Macarthur Model for Ambulatory Services

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Abstract

The Macarthur Health Sector has embraced the concept of Ambulatory Care within all clinical streams. The Macarthur Model for Ambulatory Services is multi faceted and has sought to encompass and combine the best features of many established services throughout Australia and the world. The result is one integrated, cohesive model that allows patients multiple points of entry and exit. Ambulatory Care has developed an essential link in the continuum of care from acute 'illness' hospital-based to maintenance community 'health' care. The philosophy of shared responsibility between patient, carer, general practitioner and a hospital specialist team underpins the model developing in Macarthur.

Introduction

Macarthur Health Sector is a public health service which includes Campbelltown and Camden Hospitals and five Community Health Centres, and is one of the five sectors of South Western Sydney Health Service (SWSAHS). Macarthur Health Sector is situated in the urban and semi-rural south west of Sydney and services a population of 240,000 people (ABS Census, 1996) with a projected population growth of 4% per year. Past population growth (up to 17% per annum) has rapidly outstripped the social infrastructure of what was, until recently, a largely rural area. Health care services are particularly under-resourced and this has resulted in people having to travel outside of the area for health care. This has encouraged Macarthur to look for alternatives to hospital beds for acute and chronic care.

The conceptual framework of the ambulatory care model was developed following a review of practices in a number of existing ambulatory or transitional care services in Victoria, NSW and South Australia. The literature was reviewed by working parties within Macarthur Health and SWSAHS. This work culminated in the first published Ambulatory Care Plan in NSW, which was released by the NSW Minister for Health in March 2000 (SWSAHS 2000).

Evidence

A number of studies of ambulatory care, including a randomised control trial of older patients on 'Hospital in the Home', demonstrated good medical outcomes as well as satisfaction by patients, carers and attending general practitioners (Caplan 1999, Montalto 1999). Community-based aged care and rehabilitation services have an accepted role in preventing admission for older patients. These services have also been exploring alternatives to long periods of inpatient sub acute care and rehabilitation. Early discharge orthopaedic

programs (Donald 1995) and community rehabilitation for stroke (Rudd 1997) have been found to result in outcomes similar to hospital care at 6 and 12 months follow-up.

In the area of practice involving intravenous therapy, such as the treatment of osteomyelitis (Eisenberg 1986), it has been demonstrated that complete substitution of hospital care to home is safe, effective and well tolerated (Grayson 1995). Emergency departments have also provided an alternate site for outpatient parenteral therapy (OPAT) and it has been suggested that there may be a reduction of potential complications associated with hospitalisation (Vinen 1995). The participation of home nursing with these treatment regimes has broadened the diagnostic categories for treatment. Successful home programs have been developed for chronic airways limitation (Brown 1997) and community acquired pneumonia (Fine 1997).

In the New Brunswick Province of Canada, the concept of an extramural hospital has been developed to deliver a coordinated service for acute, palliative and long term care (Robb 1994). Physicians still admit and discharge from this 'hospital without walls' and retain responsibility for care, which has been shown to be more cost-effective than hospitalisation (Brown 1995). In other regions, community nurses have formed 'Response Services' to bypass hospital admission by instituting supportive care with management conducted by the general practitioner (Freeman 1994).

Further research is needed, but there is a weight of evidence (Montalto 1997) demonstrating successful outcomes for ambulatory services in selected and targeted patients as an alternative to hospital.

Background

In the development of the Macarthur Model for Ambulatory Services, strong links with GPs, community nursing and hospital outpatient allied health services have been formed. This has been facilitated by a determined and innovative shift from traditional hospital management with the creation of a new clinical management stream called the Ambulatory Care Continuum and the appointment of a director of the Continuum with representation on the Sector Executive. The Ambulatory Continuum is responsible for departments that would be commonly referred to as clinical support services. The Continuum includes the departments of Physiotherapy, Occupational Therapy, Pharmacy, Medical Imaging, Social Work, Dietetics, Continence, Diabetes Education, acute home nursing and, most recently, sub-acute community primary health nursing.

This Continuum structure was constituted during 1998/99. The other Continuums represented on the Executive are Mental Health, Acute Services, Aged Care & Rehabilitation, Maternal and Child Health and Population Health.

Philosophy

The philosophy of Ambulatory Care is based on giving our patients the choice of treatment in their own homes or other location as an alternative to hospital. It is now well recognised that significant morbidity and mortality are associated with hospitalisation in Australia (McL Wilson 1999), and health services have a responsibility to deliver health care in the most appropriate and safe setting.

