

# NSW Chronic Care Program 2000-2003

Strengthening capacity for chronic care  
in the NSW health system

Report on Phase one



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August 2004

# Foreword

Chronic illness is a major challenge for the community and NSW health system. Increasing incidence of chronic illness, the need for involvement of multiple providers across hospital and community settings, the integral involvement of general practitioners, providing care 24 hours a day, seven days a week, and the facilitation and integration of community-based services to support people living in the community with chronic illness are a few of the challenges.

The NSW Chronic Care Program has seen the development of innovative models of care for people with chronic illness through the 60 priority health care programs across NSW during 2000-2003. Examples include the establishment of care coordinators for coordinating the care provided for people with chronic illness, better links between the acute and community health sectors and increased use of self-management approaches to enhance knowledge and skills about chronic illness, its symptoms and where to get help.

During this first phase of the NSW Chronic Care Program there have been many successful outcomes achieved, as well as a ground swell of interest, support and collegiality. This has been reflected in the Clinical Expert Reference Groups forging new directions to support the provision of chronic care within the health system and the large and diverse audiences actively participating in the local priority health care programs, local governance structures, statewide chronic care forums and special interest groups.

This first phase of the program has also identified challenges for further attention in phase two from 2003-2006. Strengthening links with general practice, community-based services and aged care services, enhancing information systems to support better care for people with chronic illness, supporting the capacity of the workforce to provide high quality care and shifting from a disease-specific service focus to a generic chronic disease model of care with links to specialist care represent some of these challenges.

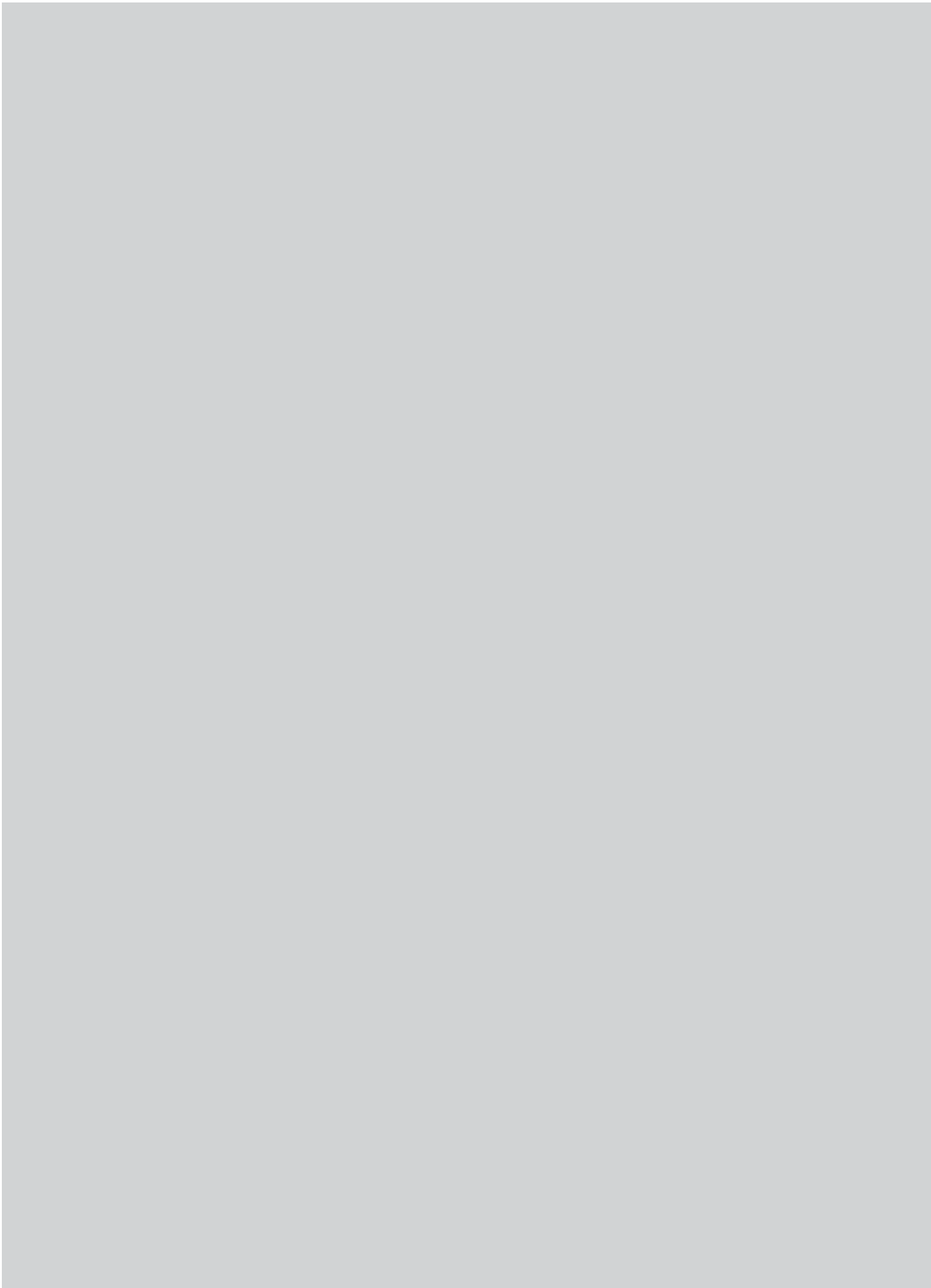
The Clinical Service Frameworks in the priority health areas outline the directions for phase two of the Chronic Care Program, with the NSW Chronic Care Collaborative providing an impetus for their implementation in 2004.

The NSW Chronic Care Program has been a successful initiative of the NSW Health system. This first phase has set the stage for the directions needed for this state to meet the challenge of rising incidence of chronic illness by providing the best quality care for people with chronic illness and their carers. We have been delighted to be involved with this important initiative.

We would like to thank all of those involved in the first phase of the NSW Chronic Care Program, the members of the Chronic and Complex Care Implementation Coordination Group, Associate Professor Steven Boyages as the early co-chair, the Clinical Expert Reference Groups, the chronic care program managers and the many clinicians across NSW who have been employed by and worked with the chronic care programs across the state.

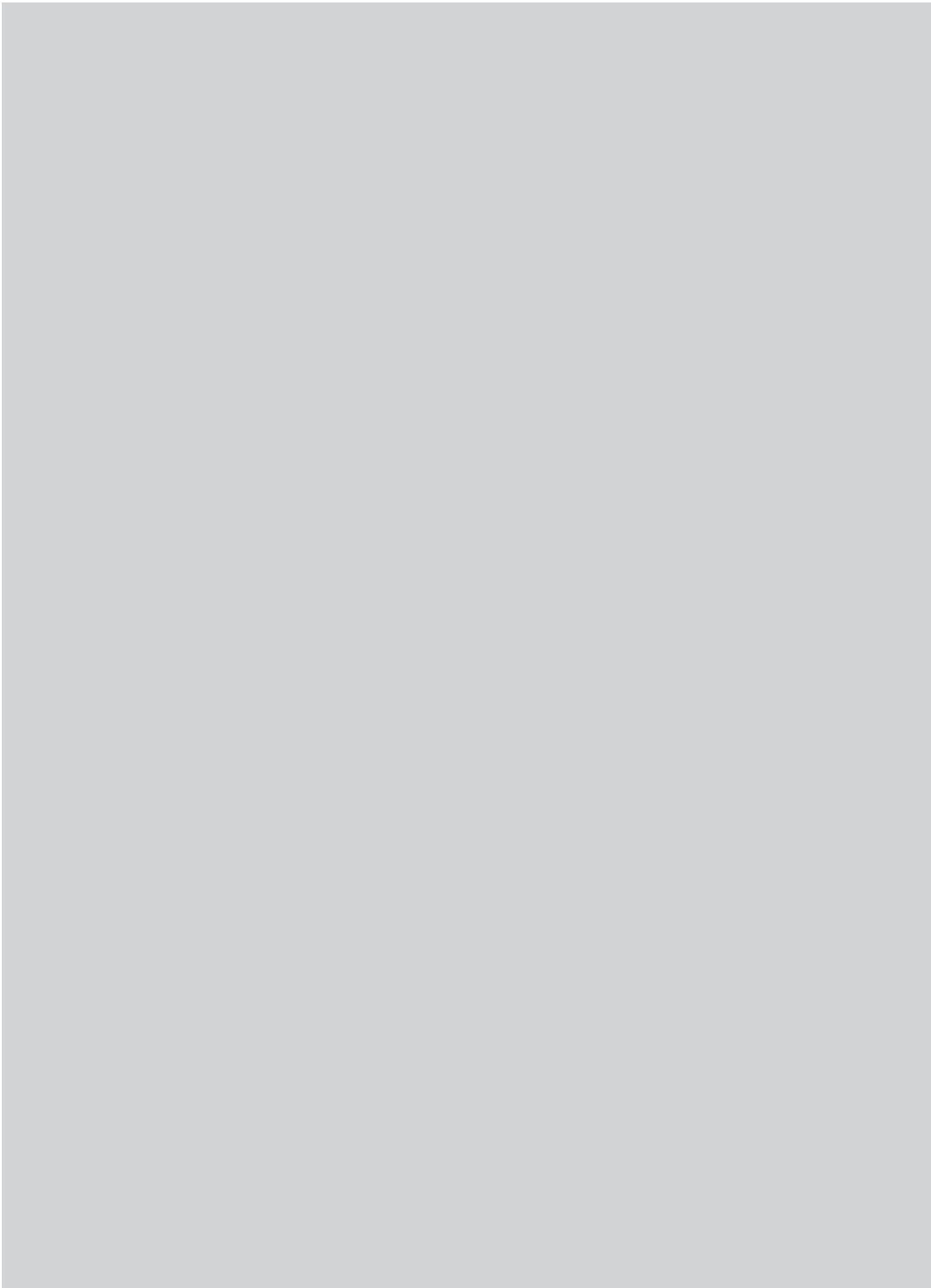


Professor Ron Penny  
Co-Chair, NSW Chronic Care Program



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# Executive summary

Chronic illness is increasing worldwide. By 2020, developed countries such as Australia can expect that 80 per cent of their disease burden will be attributed to chronic illness.<sup>1</sup>

Chronic illness is a major cause of increasing demand on health services. With the ageing of the Australian population and advances in health care, more people with chronic and complex conditions are living longer, creating greater demand on the public health system and the community.

