

**NSW  
Chronic and  
Complex Care  
Programs**

**PROGRESS  
REPORT**

**For Program activity to  
30 September 2002**

**March 2003**

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*NSW Chronic and Complex Care Programs Progress Report, for program activity to 30 September 2002, March 2003.*

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## Executive Summary

The NSW Government Action Plan for Health Chronic and Complex Care Priority Health Care programs are now in their second year of operation. This document is a synthesis of hundreds of pages of reporting received by the NSW Health Department from Area Health Services (AHSs) and provides details of the cumulative progress made to date during the period from program commencement through to the end of September 2002. Most programs received initial funding in January 2001 and achievements since have been impressive. These are showcased in this report.

Chronic and Complex Care programs continue to reach people at the local level. As at end of September 2002, more than 24,500 patients with a chronic illness have been engaged by these programs and have benefited. This group of people, their carers, and many more in the coming year will benefit through a range of local and state-wide initiatives.

To date progress of these programs can be measured by observed change since program commencement. Key observations in program patient numbers and program improvements are:

### Program patient numbers:

- 24,536 patients engaged by 60 Area Health Service programs. This includes:
  - 6,307 patients enrolled in respiratory programs and 246 schools; engaged in South Eastern Sydney asthma projects;
  - 11,898 patients engaged by cardiovascular programs;
  - 5,433 patients engaged by cancer and palliative care programs;
  - 898 patients engaged by generic chronic and complex care programs;

### Program improvements:

- 28 out of 60 programs presently track either and / or Emergency Department (ED) presentations avoided, admissions avoided, and readmissions avoided;
- 1,522 ED presentations avoided;
- 1,870 admissions avoided;
- 435 readmissions avoided;
- These statistics represent on average almost 20,000 bed days saved due to the measurable efforts of about half of the programs;
- Almost all AHS programs are reporting improved patient satisfaction, and improved quality of life for patients and carers;
- There are measured reduced lengths of stay for some patients and program groups;
- Collaboration with GPs and other health professionals;
- Consumer engagement in all initiatives.

The dedication of staff throughout the health system has been fundamental in progressing a reconfiguration of chronic disease models of care in the NSW health system.

## 1. Background

In response to the recommendations of the NSW Health Council and the Ministerial Advisory Committee on Health Services in Smaller Towns, the NSW Government Action Plan aims to achieve three broad outcomes for people with chronic and complex conditions:

- To improve the quality of life of people with chronic and complex conditions;
- To improve the quality of life of their carers and families; and
- To prevent crisis situations and urgent admissions to hospitals.

The Health Council's Report identifies several key systemic issues that need to be addressed in order to ensure that these goals are met. These include:

- Agreement about desired health outcomes and performance indicators to assist in measuring these outcomes;
- New agreed clinical practice guidelines;
- Consumer involvement in decision-making and service planning;
- Information linkages between hospitals, general practitioners and community health services;
- Linkages with other Government departments and programs to ensure a full and integrated range of supports for people with chronic and complex health conditions in the community (eg. Home and Community Care and Housing);
- General practitioner involvement in the planning and delivery of health services;
- Training and support for local service providers; and
- Engagement of clinicians in the process of health service reform.

These are being addressed through the development of a personal health record *My Health Record* for chronic and complex care patients, the development of disease-specific state-wide service frameworks and the establishment of disease-specific Priority Health Care Programs in Area Health Services across NSW. This report documents progress on the Priority Health Care Programs.

## 2. Priority Health Care Programs (PHCPs)

The NSW Health Council also recommended the formation of three Priority Health Care Programs (PHCPs) to facilitate the implementation of new models of care for people with cardiovascular disease and its risk factors, respiratory illness and cancer. Through the Priority Health Care Programs the Government has encouraged and provided funding for local initiatives in these areas that are consistent with state-wide directions.

The purpose of these funds is to assist Area Health Services to design and implement evidence-based models of care that achieve the following:

- Improve health care for people with cardiovascular disease, respiratory illness and cancer who frequently access inpatient hospital services, often through emergency departments;
- Address the recurrent health care needs of the people experiencing these illnesses in ways that reduce unplanned and urgent hospital admissions through emergency departments and reduce hospital admission and readmission rates; and
- Promote greater coordination and continuity of care for people with the nominated chronic conditions between hospitals, general practice and community care providers.

The purpose of the PHCP funding is to support innovative programs that will trigger sustainable changes to the way services are currently provided to people with cardiovascular disease, respiratory illness and cancer. It is expected that funds will be identified for future reinvestment as a consequence of the Area programs. Successful programs will be rolled out across NSW and Areas will need to consider implementing new models of health service delivery for people with other chronic conditions.

There are 60 AHS programs in operation.<sup>#</sup>

The Area Health Service programs have targeted the following illnesses :<sup>\*</sup>

- Respiratory Diseases (18\* programs) addressing chronic obstructive pulmonary disease (COPD) (15 programs), asthma (7 programs), cystic fibrosis (1 program);<sup>‡</sup>
- Cardiovascular Diseases<sup>¶</sup> (26\* programs) addressing heart failure (14 programs), stroke (5 programs), diabetes (7 programs);

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<sup>#</sup> At the start of the chronic and complex care initiative there were 60 programs. Macquarie AHS recently reported its Chronic Disease Self Management (CDSM) activity separately, which could be classified as a generic program. Counted on its own, as a fourth AHS generic program would see the summation of total programs equal 61 programs.

NB. Some programs cover multiple illnesses.

<sup>‡</sup>NB. Some respiratory disease programs cover chronic bronchitis, emphysema, and other illnesses that contribute to Chronic Airways Limitation (CAL).

<sup>¶</sup>NB. Some cardiovascular programs cover Acute Myocardial Infarction (AMI), angina, hypertension, precordial pain, and chest pain.

- Cancer and palliative care (13\* programs);<sup>∇</sup>
- Generic programs (4\* programs) dealing with a spectrum of chronic illness. In South Eastern Sydney there are two generic programs. One addresses Aboriginal and Torres Strait Islander chronic care needs and the other one deals with chronic illness within nursing homes. Wentworth AHS has a community based chronic and complex care program. Macquarie AHS recently expanded its programs to include a generic chronic disease self-management component.

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<sup>∇</sup>The cancer programs in programs in Wentworth AHS and Western Sydney AHS work in partnership.

### **3. Purpose**

The purpose of this document is to provide a report on progress of the PHCPs being implemented in Area Health Services. Whilst there is a focus on the six months from 1 April 2002 to 30 September 2002, progress is also demonstrated by showing cumulative progress since programs commenced. Area Health Services are required to provide a six-monthly report on progress to the Department, using an agreed template that includes: aims, key deliverables, intervention/model of care, target population, patient and carer satisfaction with the program, consumer engagement, sustainability, implementation barriers and a case study of improved quality of life for patients and carers. This document summarises the key elements in these reports.

### **4. Conceptual framework**

The conceptual framework within which these programs have been developed is one of quality improvement. Effective quality improvement processes are developed around three central questions:

1. What are we trying to accomplish?  
(What do we want or need to improve?)
2. What changes will result in an improvement?  
(How will we improve?)
3. How will we know that a change is an improvement?  
(How will we know we have improved?)

## **5. What the Chronic and Complex Care programs aimed to achieve?**

All the chronic and complex care priority health care programs aim to:

- Improve the quality of life of people with chronic and complex conditions;
- Improve the quality of life of their carers and families; and
- Prevent crisis situations and unplanned urgent admissions to hospital.

### **5.1 Aims of the respiratory disease programs**

The aims of the various respiratory disease programs include:

- Assisting patients with COPD to achieve and maintain an optimal level of physical and social functioning and increase quality of life;
- Decreasing hospitalisation;
- Improving access of patients with moderate – severe COPD to pulmonary rehabilitation and smoking cessation programs;
- Improving GP interface with specialty hospital services;
- Reducing urgent and unplanned admission and readmission rates, emergency department demand, length of stay (LOS), variances in clinical pathways;
- Increasing the use of community based services and referral to rehabilitation services;
- Increasing the use of clinical networking/patient centred care coordination approach;
- Providing an effective, efficient and quality alternative to hospitalisation;
- Assisting patients to integrate their health care needs into their daily lives with a focus on self management; and
- Increasing to 50% the proportion of people with asthma presenting to hospital who have an asthma plan.

### **5.2 Aims of the cardiovascular disease programs**

The aims of the cardiovascular disease programs have been to improve the quality of life of people who have or may suffer from:

- Heart failure;
- Stroke;
- Diabetes;
- Risk factors of cardiovascular disease;
- Angina;
- Hypertension; and
- Acute Myocardial Infarction.

Most programs focus on heart failure, stroke and diabetes.

### **5.2.1 Heart failure programs**

The aims of the various heart failure programs include:

- Implementing evidence based therapies;
- Greater coordination of care across the continuum of care from prevention to continuing care;
- Strengthened multidisciplinary management;
- Providing carer support;
- Promoting health, independence and optimal functioning;
- Preventing avoidable declines in health status through improved self management especially risk factor management;
- Minimising the need for crisis intervention;
- Developing effective rehabilitation programs;
- Increasing the appropriateness of medication use;
- Increasing the provision of appropriate discharge summaries;
- Educating patients and carers; and
- Providing health care professional education.

### **5.2.2 Stroke programs**

The stroke care and management programs aim to:

- Strengthening multidisciplinary management of inpatient care in all acute and rehabilitation facilities and reduce crisis admissions;
- Improving patient quality of life through better information, communication, risk identification and coordination;
- Developing clinical pathways to manage stroke patients across the continuum of care; and
- Providing task related group therapy (circuit training) and education and improving the effectiveness of health service provision to residents who have experienced or are at risk of stroke or transient ischemic attack (TIA).

### **5.2.3 Diabetes programs**

The aims of the diabetes programs include:

- Improving the standard of care for patients with diabetes;
- Preventing acute admissions and readmissions through early detection;
- Reducing the number of limb amputations related to diabetes; and
- Improving the quality of life for Aboriginal people with diabetes and their carers.

## **5.4 Aims of the cancer and palliative care programs**

The aims of the various cancer and palliative care programs include:

- Optimising the management of the patient's disease process in the most appropriate setting;
- Reducing acute and unplanned admissions and LOS;
- Enhancing linkages between existing acute and community settings with improved communication with primary health carers;
- Improving patient education on management of side effects;
- Increasing the number of patients with a care coordinator and increasing the number of people who are cared for in the home through an integrated palliative care service;
- Further developing and consolidating the area wide network of self-management, primary, ambulatory and hospital levels of care;
- Establishing and coordinating an area wide evidence based system of care, consistent with the Draft National Strategy for Palliative Care and the Draft NSW Palliative Care Service Framework;
- Improving the quality of life indicators of cancer patients and carers;
- Facilitating continuity of care with the development of a seamless service;
- Reducing differences in outcomes between selected target groups; and
- Improving discharge planning.

## **5.5 Aims of the generic programs**

The aims of the generic chronic illness programs include:

- Supporting Aboriginal Health Education Officers, other community health workers and identified GPs in the prevention and management of exacerbations of chronic disease in the community;
- Promoting optimal self management of chronic disease by Aboriginal people and communities;
- Increasing the involvement of nursing home residents and relatives in planning the clinical care received for chronic conditions and acute exacerbations;
- Coordinating widespread implementation of advance care directives by nursing home residents;
- Developing further Hospital in the Home in nursing homes;
- Ensuring timely and complete vaccination coverage via reminder letters and establishment of vaccination registers;
- Developing and implementing a falls prevention program;
- Reducing crisis and unplanned admissions to inpatient facilities through access to a brokered service for enhanced community care outside the mainstream abilities locally;
- Including a 24 hour phone access for chronic and complex clients to specialist staff which enhances community health services to allow 7

day per week referral to community health nursing services and comprehensive discharge from local inpatient facilities;

- Reducing urgent and unplanned admissions with diabetic ketoacidosis for young people aged 15-24 years through better outpatient supports and patient education; and
- Ensuring continuity of service for young adults after transferring to adult services.

## 6. What interventions are being implemented to bring about improvement?

At the state level a significant effort has focused on the development of:

- Clinical Service Frameworks;
- The personal health record *My Health Record*;
- Clinical governance;
- Establishment of working parties to best implement 24 Hour points of contact for patients and their carers; and
- Consumer engagement and representation.

### Clinical service frameworks

Clinical service frameworks are being developed in each of the disease categories of focus in the chronic and complex care programs, cardiovascular disease, respiratory disease, and cancer. They will provide health professionals with clear guidance on key components of care. Each of the frameworks is based upon evidence-based practice determined through literature reviews and standards, models of service delivery, and with collaboration with clinical experts. The frameworks provide clear milestones for each AHS.