It is interesting that institutions such as the Mayo Clinic in the USA were established long ago as diagnostic centres with no reliance on beds. It is possible for diagnostic and medical management to be separated from the support framework which can be offered either in hospital or by an ambulatory care service in the home. Terms such as the 'extra mural hospital without walls' (Robb 1994) or 'hospital in the home' have been coined for this type of care.

Ambulatory treatment has created many challenges to the accepted passive role of patients in hospital beds. Ambulatory services rely on our patients being responsible and active in their own management, with a greater emphasis on risk assessment and safety for our staff and patients. Discussion and education of relatives and carers is essential. This sharing of responsibility also rests comfortably with GPs, who generally have a greater knowledge of psychosocial home issues and past medical history than hospital specialists. Hospital Specialists still have an active consulting role but no longer have the 'name on the head of the bed'. Hospital practices

such as ward rounds have been reviewed and alternative practices developed by the use of case conferencing and ambulatory monitoring systems.

Development of Model

The development of a cohesive and effective clinical division of Ambulatory Care has necessitated both a change in the site of delivery of health care and a new conceptual model of health care. This has resulted in facilitation of patient flow between the hospital and community and in many cases removing hospital beds entirely from the circuit of acute management.

It appears that few centres have incorporated a range of ambulatory options for health care as a cohesive integrated single system, in the same way as Macarthur. The Macarthur Model has four distinct components, which together make up one Ambulatory Care Service delivering a continuum of care. The components allow for multiple points of entry and egress of patients from the system and by themselves interact with, and provide alternatives for episodes of hospital care (Figure 1). They are as follows.

* Patients admitted and discharged from hospital with a facilitated discharge program involving ambulatory care services. Such services have been called Post Acute Care (PAC), Post Acute Treatment and Care in the Home (PATCH), Home Based Rehabilitation (HBR) and Community-based Rehabilitation (CBR).

* Patients admitted to a home program as a total alternative to hospitalisation. These patients frequently get referred from emergency departments and the program can articulate with day surgery. The other referral sources are consultants, visiting medical officers (VMOs) and GPs. This is often referred to as Hospital in the Home (HITH) or Hospital at Home (HAH).

* Patients presenting to Emergency Department (ED) where problems are incompletely resolved, often present again and may eventually be admitted. These patients may be better dealt with by a more connected and acutely responsive primary health (community) nursing service. This is already being developed for patients with acute exacerbations of chronic and complex conditions who may require enhanced primary care (EPC). This same day service has been referred to as the 'Rapid Response Service' or 'Flying Squad'.

* As part of the acute ambulatory care home service, a day admission area has been established for medical review, diagnostic assessment and multidisciplinary case conferencing. This has been referred to as the 'Ambulatory Resource Centre', 'Multidisciplinary Outpatients' or 'Day Stay'.