The NSW Chronic Care Program, previously known as the NSW Chronic and Complex Care Program, is an initiative of the Government Action Plan for Health that was developed to address the increasing burden of chronic disease. A total of \$45 million was allocated to the NSW Chronic Care Program over three years from July 2000 to June 2003.

This first phase of the NSW Chronic Care Program (2000-2003) has focused on the priority health areas of respiratory disease including chronic obstructive pulmonary disease (COPD) and asthma, cardiovascular disease including heart failure, stroke, diabetes and other cardiovascular disease risk factors, and cancer. The program has covered the course of chronic illness with particular emphasis on diagnosis, treatment, rehabilitation and self-management. Selection of the priority health areas was based on the level of burden these diseases place on the community and the health system.

## Achievements and challenges for local priority health care program

The cornerstone of the first phase of the NSW Chronic Care Program has been the implementation of 60 local priority health care programs in 18 Area Health Services (AHSs) across NSW. Of these programs, 18 focused on respiratory disease, 25 focused on cardiovascular disease, 13 focused on cancer, and four programs were generic.

There have been significant achievements in the local priority health care programs from July 2000 to June 2003. Drawing on Area Health Service reports and inpatient statistics:

- over 200 full-time equivalent (FTE) staff, mainly nurses and allied health have been employed in the programs across NSW
- over 42,000 patients have been enrolled in the programs
- over 56,000 bed days have been avoided (equivalent to 89 beds freed up statewide)
- over 6,500 emergency department presentations have been avoided.

Importantly, substantial progress has been made in the development of strategies that utilise existing staff resources and reorient work practice to improve the care provided to people living with chronic illness and their carers.

Notable successes in relation to specific disease groups targeted by the priority health care programs include:

- a steady decline in unplanned admissions for heart failure, despite the increasing incidence of the disease over the same period to 2003
- a decline in the average length of stay in hospital for patients with COPD
- a reduction in hospital admissions for patients with asthma
- a reduction in avoidable emergency department presentations, hospital admissions and readmissions for cancer patients.

In addition to hospital sector savings, evaluation of local priority health care programs demonstrated improved functional capacity and quality of life for participating patients and their carers.

## Aims and principles

The aims of the NSW Chronic Care Program are to:

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

## Executive summary

These aims are based on core principles of:

- patient-centred care
- timely access to services
- good clinical governance
- coordination and integration of care.

From the experience gained during phase one of the NSW Chronic Care Program additional aims were identified for future inclusion in chronic care service development; these included the need to:

- extend the quantity of life of people with chronic illness and their families and carers
- improve the quality of working life of health care providers caring for people with chronic illness.

## State-wide initiatives

*Improving health for people with chronic illness:*

*A blueprint for change 2001-2003*<sup>2</sup> set out the goals and methodology for the NSW Chronic Care Program.

Several statewide initiatives have enhanced the implementation of the NSW Chronic Care Program.

These include the:

- development of NSW Clinical Service Frameworks for respiratory disease, heart failure and cancer, setting out standards and demonstration of compliance for implementation statewide
- production of My Health Record, a patient held record, with over 100,000 copies distributed as at February 2004
- development of the NSW Aboriginal chronic disease service standards
- coordination of chronic care forums in each of the priority health areas
- preparation for the statewide Chronic Care Collaborative to commence in 2003-2004
- coordination with Commonwealth-level chronic care initiatives.

## Critical factors for effective priority health care programs

Critical factors were identified for the effective implementation of the priority health care programs. These factors were constant across disease categories and rural and metropolitan programs. They included:

- clinical leadership and governance
- coordination of care
- multidisciplinary team approach
- general practitioner links
- self-management strategies
- rehabilitation programs.

Fundamental to successful implementation of the priority health care programs was the need to establish infrastructure and capacity within the NSW health system to support current and future developments in chronic care service delivery. The following issues were identified as elements central to redesigning the health system to meet the diverse and often complex needs of people with chronic illness and their carers:

- workforce capacity
- information systems
- organisational change.

## Gearing the system for chronic care in the future

The ground swell of interest, support and collegiality experienced during the first phase of the NSW Chronic Care Program provides a solid foundation for the future of chronic care.

The NSW Chronic Care Program is continuing with phase two from 2003 to 2006. A total of \$15 million recurrent funding has been allocated to this important initiative. The strategic directions for the second phase of the NSW Chronic Care Program will be to:

- provide governance and leadership
- develop and integrate chronic care policy
- strengthen workforce capacity for chronic care
- develop a chronic care funding model
- incorporate self-management
- strengthen the focus on patients and carers
- develop and refine chronic care information systems
- communicate the successes and learnings of the NSW Chronic Care Program
- establish evaluation and monitoring processes.

# Introduction

# 1

*Chronic diseases are usually characterised by complex causality, multiple risk factors, a long latency period, a prolonged course of illness, functional impairment or disability, and in most cases, the unlikelihood of cure.*<sup>3</sup>

Chronic illness can effect people at any point across the lifespan from birth to adulthood, and encompass a broad range of disease processes, physical and emotional disorders. The incidence and burden of chronic illness is high and increasing in Australia and internationally. Currently chronic illness is responsible for 60 per cent of the global disease burden and is increasing such that by the year 2020, developed countries such as Australia can expect that 80 per cent of their disease burden will be attributed to chronic illness.<sup>4</sup>

People with chronic illness are high users of medical and acute health services. With the ageing of the Australian population and advances in health care, more people with chronic and complex conditions are living longer, creating greater demand on the health system. People with chronic illness are more likely to present to emergency departments, particularly during the winter months, and are more likely to stay in hospital longer than other patient groups. Further, patients with chronic and complex conditions interact with multiple health service providers across hospital and community settings, both public and private, including general practitioners. National and international evidence highlights that effective and coordinated systems of care for people with chronic illness can result in the reduction of hospital admissions and readmissions and enhance the health outcomes experienced by the patient and their family and carers.<sup>5</sup>

After mental illness, respiratory, cardiovascular disease and cancer account for the greatest disease burden in the NSW health system. In 1999-2000, 17 per cent of hospital admissions were for the chronic illnesses of respiratory and cardiovascular disease, diabetes and cancer. These admissions accounted for 36 per cent of total public hospital bed days in this same year. The cost for providing hospital care for people with respiratory and cardiovascular disease, diabetes and cancer, was estimated at \$1.1 billion in NSW in 1999-2000.<sup>6</sup>

These statistics supported the decision to focus the NSW Chronic Care Program on respiratory, cardiovascular disease and cancer. It was recognised that a state and national coordinated mental health program was already well underway to manage the significant burden of mental illness.<sup>7</sup>

The NSW Chronic Care Program aimed to establish the capacity and infrastructure to support people with chronic illness in ways suggested in the national and international literature. The program also drew upon and disseminated examples of evidence-based practice and current clinical advances in providing care for people with chronic illness across NSW.

A total of \$45M was allocated to the NSW Chronic Care Program over 3 years from 2000 to 2003.

The purpose of this report is to provide an overview of the phase one of the NSW Chronic Care Program, highlighting the outcomes, achievements and challenges, and to identify key issues to be addressed in phase two of the program. The report draws on the six-monthly progress and final reports submitted to NSW Health by the 60 priority health care programs that were in operation throughout the state.

This report will be of interest to senior managers, policy makers, clinicians involved in chronic care including medical specialists, general practitioners, nursing and allied health staff working in hospital and community-based settings, and organisations providing services for and representing people with chronic illness and their carers.

This program was initially called the Chronic and Complex Care Program and changed its name to the NSW Chronic Care Program in early 2003. The rationale for this change was the increasing recognition throughout the NSW health system of the complex nature of chronic illness. Throughout the document it is referred to as the NSW Chronic Care Program.

