of breast |
| **VASCULAR** | Lower limb varicose veins ligation/stripping |
| **HAND** | Carpal tunnel decompression  
Excision of lesion of tendon of hand |
| **STERILISATION** | Vasectomy (male)  
Endoscopic occlusion/destruction fallopian tubes (female) |
| **GYNAECOLOGY** | Dilation and curettage  
Laparoscopy – investigative  
Cauterisation of cervical lesion  
Excision/destruction lesion of uterus  
Conisation of cervix  
Hysteroscopy  
Vaginoscopy |
| **GENERAL** | Inguinal hernia or umbilical hernia repair  
Excision or ligation of haemorrhoids |
| **ORTHOPAEDICS** | Arthroscopy – diagnostic  
Removal of implanted devices from bone  
Excision of semilunar cartilage of knee |
| **RESPIRATORY** | Mediastinoscopy  
Laryngoscopy |
| **UROLOGY** | Circumcision  
Cystoscopy – diagnostic  
Transurethral (closed) biopsy of bladder  
Transurethral excision/destruction bladder lesion  
Dilation of urethra |

**NOTE:** This procedure has been included to encourage the transfer of cases from multiday to same day management, not the inappropriate transfer of “office based” or outpatient management to a day surgery service.
A2.2 LITERATURE REVIEW

A2.2.1 NSW Health Same Day Surgical and Endoscopic Procedures Policy

The NSW Health Same Day Surgical and Endoscopic Procedures Policy provides a conceptual framework for the planning of same day services through to 2001. The policy aims to “promote and optimise the delivery of high quality same day surgical and endoscopic services to meet the current and future needs of the community”.

Within the NSW Health policy, same day surgery is defined as:

“a planned admission where the patient undergoes a surgical or endoscopic procedure, requires a local, regional spinal, general anaesthetic and/or intravenous sedation, a period of post operative observation in a designated area and is discharged home (or to alternative accommodation) on the same date”.

Four goals are identified for achievement:

- to provide 60% of all surgery on a same day basis by 2001;
- to ensure that the people of NSW have equitable access to a range of surgical and endoscopic procedures on a same day basis;
- to ensure that the provision of same day services are based on principles of quality, effectiveness and current best practice and that the achievement of desirable outcomes is demonstrated; and
- to ensure that the development of same day services in NSW is supported by appropriate operational and management structures.

Two “baskets” of surgical and endoscopic procedures have been identified for provision on a same day service basis (see Figure 2 in Appendix A2.1). These procedures represent the majority of the top 60 high volume procedures performed in the State. Same day activity rates, to be achieved by 2001, have been nominated for each procedure.

The expectations of the policy are that:

- hospitals and day surgery services will provide these procedures as same day procedures, unless specifically contraindicated;
- documented preoperative patient screening and selection processes will be used to identify the few patients requiring these procedures who

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1 NSW Health, What a Difference a Day Can Make – Same Day Surgical and Endoscopic Procedures Policy, May 1999.
need an overnight hospital admission;

- Area health services and hospitals will ensure, or work towards ensuring that the available facilities for same day activity represent best practice design for the current and future same day caseload;

- Area health services and hospitals will identify and address equipment requirements, particularly in relation to laser and endoscopic surgery;

- the "extended hours recovery" concept will be considered in planning of same day services; and

- appropriate community support will be available and organised in cooperation with general practitioners and other community service providers.

In order to support the best practice delivery of same day services detailed in the Policy document, it is concluded that hospitals and same day facilities will need to:

- reconfigure resources (physical, human and financial) to facilitate and support the effective and efficient management of patients on a same day (rather than a multi-day) basis;

- ensure that high quality care is uniformly provided to all day surgery patients;

- work co-operatively with community based service providers to ensure the availability of the required post operative support; and

- ensure that preferred outcomes are clearly identified and monitored.

A2.2.2 National Institution Based Ambulatory Modelling Project (NIBAM)

The primary objectives of the NIBAM project were:

- to develop a national institution based ambulatory care health service information model for emergency and outpatient departments;

- to develop an agreed set of standard national data items and code sets for institution-based ambulatory health services eligible for inclusion in the National Health Data Dictionary; and

- to identify the information requirements of institution based ambulatory care.