The frameworks are due to be released in early 2003.

### Personal health record

A personal health record titled *My Health Record* has been developed for patients to better manage their health conditions. *My Health Record* aims to improve communication and care particularly between multiple health care providers. The benefits of such a record are that patients and their carers are better informed about the patient's illness and what they can expect from health services.

There will be greater scope for information and knowledge shared between patients, doctors and other health team members. The record should reduce patient and carer stress in having to repeat and remember previous diagnostic tests and results.

The record will facilitate access to personal information such as diagnostic test results, medication, allergies, and emergency contact numbers. The record has been developed collaboratively with consumer representatives, general practitioners, NSW Health staff, AHS staff, and other health care professionals. Input was sought from the Office of the NSW Privacy Commissioner who is supportive of the record and its content.

*My Health Record* was launched on December 4, 2003.

## **Clinical governance**

All chronic and complex care initiatives and the AHS programs have a focus on clinical governance. Clinical governance is not a product of each of the programs, it is an expected criteria of all programs. Clinical governance will provide the means through which AHSs will ensure the provision of quality clinical care to program participants and the achievement of program goals and objectives. The model of program governance ensures clinical engagement and leadership and clinician involvement in the planning, operation, monitoring and evaluation of the program.

## **Expert reference groups**

The priority health care programs and initiatives continue to be supported by expert reference groups spanning the three priority health care streams and a consumer reference group. Co-chairs of the three priority health care streams are Directors of Divisions of General Practice. This ensures that the initiatives and programs are well represented by GPs who are essential in the effective, continuing management of patients with chronic illnesses.

## **24 hour points of contact**

An ongoing initiative is to ensure that all people with chronic illness know whom to contact for medical assistance for their condition, at all times. In many instances, people who have an exacerbation of their illness out of business hours still rely on presenting at emergency departments. Any exacerbation of a chronic illness is stressful to both patient and their carers, and as such NSW Health is committed to ensuring that people with chronic and complex conditions and their carers know what services are available to them at all times of need. AHSs have recently provided the Department with details of contact arrangements for patients and carers at all times. Most rural AHSs have reported that the emergency department remains the out of hours default for contact for most programs. Clinical experts have determined for some diseases the emergency department is the most clinically appropriate place to present. The Department of Health has convened a small working party of AHS staff to progress options, where by, unless it is clinically indicated, other arrangements away from the emergency department will be put in place for out of hours contact for patients and their carers.

## 6.1 Respiratory disease interventions

Respiratory disease interventions within the AHSs comprise of programs addressing:

- Chronic obstructive pulmonary disease (COPD);
- Asthma;
- Emphysema;
- Cystic fibrosis; and
- Chronic bronchitis.

The programs address either disease individually or take a multi-faceted disease approach. Table 6.1 outlines respiratory diseases covered in respiratory programs.

**Table 6.1 AHS Respiratory priority health care programs disease coverage**

AHS	Respiratory program addresses:			
Children's Hospital Westmead	Cystic Fibrosis			
Central Coast AHS	COPD			
Central Sydney AHS	COPD			
Greater Murray AHS	COPD	Asthma		
Hunter AHS	COPD	Asthma		
Illawarra AHS	COPD	Asthma	Emphysema	Chronic Bronchitis
Macquarie AHS	COPD	Asthma		
Mid-North Coast AHS	COPD	Asthma	Emphysema	
Mid-Western AHS	COPD			
New England AHS	COPD	Asthma	Emphysema	
Northern Rivers AHS	COPD	Asthma	Emphysema	Chronic Bronchitis
Northern Sydney AHS	COPD			
Southern AHS	COPD			
South-Eastern AHS	COPD	Asthma	Emphysema	Chronic Bronchitis
South-Eastern AHS		Asthma in Schools		
South-Western AHS	COPD			
Western Sydney AHS	COPD			
Wentworth AHS	COPD		Emphysema	

Source = AHS Implementation and Evaluation Plans and 6 monthly activity reports ending 30 September 2002.

The interventions being developed and implemented through the respiratory priority health care programs include:

- Active promotion of early discharge to nursing outreach programs;
- Identifying people at appropriate points in their care for improved targeted interventions;
- Developing and implementing of clinical pathways to care;
- Engaging GP's and other service providers;
- Developing of a database to track patients and measure outcomes;
- Implementing evidence based therapies;

- Providing coordination across the continuum of care;
- Providing carer support;
- Establishing and coordinating an area-wide evidence based system of care for the management of asthma consistent with the National Asthma Strategy; and
- Establishing a day treatment centre for children with cystic fibrosis, which will provide the basis for a home IV antibiotic service and convenient assessment centre.

## 6.2 Cardiovascular disease interventions

Most cardiovascular disease interventions within the AHSs comprise of programs that address:

- Heart failure
- Diabetes;
- Stroke; and
- Risk factors of cardiovascular disease.

AHS based programs address either diseases individual or take a multi-faceted disease approach. Table 6.2 outlines the diseases covered in the cardiovascular programs.

**Table 6.2 AHS Cardiovascular priority health care programs disease coverage**

AHS	Cardiovascular program addresses:
Children's Hospital Westmead	Diabetes (children)
Western Sydney AHS	Diabetes young adults
Central Sydney AHS	Diabetes foot care
Northern Sydney AHS	Diabetes foot care
South-Eastern AHS	Diabetes foot care
Greater Murray AHS	Aboriginal Diabetes
Wentworth AHS	Diabetes
Far West AHS	Cardiovascular
Western Sydney AHS	(Coordinated Vascular risk assessment program) Angina, AMI
Central Sydney AHS	Stroke
Illawarra AHS	Stroke
Southern AHS	Stroke
Central Sydney AHS	Heart Failure
Hunter AHS	Heart Failure
Illawarra AHS	Heart Failure
Mid North Coast	Heart Failure
New England AHS	Heart Failure
Northern Rivers AHS	Heart Failure
Northern Sydney AHS	Heart Failure

<b>AHS</b>	<b>Cardiovascular program addresses:</b>			
South-Eastern AHS	Heart Failure			
Central Coast AHS	Heart Failure	Stroke	AMI	
Greater Murray AHS (NEW)	Heart Failure		Angina AMI Precordial pain, Chest Pain	
Macquarie AHS	Heart Failure	Stroke	Chest Pain	
Mid-Western AHS	Heart Failure		Angina,AMI	
South-Western AHS	Heart Failure	Stroke	Hypertension	Diabetes

Source = AHS Implementation and Evaluation Plans and 6 monthly activity reports ending 30 September 2002.  
NB. Some respiratory programs also report covering patients with precordial pain.

### **6.2.1 Heart failure interventions**

The interventions being developed and implemented through priority health care programs that address heart failure include:

- Developing multidisciplinary-shared care involving GPs, patients, rehabilitation providers, Aboriginal health education officers, and community and support groups;
- Engaging GPs in care plans, eg. case conferencing;
- Developing discharge planning tools;
- Establishment of an emergency point of contact;
- Establishing a Heart Function Clinic;
- Improving standardised assessment guidelines; and
- Mapping of services to identify strengths and gaps and development of personalised care plans.

### **6.2.2 Stroke interventions**

The interventions being developed and implemented through the stroke priority health care programs include:

- Developing information management solutions;
- Improving care pathways;
- Patient education on self-maintenance strategies;
- Providing education and information to patients and carers on stroke, risk factors, treatment and complication indicators;
- Monitoring compliance with treatment and liaise with GPs and community services; and
- Case conferences across services.

### **6.2.3 Diabetes interventions**

The interventions being developed and implemented for diabetes include:

- Developing and implementing standardised protocols, structured documentation and education on best practice in diabetic foot care for doctors, nurses and podiatrists;
- Developing the capacity of the local Aboriginal communities to manage diabetes and employment and training of specialised Aboriginal Diabetes Workers;
- Providing an after hours emergency hotline;
- Conducting a community program with GPs which enables them to access recall/reminder systems for diabetes management.

### 6.3 Cancer and palliative care interventions

The interventions being developed and implemented include:

- Introducing area wide standardised best practice guidelines for the management of cancer both in acute and community settings;
- Providing greater coordination and continuity of care and fast-track triaging of known cancer patients presenting to hospital unexpectedly for exacerbations of treatment; and
- Providing a coordinated 24 hour, 7 day response for registered palliative care patients to palliative care advice.

Table 6.3 outlines what the cancer and palliative care programs are addressing.

**Table 6.3 AHS Cancer and Palliative Care priority health care programs coverage**

AHS	Program addresses:
Central Coast AHS	Cancer
Hunter AHS	Cancer
New England AHS	Cancer
Northern Rivers AHS	Cancer
Northern Sydney AHS	Cancer
Southern AHS	Cancer
South-Eastern AHS	Cancer
Wentworth AHS	Cancer
Western Sydney AHS	Cancer
Greater Murray AHS	Palliative Care
Mid North Coast AHS	Palliative Care
Mid-Western AHS	Palliative Care
South Western Sydney AHS	Palliative Care

Source = AHS Implementation and Evaluation Plans and 6 monthly activity reports ending 30 September 2002.

### 6.4 Generic interventions

The interventions being developed and implemented include:

- Improving access for the Aboriginal community to a geriatrician, respiratory physician and paediatric services;

- Employing Aboriginal Health Education Worker and establishment of an organised clinic;
- Providing education sessions to nursing home staff;
- Promoting the use of advance health care directives by patients or plans of treatment agreed by their carers;
- Establishing a Hospital in the Nursing Home pilot; and
- Using Enhanced Primary Care (EPC) items, especially case conferencing by GPs;

Table 6.4 outlines what the generic programs are addressing.

**Table 6.4 AHS Generic chronic and complex care priority health care programs coverage**

<b>AHS</b>	<b>Program addresses:</b>
Macquarie AHS	Chronic Disease Self Management (CDSM)
South Eastern Sydney AHS	Aboriginal Health
South Eastern Sydney AHS	Chronic disease management in nursing homes
Wentworth AHS	Community based approaches to chronic care

Source = AHS Implementation and Evaluation Plans and 6 monthly activity reports ending 30 September 2002.

## **7. How will we know that improvements have occurred? What performance measures are in place?**

There are many aspects that demonstrate success of the projects to date. All AHS report six monthly against milestones. These milestones state how many people the program is reaching and what achievements have occurred. Governance structures have been established for all programs. These include steering committees, clinical reference advisory groups, and support from Area Health Service Health Councils and Executives and consumer participation structures. There is an expectation that crisis admissions can be avoided by each of the programs. This section summarises each of the program's stated achievements for the six months ending September 2002 and considers the cumulative progress since program commencement.

### **State-wide performance indicators –Methodology**

#### ***Development***

There is an expectation that the priority health care programs will:

- Reduce unplanned and emergency, readmissions and admissions;
- Reduce the total and average length of stay.

The development of state-wide performance indicators to measure these aspects of performance has been problematic. In 2001, the state health publication, *Chronic and Complex Care State-wide Performance Measures – Methodology* was published. This methodology was developed in consultation with AHS managers and senior clinicians in the health system. The methodology, attempted to measure inpatient activity where by episodes of care could be termed as Chronic and Complex where an episode of care has either a primary or secondary diagnosis of an illness covered by the AHS priority health care programs. The largest problem in developing this methodology related to a lack of data within the NSW Health information exchange (HIE) for most of 2001 to test the methodology.<sup>¶</sup> Moreover, as at time of writing, HIE inpatient data is still not complete for Central Sydney AHS and South Western Sydney AHS.

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<sup>¶</sup> In 2001, most programs received their initial funding in January and program commencement soon followed after a time required for recruiting staff and establishing infrastructure. Most AHS reported that programs only commenced patient activities around July 2001. Any improvements in key statistics observed over this time is problematic as any observed improvement in inpatient statistics amongst low patient numbers during the initial enrolment period would not logically result in significant improvements in state-wide effects that could be attributed to the programs. In addition, data availability problems due to both the implementation of the Health Information Exchange (HIE) (a new data repository for NSW Health) and the implementation of new Patient Administrations Systems (PASs) in several AHSs for much of 2001 resulted in poor data availability to examine any observable change in performance.

### ***Ongoing development and change***

In excess of 24,500 patients have now been engaged in AHS programs across the state, and data management problems whilst ongoing have been minimised. AHS managers have reported, that resources are being aimed at boosting the coverage of the programs to engage greater numbers of people who typically would present to hospital with a primary diagnosis of the illnesses being targeted by each of the priority health care programs. In doing this, they are not targeting those people who present with a secondary diagnosis. With the knowledge that all programs are focusing on primary diagnoses, a shift in the measurement of assessing state-wide performance has occurred. Episodes of care are included now only if the primary diagnosis is an illness targeted by the priority health care programs.