## 1.1 Burden of chronic illness in Australia and NSW

### Chronic heart failure<sup>8,9,10,11,12,13,14,15</sup>

- Prevalence of heart failure is expected to double over the next 30 years with the ageing of the general population
- Heart failure affects one per cent of the general population and ten per cent of people aged 75 years and over in western countries
- 50 per cent of patients die within five years of diagnosis
- Heart failure is more common among females
- There is an increasing incidence of diastolic-related heart failure
- Ischaemic heart failure is becoming a more common underlying cause of heart failure

#### In NSW<sup>16</sup>

- 10,571 overnight public hospital admissions were attributed to heart failure in 2002-03
- Average length of stay for patients with heart failure was 8.8 days (2002-03)

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### Cancer in NSW<sup>17</sup>

- Second most common cause of disease burden in males and females
- 28,889 new cases of cancer were reported in 2000
- There were 12,185 cancer related deaths in 2000
- Incidence rates rose by 25 per cent for all cancer types between 1980 and 2000

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### Chronic Obstructive Pulmonary Disease (COPD)<sup>18</sup>

- In Australia, COPD is the fourth leading cause of death for males and sixth leading cause of death among females in 2000

#### In NSW

- In 2000, 1,945 deaths were attributed to COPD<sup>19</sup>
- 15,122 overnight public hospital admissions in 2002-03 were attributed to COPD<sup>20</sup>
- Average length of stay for COPD in NSW public hospitals is 7.6 days<sup>21</sup>

### Asthma

- Australia has the highest prevalence of asthma in the world, along with New Zealand and United Kingdom<sup>22</sup>
- It is estimated that about 30-40 per cent of Australians will have symptoms consistent with asthma at some time in their lives<sup>23</sup>

#### In NSW

- There were 180 deaths from asthma in 2000<sup>24</sup>
- In 2002-03, 7,500 overnight public hospital admissions were attributed to asthma<sup>25</sup>

---

### Aboriginal populations and chronic disease<sup>26</sup>

- Approximately 110,000 indigenous people live in NSW, representing approximately 2 per cent of the total population.

#### Indigenous people

- Are more likely to die at a younger age than non-indigenous people
- Have higher hospitalisation rates than non-indigenous people for many health diseases, especially in rural areas.

#### Cardiovascular disease

- Hospital separation rates of indigenous people with cardiovascular disease is almost double that of non-indigenous people.\*

#### Respiratory disease

- Hospital separation rates of indigenous people with respiratory disease is more than double that of non-indigenous people.\*

\* *Indigenous status is believed to be substantially under-reported in NSW hospital morbidity data. Statements above should be considered as conservative.*<sup>27</sup>

## 1.2 Aims and principles of the NSW Chronic Care Program

The NSW Chronic Care Program is a major initiative of the Government Action Plan for Health. The program aims to:

- improve the quality of life of people with chronic and complex conditions
- improve the quality of life of their carers and families
- prevent crisis situations and unplanned and avoidable hospital admissions.

Additional objectives that have evolved from the experience gained through phase one of the NSW Chronic Care Program include the need to:

- extend the quantity of life of people with chronic illness, their families and carers
- improve the quality of working life of health care providers caring for people with chronic illness.

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### Principles for chronic care in NSW

Strengthening the capacity of the NSW health system to improve service delivery for people with chronic health care needs requires the development and implementation of strategies aimed at:

- supporting consumers at the centre of the health system with services designed around their unique health needs
- developing the capacity of consumers to participate fully in their own health care and more effectively navigate their way through the health system
- ensuring easier and more timely access
- facilitating continuity of relationships between health providers at various levels of the health system and between health providers and consumers
- developing organisational and governance systems and structures to support long term orientation and reorientation of care within the health system.

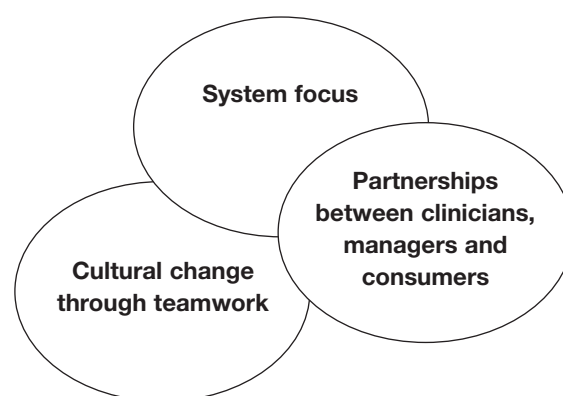
## 1.3 Clinical governance

Clinical governance is:

*... the framework through which health organisations are accountable for continuously improving the quality of services and safeguarding high standards of care by creating an environment in which excellence in clinical care will flourish.<sup>28</sup>*

The NSW Chronic Care Program embraced a positive approach to clinical governance by emphasising three key issues encompassing systems, culture and partnerships (Figure 1.1).

**Figure 1.1 Chronic care clinical governance components in NSW**



The Chronic and Complex Care Implementation and Coordination Group (CCCICG) provided statewide leadership and direction for the NSW Chronic Care Program and aimed to improve clinical practice and health service delivery at the point of care in both the acute hospital and community setting. The group comprised leading clinicians, general practitioners, specialists, and consumers, nursing and allied health staff, senior Area Health Service managers and other NSW Government agencies working together as a team with the Department of Health.

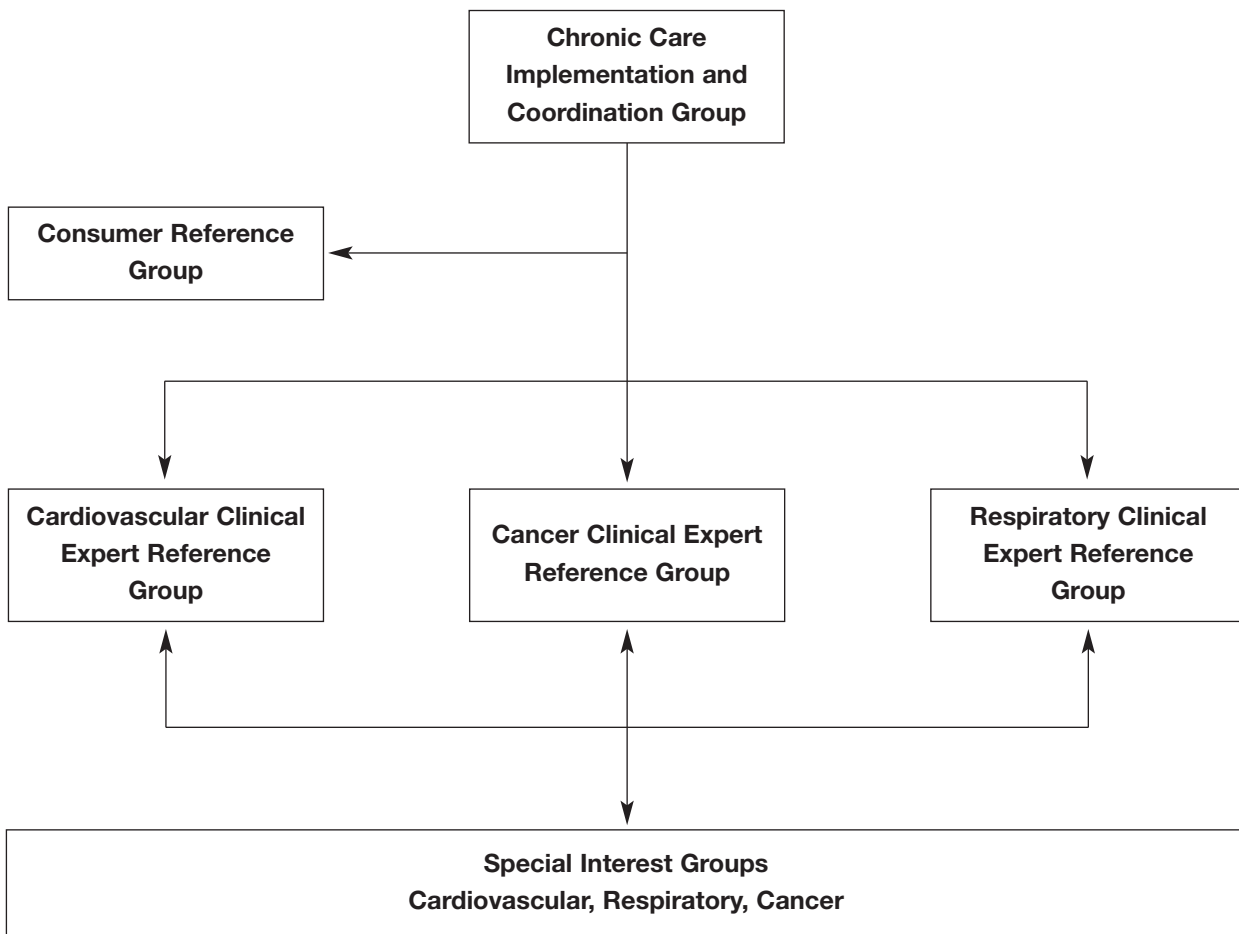
Clinical Expert Reference Groups (CERGs) were also established, focusing on respiratory disease, cardiovascular disease and cancer. These groups provide clinical expertise and advice on key directions and implementation issues in each of the respective disease areas. A leading senior specialist clinician and a general practitioner chaired each CERG. Members of the CERGs included doctors, nurses, allied health professionals, health administrators, consumers and representatives from key consumer organisations.

## Introduction

Special Interest Groups (SIGs) were established in each of the priority areas of respiratory disease, cardiovascular disease and cancer. These were larger groups providing broad representation from across the NSW Health and related systems and consumer organisations. These groups were pivotal in providing input to the Clinical Service Frameworks, fostering ongoing collaboration to enhance the care provided for people with chronic illness and exchanging information on best practice approaches.

A Consumer Reference Group was established to provide a focus on community needs and input into the development of the NSW Chronic Care Program. The group was valuable in the initial establishment phase of the NSW Chronic Care Program and the issues identified by the group were then incorporated into the broader NSW Health Participation Council.

**Figure 1.2 NSW Chronic Care Program clinical governance structure, Phase one**



Membership of the above groups is detailed in Appendices 3-5.

# Statewide initiatives

# 2

At the state level a number of initiatives and activities have been undertaken through the NSW Chronic Care Program. These initiatives have each benefited the care provided for people with chronic illness across the state.