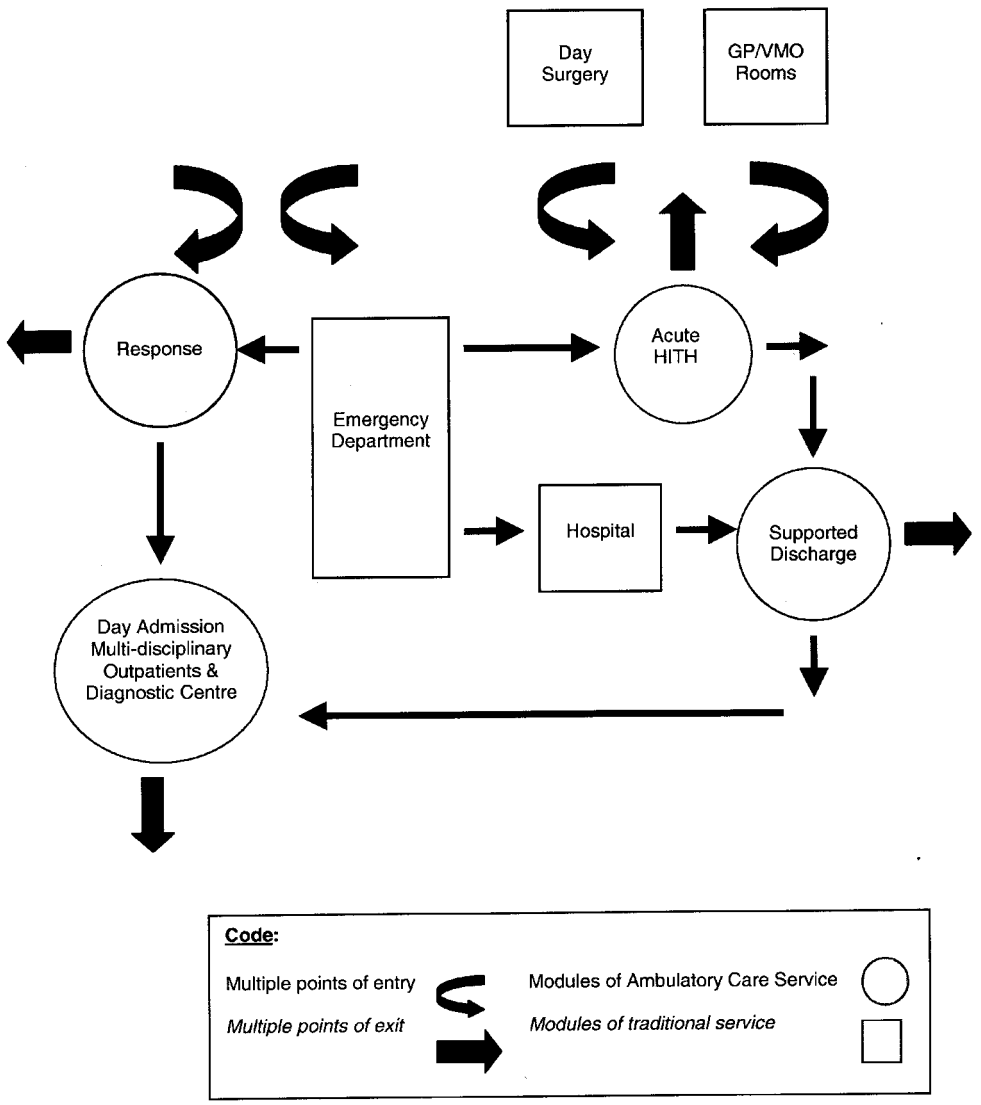
Steps in Development

A number of key milestones were passed in the process of developing this service (Figure 2). These included the appointment of a Director of Ambulatory Care and the development of the conceptual framework. This framework was endorsed by the Health Sector and Area Executive. The endorsement was supported by financial enhancements for the employment of the staff within very strict service delivery guidelines. These guidelines included the service operating for a minimum of 7 days per week and providing 24-hour service.

The service was built by first establishing post acute care as the most widely researched and evaluated area of practice followed quickly by the day assessment and diagnostic centre as space became available through a transfer of acute care physical resources on a cost neutral basis to Ambulatory Care. New Nursing and Allied Health positions were established to promote multidisciplinary management of patients.

The problems of promoting and developing shared care with GPs were overcome by the appointment of a Vocational Special Skills post in General Practice and closer links with the Macarthur Division of General Practice. The appointed registrar acts in the role as the general practitioner's registrar in the same way that hospital specialist registrars support their consultants. This appointment was pivotal in the development of total substitution of care in the community and encouraged direct general practitioner referral to the ambulatory service, thus bypassing the Emergency Department.