Data is extracted from the HIE for diabetes, stroke, heart failure, COPD, emphysema, chronic bronchitis, asthma, and cystic fibrosis. Chronic and complex care improvements can be represented by observed improvements in the total numbers of episodes of care for AHSs that have a funded chronic and complex care priority health care program that addresses these illnesses. State-wide measurement for Heart Failure for example, will be measured by the sum total of episodes of care for the 13 AHSs who are covering heart failure either through specific heart failure programs or programs for CVD.<sup>Ω</sup> <sup>Δ</sup> The rationale for this approach is the observable change in inpatient activity for these AHSs will contain improvements funded by the priority health care programs monies.

Essentially the observable change in these AHS contains the effect for the dollars outlaid. It is impossible to state however, due to the many complexities in health and health care, that an observable change is entirely attributable to the efforts of the priority health care programs.

### ***Expectations of state-wide performance***

To date, preliminary data indicates, no significant change in the state-wide inpatient statistics. In some cases, preliminary data indicates that inpatient activity may have actually increased. The initial state-wide methodology was based on an estimated target population of almost 200,000 people being engaged by the programs. This estimate was based on population targets supplied to NSW Health in each of the AHS Implementation and Evaluation plans. These target populations were either numbers of people stated by AHSs or statements such as “all people living in the AHS with Cancer”. In some cases the interpretation by AHSs of the target population was people suitable to be engaged by the program and not an actual number target.

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<sup>Ω</sup> As per the original methodology same day episodes of care are excluded.

<sup>Δ</sup> It has been suggested that AHSs that do not have a funded program covering a disease area could be used as a control to those that do. Given the complexities of health care delivery and the fact that non-program funded initiatives may exist in the absence of a funded priority health care program, an examination of such AHSs as a control may be exceptionally problematic. Nonetheless this comparison may be of interest in considering program efficiency.

AHSs revised their target populations in 2002 to reflect actual numbers of people that the programs would reach by June 2003. For all programs this was approximately 59,000 people.

With just over 24,500 patients engaged in programs across the state as at the end of September 2003, and with knowledge that these patients are mainly engaged in the outpatient setting, some caution needs to be exercised in expecting state-wide improvements in inpatient statistics particularly in the short term. Should the target population of 59,000 people be achieved, there may be a greater measurable effect on state-wide inpatient statistics, but this too may require a longer-term perspective.

Disease incidence is also rising and this may negate improvements against inpatient statistics made through program success. The methodology has not yet considered disease incidence. If the programs are having an impact on state-wide inpatient statistics, perhaps the expected result will not be a reduction in overall admission and readmission rates, but a slowing of the rate of increase in activity. The Chronic Care Secretariat will seek epidemiological advice to this end.

For cancer and palliative care programs, data testing has revealed that the most appropriate method of assessment will come from data collected by the programs. Selecting ICD-10AM codes for cancers does not accurately represent the patients being targeted by the programs.

AHS chronic and complex care program managers and clinical expert reference group chairs, Professor Paul Harnett (Cancer), Professor Geoffrey Tofler (Cardiovascular), and Professor David McKenzie (Respiratory), have indicated their support for the new approach to state-wide measurement.

## **AHS program data performance – A measurable alternative to State-wide statistics**

The AHS programs are working to achieve measurable change in a range of outcomes included inpatient statistics. Twenty-eight of the sixty programs currently collect information as to whether the interventions of the program were successful in preventing ED presentations, or preventing admissions, or preventing readmissions to hospital. For those programs that presently do collect such information, efficiency can be measured for admissions and readmissions avoided by calculating the bed days associated with the admissions and readmissions avoided. Some AHSs do supply bed days saved<sup>♦</sup> along with the prevented admissions and readmissions data. For AHSs that do not provide bed days saved data, calculations of bed days saved are done by using the average length of stay for the illness the program deals with. Where the program covers multiple illnesses, the average length

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<sup>♦</sup> Bed day savings are internalised financial benefits. These benefits are internalised because unless a bed is closed it is used for other patients. Thus, the bed day savings attributed to the program can be considered as resources freed up for other purposes within hospitals.

of stay for the major diagnostic category (MDC) can be used to approximate bed days saved. Bed days saved are then multiplied by an average bed day cost of \$500 per bed day.

For ED presentations the average ED presentation cost of \$320 per presentation is used to approximate the benefits associated with ED presentations prevented.

For programs that involve preventing admissions and readmissions of Nursing Home type patients, the cost applied is the maintenance care per bed day rate of \$330 per bed day.

Other programs have indicated that they are working towards collecting these statistics. For some of programs it is not possible to collect such data due to resource constraints, whilst others have said that they cannot assess the program in this way due to the complexities of reasons to why admissions to hospital may occur.

The 28 programs collecting avoidable presentations and avoidable admissions and readmissions data have made significant. For the 14,214 people in these programs, as at 30 September 2002:

- 1,522 ED presentations avoided;
- 1,870 Admissions avoided;
- 435 Readmissions avoided.

These statistics represent on average about 20,000 bed days saved due to the measurable efforts of just half of the programs. These statistics equate to:

- \$10,380,345 of internalised financial benefits, including:
  - o \$9,893,465 of internalised financial benefits in bed days saved;
  - o \$486,880 of internalised financial benefits in ED presentations saved.

A breakdown of these results by disease area is available in the following disease improvement sections. Results for each AHS are also tabled.

### ***Clinical outcomes indicators***

The development of clinical service frameworks affords the opportunity to ensure that clinical standards for the treatment of chronic illness are high. This can be achieved through developing clinical outcomes indicators that are linked to the standards of care documented in the clinical service frameworks. SESAHS has developed databases that collect information for COPD and heart failure at the AHS level. These databases were demonstrated to all AHS program managers. It is up to each AHS to show clinical support for their use before the Chronic and Complex Care Implementation and coordination Group would consider funding assistance to AHS for the purchase and support of such systems. To date only, Illawarra AHS has formally requested additional funding for the database software to assist with data collection of clinical outcomes for patients within their programs. Such a

database would be also useful to AHS who presently have resource difficulties in collecting AHS program data performance.

### ***Audits of patient activity***

The numbers of patients reached by each of the Chronic and Complex Care programs is one means of determining the impact of the Government's Action Plan for health to benefit the people of NSW.

### ***Overall program patient activity performance***

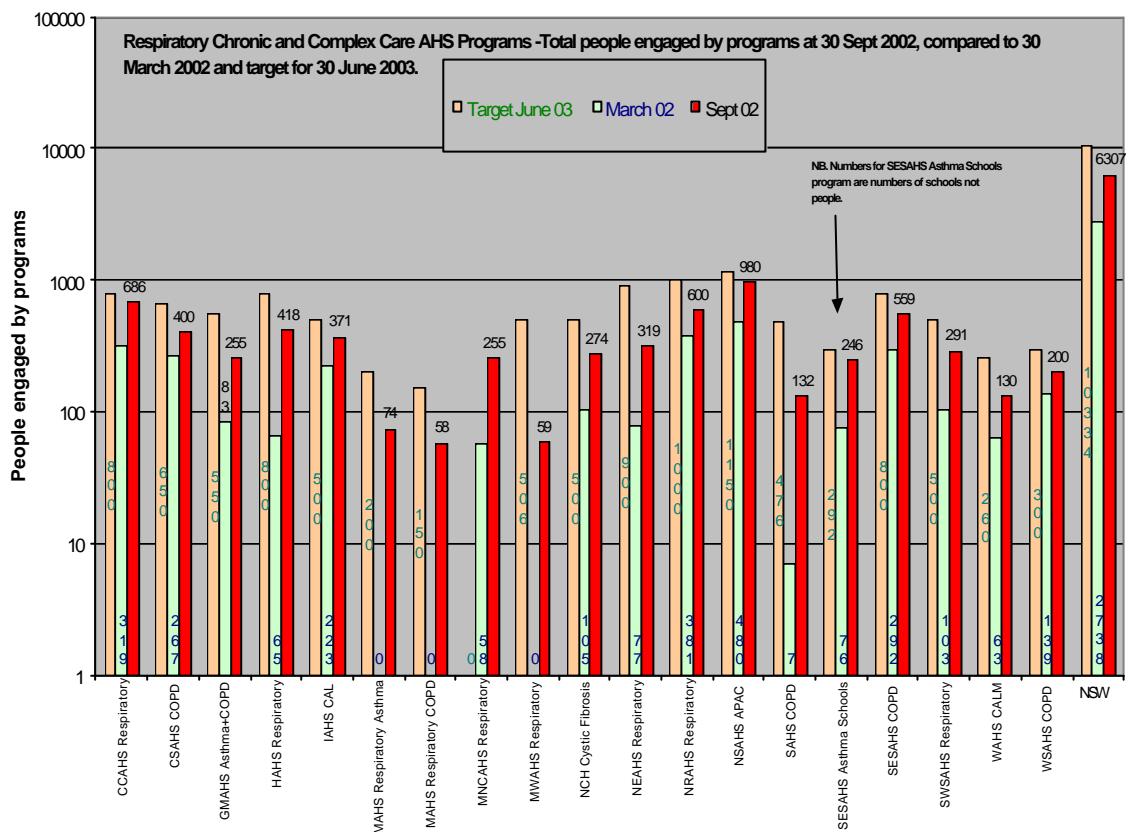
There are 60 AHS programs operating throughout NSW. In excess of 24,500 people across NSW and 246 schools in South Eastern Sydney have been reached directly by these programs. This represents a significant number of the incidence of illness for the diseases targeted by the AHS priority health care programs. Further work will soon be undertaken by the Department to outline the incidence and prevalence of the diseases currently targeted by each of the AHSs priority health care programs.

## 7.1 Respiratory disease program improvements

### Respiratory programs -patients reached

6,307 patients have been engaged in respiratory care priority health care programs. As shown in table 6.1 most of the respiratory programs cover more than one illness. For this reason, and due to the way patient numbers are reported by AHSs as the total for the program, it is not possible to say precisely how many patients for each individual respiratory illness, such as asthma for example, have been reached.<sup>Ψ</sup> In particular, South Eastern Sydney AHS has been targeting schools for their asthma program and to date 246 schools have been reached. This program has targeted over 60,000 school children.

**Chart 1. Numbers of patients in respiratory disease programs in NSW as at September 30, 2002.** Source AHS six monthly reports for end of Sept 2002.



<sup>Ψ</sup> For Macquarie AHS, all respiratory reporting initially was a grossed total for cardiovascular activities and respiratory activities.

### **Respiratory state-wide achievements**

Local AHS program data were available in 6 AHS programs. From program commencement to 30 September 2002, results for these programs show:

Number of Patients engaged in six AHSs with avoidable presentations / admissions data	2,435
ED presentations avoided	345
Admissions avoided	288
Readmissions avoided	83
Bed days saved	2,246
Internalised Financial Benefits -Bed Days	\$1,123,220
Internalised Financial Benefits -ED presentations	\$110,240
Total Internalised Financial Benefits	\$1,233,460

### **Respiratory individual programs achievements**

#### **Central Coast AHS**

*Integration of Respiratory Services for Patients with Chronic Obstructive Pulmonary Disease*

<b>Covers:</b> COPD	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	319	686	800

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	Not Supplied	Not Supplied	-

- Patients provided discharge summary from ED and follow-up occurs with GP;
- Home Education Respiratory Services (HERS) provide a minimum of 3 visits following discharge from hospital and provide education for patient and carer;
- Respiratory maintenance program;
- Respiratory support group;
- Inpatients with 3 or more hospital presentations in the last year are seen by a Respiratory Nurse Case coordinator (218 referred, 137 attended outpatient respiratory rehabilitation program);
- Respiratory care coordinator liaising with GP liaison increasing uptake of case conferencing;
- Comprehensive respiratory rehabilitation program progressing;
- Smoking cessation strategies in place;
- 24 hour point of contact service operating; and

- Quality of life improvements from outpatient respiratory rehabilitation program:
  - Improved function;
  - Improvement in 6 minute walk test;
  - Improved patient knowledge of the disease;
  - Improved knowledge regarding importance of exercise;
  - Improved knowledge for managing panic attacks and shortness of breath (including breathing techniques).

### **Central Sydney AHS**

*Coordinated care of patients with Chronic Obstructive Pulmonary Disease in CSAHS*

<b>Covers: COPD</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	267	400	650

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	Not Supplied	Not Supplied	-

- CSAHS have submitted patient numbers for this program. CSAHS have not yet submitted a report for the end of September 2002 to NSW Health for the progress of the COPD program.