## 2.1 Improving health for people with chronic illness: A blueprint for change 2001-2003

*Improving health for people with chronic illness: A blueprint for change 2001-2003*<sup>29</sup> was the key document of the NSW Chronic Care Program which outlined the aims, principles and scope of the program. The document also provides information on baseline data on hospital admissions and readmissions prior to the implementation of the NSW Chronic Care Program and performance measures. Further, the document provided details of the 60 local priority health care programs to be delivered across NSW.

## 2.2 Clinical Service Frameworks

A major platform of the NSW Chronic Care Program has been the development of the Clinical Service Frameworks in the three priority areas of respiratory disease, heart failure and cancer. These important frameworks draw on evidence-based practice to set standards for optimal care for people with the priority illnesses across Area Health Services. They also outline initial milestones, targets and demonstrations of compliance within agreed timeframes for achievement over the three-year period to 2006.

Each of these frameworks represents a culmination of three years work involving widespread consultation with and endorsement by senior clinicians and others across NSW.

The frameworks also include practical tools to support implementation, such as:

- models of care that describe the operation of the standards in different settings
- examples of self-management action plans

- wall charts for management of asthma and COPD in acute and community settings
- algorithms for the management of heart failure
- references to relevant guidelines and other useful information.

In July 2003 the Minister for Health and Minister assisting the Minister for Health (Cancer) launched the Clinical Service Frameworks for respiratory disease, heart failure and cancer. Forums were held in Westmead, Orange and Coffs Harbour attracting large numbers of clinicians, consumers and health service managers from across the state to discuss the Clinical Service Frameworks and issues regarding their implementation. Presentations from each forum are posted on the NSW Health website.

## 2.3 NSW Aboriginal Chronic Disease Service Standards

The *NSW Aboriginal Chronic Disease Service Standards*<sup>30</sup> was initiated in recognition of the poor health experienced by Aboriginal populations in relation to chronic disease and the innovative work being achieved through the NSW Aboriginal Vascular Health Program. Development of the framework was initiated in 2003, and covers cardiovascular, renal, diabetes, cancer and respiratory disease. The standards document is due to be finalised in 2004.

Extensive consultation with Area Health Services, Aboriginal communities, health workers and other service providers has informed the development of the standards. It aims to support Area Health Services and enhance service delivery through partnerships with Aboriginal community-controlled health services.

The document outlines evidence-based standards to guide service development in chronic care for Aboriginal people. Timeframes for demonstrations of compliance with the standards have been specified. Illustrative case studies provide examples of the standards provided.

### 2.4 My Health Record

Another key initiative of the NSW Chronic Care Program is *My Health Record*.<sup>31</sup> My Health Record is a patient-held folder in which all of the patient's health information can be organised and available in one place. The purpose of the record is to improve communication and enhance continuity of care for people with ongoing health care needs who interact with multiple health service providers. *My Health Record* is an innovative tool to assist patients and their carers to be more informed partners in the management of their illness.

*My Health Record* allows for updating of information during care, such as changes to medications, details of health care provider contacts including general practitioner, appointments and information about what the patient needs to do. The booklet includes plastic sleeves for the easy insertion of the patient's information, including discharge summaries, care plans and case conference reports.

*My Health Record* was launched in December 2002. This was followed by local launches in regional centres throughout NSW including Wagga Wagga, Port Macquarie and Orange in early 2003.

More than 100,000 copies of *My Health Record* (as at February 2004) have been distributed across NSW to patients in priority health care programs, general practitioners, other health providers, hospitals, community health centres, government and non-government organisations. *My Health Record* is currently in its fourth print run, with a fifth edition in progress due to the continuing high demand for this valuable self-management tool.

Initial feedback indicated that consumers and carers had received the record very positively. However, the response from general practitioners was mixed, indicating an equal number of those who were willing to use *My Health Record* and those who were not. The main criticisms from general practitioners focused on concerns about the time required to assist patients to fill out the record and a preference for an electronic, rather than a paper-based hand-held booklet. An independent review of *My Health Record* is planned for 2004 and the findings will help to inform the design and presentation of future editions.



*It's a very handy folder. We've been needing something like this for a long time.*

*When you can't breathe it's so good just to hand the book over.*

Patient Feedback – *My Health Record* Evaluation

### 2.5 Chronic care forums

Throughout the first phase of the NSW Chronic Care Program a series of forums were held for each of the priority health areas. The purpose of the forums was to bring together clinicians, program managers and consumers to network and share ideas of innovative and optimal models of care and practice for people with chronic illness. These were organised by the NSW Department of Health in collaboration with the co-chairs of the CERGs and were well attended.

Feedback indicated that these forums were invaluable in disseminating the latest thinking and proven best practice methods in working with people with chronic illness. They also promoted discussion of solutions to problems encountered in the development and implementation of the local priority health care programs.

The NSW Chronic Care Program Review Forum was held in August 2003, with more than 200 clinicians and managers attending from across NSW. The forum also attracted interstate and national interest with participants attending from Victoria, Queensland and the Commonwealth. Forum presentations were very well received and have been posted on the NSW Health website.

## 2.6 NSW Chronic Care Collaborative

Planning for the NSW Chronic Care Collaborative commenced during Phase one of the NSW Health Chronic Care Program. Implementation of the collaborative will be a key initiative for the second phase of the NSW Chronic Care Program (2003-2006) and will draw on the successes and experience gained through the first three years of the NSW Chronic Care Program.

The collaborative methodology has been used internationally over the last decade and is designed to spread proven best practice across multiple health service sites in a relatively short time period (nominally 12 months).<sup>32</sup> NSW Health and the Institute of Clinical Excellence (ICE) will jointly sponsor the chronic care collaborative.<sup>33</sup>

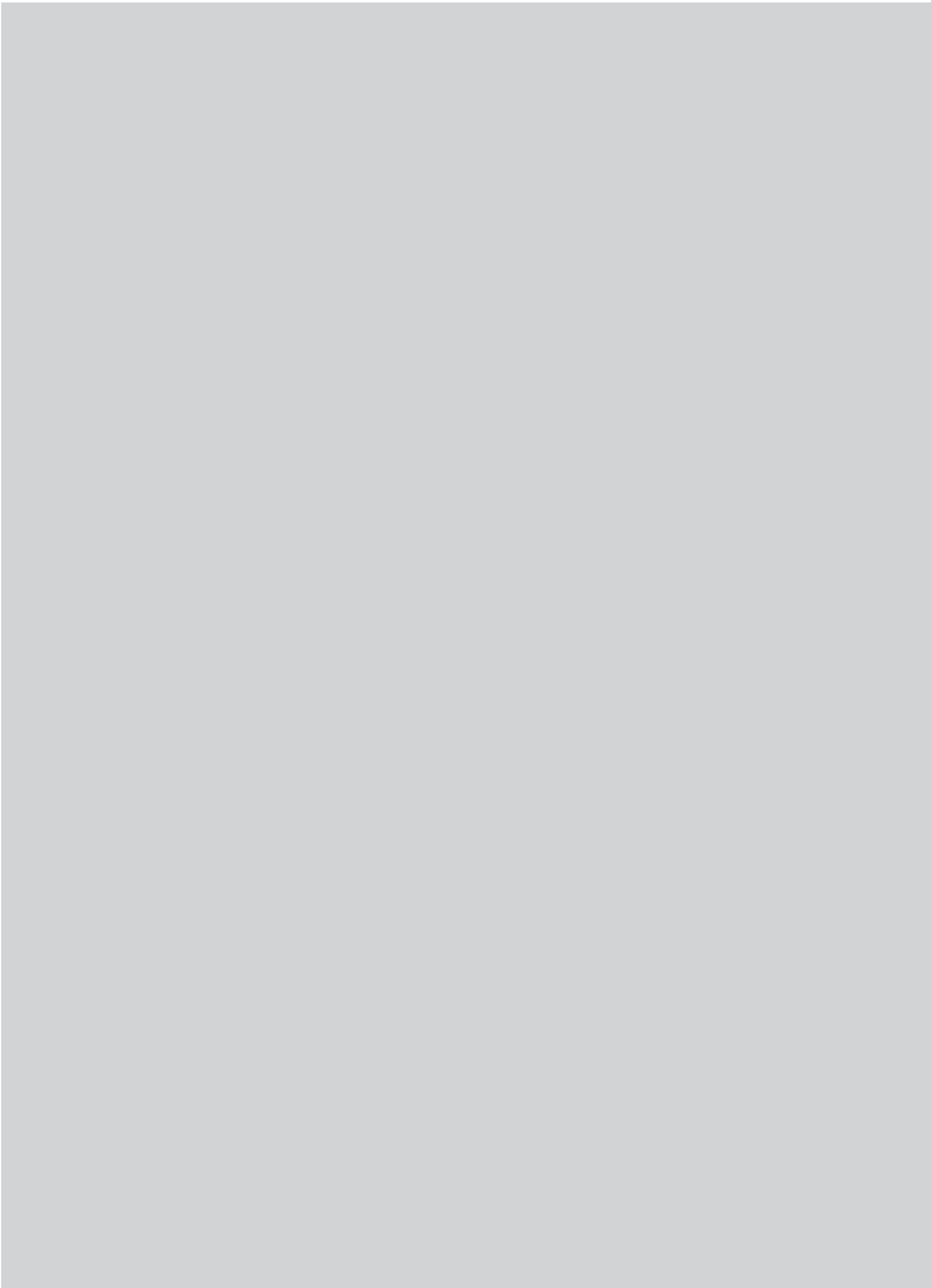
The focus of the collaborative will be on heart failure and COPD and aims to enhance implementation of core standards from the Clinical Service Frameworks for these priority health areas. The collaborative commences in February 2004, with over twenty teams from seventeen Area Health Services participating.