The final project report of the NIBAM project defines the scope of institution-based ambulatory care as:

“Outpatient and emergency department services delivered by a hospital. This includes pre-admission and post-acute services provided by hospital outpatient...
departments (which are integrally linked to an acute episode) and outreach services provided by outpatient departments” (NIBAM, 1999 pg 29). \(^2\)

The general findings of the NIBAM project include:

- the identification of the core ambulatory processes as presentation – triage – service delivery – appointment management – separation;
- the information associated with the core processes grouped into communication – appointment – ambulatory visit;
- the minimum data items to support ambulatory care provision;
- supporting the clinical care of a patient;
- monitoring referral patterns; and
- monitoring system effectiveness (including costs and outcomes).

A2.2.3 NSW Health Council Report

The NSW Health Council Final Report released in March 2000 has recommended a number of changes to clinical practice in public hospitals to generate greater efficiencies in the health system. The recommendations which impact on the delivery of same day/ambulatory services include:

- the majority of patients being admitted electively should be admitted on the day of their planned treatment; and
- that a target of 80% can be achieved.

Implementation of this target related to a number of interdependencies, including the use of pre-admission clinics and better communication between GPs and specialists in order to arrange tests prior to admission.

The Health Council also makes a number of recommendations for using information technology to optimise the delivery of patient care. The broad recommendations likely to impact on the delivery of same day services include:

- the NSW Health and the Commonwealth Government work together to develop an Electronic Health Record for every individual in NSW;
- NSW Health take action to improve the links between patient information systems within hospitals (such as transferring information from an emergency department to the wider hospital), between hospitals and community health teams and between hospitals and general practitioners;
- that NSW Health establish a unique patient identifier for every

individual in NSW;

• that telemedicine be fast-tracked and the telecommunications system upgraded, so that clinicians can exchange diagnostic information and provide immediate care and advice regardless of where a patient is located; and

• the NSW and Commonwealth Governments and NSW Health must lead the way in developing and implementing the strongest privacy legislation and the strongest security and confidentiality standards.

The outcomes of these recommendations have been incorporated into all aspects of planning for Same Day Services.

A2.2.4 Literature Review

A survey of the literature on models of ambulatory care service delivery reveals four main themes:

i) patient focus
ii) physical layout and design
iii) information technology
iv) operational and management issues

i) Patient Focus

The emphasis on patient focussed service delivery is best summarised in the goals of the Beth Israel Deaconess Medical Centre as to:

“Provide unsurpassed patient-centred care in a professional and personal environment. The commitment was to offer patients state-of-the-art technology, skill and expertise in all clinical specialties, providing a “Centre for Excellence” in the ambulatory surgery department”.

(ii) Physical Layout and Design

The literature identifies the following issues for consideration when planning an Ambulatory Surgery Centre (ASC):

• day surgery needs to be performed in a properly designed unit managed independently of any general hospital needs unless the ASC is completely separate from the main hospital operating rooms, efficiencies are not fully realised;

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for hospital based ASC to be successful, separately functioning operating rooms are essential - In this way, the normal daily schedule is not impacted by emergencies\(^5\);

- there are advantages to having an ASC located within the hospital setting including the ability to tap into resources such as processing, bulk stores, and pharmacy\(^5\);

- another advantage of the hospital based ASC is the ability to keep patients overnight if necessary\(^5\);

- the physical environment for ambulatory care is an important determinant of efficiency and effectiveness of patient care and satisfaction of patients\(^6\); and

- space is required for common support services, including pharmacy, medical records, and laboratory services\(^6\).

(iii) Information Technology

The literature suggests that:

- managers must have information systems that can assist in the vast data analysis that is necessary\(^5\);

- continuity of information available is enhanced by developing a separate clinic record and by making computer record information accessible to physicians in their examination rooms\(^7\); and

- a computer generated over-print developed for primary care notes can remind clinicians to counsel about diet, exercise etc\(^7\).