### **Children's Hospital Westmead**

*Optimising Ambulatory and Transitional Care for Children and Adolescents with Cystic Fibrosis*

<b>Covers: Cystic Fibrosis</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	105	274	500

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
55	36	Not Supplied	324

- Cystic fibrosis treatment centre utilised and promoted as an alternative to general patient care (increased utilisation of 11% from previous six months);
- Greater portion of treatment completed in the home setting, including IV antibiotics with decreased number of home CNC visits required;
- 42% decline in ED presentations from previous six months;
- 60% decrease in unplanned hospital admissions from previous six months;
- Discharge summaries and yearly check reports sent to patients;
- Development and circulation of brochure *Cystic Fibrosis – Guidelines for GPs and Paediatricians*;
- Education session included in *Paediatric Update* day, including home IV and an outline of treatment centre services; and
- Quality of life indicators suggest satisfaction with alternative treatment locations to the ED.

### **Greater Murray AHS**

#### *Respiratory Disease*

This program now has been expanded to include COPD

<b>Covers: Asthma, COPD</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	83	255	550

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	Not Supplied	Not Supplied	-

- Asthma care coordination program reducing number of hospital admissions with the development of asthma action plans;
- Reduced number of separations, readmissions and ED presentations;
- Increased uptake of case conferencing;
- Clinical pathways for management of asthma and COPD are developed;
- Management pathways are developed to link risk assessment and discharge planning processes;
- Asthma and COPD information packages developed (implementation planned for October 2002); and
- Staff education for asthma treatment and chest auscultation.

## Hunter AHS

*Program to establish an integrated clinical management model for people with chronic respiratory disease*

<b>Covers:</b> COPD, asthma	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	65	418	800

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	Not Supplied	Not Supplied	-

- Potential participants for program identified while in hospital and given education in hospital and referral forwarded;
- Four community based rehabilitation programs implemented in community centres, linking self-management, primary, ambulatory and hospital levels of care;
- Quality of life improvements:
  - Initial post intervention improvement
  - Smaller 6 month follow up post intervention improvement;
- Improved function status measured by six minute walk test:
  - Initial post intervention improvement
  - Smaller 6 month follow up improvement; and
- Patient education material developed and distributed.

## Illawarra AHS

*Improved management for people with chronic airflow limitation (CAL)*

<b>Covers:</b> CAL includes COPD, asthma, chronic bronchitis	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	223	371	500

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
219	189	60	1,320

- 'CareBridge' program creates a bridge between acute presentation and community care - includes care planning, GP liaison and follow-up across service provision;

- Patient support group established through the pulmonary rehabilitation program at Wollongong Hospital;
- Tailored QUIT programs developed at Wollongong Hospital for people with chronic conditions;
- Electronic discharge summaries available at Wollongong Hospital;
- Discharge planning process in Area is under review;
- Clinical pathways for CAL across all settings in the Northern Illawarra being developed;
- Education material has been developed for all programs; and
- Chronic disease services directory and asthma kit have been printed.

### Macquarie AHS

*Pulmonary Rehabilitation for Chronic Respiratory Disease in MAHS Bigger Fitter Better Lung Care Program (BFB)*

<b>Covers: COPD, asthma</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	371 NB. This figure was reported for all programs and no split amongst CVD and COPD patients were provided for the March 2002 report.	Asthma 74 COPD 58 Total 132	Asthma 200 COPD 150 Total 350

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	Not Supplied	Not Supplied	-

- Macquarie AHS, whilst submitting patient numbers for this program individually, did not supply an individual report on this program. The report submitted by Macquarie AHS contains progress information for all of Macquarie AHS chronic and complex care programs. Thus, the report did not identify if performance was for COPD, asthma, heart failure, stroke or chronic disease self management (CDSM).

### Mid North Coast AHS

*Integrated care model for people with chronic respiratory disease*

<b>Covers: COPD, Asthma, Emphysema</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	58	255	Not Stated

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	Not Supplied	Not Supplied	-

- Developed and circulated self management plans for Asthma and COPD;
- GP liaison officers now located at three sites (2 FTES);
- GP liaison officers have a focus on facilitating discharge planning, and implementing strategies to improve communication with GPs;
- All components of clinical governance structures are in place;
- Role and responsibilities of steering committee under review;
- Consumer representation on steering committee. Consumer representative actively participating in planning and decision making; and
- Program dissemination strategies implemented.

### **Mid Western AHS**

*Development and implementation of a coordinated chronic care program for people with respiratory disease in the Mid West Health Area*

<b>Covers: COPD</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	0	59	506

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	Not Supplied	Not Supplied	-

- Respiratory disease reference group established;
- Continuum of care pathway model established integrating clinical pathways, multidisciplinary care planning and comprehensive health assessments;
- Client action plans developed, personal health record utilised; and
- Routine community referrals are occurring.

### **New England AHS**

*Clinical networking model of care for chronic illness –respiratory*

<b>Covers: COPD, asthma</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	77	319	900

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
37	22	15	231

- Patients utilising a client held record including self-management plans assisting coordination of care;
- Pulmonary rehabilitation program implemented including individual patient and group patient programs and visitation by community nurse;
- Spirometers purchased for EDs without the equipment;
- Education commenced for use of spirometers; and
- Aboriginal liaison officers attended COPD education.

### **Northern Rivers AHS**

#### *Respiratory illness*

<b>Covers: Asthma, COPD, bronchitis, emphysema</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	381	600	1000

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	Not Supplied	Not Supplied	-

- Two hospital projects to decrease respiratory disease through ED commenced 2002;
- Patients received inpatient assessment, education and discharge planning program;
- Patients treated via community respiratory outreach service;
- Patients received home based pulmonary rehabilitation;
- Patients treated hospital based pulmonary rehabilitation;
- Education of disease, self-management skills, medications, devices and community resources provided to all patients;
- Discharge care plans and associated processes finalised;
- Discharge care plans require patient signature before distribution to GP and community staff;
- Media promotion of pulmonary rehabilitation achieved increased consumer demand for services;
- Liaison workers trained in brief intervention for smoking cessation; and
- Improvements noted in total quality of life indicators for patients.

**Northern Sydney AHS**  
*NSH respiratory medicine*

<b>Covers: COPD</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	480	980	1150+

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
7	4	Not Supplied	30

- Registered respiratory patients receive an action plan, explanation of the purpose to facilitate self-management and ensure timely and appropriate medical treatment via community, GP and hospital facilities; and
- Service provision includes:
  - o Acute hospital care substitution and post acute respiratory care services;
  - o Relapse prevention and end stage symptom control service;
  - o Outpatient rehabilitation and home-based service.

**Southern AHS**  
*Respiratory COPD program –Lungsmart*

<b>Covers: COPD</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	7	132	476

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	Not Supplied	Not Supplied	-

- 8.7% reduction in unplanned readmissions;
- 7.6% reduction in unplanned readmissions length of stay;
- GP models of care developed. Care plan template developed. Close links with Division of GPs. Special Interest Group for COPD;
- 100% of patients with GP and / or Medical Specialist involved in care planning process;
- 85% of eligible patients have completed pulmonary rehabilitation programs of eight weeks duration;
- Strategies in place to ensure rapid access to pulmonary rehabilitation;
- Strategies developing to ensure after hours access;

- Representation of all stakeholders on our committee except Aboriginal and Torres Strait Islanders (ATSI);
- ATSI / culturally and linguistically diverse (CALD) clients enrolled in pulmonary rehabilitation;
- Staff involved at all levels with the pathways;
- GP evenings and clinical reviews attended;
- GP models of care developed. Sustainability will be achieved through change in practice / implementation of pathways;
- 100% of all patients who have attended pulmonary rehabilitation programs have had a demonstrated improvement in their six minute walk test;
- 100% of patients attending pulmonary rehabilitation programs have had a demonstrated improvement in their knowledge base through the education component of the program;
- All clients in SAHS have equal access to services; and
- Strategies are being developed to encourage ATSI clients to access services.

### **South Eastern Sydney AHS**

*Aiming for Asthma Improvement in Children*

<b>Covers: Asthma in school children</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Schools engaged by program	76	246	292

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	Not Supplied	Not Supplied	-

- Reduction in asthma hospital admissions compared to last 4 year average;
- 60,478 school students targeted with education material and improved access to asthma resources;
- Implementation of *Acute Asthma Emergency Department Guidelines* at Sydney Children's Hospital and Sutherland;
- Use of asthma discharge summary at Sydney Children's Hospital;
- Paediatric patients receive asthma education and follow up prior to discharge;
- Specialised asthma discharge forms utilised; and
- Professional development education via Divisions of GPs.

*Coping with chronic obstructive pulmonary disease in South East Health*

<b>Covers:</b> -COPD, emphysema, asthma, chronic bronchitis	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	292	559	800

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	Not Supplied	Not Supplied	-

- Reductions in separations, average length of stay, readmissions and ED presentations;
- Patients received pulmonary rehabilitation (at hospital);
- Patients received maintenance pulmonary rehabilitation;
- Improvements in quality of life indicators for patients and carers;
- Improved patient education of patients and carers in management of disease;
- Staff training to improve continuity of care from hospital to community services;
- Improved GP communication with COPD hospital and community services via case conferencing and care planning;
- Improved functional status with 21% differential for six minute walk test; and
- Care plans utilised improving GP involvement in discharge of patients.

**South Western Sydney AHS**

*Chronic obstructive pulmonary disease and asthma*

<b>Covers:</b> COPD, Asthma	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	103	291	500

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
12	25	8	250

- Reduced hospital admissions for COPD and asthma;
- Reduced length of stay for COPD;
- Care plans and case conferencing with GPs;
- Discharge planning form developed with system in place for delivery to GP;

- Patients referred to pulmonary rehabilitation;
- Meetings with primary/allied health providers to facilitate smooth transition of care; and
- Interim quality of life results indicate minor improvements.

### **Wentworth AHS**

#### *Chronic Airways Limitation Management Program (CALM)*

<b>Covers: COPD</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	63	130	260

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	Not Supplied	Not Supplied	-

- 100% reduction in admissions at Blue Mountains hospital;
- 82% reduction in admissions at Nepean hospital for graduates of the program;
- 20% reduction in readmissions;
- 100% of the patients discharged from the program have a care plan;
- Meetings with GPs, community and allied health have occurred to facilitate continuity of care;
- Blue Mountains Division of GPs engaged and consulted regularly; and
- Governance model in place with key stakeholders represented.

### **Western Sydney AHS**

#### *Improved Ambulatory Care and Community Support for People with Chronic Obstructive Lung Disease*

<b>Covers: COPD</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	139	200	300

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
14	12	Not Supplied	91

- Disease-specific COPD discharge summary developed and implemented at Westmead Hospital;

- GPs of all patients enrolled in the program are invited to participate in case conferencing and care planning via correspondence sent to them after initial clinic assessment;
- Summaries of clinic assessments and outcomes for the program participants are fed back to GPs and respiratory specialists within 24 hours of patient review;
- Comprehensive, multi-disciplinary assessment of the patient's needs is undertaken at each clinic visit. Any issue identified that cannot be managed within program resources prompts a referral to community care services. Most common referrals are for occupational therapy home assessment and speech pathology assessment of breathing and swallowing;
- Successful implementation of the first electronic clinical documentation system/electronic medical record for public hospital patients in Australia. This Electronic medical record for all patients enrolled in our program (Cerner Millennium) means that patient records are accessible area-wide. Furthermore, the electronic record means that data collection / assessment of patients is standardised. This leads to appropriate clinical decision making and ensures that patient problems are identified and suitable management plans implemented;
- Waiting time to access pulmonary rehabilitation reduced from approximately 12 months to 8 weeks; and
- 24 hour Respiratory Hotline / telephone triage service in place since September 2002.