## 2.7 Commonwealth initiatives

Chronic care initiatives have been also been developed at the Commonwealth level, largely under the auspice of the National Health Priority Action Council (NHPAC). NHPAC has carriage of the national priority areas, which include diabetes, cancer, asthma, musculoskeletal and arthritis, and heart, stroke and vascular.

The Chronic Care Unit within NSW Health has represented statewide chronic care issues through NHPAC reference groups. The Chronic Care Unit has also had active involvement in other national strategies including:

- Supporting Rural Women with Breast Cancer
- Visual Impairment Prevention Project
- Asthma Friendly Schools.



# Local priority health care programs

# 3

A major component of the NSW Chronic Care Program has been the establishment of 60 priority health care programs across the state to the period June 2003. These programs aimed to introduce and improve models of care for people with chronic illness in the priority health areas, and to overcome the structural and system problems that health service providers faced in caring for people with chronic illness.

To support the local priority health care programs funding was allocated to Area Health Services according to the NSW Health population-based Resource Distribution Formula for the three years to June 2003. Access to funding was dependent on an open and transparent expression of interest and a formal assessment process that included submission of detailed implementation and evaluation plans. Through this process, Area Health Services determined the focus of their local programs in line with state and national health priorities, and designed program models based on local needs.

Funds were used to employ and/or reorient clinical nursing, clinical leaders and allied health staff to the provision of services for people with chronic illnesses in the priority areas. In the initial stages the majority of the priority health care programs recruited patients from the hospital setting into a diverse range of hospital and community-based service interventions.

The 60 local priority health care programs comprised the following target areas:

## **Respiratory disease:**

Particularly COPD, chronic airways limitation and asthma in children and adults (18 programs)

## **Cardiovascular disease:**

Including risk factors, heart failure, diabetes and stroke (25 programs)

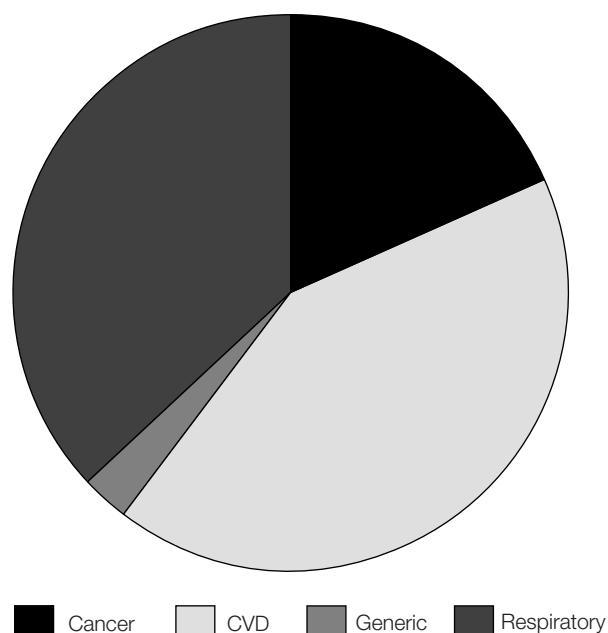
## **Cancer:**

Covering various cancer types, and phases of treatment (13 programs)

## **Generic chronic disease:**

Encompassing chronic disease in the broadest sense and including patients from all of the above categories (four programs).

**Figure 3.1 Distribution of NSW priority health care programs by disease category (2000-2003).**



Interventions primarily targeted adults, with three priority health care programs designed specifically for children with chronic illness. These included interventions to address the needs of children and their families with cystic fibrosis, diabetes and asthma. Providing support during the transition from paediatric to adult services was recognised as a critical aspect of effective health management for children and young people with chronic illness and their families.

One generic program targeted the local Aboriginal population, while other cardiovascular and diabetes programs worked closely with the NSW Health Aboriginal Vascular Health Program demonstration projects.

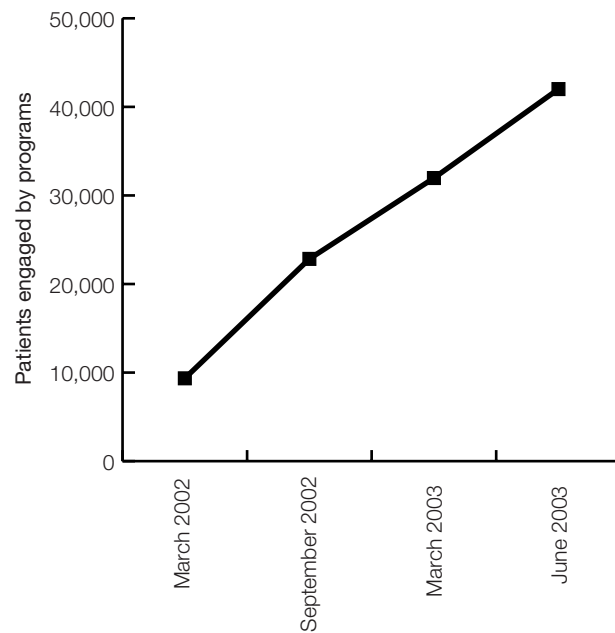
## **3.1 Clinical staff**

Local priority health care programs employed more than 200 staff across NSW to June 2003 (as shown in Table 3.2). The staff mainly comprised nursing and allied health professionals. There was a strong emphasis on the redesign of work practice for existing staff to meet the health care needs of people with chronic illness.

**Table 3.2 Number of full-time equivalent staff (FTEs) employed in the local priority health care programs to June 2003**

Chronic care disease category	FTEs employed in priority health care programs to June 2003
Cancer	37.7
CVD	85.8
Generic	5.4
Respiratory	75.3
Total	204.2

**Figure 3.3 Patient enrolments in NSW priority health care programs to June 2003**



Mar 02, Sept 02, Mar 03 number revised by AHSs.  
Jun 03 numbers based on patient numbers supplied in 60 programs final reports received

### 3.2 Patient enrolments

Overall 42,000 patients were enrolled in the priority health care programs to June 2003. There was a marked increase in patient enrolments from approximately 9,000 patients in March 2002 over the period to June 2003 (as shown in Figure 3.3). This number represents approximately 20 per cent of the potential patient population based on prevalence estimates originally submitted from Area Health Services.

### 3.3 Reductions in hospital admissions

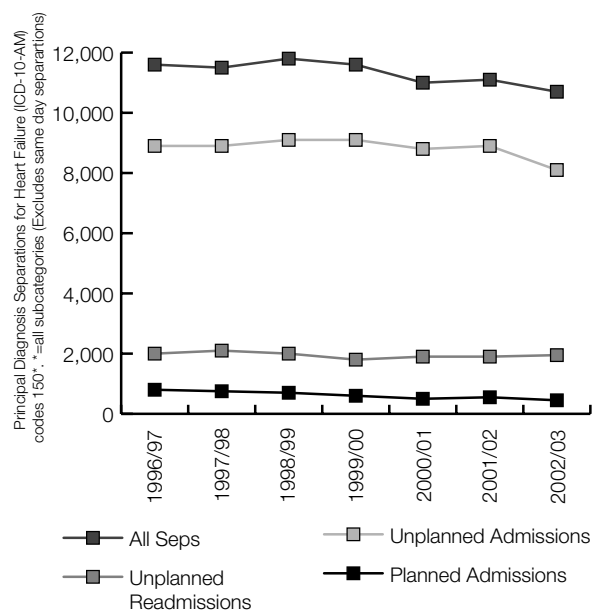
Reductions were reported in hospital admissions and readmissions and emergency department presentations by the local priority health care programs. An estimated 56,000 bed days were avoided through the implementation of the local priority health care programs to June 2003 (refer Table 3.4). This equates to 89 hospital beds statewide.

**Table 3.4: NSW Chronic Care Program: Estimated hospital admissions, readmissions and emergency department presentations avoided due to the local priority health care programs to June 2003**

Chronic care disease category	Estimated Emergency Department presentations avoided	Estimated admissions avoided	Estimated readmissions avoided	Estimated bed days avoided
Cancer	1241	1119	361	4954
CVD	1445	2657	1221	29096
Generic	1693	1693	781	6825
Respiratory	2194	2311	1790	15198
Total	6,573	7,780	4,153	56,073

In the area of heart failure there has been a steady decline up to June 2003 in the number of unplanned admissions in NSW. At least some of this can be attributed to the heart failure priority health care programs in operation throughout the state. This result is commendable given the increasing incidence of heart failure at approximately 10,000 new cases in NSW per year, and the expectation that hospital admissions for heart failure would have increased accordingly during this period (refer Figure 3.5).

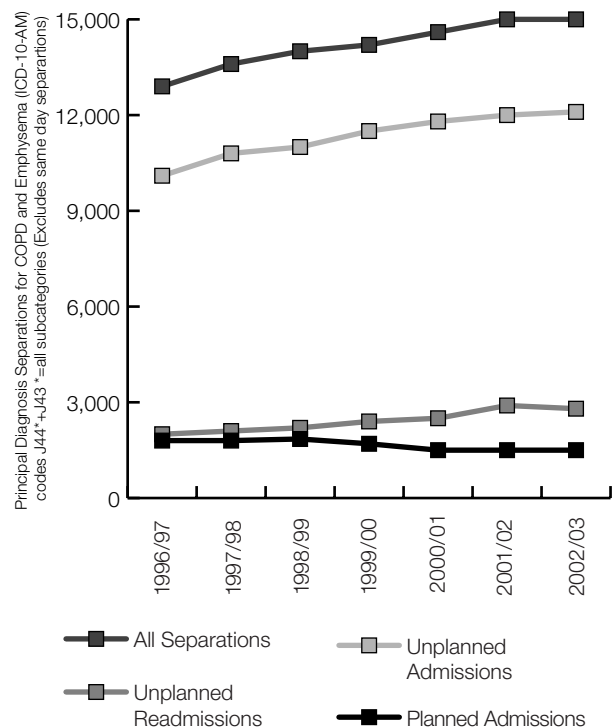
**Figure 3.5 NSW public hospital heart failure inpatient activity 1996-2003**



There has been a steady decline in Unplanned Admissions for Heart Failure. This is a good result given increasing incidence of Heart Failure estimated to be around 30,000 people Australia wide each year (AIHW) or approximately 10,000 new cases in NSW.