(iv) Operational and Management Issues

There are a number of issues addressed in the literature relating to operational and management issues including different models with varying degrees of success. The most important issues relate to effective communication and consultation with the implications of establishing an Ambulatory Procedures Centre best summarised in the statement:

\(^5\) loc cit

\(^6\) Restructuring VA Ambulatory Care and Medical Education: The PACE Model of Primary Care, Denis W. Cope, Scott Sherman and Alan S. Robbins, academic Medicine, Vol 71, No. 7:761-771, 1996

\(^7\) Evaluation of the VA’s Pilot Program in Institutional Reorganisation toward Primary and Ambulatory Care: Part 1, Changes in Process and Outcomes of Care, Lisa V. Rubenstein, John Lammers, Elizabeth M. Yano, Melissa Tabbarah, Alan S. Robbins Academic Medicine, Vol 71, No. 7: 772-783, 1996
“The shift from an inpatient to an outpatient orientation in an academic medical centre induces profound changes in organisational culture”\textsuperscript{7}

\textsuperscript{7} Evaluation of the VA’s Pilot Program in Institutional Reorganisation toward Primary and Ambulatory Care: Part I, Changes in Process and Outcomes of Care, Lisa V. Rubenstein, John Lammers, Elizabeth M. Yano, Melissa Tabbarah, Alan S. Robbins academic Medicine, Vol 71, No. 7:772-783, 1996
A2.3 AMBULATORY CARE SERVICES SITE VISITS

A2.3.1 Ambulatory Care Facilities Visits – Victoria 20 March 2000

WIN Program team members visited three sites in Victoria on 20 March, 2000 – Geelong Hospital, Cranbourne Integrated Care Centre and The Northern Hospital – in order to gain an understanding of the innovative models of care which had been reported to be in place in these institutions.

Geelong Hospital

The Geelong Hospital is a general hospital of approximately 400 beds, serving a local population of approximately 250,000 and a tertiary catchment population of 400,000.

The units we inspected were the day surgical unit, the perioperative unit and the integrated cardiac services centre.

The day surgical unit has two dedicated theatres and the capacity to refer patients up to main theatres if required. Collocated with the theatres is an endoscopy room. There are two sets of 6 recovery beds associated with the theatres and a further 7 associated with the endoscopy service. Reception for these areas is shared and is accessed via a separate street entrance. A lounge is available for patients no longer requiring a bed, but this is rarely used. The patient flow pattern is broadly circular. Key operational policies include staggering of attendance time to minimise waiting time and space requirements and allocation of patients to their beds in recovery prior to their procedure, which is thought to minimise confusion on the part of patients. The unit performs roughly 550 procedures per month. Much of the activity is ophthalmological surgery.

The perioperative unit provides a one-stop shop for pre-admission clinic services and admission on day of surgery. 92-95% of elective surgery is admitted on the day of surgery. This amounts to around 800 cases per month, including those managed in the day surgery unit. The perioperative unit is located adjacent to theatres and patients go straight to theatre from there, returning to a bed on the wards.

The integrated cardiac service is located within the body of the hospital in a renovated area. Although cardiac surgery is not offered at the hospital, there are two cardiac angiography suites, one of which was integrated into the 47 bed ward, which also includes coronary care, cardiac stepdown and cardiac rehabilitation. Extensive use is made of telemetry and of decentralised patient observation posts, one of which is located between every two acute coronary care rooms. As the hospital’s cardiac surgical service develops, post-operative intensive care will be provided in the unit.
The service offers an integrated nursing model designed to improve the flexibility with which the workforce is deployed in handling a range of situations, including emergency procedures, and to improve career structure for nurses.

**Cranbourne Integrated Care Centre**
This centre is a newly built service for a rapidly growing population of 160,000 people in Melbourne’s outer south eastern suburbs. It is part of the South Eastern Network. The centre includes:

- allied health, including a rehabilitation gymnasium and consulting rooms,
- community health;
- mental health;
- dental services - 9 chairs;
- district nursing services;
- a suite of medical consulting rooms to be used for outreach, public clinics and by private practitioners on a tenancy basis;
- a private radiology practice;
- a day surgical service of around 20 places; and
- a 6 place dialysis service, with an additional 6 places available for growth in dialysis demand or an ambulatory infusion service.

Office space is available for all staff requiring it in a large, open plan area of the centre.