### **Respiratory patient case study**

#### **South Eastern Sydney AHS**

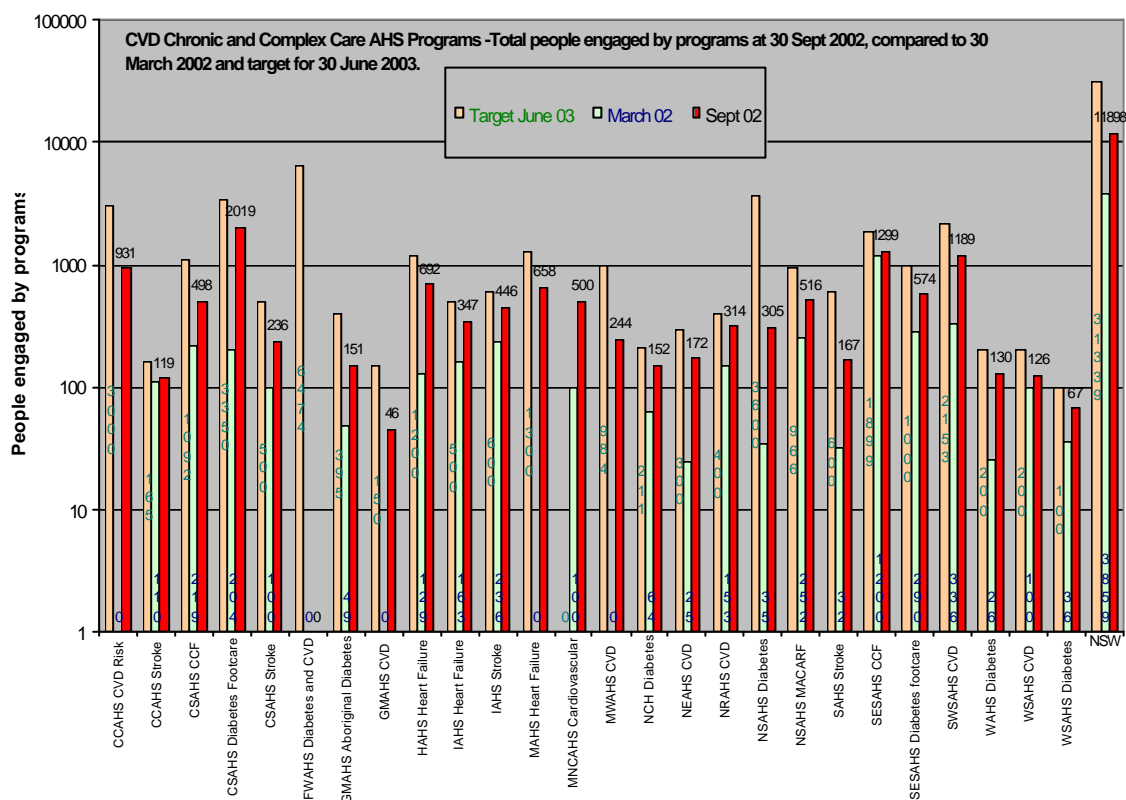
Mrs M. (75 year old female) was referred for pulmonary rehabilitation via outpatient clinic. On telephoning the patient it was established that she was house bound, not coping and did not understand her long-term oxygen therapy. The pulmonary rehabilitation co-ordinator organised a private community physiotherapist (the public community waiting list was 6 weeks, patient had Department of Veteran Affairs (DVA) access) to see her the next day. The community physiotherapist immediately contacted the rehabilitation coordinator to report a dangerous level of oxygen use. The rehabilitation coordinator organiser liaised with the patient's specialist to determine each prescription of oxygen. The project occupational therapist then organised an immediate home visit. This home visit was followed up the next day with another visit to ensure appropriate and safe use of her oxygen. The community physiotherapist continued increasing the patient's level of fitness until she was able to get to the hospital (via DVA transport). Mrs M is to attend pulmonary rehabilitation as an outpatient (within a group setting) and will be offered additional services as required.

## 7.2 Cardiovascular disease improvements

### Cardiovascular programs -patients reached

As at the end of September 2002, AHSs reported that there were 11,898 patients engaged by the cardiovascular programs. As shown in table 6.2, most of the cardiovascular programs cover more than one illness associated with cardiovascular disease. That is, they may cover heart failure, and diabetes. For this reason, and due to the way patient numbers are reported by individual AHS's as the total for the program, it is not possible to say precisely how many patients have been engaged for each individual CVD illness.

**Chart 2. Numbers of patients in cardiovascular disease programs in NSW as at September 30, 2002.** Source AHS six monthly reports for end of Sept 2002.



### **Cardiovascular state-wide achievements**

Local AHS program data were available in 12 AHS programs. From program commencement to 30 September 2002, results for these programs show:

Number of Patients engaged in 12 AHSs with avoidable presentation / admission data:	7207
ED presentations avoided	486
Admissions avoided	959
Readmissions avoided	352
Bed days saved	12397
Internalised Financial Benefits -Bed Days	\$6,198,580
Internalised Financial Benefits -ED presentations	\$155,520
Total Internalised Financial Benefits	\$6,354,100

### **7.2.1 Heart failure program improvements**

Many AHSs reported significant progress in establishing heart failure programs and providing enhanced chronic and complex care to patients.

### **Heart failure program achievements**

#### **Central Coast AHS**

*Heart disease risk factor management – improving awareness of risk factors*

<b>Covers: Heart failure, stroke, AMI</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	0	931	3000

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	Not Supplied	Not Supplied	-

- Development of evidence based guidelines for use in clinical practice;
- GP guidelines for risk factor management developed and distributed;
- Cardiovascular disease risk factor (CVDRF) clinics were attended by GPs, hospital and community staff to improve CVDRF management by GPs, and improve CVDRF identification in hospital settings;
- Electronic discharge referral from cardiac ward to GPs was piloted; and
- Ongoing liaison with Aboriginal Health Unit.

**Central Sydney AHS**  
*Heart Plus*

<b>Covers: Heart failure</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	219	498	1092

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	145	Not Supplied	1,230

- Education night held with Divisions of GPs on the management of heart failure;
- Employment of specialist heart failure liaison nurses;
- Monitoring of the number of patients that receive a home visit via the heart failure database; and
- Consumer representative on heart failure committee.

**Far West AHS**

*Chronic disease coordination and continuity of care*

<b>Covers: CVD</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	0	0	Not Stated

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	Not Supplied	Not Supplied	-

- Care pathways developed for chronic disease;
- Self-management training in Broken Hill for staff and clients is being achieved;
- Chronic disease network in place;
- Regular meetings and education sessions to ensure provision of best practice;
- Primary health care teams developed in all sites across the FWAHS;
- Diabetes educators in all regional hubs;
- Visiting specialist clinics from Prince of Wales, timetable in place and implementation underway;
- Regional Diabetes centre doing outreach. Broken Hill complex care interagency group developed;
- Development of linkages with the Barrier Division of GP's; and
- Steering group in place reporting to FWAHS executive.

## Greater Murray AHS

### *Wagga Wagga cardiovascular disease program*

<b>Covers:</b> Heart failure, angina, AMI, precordial pain, chest pain	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	0	46	150

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	Not Supplied	Not Supplied	-

- Eligible patients received care coordination from care coordinator and referrals where appropriate;
- Patient management flow chart has been developed and distributed;
- Referrals made according to protocols including to allied health, diabetes and asthma educators, home care and Meals on Wheels; and
- 3 in-services completed at Wagga Wagga Base Hospital.

## Hunter AHS

### *Integrated clinical management model for people with chronic cardiac disease*

<b>Covers:</b> -Heart failure	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target for 30 June 2003</b>
Patients engaged by program	129	692	1200

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	Not Supplied	Not Supplied	-

- Clinical pathway for heart failure developed;
- Four heart failure rehabilitation sites established;
- Increased functional capacity of patients based on 6 minute walk test;
- Improvements in quality of life scores;
- Patient information developed and disseminated;
- GP network education completed;
- Rural GP referral system implemented;
- No waiting time for access to allied health services; and
- Strategy to encourage GP uptake of discharge care plans in process.

## Illawarra AHS

*The best of life with heart failure*

<b>Covers: Heart failure</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	163	347	500

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	228	111	2,875

- Heart failure rehabilitation programs commenced at Bulli and Nowra hospitals;
- Home-based programs have been implemented;
- Anecdotal information suggests reduced hospital admissions and faster return to work (to be confirmed with data);
- Large unmet need identified and partially addressed by program;
- Education for management of heart failure, discharge planning, heart failure drugs and Aboriginal health (GPs, hospital staff, pharmacists);
- Educational brochures for patients have been distributed;
- Improved functional capacity based on 6-minute walk test results;
- After investigation, the cardiac rehabilitation database at St Vincent's Hospital was chosen for the Area; and
- Aboriginal Heart Failure Group has commenced monthly meeting in the Northern Illawarra.

## Macquarie AHS

*Cardiac and Stroke Prevention and Rehabilitation Program for Macquarie Area Health Service*

<b>Covers: Heart failure</b> —program does state it covers stroke too, but only heart failure patients have been engaged under this CVD program thus far.	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	371 NB. This figure was reported for all programs and no split amongst CVD and COPD patients were provided for the March 2002 report.	658	1300

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	Not Supplied	Not Supplied	-

- Macquarie AHS, whilst submitting patient numbers for this program individually, did not supply an individual report on this program. The report submitted by Macquarie AHS contains progress information for all of

Macquarie AHS chronic and complex care programs. Thus, the report did not identify if performance was for COPD, asthma, heart failure, stroke or chronic disease self management.

### **Mid North Coast AHS**

*Integrated chronic care model for people with cardiac disease*

<b>Covers:</b> Heart failure	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	100	500	REQUESTED

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	Not Supplied	Not Supplied	-

- GP liaison officers now located at three sites (2 FTES). These officers have a focus on facilitating discharge planning, and implementing strategies to improve communication with GPs;
- All components of the clinical governance structure are in place;
- Consumer representation on steering committee; and
- Extensive dissemination tools and strategies have been developed.

### **Mid Western AHS**

*Development and Implementation of a coordinated chronic care program for people with cardiovascular disease in the Mid Western Health Area*

<b>Covers:</b> Heart failure, AMI, angina	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	0	244	984

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	Not Supplied	Not Supplied	-

- Continuum of care pathway model established;
- All patients have action plans to support rapid access to services;
- Personal health records and routine referrals are key to project success;
- Implementation of 'Healthy Lifestyles' education package in Orange and Lithgow;

- Integration of chronic care project with Telehealth, Central West Division of GPs, care planning and care management; and
- Minor quality of life improvements.

### **New England AHS**

*Clinical networking model of care for chronic illness – cardiovascular*

<b>Covers: Heart failure</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target for 30 June 2003</b>
Patients engaged by program	25	172	300

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
20	Not Supplied	30	254

- Decreased length of stay;
- Increased utilisation of community services;
- Patient self-management tools implemented to assist patient's to identify criteria for hospital presentation and daily self-management;
- Utilisation of client-held record in program;
- Case conferencing and care plan utilised for patients with complex needs;
- Home based education and support/ cardiac rehabilitation;
- Joint training venture with New England HACC services with community health staff, discharge planners and Division of GPs; and
- Education provided for Aboriginal liaison officers.

### **Northern Rivers AHS**

*Heart failure*

<b>Covers: Heart failure</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	153	314	400

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	73	Not Supplied	619

- Heart failure model has improved discharge planning, education of patients and carers in self-management and reporting early deterioration;
- Care coordination has improved referrals for community services;

- Liaison workers contact specialist and community services to assist in appropriate service utilisation; and
- Improved discharge summary process with completion at Lismore Hospital and faxed to GP (Tweed and Grafton to follow).

### **Northern Sydney AHS**

*Northern Sydney health management of cardiac failure (MACARF)*

<b>Covers: Heart failure</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	252	516	966

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	Not Supplied	Not Supplied	-

- Reductions in hospital readmissions for congestive cardiac failure;
- Reduced length of stay;
- Referral flow chart developed and implemented;
- Comprehensive discharge summaries are faxed to GPs;
- Patients enrolled receive Heart Action Plans and attend the Heart Function Clinic;
- Effective communication improvements between program nurse, GP and specialist;
- Appointment of specialist cardiac nurses;
- Links made within hospital between respiratory, aged care and rehabilitation units;
- Links made between GPs and program nurse, with Divisions of GPs; and
- Links made between nursing homes, hostels, and cardiac rehabilitation.

### **South Eastern Sydney AHS**

*Collaborative care for congestive cardiac failure*

<b>Covers: Heart failure</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	1200	1299	1899

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
310	255	Not Supplied	2,162

- Reduction in average length of stay, readmission rates, and ED presentations;
- High severity patients targeted;
- Home based heart failure program established;
- Community nurses follow up on all patient referrals to the program;
- Liaison nurse established and improved coordination and continuity of care between hospital and community services;
- Domiciliary visits by community nurse to monitor clinical status;
- Patient education to improve disease awareness and symptom recognition has improved patient self-management;
- GPs are managing higher acuity patients more appropriately in the community with support;
- GP in-services conducted with Divisions of GPs to encourage utilisation care plan utilisation and hospital discharge plans; and
- After hours telephone service has been established for patients with emergency needs

### **South West Sydney AHS**

#### *Cardiovascular disease*

<b>Covers: Heart failure, diabetes, stroke, hypertension</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	336	1,189	2,153

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
-1	130	17	1,247

- Reduction in hospital admissions, length of stay and ED presentations;
- Care planning and case conferencing systems in place;
- Education of GP's conducted;
- Liaison nurses employed;
- Improved 24-hour specialist access regime; and
- Meetings with primary and allied health staff are facilitating smooth transition of care from hospital.