In the area of COPD/emphysema the average length of stay has declined in NSW to the period June 2003. This in part can be attributed to the impact of the respiratory priority health care programs. This achievement should be noted in the context of a steady increase in the number of unplanned admissions in NSW to June 2003, possibly reflecting an increase in the incidence of COPD/emphysema of approximately 6,700 people per year in NSW (refer to Figure 3.6).

**Figure 3.6 NSW public hospital COPD/emphysema inpatient activity 1996-2003**



The steady increase in the volume of unplanned admission is affecting increasing disease incidences of approximately 6,700 people per year in (AIHW). Corresponding days for these admissions have not increased and have remained constant over the same time period. Therefore average length of stay has declined for people with COPD/emphysema.

Advice from Dr Guy Marks SWSAHS Respiratory Staff Specialist is that COPD and emphysema are basically the same disease. Emphysema is one of the most common of diseases that underlies the clinical syndrome known as COPD. Trend analysis of emphysema on its own indicates a decline in the reporting of separations coded as emphysema as a principal diagnosis, which further supports Dr Marks statement.

In the area of asthma there has been a reduction in hospital admissions in NSW to the period June 2003. This may in part be attributed to Commonwealth asthma initiatives such as the Asthma 3+ Plan project implemented nationally in 2001-2002. The local priority health care programs should also be acknowledged in contributing to this decline.

In the area of cancer there have been reductions in avoidable emergency department presentations, hospital admissions and readmissions in the period to June 2003 in NSW as shown in Table 3.4.

### 3.4 Improved quality of life and functional capacity indicators

Improving the quality of life of patients and their carers has been a primary aim of the NSW Chronic Care Program. Area Health Service programs included quality of life measures in their evaluation design and demonstrated improvements in quality of life indicators for patients enrolled in their programs. These benefits cannot be measured simply in terms of dollars or bed days saved.

The quality of life assessment tools employed by priority health care programs included the Minnesota Living With Heart Failure Questionnaire,<sup>34</sup> Carer Strain Index,<sup>35</sup> St. George's Respiratory Questionnaire<sup>36</sup> and the Spitzer QL-Index.<sup>37</sup>

Evaluating the impact of priority health care programs on carers as a defined group proved challenging for most local programs. Few programs had interventions designed specifically for the carers of patients with cardiovascular disease, respiratory disease and cancer. Program managers reported positive outcomes when a strong link with other carer initiatives within an Area Health Service was established.

*The friendly and consistent approach has helped mum feel more confident in herself, managing her illness, making contact with others and keeping all aspects of her life in perspective. This means that the family and I benefit immensely.* Carer feedback  
Priority health care program

Rehabilitation programs designed to improve functional capacity consistently reported positive outcomes in exercise tolerance and endurance. Improvement in functional capacity was measured mainly through use of a six-minute walk test, where appropriate. Functional capacity testing was not applied where no gain in functioning was expected, for example patients requiring palliative care.

*I was surprised I was capable of doing the exercises – small and large on the bikes etc. with very little distress. I was pleased I had the opportunity to do the course – at 85 years young.* Rehabilitation program participant

Patients and carers expressed a high level of satisfaction and appreciation for the care they received through the local priority health care programs. The large number of commendations received by program staff, managers and Area Health Service executives, demonstrated this.

*All staff were very professional in their attitude and work well as a team. Their rapport with everyone is exemplary, and their patience excellent. I have now started a care program with my GP to coordinate my reports and condition.*  
Rehabilitation program participant

### 3.5 Issues in measuring chronic care activity and interpreting the data

The main methodological issues that need to be considered in interpreting the outcomes of the NSW Chronic Care Program and the priority health care programs presented in this document include:

- availability and quality of information to assess the impact of chronic care initiatives
- local priority health care program progress and evaluation reports
- use of inpatient statistics to measure chronic care
- incidence of chronic illness
- set-up times of the local priority health care programs.

#### 3.5.1 Information related to chronic care in the community sector

Providing care for people with chronic illness occurs across primary care and community health and hospital-based sectors, with the majority of care delivered in the community sector. Although pockets of community sector data exist in some Area Health Services, collation of this information across health services and the state is not possible due to variation in data systems, the type of data collected and the lack of local capacity to network systems for reporting and interrogation.

It is not possible at this stage to systematically analyse the chronic care workload on the community sector in terms of demand, capacity and effectiveness. Development of community-based information systems such as the Community Health Information Management Enterprise (CHIME) should provide an opportunity to collect and access community sector information in the future. In the absence of reliable community health information systems statewide emphasis has been placed on analysing statewide inpatient statistics for chronic illnesses as proxies for overall health system performance for chronic care.

### 3.5.2 Program progress and evaluation reports

Information on local priority health care programs was gathered from progress reports submitted six-monthly by each of the Area Health Services and co-signed by the Area Chief Executive Officer and clinical leader. The reports included quantitative and qualitative data on the design and establishment of the local programs, number of patients enrolled, their successes and the barriers encountered in working towards their goals. This also included information on estimates of avoidable hospital admissions, readmissions and emergency department presentations. A final evaluation report was submitted for each program in August 2003.

### 3.5.3 Chronic care activity and inpatient statistics

The initial methodology for assessing progress in chronic care in NSW was based on an estimated target population of almost 200,000 people being engaged by the local priority health care programs across the state. This estimate was based on population targets supplied to NSW Health by Area Health Services in 2000-2001 for each priority health care program. These target populations were either numbers of people specified by Area Health Services, or statements such as "all people living in the Area Health Service with cancer" (that is, not an actual number, rather an interpretation by the Area Health Services of the potential population suitable for the program). In 2002 the priority health care programs revised their projected target populations in light of the scope of individual programs, access to target groups and program capacity.

For all priority health care programs across NSW the revised target population was approximately 59,000 people to June 2003. Just over 42,000 patients have been engaged in priority health care programs across the state by the end of June 2003.

New health information systems were being implemented concurrently with the development of methodology for measuring change in chronic care activity. These systems included the Health Information Exchange (HIE) and the new Patient Administration Systems (PAS) in some Area Health Services. These systems, however, were not able to provide accurate statewide information from which chronic care activity could be assessed.

Using inpatient statistics also relies on specific disease groups. Many of the local priority health care programs covered more than one specific illness or diagnosis. To allow for this, the broader groupings of respiratory disease, cardiovascular disease, cancer and generic chronic diseases have been used throughout this report. For example, heart failure was covered exclusively by eight programs, but was also covered by another four programs that included other cardiovascular diseases; COPD was covered exclusively by six programs, but also covered by another ten programs that included other respiratory diseases. Some Area Health Services did not report on specific outcomes for individual diseases within their programs, for example, specific cancer groups, but provided information on a whole-of-program basis.

The challenge with using inpatient statistics is that this information does not fully reflect the chronic care workload, particularly on the primary and community health care sectors. Consequently inpatient statistics are of limited value for monitoring local priority health care programs and for informing chronic care policy. Caution needs to be exercised in expecting statewide improvements in inpatient statistics in the short term.

### 3.5.4 Incidence of disease

The incidence of chronic respiratory disease, heart failure and cancer is increasing. This is likely to impact on improvements achieved through local priority health care programs. It would traditionally be expected that increased disease incidence would correlate with increased hospital admissions. The methodology for calculating chronic disease incidence and consequent burden of disease is still in its infancy, limiting the ability to measure the current and future impact of chronic disease and the priority health care programs in NSW.

### 3.5.5 Set up time for programs

Many of the priority health care programs were not fully established until mid-2001 with operational capacity not fully realised until late 2001-2002. Therefore the data collected on these programs to June 2003 generally only reflects a relatively short period of program activity time.

## 3.6 Papers and conference presentations

The local priority health care programs have enabled the exploration of a range of innovative models of care for people with chronic illness. Disseminating the findings of the development and implementation of these models of care has been an important component for several of the programs. Numerous conference presentations both nationally and internationally have been given. A number of articles have been written or are in preparation for publication in relevant health and professional journals.

# Achievements and challenges: 4

## Critical elements for priority health care programs

A number of critical factors have been identified as fundamental to achieving positive outcomes in chronic disease management during Phase one. In identifying these factors several challenges emerged from the priority health care programs which required attention. The critical factors and challenges occurred in rural and metropolitan programs across the areas of respiratory disease, cardiovascular disease and cancer. These factors and associated challenges can be grouped into the following categories:

- clinical leadership and governance
- coordination of care and clinical pathways
- multidisciplinary team approach
- general practitioner links
- self-management
- rehabilitation
- workforce capacity
- information systems
- organisational change.

### 4.1 Clinical leadership and governance

The NSW Chronic Care Program document, *Improving health care for people with chronic illness: A blueprint for change 2001-2003*,<sup>38</sup> identified clinical leadership and governance as key drivers in improving care for people with chronic illness. Area Health Service and local level clinical leadership and governance structures were central pillars to successful implementation of priority health care programs.