On the day of the visit, the centre, which had been open for a few months only, was very busy, with intense activity in all of the ambulatory clinics. The day surgical service was not yet in operation pending development of a funding strategy by the Network and/or the establishment of an arrangement with the private sector for its use.

This centre is the second of its type in Victoria, and a third is planned for Frankston, another growth area.

**The Northern Hospital**
The Northern Hospital was commissioned approximately 2 years ago. It replaced the old PANCH hospital. A low-rise building, it is situated in the outer northern Melbourne suburbs and has a catchment of around 160–170,000 people. The hospital, which has 200 inpatient beds, has several interesting features, including:

- collocated community health services – these occupy one extreme of the building;
• collocated private specialist services in an adjacent building;
• a general practice integrated into the fabric of the main building to which selected triage category 4 and 5 patients are referred;
• privatised radiology, pathology and pharmacy services;
• allied health services provided on site by a unit of the network hub hospital; and
• decentralised nursing stations and a physical arrangement which facilitates sharing of clerical staff and after hours partnering between two adjacent wards.

The Hospital’s ambulatory care service provides 45-50,000 occasions of service per annum. The emergency department triages 37,000 patients per annum, with a 20% admission rate. 90% of elective surgery patients are admitted on the day of surgery.

Conclusion
Some of the models of care and physical solutions observed on this visit warrant further investigation. In particular, the integrated care centre concept as implemented and planned in Victoria has the potential to be a relevant model for areas of the Western Sydney Health Area.

A2.3.2 Ambulatory Care Facilities Visits – New South Wales 5th April 2000

WIN Program members visited ambulatory procedure facilities at St George Private Hospital, Prince of Wales Hospital and Royal North Shore Hospital in order to develop an understanding of different models of service delivery.

St George Private Hospital
The Day Procedures Unit is accessed off the Main Lobby and is located within close proximity of the Main Reception Desk.

The unit accommodates both day surgery and endoscopy services and operates from 6.00 am – 8.30 pm, Monday – Friday, with some Saturday lists. An estimated 400 procedures are performed each month, roughly half are endoscopy. Between 15-25 endoscopies are performed daily.

Patients are admitted at the unit. Two interview rooms are provided adjacent to unit reception for this purpose. Following admission, day surgery and endoscopy patient flows are managed separately until they reach the post-operative lounge.

Following admission, endoscopy patients await their procedure in a lounge area or an adjoining 5-bay holding area. There are three endoscopy procedure
rooms -Procedure Room 1 is used for gastroenterology work, Procedure Room 2 for IVF egg retrieval and bronchoscopies and Procedure Room 3 for walk in, walk out procedures such as flexible cystoscopies. ERCPs are performed in the Operating Suite. Endoscopy patients recover in a 5-bay recovery area before going to the post-operative lounge to await discharge.

A scope cleaning room is located between Procedure Room 1 & 2. Cleaning equipment includes a Medivator disinfector, for gastrosopes and a Steris. The Medivator costs the same as a Steris but takes two scopes at a time and is cheaper to operate. Gluteralderhyde is used for the cleaning of probes and dialators.

Day surgery patients are admitted to a 14-bay combined pre-op holding/2nd stage recovery area before transfer to the main operating suite for their procedure. 1st stage recovery occurs in the main operating suite.

A patient tracking system is being developed for the unit by Honeywell.

**Prince of Wales Hospital**

The team visited the Perioperative Unit (to be redeveloped), the Endoscopy Unit, the Department of Respiratory Medicine and the Integrated Cardiac Service.

The Hospital is planning to redevelop the existing Perioperative Unit to provide a one stop ambulatory procedure service. The service will have a dedicated external entry to allow easy access by patients and carers. Functions to be located within the Perioperative Unit will include perioperative clinics, preadmission assessment program, discharge planning clinic and admissions.

The redeveloped Perioperative Unit will comprise 4 clinic rooms in addition to interview cubicles, 4-5 pre-operative trolley bays and 15 recliner chairs. A minor procedures room will be provided for those procedures requiring sedation or short duration anaesthetics. Both medical and surgical procedures will be managed. Medical procedures will include organ biopsies and insertion of lines. A separate oncology area will be provided off the Day Treatment Area. 1st stage recovery will occur in the main operating suite.