## Western Sydney AHS

### Coordinated vascular risk assessment and management program

<b>Covers: AMI, angina</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	100	126	200

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	Not Supplied	Not Supplied	-

- Combined cardiac and diabetes care plan recommendations sent to the GPs;
- Employment of a GP liaison person situated with the Division of General Practice;
- Information sharing with a GP liaison person who follows up with GPs and offers assistance with health assessments, care planning, GP based cardiac rehabilitation;
- Two part-time nurses have been employed to act as care coordinators within the program;
- Specialist nurse assessments and recommendations are provided by existing staff within the Departments of Cardiology and Diabetes and Endocrinology;
- Individual services vary but on average service waiting times are as follows:
  - o Cardiac rehabilitation 0-3 weeks;
  - o Diabetes educator 3-6 weeks (if urgent will be seen same or next day);
  - o Diabetes Clinic 2-6 weeks;
  - o All patients within the intervention group have had the availability of a cardiac/diabetes assessment within a 2 week timeframe;
- Vascular risk guidelines for GPs have been developed; and
- The program has established a communication system that involves GP notification of patient discharge from hospital.

### **Cardiovascular (Heart Failure) patient case study**

#### **A case study from New England AHS**

Mrs J, 64 years usually presents up to 6 times a year in periods of extreme climatic change, due to acute exacerbations of heart failure. After 3 rapid admissions to hospital, despite recruitment to the chronic and complex care program, the importance of a client centred care plan was identified. In consultation with the GP, community nurse, cardiac rehabilitation co-ordinator and dietician a plan was developed using client friendly language that helped Mrs J to understand her role in self management. As a consequence of better and clearer self-management Mrs J has remained out of hospital for the preceding 3 months over winter. (It was a bitter winter.)

## 7.2.2 Stroke improvements

### Stroke patients benefiting from these programs

Five programs addressed stroke care. Some programs report and address stroke as a separate program, whilst others address it as part of a cardiovascular program.

### Stroke program achievements

#### Central Coast AHS

##### *Community stroke support service*

Covers: Stroke	31 March 2002	30 September 2002	Target 30 June 2003
Patients engaged by program	110	119	165

As at 30 September 2002:

ED presentations prevented	Admissions Prevented	Re-admissions Prevented	Bed days saved
Not Supplied	Not Supplied	Not Supplied	-

- Referral source and numbers of referrals logged and monitored to ensure realistic waiting times for patients;
- Waiting time for assessment has been reduced;
- Readmission rates monitored;
- No noted preventable readmissions;
- Life satisfaction survey indicates increase in patient life satisfaction;
- Marked decline in the carer strain index;
- Improved performance and satisfaction for occupational therapy service; and
- Reduction in risk of patient depression.

#### Central Sydney AHS

##### *Enhancing quality of care for patients with stroke and mobilising effective community support for their carers*

Covers: Stroke	31 March 2002	30 September 2002	Target 30 June 2003
Patients engaged by program	100	236	500

As at 30 September 2002:

ED presentations prevented	Admissions Prevented	Re-admissions Prevented	Bed days saved
Not Supplied	Not Supplied	Not Supplied	-

- Patient education completed regarding stroke risk factors, compliance, signs and symptoms;
- Stroke care coordinators maintain regular contact with patients and carers to monitor compliance to treatment regimes, identify risk of readmission, and to refer the patient and carer to community services as required;
- Carer education sessions for neurosciences nursing, medical and allied health staff, geriatric and general medical staff;
- Inpatient and outpatient education by expert stroke staff;
- Common clinical record commenced;
- Guidelines drafted to assist GPs dealing with primary and secondary stroke prevention; and
- Nursing guidelines are in use.

### **Illawarra AHS**

*Development of a coordinated delivery system for stroke care*

<b>Covers: Stroke</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	236	446	600

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
45	49	188	2,808

- Speech discharge management program developed to:
  - o Improve the process of follow-up for discharged clients;
  - o Enhance accessibility of essential speech pathology services;
- Promote better health outcomes through improved clinical practice;
  - o Improve efficiency of client and service management;
  - o Improve effective communication, collaboration and teamwork between speech pathology and community agencies, GPs and nursing home patients;
- Patients progress post discharge tracked to enable earlier intervention and avert crisis presentations;
- Staff education to facilitate changes in stroke management;
- Dedicated stroke beds;
- Outpatient lower limb circuit training implemented to enhance outpatient services;
- Patient education packages delivered to stroke patients and carers;
- Critical pathways and referral processes developed; and
- Improve the availability and quality of education for patients, families and carers.

Also, a program was developed for dysphagia (swallowing problems) with initiatives to:

- o Reduce the complications associated with dysphagia secondary to stroke;
- o Enhance early detection of swallowing disorders through prompt referral to speech pathology;
- o Improve staff education and consistency of care.

### **Southern AHS**

#### *Southern Area stroke management program*

<b>Covers: Stroke</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	32	167	600

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	Not Supplied	Not Supplied	-

- Development and implementation of acute and post-acute management plans and education delivered;
- All facilities within SAHS have received education about best practice management of client groups;
- One day workshops in functional independence measurement to assess clients within a multi-disciplinary context and set rehabilitation goals;
- Education module developed and delivered to support RNs to attend swallowing assessments and indicate appropriate nutrition in absence of speech pathologist;
- All clients suitable for rehabilitation are assessed using the Functional Independence Measure to determine disability at commencement of rehabilitation, pre-discharge and at 90 days; and
- Case conferencing / care planning utilised at all sites.

### **Cardiovascular (stroke) patient case study**

#### ***A case study from Illawarra AHS***

Mr M was a person who experienced a stroke in August 2002 and was a patient of the stroke unit. Mr M made the decision to leave the hospital prior to his completion of his rehabilitation. On follow-up at home, Mr M experienced ongoing falls and his wife, who was his main carer, expressed concerns related to her ability to provide personal care for Mr M due to her own health issues. No services were put in place at discharge due to Mr M making his own decision to leave. Contact was made with the local community health nurses for interim support and Aged Care Assessment Team (ACAT) for assistance with home modifications and accessing services. Contact was made with local outpatient services for physiotherapy and speech therapy services.

On subsequent follow-up, home modifications had been carried out, support services were in place, and outpatient services had commenced. Mr M's wife had an interest in finding out more about the physical impact of stroke and cognition changes. This was discussed and educational material was sent out.

On the last contact with this family, the wife had found the educational material very helpful and was pleased with the progress Mr M was making.

### **7.2.3 Diabetes improvements**

#### **Diabetes programs -patients reached**

Seven programs addressed diabetes. Three programs focus on diabetic foot conditions, two on diabetes in children and young adults, one focuses on diabetes in an Aboriginal population and one addresses diabetes as part of a cardiovascular program.

#### **Diabetes programs achievements**

##### **Children's Hospital, Westmead**

*Ambulatory stabilisation program for children and adolescents recently diagnosed with diabetes*

<b>Covers: Recently diagnosed diabetes in children and adolescents</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	64	152	211

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
65	Not Supplied	Not Supplied	-

- Growth in day program treatment and reduced hospital admissions and length of stay;
- Treatment costs per patient reduced by 25%;
- Routine follow-up discharge letter within 72 hours of discharge from day care;
- Positive feedback from hospital staff and patients/carers for day program compared to hospitalisation;
- Audit of diabetes day care centre program due for completion December 2002; and

- Finalist in the NSW Health Baxter Awards for 2002.

### **Central Sydney AHS**

*Developing diabetes foot care services across CSAHS: a coordinated and integrated approach*

<b>Covers: Diabetes foot care</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	204 enrolled	>204 enrolled* 2019 assessed	(Enrolment target being supplied) 3350 assessed

\*Recent data for end of February 2003 indicates 240 enrolled.

As at 30 September 2002: -data was not available until end of February 2003.

This data indicated:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	65	Not Supplied	975

- High Risk Foot Clinic at Concord Hospital has been extended threefold and another has been established at Canterbury Hospital;
- Foot assessment in-services at all community health centres and with ward nursing staff have been conducted and well received;
- Clinical treatment guidelines have been developed and are being made available to those involved in care of people with diabetic foot disease; and
- After initial consultation letters are sent to GP and relevant community services;
- Amputations have been prevented for those people enrolled in the program.

### **Greater Murray AHS**

*Aboriginal diabetes*

<b>Covers: Diabetes in the Aboriginal population</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	49	151	395

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	Not Supplied	Not Supplied	-

- Increase in number of Aboriginal Health Workers who have achieved competencies in diabetes management and case management;
- Care coordination process and referral to GPs implemented;

- Growth of referrals for nutrition, foot care and vision (dietician, podiatry, ophthalmology);
- Clinical pathways, management and screening guidelines developed and implemented; and
- Development of partnerships in health care for Aboriginal people with diabetes.

### **Northern Sydney AHS**

#### *Diabetes - High Risk Foot Service*

<b>Covers: Diabetes foot care</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	35	305	3600

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	Not Supplied	Not Supplied	-

- High Risk Foot Service and Diabetes Health Screening Service commenced;
- Increased referrals to the diabetes education centre, dietetic, community podiatry, physiotherapy, orthotics, community nursing and medical specialists (orthopaedics, endocrine, vascular and microbiology);
- All referring services receive a discharge summary with care plan recommendations included; and
- Podiatry services are now operating at capacity.

### **South Eastern Sydney AHS**

#### *Diabetes foot care – a comprehensive diabetic complication reduction strategy*

<b>Covers: - Diabetes foot care</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	290	574	1000

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
24	13	Not Supplied	195

- Standardised care plans developed, disseminated and utilised across Area specific to diabetic foot conditions including: charcot's; ulcers; infections; and diabetes foot;
- Area podiatrists trained in the treatment and management of high risk diabetic foot;
- Development of guide for GPs and other health care providers on foot assessment of the diabetic patient;
- GP diabetes foot care education meetings and information distributed through the Divisions of GPs;
- Referral form developed for GPs to refer patients to high risk foot service;
- Improved referral processes via mapping podiatry services across Area;
- Hospital podiatry staff up skilled in identification and management of high risk diabetic foot; and
- Appointment of podiatrist (previously no access to podiatrist in Sutherland except for aged pensioners).

### Wentworth AHS

#### *Cardiovascular and diabetes chronic care program*

<b>Covers: -</b> Diabetes	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	26	130	200

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
19	Not Supplied	Not Supplied	-

- Liaison nurse has commenced visiting surgeries;
- Ongoing education offered;
- Hotline accessible 24 hours a day; and
- All clients have access to emergency guidelines.

### Western Sydney AHS

#### *Transitional care program for young adults with diabetes*

<b>Covers: Diabetes -Young Adults</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	36	67	100

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
4	1	6	32

- Hospital admissions have reduced by 50%
- Reduction in emergency department presentations for patients in program;
- Program coordinator case conferences;
- GP education on use of care plans;
- 58% of patients registered with program for 12 months or more;

### **Cardiovascular (diabetes) patient case study**

#### **A case study from Central Sydney AHS**

Mr B is a Hungarian born man who is 81 years old. His English is limited and a Hungarian speaking carer acted as an interpreter during his treatment. Mr B is a recent non-smoker, with a 50 year history of cigarette smoking. He reports being diagnosed with diabetes at the time of his admission to RPAH in 2001 although he recalls being advised 10 years prior by his local doctor to cut sugar from his diet indicating that he may have had diabetes for some time before 1987. His pedal pulses were only weekly detectable using doppler and he had severe peripheral neuropathy. Ankle Brachial Indices of 0.75 and 0.68 in the affected foot indicate significant peripheral vascular disease.

In March 2001, he describes a scratch to his left 4<sup>th</sup> toe. He sought advice from his local doctor who provided treatment. Some time after, the toe went black and the GP referred him to a vascular specialist who admitted him to RPAH for amputation of the toe. He was admitted within 1 month of the initial injury for bypass surgery to the left leg, amputation of the toe and radical debridement. Management of his diabetes was commenced in hospital by the endocrine team. Three weeks later he was discharged to the care of the High Risk Foot Clinic (HRFC) with a follow up appointment with the vascular specialist.