Clinical leadership was generally provided through medical specialists such as respiratory physicians, cardiologists and oncologists in the metropolitan areas and some rural areas. All Area Health Services identified involvement of these medical specialists as critical to the success of their programs. Rural areas relied more heavily on leadership from senior nursing and allied health staff with the support of health service managers.

Clinical leadership has several facets:

- raising the profile of the needs of people with chronic illness as part of core business across the health system including public and private sector health services
- promoting and facilitating uptake of best practice care for people with chronic illness and their carers and strengthening research capacity
- forging relationships to support new systems of care that enhance health outcomes for people with chronic illness and their carers across the health system
- driving education and training for health professionals in evidence-based practices and new systems to provide the best quality care for people with chronic illness.

Clinical governance structures provided a forum for the direct involvement of clinicians, community representatives and carers in planning health care. A variety of structures were established in Area Health Services to provide direction and advice on the development and implementation of the priority health care programs. Structures included Area-wide and locality-based committees. Some covered chronic disease from a generic perspective, while others focused on specific diseases such as respiratory or cardiovascular.

Membership of these committees varied according to local circumstances but typically included senior management, medical, nursing and allied health staff drawn from across hospital and community-based health services, general practitioners, Divisions of General Practice, consumers and carers.

### Chronic care program managers

Designated chronic care program managers at the Area Health Service level were important in driving the development and implementation of the priority health care programs and related initiatives. The chronic care program manager roles included overall coordination of priority health care programs across the Area Health Service, interfacing with the broader health system including hospital, community-based services and general practitioners, and accountability for reporting on program progress to management and the NSW Health Department.

Senior clinicians, mainly nursing and allied health staff, generally held these positions. Management structures for these positions varied across Area Health Services, with reporting lines to Directors of Health Service Development, Nursing, Clinical Streams, Community Health, Population Health or their equivalents.

### Care coordinators

Care coordinators primarily worked to bridge the gap between service providers and to help patients with chronic and complex conditions and carers navigate the health care system. It was the role of many of the care coordinators to ensure appropriate referral or access to other services or care options. The role requires a diverse skill and knowledge base encompassing the disease process, its diagnosis and management, impact of chronic ill health on the patient and carer, and the availability of health and support services.

As the care coordination role has evolved, so too has the degree of variation in the models of care coordination. Some Area Health Services have adopted community-based models, whilst others have care coordinators located within acute hospitals, usually with an outreach capacity. This has raised questions in relation to the most appropriate approach. Benefits can be identified for each model.

## 4.2 Care coordination and clinical pathways

*People with chronic illness often see multiple health care providers across the broader health system, as well as having a range of needs that extend into other service sectors, such as housing and home help. This requires that this group of people need services that are coordinated across levels of care – primary, secondary and tertiary – and across providers... Where possible, an identified 'care coordinator' can serve as the overseer and director of a patient's care, ensuring that efforts of all involved health care workers are integrated and coordinated. Continuity of care is also critical. Care must be planned and thoughtful over the course of the condition.<sup>39</sup>*

The appointment of designated care coordinators, facilitators or liaison officers was identified as a feature of many of the priority health care programs and a key factor contributing to their success. The need for care coordination roles became increasingly apparent as the complex nature of chronic care was defined.

### Care coordination models

Hospital-based care coordinators usually have a substantial level of specialist disease knowledge and ready access to medical specialists. Models incorporating an outreach component facilitate patient support in the transition from hospital to home. These models need strong linkages and integration with community-based services to clearly define the roles and responsibilities, in order to reduce the risk of duplication across the health workers involved.

Community-based care coordinators have a range of generalist skills and knowledge and capacity to provide extended periods of monitoring and intervention associated with chronic disease management. However, some community-based programs reported difficulty in maintaining continuity and effective communication during periods of hospitalisation.

Success of the various care coordination models appeared largely dependant on the flexibility of the coordinator to travel with the patient across the continuum of care, and the ability of hospital and community service providers to work in collaboration.

Program managers have reported some concern with the capacity of their service to meet the growing demand for care coordination. A number of Area Health Services have redesigned the work practice of existing staff to facilitate development of care coordination roles and practice within current resources.

Care coordination was further enhanced through the use of clinical pathways. Clinical pathways are a tool designed to define key milestones for service access, service delivery and clinical best practice. Clinical pathways aim to standardise health care processes and describe best or evidence-based practice for selected patient groups.

Area Health Services that were able to map the patient journey within their area and articulate this in a clinical pathway were better able to coordinate individual patient care. For example, through the development of a clinical pathway for patients with COPD, Central Sydney Area Health Service implemented a model of best practice across the Area Health Service. The pathway assisted staff, patients and carers to identify disease management options and supported coordination of the patient journey across health care facilities and settings.

### **Twenty-four-hour points of contact**

An integral component of effective care coordination is the capacity to provide patients with health service contact points twenty-four hours a day, seven days a week. Discussions with people with chronic illness and their carers highlighted their need for access to appropriate and timely health care advice, particularly outside normal working hours and over weekend periods.

Providing this service proved challenging, particularly in areas where infrastructure is less well developed and staff availability is limited. Area Health Services that were able to establish and maintain twenty-four-hour points of contact primarily used care coordinators or specialist program staff as the point of contact.

All Area Health Services have made provision to systematically inform patients and carers of after-hours care options. A statewide approach to a central point of phone contact for people with chronic illness was not recommended following stakeholder consultation. The main barriers to a statewide approach included the complex nature of chronic illness, limited capacity to access relevant patient information, and limited potential for cost effectiveness.

Self-management strategies such as action plans helped support initiatives for twenty-four-hour points of contact by prompting patients and carers about the most appropriate action to take if a health problem arose after hours or on a weekend.

Future developments in GP after-hours care and electronic health records will further enhance the capacity to offer effective twenty-four-hour health care for people with chronic illness.

### 4.3 Multidisciplinary team approach

Like care coordination, the multidisciplinary team approach implemented within many priority health care programs recognises the complexity of chronic disease management. People with a chronic illness and their carers have a range of needs that can rarely be fully met by one health discipline, such as medicine or nursing. The psychological, social and functional impact of chronic illness necessitated the development of service models that bring together the skills and knowledge of a diverse workforce.

*Having access to a defined multidisciplinary team improved our ability to communicate and plan care. We were able to bring our own experience and skills to the team. It really enhanced the scope and quality of the care we could offer patients and their families.*  
Nurse, Chronic Disease Management Program, Hunter Area Health Service.

Most commonly the multidisciplinary teams developed through the priority health care programs consisted of, but were not limited to, staff from the disciplines of:

- medicine – including specialists and general practitioners
- nursing – including clinical nurse specialists, clinical nurse consultants, hospital and community-based nurses
- physiotherapy
- psychology
- social work
- occupational therapy
- dietetics.

Multidisciplinary models of care incorporated hospital, community health and other community-based services. The key aims of multidisciplinary teams in chronic care were to:

- improve communication
- clarify roles and minimise duplication of effort
- support integrated care planning
- provide patients and carers with coordinated and high quality health care.

Multidisciplinary teams frequently engaged both public and private providers, for example, community pharmacists. Emerging roles in health care delivery, such as exercise physiologists and community care aides, were recognised as important contributors to the multidisciplinary approach to chronic care. Chronic care program managers reported that strengthening multidisciplinary teams enhanced the capacity for effective chronic disease management by improving access to allied health staff.

#### **Multidisciplinary team leadership**

Multidisciplinary teams are considered a vital component in the establishment of an effective multidisciplinary approach. A diverse range of staff undertook the leadership role of the team. In the Illawarra Area Health Service the stroke multidisciplinary team consists of medical and nursing staff, physiotherapists, occupational therapists, speech therapists and social workers, with the lead role taken by a medical director.

In South Eastern Sydney Area Health Service the podiatrists lead a diabetes foot care service that supports inter-service provider networks including general practitioners, community health and hospital services.

A number of rural areas experienced difficulty accessing or recruiting staff to enable a multidisciplinary approach to chronic care. This led to the development of strategies such as outreach clinics for palliative care in the Mid North Coast Area Health Service. Ongoing work through *NSW TeleHealth* such as the tele-psychology services for cancer patients in the New England Area Health Service will help to develop alternate models for allied health involvement in multidisciplinary chronic disease management in rural areas.

### 4.4 Self-management

Self-management is not a new concept. However the role of self-management in chronic care has gained significant support in recent years as a vital component in any effective chronic disease management model.

*Research and practical experience in North America and Britain are showing that today's patients with chronic diseases need not be mere recipients of care. They can become key decision-makers in the treatment process. ... Self-management programs can be specifically designed to reduce the severity of symptoms and improve confidence, resourcefulness and self-efficacy.<sup>40</sup>*

One of the major achievements of the priority health care programs has been the increased recognition of the role people with chronic illness and their carers play in effectively managing their chronic disease. The majority of the sixty programs reported increased activity directed at supporting self-management skills and greater understanding of the scope of self-management as being more than just patient education.

*...self-management support can't begin and end with a class. Using a collaborative approach, providers and patients work together to define problems, set priorities, establish goals, create treatment plans and solve problems along the way.<sup>41</sup>*

The self-management models used by priority health care programs included:

- Stanford University (Kate Lorig) program Living With Chronic Disease.<sup>42</sup> This is a group-based and peer-led model that facilitates the development of knowledge and skills for managing the emotional and physical impact of chronic disease and problem-solving
- South Australian Flinders University Partners in Health program.<sup>43</sup> The Flinders program has a strong emphasis on health care providers working in partnership with patients to identify their level of self-efficacy, their individual health goals and to plan actions to attain those goals.