The Perioperative Unit currently has 4,000 – 5,000 cases per year, this is expected to increase to 10,000 per year. Currently 85% of adult elective surgery cases are admitted on day of surgery. 50% of elective surgery is currently done on a same day basis - the same day target is 60%.

For a number of clinical specialties, ambulatory care services are collocated with the inpatient accommodation to provide an integrated service. This model of service delivery operates for ENT, Renal, Urology and Cardiac and Respiratory Medicine. Outpatient staff have been assigned to these specialties.
The Endoscopy Unit is collocated with Respiratory Medicine. The unit includes 3 consultation rooms, 2 endoscopy rooms, a diagnostic room for manometry, a bronchoscopy room, an enema room and 10 holding bays. One endoscopy room has a fixed screening unit for ERCP. The unit operates 8am – 6:30 pm, Monday – Friday, and performs an estimated 300 procedures per month, up to 20 per day. All ambulatory cases are managed as outpatient presentations.

The Integrated Cardiac Service includes 3 cardiac catheter laboratories privately operated by Eastern Heart.

**Royal North Shore Hospital**
A Department of Ambulatory Care was established eight months ago by the Division of Medicine as part of a hospital–wide strategy to address access block. The service has been so successful that ward accommodation on Level 12 is currently being redeveloped to house an expanded range of activities.

The service currently has a caseload of 500-600 cases per month, expected to increase to 1,100 per month in the new centre. Operating hours are 7.30 am – 10pm, 7 days per week.

The temporary facility has 12 beds and 10 chairs increasing to 14 beds and 24 chairs in the new centre. The centre will also include 2 multi-purpose consultation rooms, an isolation room and a satellite pharmacy to support chemotherapy.

Since the establishment of the service, ALOS for renal, oncology and bone marrow transplants admissions have fallen and inpatient beds have been closed. At the same time a proactive approach to bed management has been pursued.

Referrals from Emergency have been low; apart from weekends when the inpatient beds are tight and patients are referred for assessment.

Services to be provided at the Centre include:

- ‘one stop’ Motor Neurone Disease Clinic;
- pre and post procedure holding for TOE & cardioversion;
- renal, liver and bone biopsies;
- chemotherapy;
- blood transfusions;
- IV therapy including Warfarin stabilisation & antibiotics;
- bone marrow transplant follow-up after discharge day one post procedure – no barrier nursing;
- Claxane injections for thrombosis previously managed in Emergency;
and

- patients without a means of transport home are provided with a Cabcharge docket.

A Hospital in the Home Service for Respiratory Medicine commenced in May.

Conclusions
The model of ambulatory care service delivery at Prince of Wales Hospital is similar to that proposed for Westmead Hospital featuring an ambulatory procedures unit, an endoscopy unit and a number of integrated clinical services.

The principle of separating day surgery and endoscopy patient flows was observed at both St George Private and Prince of Wales Hospitals.

The inclusion of medical day treatment places within Ambulatory Procedures Centres in Western Sydney needs to be investigated.

Information Technology
Site visits to ambulatory care facilities at both a private and two public hospitals in Sydney revealed consultancy and off-the-shelf programs were under consideration, with one site using an in-house modified booking system to interface with its HOSPAS system. Overall, there were no integrated scheduling, management and communication models in operation across the entire ambulatory care setting.

The Westmead Ambulatory Procedures Centre will aim to utilise innovations in information technology to enhance the continuum of patient care. The delivery of these services will necessitate technology-facilitated business process changes in the ambulatory care setting, to incorporate information technology advancements in patient management and clinical innovation.
A2.4 PATIENT FLOW CHART

A2.4.1 Endoscopy

A – Current
B – Proposed

A2.4.2 Pre-admission Clinic

A – Current
B – Proposed

A2.4.3 Perioperative/Same day ward

A – Current
B – Proposed
A2.5 PROJECTED SAME DAY EPISODES AND BED EQUIVALENTS FOR CURRENT MODEL
A2.6 PROJECTED SAME DAY EPISODES AND BED EQUIVALENTS FOR PREFERRED MODEL