Management at the HRFC consisted of:

- Treatment of infection with oral antibiotics;
- X-rays to exclude osteomyelitis and wound cultures to assist in prescription of oral antibiotics;
- Wound care including liaison with the community nursing service who performed the dressing changes;
- Referral to dermatology for advice on management of skin rash on the foot and leg;
- Monitoring of biochemistry including blood glucose; and
- Offloading of the foot using a combination of post-operative footwear and an aircast pre-fabricated walking cast.

He healed after 12 months of treatment and the HRFC team arranged discharge.

Discharge and secondary prevention consisted of:

- Referral to public podiatry clinic for routine care;
- A letter detailing his condition and recent treatment was given;

- Discharge letter sent to local GP;
- Prescription and fitting of custom made insoles and orthopaedic footwear;
- and
- Individual foot education.



Mr B's foot in May 2001



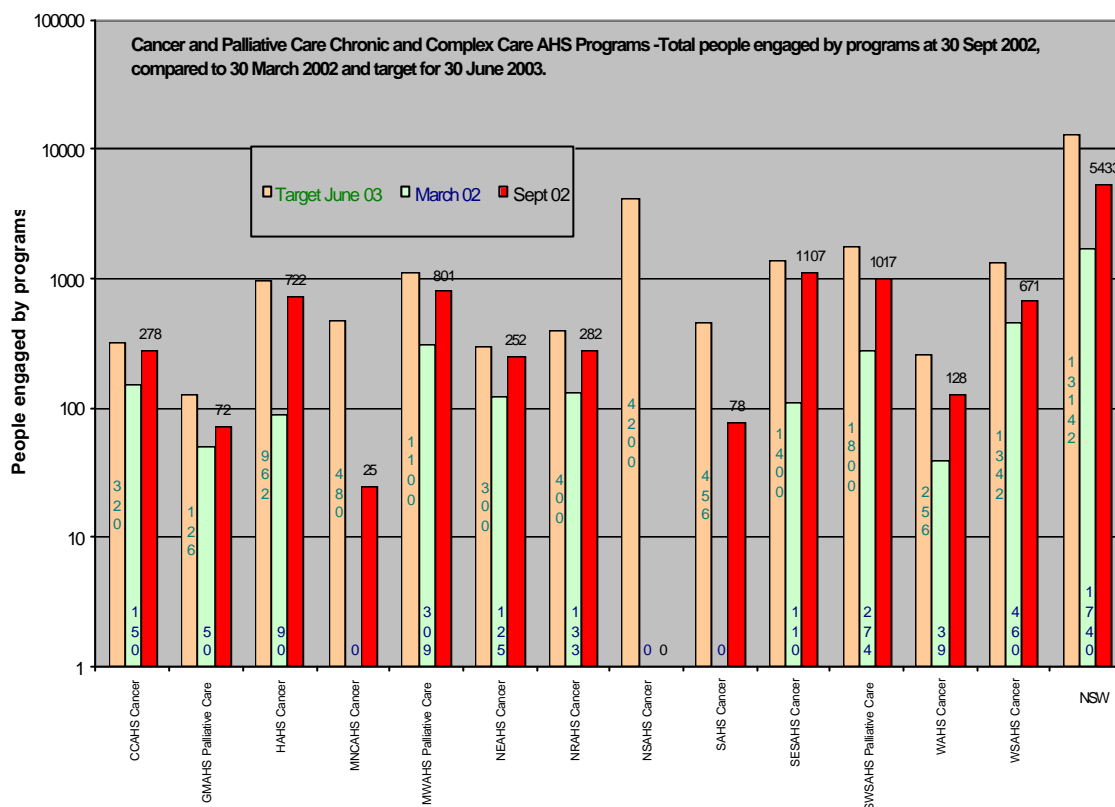
Mr B's foot (Healed May 2002)

## 7.3 Cancer and palliative care program improvements

### Cancer and palliative care programs -patients reached

As at the end of September 2002, AHS report that there were 5,433 patients that had been engaged by the 13 cancer and palliative care programs.

**Chart 3. Numbers of patients in cancer and palliative care programs in NSW as at September 30, 2002**



### Cancer and palliative care state-wide achievements

As discussed in section 7, the use of ICD10-AM codes to adequately identify patients of the Cancer and Palliative Care programs is inadequate. Information gathered at the program level is far more telling of the significant progress made to date.

Key highlights of these programs include:

- Decreased unplanned admissions;
- ED admissions avoided;
- Increased GP involvement in patient management and care initiation to avoid ED admission; and
- Better coordination of care.

Local AHS program data were available in 7 AHS programs. From program commencement to 30 September 2002, results for these programs show:

Number of Patients engaged in 7 AHSs with avoidable presentations / admission data:	3779
ED presentations avoided	540
Admissions avoided	504
Readmissions avoided	
Bed days saved	4719
Internalised Financial Benefits -Bed Days	\$2,359,475
Internalised Financial Benefits -ED presentations	\$172,800
Total Internalised Financial Benefits	\$2,532,275

### **Cancer and palliative care program achievements**

#### **Central Coast AHS**

##### *Community Cancer Services*

<b>Covers: Cancer</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	150	278	320

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
55	Not Supplied	Not Supplied	222

- Decreased unplanned admissions;
- ED admissions avoided;
- Increased GP involvement in patient management and care initiation to avoid ED admission;
- ED discharge summaries are forwarded to GP;
- Higher risk patients are monitored at home and provided with appropriate community resources;
- Specialist liaison nurse available 7 days a week;
- Colorectal patients now receive specific chemotherapy in the community setting;
- Increased IV medication administered at home; and
- All chemotherapy patients receive education in the use of 24 hour points of contact.

#### **Greater Murray AHS**

<b>Covers: Palliative care</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	50	72	126

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
33	15	Not Supplied	134

- Reduced average length of stay;
- Reduced number of unplanned ED presentations;
- Appropriate access of 29 patients to domiciliary care;
- Uptake of MBS EPC items is approximately 6 per month;
- Strategies in place to support GPs;
- Strategies in place to ensure appropriate referral to palliative care services and to ensure rapid access to specialist services;
- Weekly case management meetings attended by 2 to 8 GPs and case conferencing in place;
- Provision of 24 hour telephone 1800-line in Griffith area;
- Key stakeholders involved in governance and program management.

### **Hunter AHS**

*Integrated clinical management model for people with cancer as a chronic disease*

<b>Covers: Cancer</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	90	772	962

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
37	50	Not Supplied	460

- Reduction in hospital admissions;
- Enhanced GP management of patients within the community setting;
- Care pathways established and utilised;
- Referral protocols for lung cancer management developed;
- Rapid referral process for psycho-oncology services in place for lung cancer patients;
- Lung cancer nurse appointed to act as coordinator and central point of contact for patients;
- Patient education material developed and distributed;
- GP information package developed regarding side-effects associated with radiotherapy and chemotherapy; and
- Increased quality of life scores pre to post intervention for psycho-oncology service, lung multi-specialty team and palliative care medical outreach service.

## Mid North Coast AHS

### *Palliative care*

<b>Covers:</b> Palliative care	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	0	25	480

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	Not Supplied	Not Supplied	-

Many initiatives are reported as partially achieved for this program.

Achievements include:

- Consumer representation on steering committees;
- Priority Health Care program website has been established.

## Mid Western AHS

*Integration of palliative care and oncology services. A comprehensive model of care for cancer patients and their carers*

<b>Covers: -</b> Palliative care	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target for 30 June 2003</b>
Patients engaged by program	309	801	1100

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
300	220	Not Supplied	2,024

- Collaboration between the Area and the Division of GPs to include practice nurses in primary health care network;
- GPs notified by fax of patient admission and encouraged to participate in the discharge planning process;
- Care plan and care pathways introduced;
- Case conferencing mechanism introduced;
- Increased access to specialists enabled via telephone consultation;
- 24 hour telephone contact for palliative care physician;
- Specialist palliative care physicians available to mentor GPs;
- Chemotherapy outreach clinic now available in Parkes; and
- Increased counselling and community nursing positions.

## New England AHS

*Clinical networking model of care for chronic illness – cancer*

<b>Covers: Cancer</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	125	252	300

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	Not Supplied	Not Supplied	-

- Patient held record has specialist contact information and after hours contact point and an alert card to present to ED;
- Cancer management guidelines have been distributed to each hospital ED in poster format;
- All new patients are referred to a community nursing service. Rapid intervention is initiated by telephone if required;
- Patients follow self-management guidelines of when to present to ED;
- Number of admissions has decreased; and
- Patients and carers report the Febrile Neutropenia alert card is a 'gold pass' to immediate care.

## Northern Rivers AHS

*Cancer Program*

<b>Covers: - Cancer</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	133	282	400

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	Not Supplied	Not Supplied	-

- Cancer liaison workers established in hospitals;
- Patient held record with liaison worker interaction has improved coordination of care;
- Discharge care plans forwarded to GPs;
- Increased community allied care used by cancer patients including nursing, physiotherapy, occupational therapist and social workers;
- Best practice models of care developed and disseminated;

- Education to Area staff for improved cancer care, including prostate care nursing, breast cancer nursing, lymphoedema management, and 'Living with cancer' education; and
- Improved patient self-management.

### Northern Sydney AHS

Covers: Cancer	31 March 2002	30 September 2002	Target 30 June 2003
Patients engaged by program	0	0	0

As at 30 September 2002:

ED presentations prevented	Admissions Prevented	Re-admissions Prevented	Bed days saved
Not Supplied	Not Supplied	Not Supplied	-

Negotiations are underway with Northern Sydney AHS as to providing details of progress made to date against the stated and agreed objectives of this program's implementation and evaluation plan.

### Southern AHS

*Chronic care needs and cancer program*

Covers: Cancer	31 March 2002	30 September 2002	Target 30 June 2003
Patients engaged by program	0	78	456

As at 30 September 2002:

ED presentations prevented	Admissions Prevented	Re-admissions Prevented	Bed days saved
Not Supplied	Not Supplied	Not Supplied	-

- Reduced length of hospital stay;
- Improved access to information regarding community services for health care providers via carers resource folders;
- All registered patients are allocated a care manager;
- GP education session for improving practice;
- Personal health record distributed; and
- Improved links with GPs and local facilitators.

**South Eastern Sydney AHS**  
*Connecting cancer care program*

<b>Covers: Cancer</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	110	1107	1400

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	99	Not Supplied	775

- Preliminary outcomes suggest reduced presentation at hospital and reduced length of stay;
- Coordination and continuity of care has increased in home, ED and ward settings;
- Strong support for the program from local clinicians, community and hospital staff;
- Good post-hospital care plans in place;
- Improved patient knowledge and confidence with symptom control and side-effects;
- Improved patient access to services with increased home treatment;
- Clinical pathways have been developed for inpatients; and
- Common protocols are being developed across the Area.

**South Western Sydney AHS**

<b>Covers: Palliative care</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	274	1017	1800

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	Not Supplied	Not Supplied	-

- Area-wide palliative care service established;
- 27% registered 100+ days prior to death;
- 269 calls in first 6 months of operation;
- Phone contacts for all consultants in each sector given to all GP Divisions;
- Training of GP in program implementation and coordination started;
- Research undertaken regarding GP uptake of care planning;
- Palliative care algorithm in place;
- Coordinator recruited March 02;

- 100% staff employed as of June 02;
- Extension of appropriate service hours in place. Problems with internal recruitment creating gaps elsewhere in the system;
- Protocol in place;
- 7 care plans implemented by GP; and
- 28% of total deaths occur at home.

### **Western Sydney AHS and Wentworth AHS**

#### *Cancer Service Without Walls – Joint project*

##### Western Sydney AHS

<b>Covers: - Cancer</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target for 30 June 2003</b>
Patients engaged by program	460	671	1342

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
95	101	Not Supplied	929

##### Wentworth AHS

<b>Covers: - Cancer</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target for 30 June 2003</b>
Patients engaged by program	39	128	256

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
20	19	Not Supplied	175

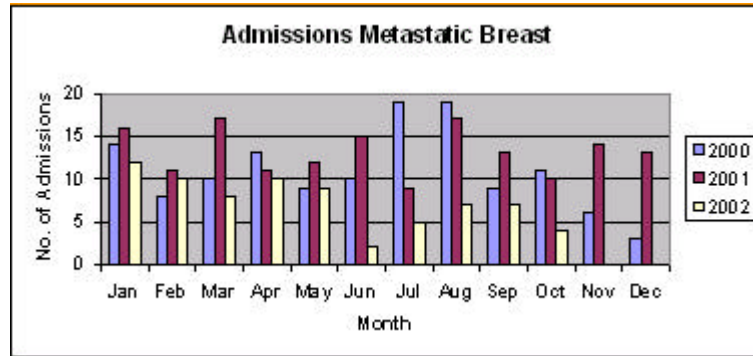
- Decreased admissions;
- Decreased length of stay;
- Increased communication between service providers has resulted in greater coordination of care, with smoother transition between hospital and community;
- Increased use of care plans and case conferencing facilitated by program nursing staff and the Divisions of GPs;
- GP fax notification strategy shares hospital admission, treatment and discharge information with GP (including side effects of treatment);
- GP liaison officer and CNC assists communication between GPs and community and hospital facilities; and
- GP training in progress to facilitate closer working relationships between GPs, CNCs and community health.