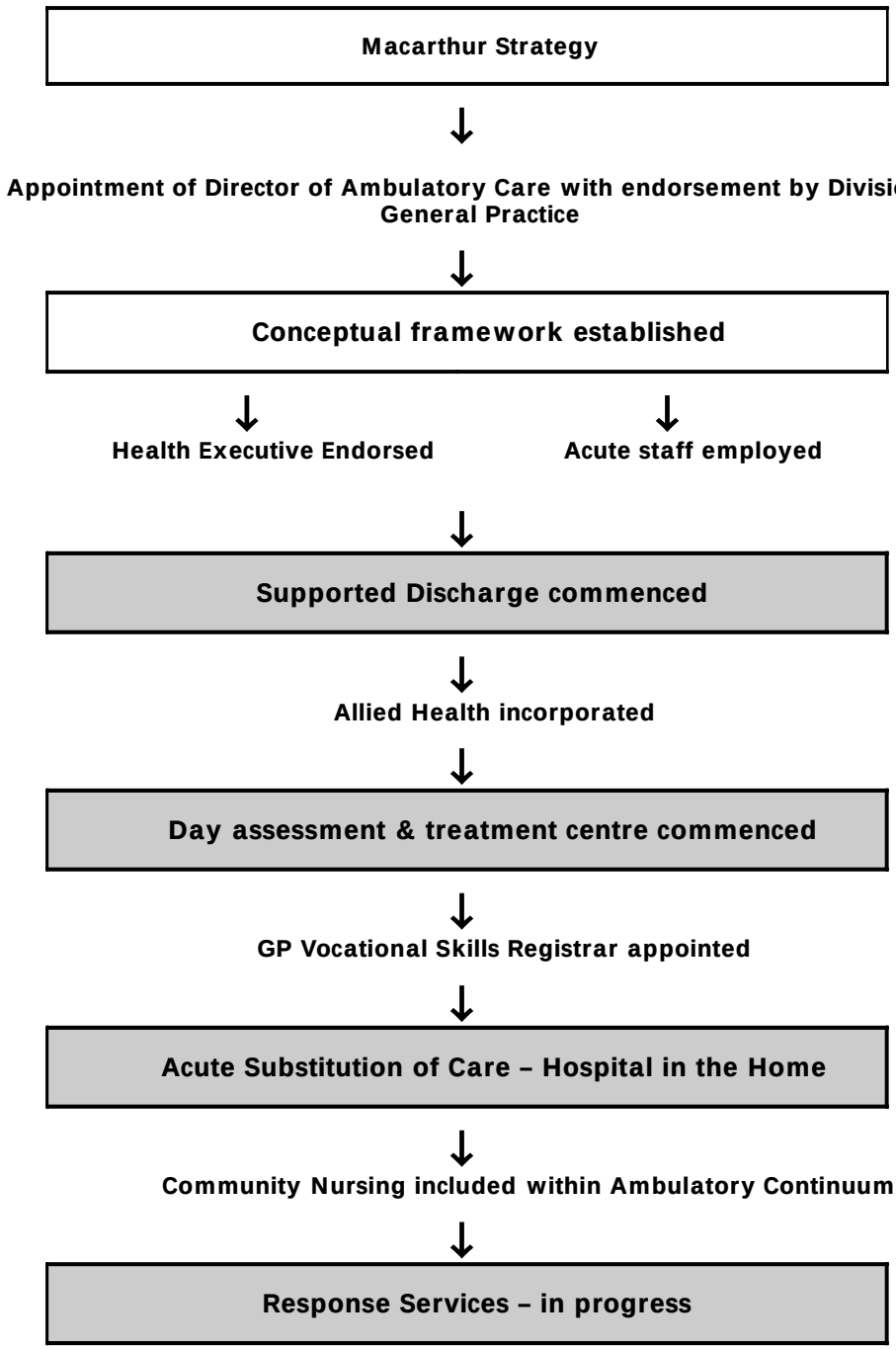
Figure 1: Schematic representation of the service model



Progress

In its first year of operation, the Macarthur Ambulatory Care Service has achieved 100 separations per month, which is equivalent to 15 inpatient beds. Experience of the first year has shown 43.2% of referrals were received from the hospital, 29.8% from the Emergency Department, 17.9% from VMOs, and 9.6% from GPs. In the first year of operation, 59% of referrals were for HITH (with complete substitution of inpatient care), 37% were Post Acute Care cases and 4% were quick response program clients.

Figure 2: Steps in the development of the Ambulatory Care Service



Recent direction from the Health Council Reform (Menadue, 2000) has raised awareness of the need for a community nursing service to be more responsive to patients with acute exacerbations of chronic and complex conditions. A restructure of the community nursing service with responsibilities to the Ambulatory Continuum has recently occurred. This restructure will allow the further development of rapid response services and promote a multidisciplinary response to prevent admission for a variety of conditions including respiratory and cardiovascular conditions.

Areas of ambulatory care other than in acute medical and surgical have also developed within Macarthur. An antenatal shared care program and Domiciliary Midwifery Service is well established. This involves a high level of antenatal education and the planned discharge of mother and baby at six hours or more following delivery. Ambulatory drug and alcohol detoxification has also commenced and paediatric ambulatory care is planned to commence in 2001.

The four clinical service streams of Ambulatory Care have been useful as a conceptual tool for what is essentially only one ambulatory care service incorporating features from previous smaller initiatives developed in other health services around the world. The Ambulatory Continuum concept has clustered a wide range of community and outpatient services into a cohesive model of service delivery to assist in bridging the gap between community and hospital health care and promoting service integration.

Further references and information relating to ambulatory care are available on the Macarthur Ambulatory Care website (www.ambucare.nsw.gov.au) .

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