### **Cancer progress graphical examples**

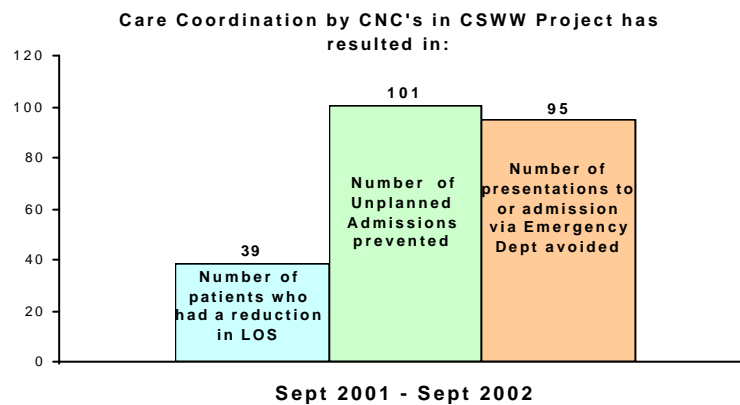
Chart 5 shows a reduction in admissions for metastatic breast cancer has reduced under the *Cancer Services Without Walls* (CSWW) chronic care

program. Chart 6 shows significant improvements in reduced bed days, unplanned admissions prevented, and presentations or admissions to the ED avoided.

**Chart 5. CSWW admissions**



**Chart 6. CSWW hospital activity progress**



**Cancer patient case study**

**A case study from Southern AHS**

(Real names not used)

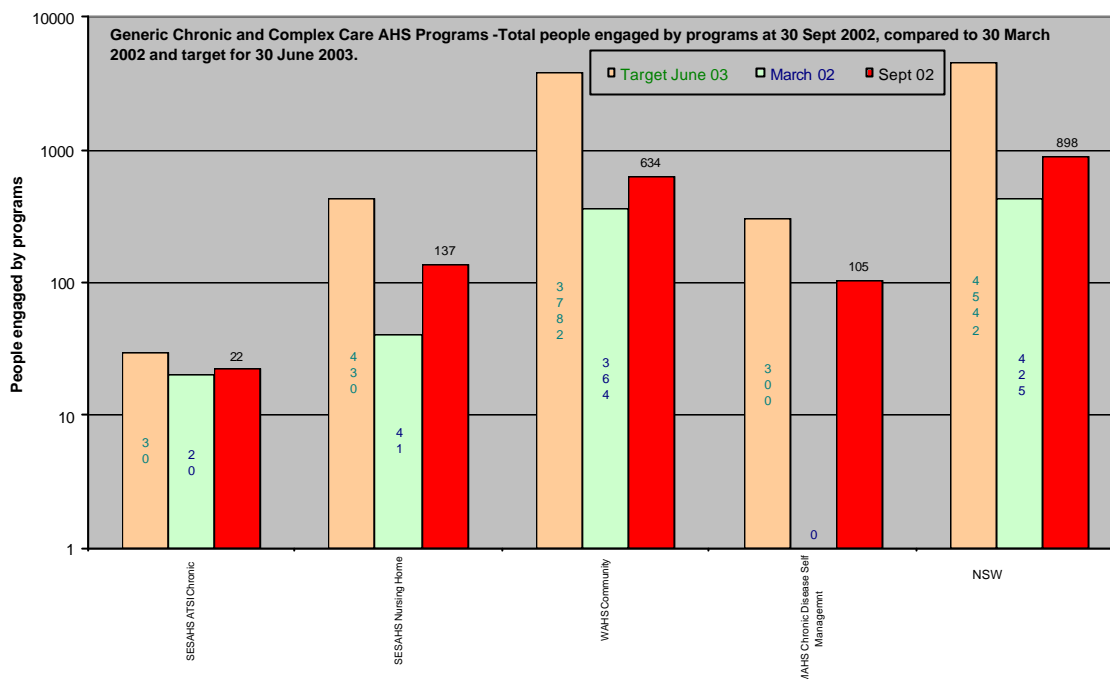
Mary is a 78-year-old lady diagnosed with bowel cancer 12 months ago. She underwent surgery and has completed her course of chemotherapy. She is now in remission. The Community Nurses are no longer monitoring Mary and she is not suitable (nor wants) palliative care support. Mary expressed a need for a contact person that she can call on for support as she stills feels that her life has been changed by the cancer diagnosis. Her husband is well but emotionally frail about his wife's diagnosis, despite her good prognosis. Mary and her husband don't like to drive and don't like groups for support. The local facilitator has been able to provide ongoing support for the client and her carer, which has been well received and welcomed. They feel more in control and better able to deal with the alterations that have had to be dealt with since her cancer diagnosis.

## 7.4 Generic chronic and complex care programs

### Generic chronic and complex care programs -patients reached

898 patients are engaged in generic chronic and complex care programs.

**Chart 6. Numbers of patients in generic chronic disease programs in NSW as at September 30, 2002**



### Generic chronic and complex care program achievements

Local AHS program data were available in 3 AHS programs. From program commencement to 30 September 2002, results for these programs show:

Number of Patients engaged in 3 AHSs with avoidable presentations / admission data:	793
ED presentations avoided	151
Admissions avoided	119
Readmissions avoided	
Bed days saved	643
Internalised Financial Benefits -Bed Days	\$212,190
Internalised Financial Benefits -ED presentations	\$48,320
Total Internalised Financial Benefits	\$260,510

### **Macquarie AHS**

*Chronic disease self management (CDSM)*

Covers: CDSM	31 March 2002	30 September 2002	Target 30 June 2003
Patients engaged by program	Not Stated	105	300

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
Not Supplied	Not Supplied	Not Supplied	-

- Macquarie AHS, whilst submitting patient numbers for this program individually, did not supply an individual report on this program. The report submitted by Macquarie AHS contains progress information for all of Macquarie AHS chronic and complex care programs. Thus, the report did not identify if performance was for COPD, asthma, heart failure, stroke, or CDSM.

### **South Eastern Sydney AHS**

*Chronic diseases among Aboriginal people*

<b>Covers:</b> Aboriginal Health	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	20	22	30

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
15	15	Not Supplied	Require disease types in order to calculate bed days saved.

- 'Health Link: chronic diseases among Aboriginal people' developed;
- Consultation with community organisations and Aboriginal community members completed and their views incorporated into the model of care; and
- Clinic opened, with steadily increasing recruitment in place.

### **South Eastern Sydney AHS**

*Chronic Disease Management (CDM) in Nursing Homes – Northern Sector and Southern Sectors*

<b>Covers: - CDM</b> Nursing homes	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target for 30 June 2003</b>
Patients engaged by program	41	137	430

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
32	Not Supplied	Not Supplied	643

*Northern Sector:*

- Education sessions to nursing homes staff commenced and continue;
- For individuals with capacity to complete advance health care directive (AHCD) – good progress has been achieved in developing this and developing instruments required. For those who lack capacity to complete an AHCD a plan of treatment will be developed that the person responsible can sign, indicating the treatments they would/would not consent to.

*Southern Sector:*

- Hospital in the Nursing Home pilot study is demonstrating reduced LOS within the aged care wards and improving coordination and communication between the aged care team, nursing home staff, the GP, family and resident via regular clinical review, case conferencing, development of treatment plans and comprehensive correspondence
- A nursing home specific patient held record has been developed and is being piloted

### **Wentworth AHS**

*Collaborative community approach – complex and chronic care*

<b>Covers:</b>	<b>31 March 2002</b>	<b>30 September 2002</b>	<b>Target 30 June 2003</b>
Patients engaged by program	364		

As at 30 September 2002:

<b>ED presentations prevented</b>	<b>Admissions Prevented</b>	<b>Re-admissions Prevented</b>	<b>Bed days saved</b>
104	104	Not Supplied	Require the disease types to calculate bed days saved.

- Section 2 only of the 6 monthly reports has been received. Section 1, containing key milestones has not yet been received by NSW Health as at time of printing.

**Generic chronic and complex care program patient case study**

***A case study from South Eastern Sydney AHS***

Mrs NW is 87 years old. She has been referred from her GP, following recent discharge from hospital. She is a new nursing home resident. Her family is requesting palliation. She suffers from metastatic colorectal cancer and has left inguinal fossa (severe) abdominal pain distension and constipation, and is worsening despite medications.

When reviewed, she was found to have large bowel obstruction. Maxolon was ceased, and subcutaneous fluids were commenced. Buscopan and haloperidol for non-surgical management (after discussion with family members) were administered. There was little improvement, despite treatment. The palliative care staff specialist was consulted, and as there were no beds available the patient was visited at home. Palliative nursing staff commenced syringe drivers (Buscopan, Haloperidol ) for obstruction on the same day.

Mrs NW's nausea, vomiting and pain settled. Her son was pleased that his mother was not transferred, but instead was surrounded with staff she was familiar with. Mrs NW deteriorated, and died peacefully with her family present 11 days after initial contact.

## 8. Chronic and Complex Care Program implementation barriers

Many programs experienced barriers to implementation in terms of recruitment and retention of staff and low morale of staff. GP turnover was also a problem, particularly for rural and remote programs. Timeframes imposed by the funding program were also indicated as a barrier. Other barriers included problems with manual data collection, rebuilding at one program location, resulting in difficulties for some patients accessing the program, and finding appropriate outpatient program venues. One Area Health Service noted that the collaborative nature of the programs requires time for consultation and consolidation and stabilisation of service/practice changes.

Cultural resistance was experienced in the changing of existing models of care, and the lack of local ownership of the program. Cultural barriers included fear of the new and ownership of patients and are summed up by the comment of Mid North Coast AHS:

*While there have been improvements in the organisational support for the program, there remains significant cultural resistance to changing existing models and very real barriers from limited resources.*

Extrinsic barriers resulted from delays in establishing statewide clinical indicators for Priority Health Care Programs and limited resourcing of related HACC services. Several programs reported that the need and breadth of the service was greater than anticipated. Other unanticipated barriers included, the need to consult on adoption of new consent procedures, training for the new “flagging” process of patients, lack of administrative support for clinicians, multiple demands on staff, the need for additional office accommodation for new staff, and lack of integrated information systems between acute, primary and community care. One service reported a lack of culturally appropriate educational material and problems with outreach to homeless people. Another noted that another barrier to involvement of all appropriate sectors was experienced due to the fact that the GP, as a VMO, is not eligible for the Medicare rebate when contributing to a discharge care plan.

One Area Health Service made the point that

*Finite funding poses a continual problem – all hospitals are attempting to establish programs with in-built sustainability to try to ensure continuation of practices implemented during the 3 year funding period.*

Despite such barriers, one Area Health Service said that there had been no barriers to implementation

*that there was excellent Area-wide support and enthusiasm.*

Others said

*The range of staff who have been involved in these areas (not just clinicians) has been supportive and we have been able to embed the Chronic Care processes into the existing day to day work processes of staff. Support from IT staff has been extensive.*

and

*Despite the barriers, it is important to reiterate the work the program has put into defining existing practices and integrating chronic care program initiatives into current practice.*

## **9. Conclusion**

In the first 18 months to two years of the programs great in-roads have been achieved for people living with chronic illness. The Chronic and Complex Care initiatives aim to reconfigure the way in which health care has been provided to patients with a chronic disease in NSW. This is a complex task that will be achieved in time and with continued and continuous focus and attention and with incremental change strategies.

In the next twelve months the Chronic and Complex Care Program aims to achieve the following:

- An increase in patient enrolments to Area Health Service programs of 50% or an increase to the AHS target (whichever is higher);
- An increase in the number of AHS programs that track in-patient activity for patients enrolled in their programs and report for these patients the numbers of admissions, readmissions, and ED presentations avoided due to the program's efforts;
- A decrease in avoidable admissions by 50% where avoidable admissions are measurable;
- A decrease in admissions by a further 20%;
- Achievement of all 2003 targets for the three clinical service frameworks;
- A decrease in presentations to the Emergency department of 20%.