A number of resources and support strategies were developed to enhance self-management capacity. These included *My Health Record* (discussed in Section 2.4) and self-management action plans. Self-management action plans provide a guide for patients and carers on the signs and symptoms of disease exacerbation and the steps to be taken to manage the situation including points of contact for assistance and self-medication titration. Inserts for *My Health Record* have been designed to accommodate additional health records and reports such as self-management plans.

### 4.5 Rehabilitation

Most programs incorporated self-management concepts into structured rehabilitation and maintenance programs. This was particularly undertaken for heart failure and COPD rehabilitation programs, whilst cancer programs used a more individualised and/or family approach to patient education.

A substantial evidence base supports the effectiveness of rehabilitation in improving clinical outcomes for people living with chronic pulmonary and cardiac disease. However rehabilitation programs for these patient groups has only been available at a small number of sites in NSW for some years. Improved access to rehabilitation was a significant achievement of the NSW Chronic Care Program, with priority health care programs building on existing rehabilitation services to increase the number and range of rehabilitation programs being offered statewide.

Rehabilitation programs were designed for group and individualised home-based programs. Components of rehabilitation programs included education, functional skill development and physical conditioning through exercise. While the majority of metropolitan rehabilitation programs were disease-specific, rural areas tended towards a more flexible generic chronic disease approach to accommodate local demographics, needs and resources.

### 4.6 General practice linkages

General practitioners are key health providers for people living with chronic illness, their families and carers. Priority health care programs aimed to improve integration between the work of Area Health Services and general practice, particularly in the area of care coordination and increased use of Enhanced Primary Care (EPC) Medicare Benefit Schedule items. Strategies ranged from the development of communication mechanisms to the delivery of shared education and training programs.

Area Health Services that were able to engage actively with general practice reported favourable outcomes in terms of planning for the management of individual patient needs. However the level of success in effectively engaging general practitioners in priority health care programs at a local level was variable. Areas worked through their local Divisions of General Practice and/or approached individual general practitioners directly. Chronic care program managers reported mixed results statewide, whichever approach was taken.

Programs that had some success in building closer relationships with general practitioners reported that only a small proportion of general practitioners consistently engaged in chronic care activities with Area Health Services. The significant factors influencing this situation related to the alignment of local, State and Commonwealth initiatives and priorities.

#### Commonwealth general practice initiatives

At the time of the priority health care program implementation Commonwealth strategies such as Practice Incentive Payments for diabetes and the Asthma 3+ Management program had been introduced.

General practitioners and program managers reported problems with conflicting timeframes, changes to EPC guidelines and variable capacity for general practitioners to take on new initiatives, particularly those that impeded the normal functioning of the practice.

Coupled with general practitioner shortages, particularly in regional and rural areas, the opportunities for developing integrated models of care were limited.

Some Area Health Services successfully developed processes to support the uptake of the EPC items of care planning and case conferencing. This was primarily achieved through the appointment of liaison officers who provided a link between GPs and local health services. These positions focused on developing processes to better integrate the work of the Area Health Service and general practice.

#### Wentworth Area Health Service – GP engagement model

Wentworth Area Health Service demonstrated improvement in patient outcomes through the appointment of liaison nurses who were co-located in the local Division of General Practice. The role of the liaison nurses specifically targeted a coordinated approach to case conferencing for patients with chronic and complex needs.

Resources developed to assist this process included a *General Practitioner Care Plan Kit*, *Case Conference Kit* and an *Easy Reference MBS Item* brochure.

By tracking the hospital admission patterns for a cohort of 80 patients enrolled in the program, the Wentworth Area Health Service demonstrated a 70 per cent reduction in hospital admissions for the cohort post-case conference.

Other strategies that achieved a level of support and acceptance by general practitioners included education and training activities, individualised liaison in relation to specific patient needs and improved quality of information exchanged at the time of hospital discharge.

Of note is the evolving role of practice nurses and the potential to enhance their capacity to support general practitioners in chronic care in the future. Some Area Health Services were successful in developing an integrated approach to health professional education and training that supports skill development in chronic care and facilitates interagency networks.

## 4.7 Workforce capacity

The introduction of the 60 priority health care programs highlighted a number of workforce issues. All of the programs included education and training components to better equip health workers with the knowledge and skills to work with patients with chronic illness.

The knowledge and skill set required by health professionals working with people with chronic illness differs from that which most health professionals have developed in acute health care settings.

### Chronic disease management skills:

- supporting and developing patient and carer capacity for self-management of the illness
- knowledge of behaviour change concepts and strategies
- skills that address and support the psychological, social and physical needs of the patient with a chronic condition and their carers
- clinical knowledge and skills for managing a variety of diseases
- the ability to link with others involved in providing patient care across the continuum of disease management, including skills in multidisciplinary team participation and care planning across multiple providers and settings.

There is a critical need to strengthen the skills and knowledge of the mainstream health workforce if the growing burden of chronic illness is to be effectively managed. Education and training resources developed in the first phase of the NSW Chronic Care Program are outlined in Appendix 2.

While many Area Health Services experienced difficulties in recruiting and retaining nursing and allied health professionals with skills and interest in chronic care management, rural Area Health Services reported the most workforce shortages. The limited availability of medical specialists is an ongoing barrier to the delivery of quality chronic care services in rural areas.

Telehealth consultations between generalist staff in rural areas and specialist health professionals in city teaching hospitals are now becoming more common and have the capacity to significantly enhance current and future initiatives in chronic disease management in rural areas.

Telehealth offers an alternative and cost-effective way to provide professional development for staff and clinical consultation sessions in areas where access to specialist skills are limited. This mode of service delivery will help to redress some of the inequities identified during the NSW Chronic Care Program that rural patients experienced in accessing chronic care services.

Workforce planning for chronic care has been identified as crucial for preparing the health system to meet the growing demands of chronic disease. Overall, the priority health care programs have helped to raise the profile of chronic illness as a legitimate field of practice. However there has been limited work on a national and international level to identify a strategic approach, incorporating recruitment, retention and training, to the development of a chronic care workforce.<sup>44</sup>

### Improving the quality of life of health care providers caring for people with chronic illness

The emotional and physical burden of caring for people with chronic illness was identified by priority health care program managers and staff as a barrier to effecting system-wide change in the management of chronic disease.

Staff state that work structures and environments developed for acute care do not provide the level of support needed to manage a predominantly chronic disease caseload. Issues such as the time needed for patient assessment, developing self-management skills, care coordination and ongoing monitoring need to be considered in future development of work practice models.

Attempting to effect quality chronic care in the current health system has added significantly to the stresses placed on staff, with many reporting a negative impact on their own quality of life and job satisfaction.

Strategies to better equip managers and staff with the skills to plan chronic care workloads and management of the emotional and physical burden of care in the workplace need to be developed.<sup>45</sup>

## 4.8 Information management systems

Challenges continue for accessing relevant patient information across the patient journey. The ability to track patient care across hospital and community settings and over the duration of the illness has been problematic for local priority health care programs. In addition, the ability to use information management systems to generate program-related reports has been limited leading to a higher than expected resource burden on administrative and management resources.

As people with chronic illness tend to visit multiple providers including emergency departments, hospitals, community-based services and general practitioners, it is important that appropriate and relevant information is available across the care continuum. Area Health Services that had established a unique patient identifier were better equipped to track people with chronic illness and the care provided to them across the health system; however, more sophisticated information management systems are required.

Information systems tend to be better established in hospital settings than in community health services. As discussed in Section 3, there is generally a paucity of quality community health information systems.

In the absence of quality and integrated health information systems across hospital and community settings, Area Health Services have set up a range of systems to administer the priority health care programs and to enhance the information available on a person with chronic illness across the patient journey. These systems are largely ad hoc stand-alone systems using software such as Excel or Access. Most Area Health Services reported these systems were difficult to establish, often lacked the capacity to be networked and were generally resource-intensive to maintain.

For long-term sustainability and successful planning and implementation of chronic care strategies, a uniform approach to information management systems for chronic care will need to be addressed. It is hoped that development of the electronic health record and CHIME will help to address the significant and continuing challenge of improving information management for people with chronic care needs.

## 4.9 Organisational change

Establishing chronic care initiatives largely involves organisational change to establish new ways of working with people with chronic illness. The final reports submitted by priority health care programs highlighted the difficulties experienced in facilitating organisational change and the lessons learnt.

### Challenges in changing systems and culture for chronic care

*In hindsight we would have allowed for and allocated more time and resources for the planning process of the program to enable greater coordinated implementation of the program into all sites.* Macquarie Area Health Service respiratory program

*Allocated time and resources to team development and change management strategies in initial stage of implementation.* Hunter Area Health Service respiratory program

*Emphasise the best clinical practice management and seek greater buy-in from clinical health care providers.* New England Area Health Service heart failure program

Health service staff have often been ill prepared for the level of change required to accommodate the shift in emphasis from acute care to the longer-term care that is inherent to chronic illness. The level of organisational change was generally not accounted for in initial program plans, nor was there recognition of the significant lead-time needed to introduce change in the workplace.

New roles, such as the chronic care program managers and care coordinators, required time to be established and for appointees to gain credibility amongst their peers as leaders and establish their role as change agents in chronic care. The support of both senior clinicians and managers in Area Health Services was critical in establishing these roles as a catalyst for change.

Gearing the health system for chronic care requires new ways of doing business and was a challenge for most Area Health Services. These challenges included setting up systems of care for people who would have:

- multiple contacts with health care providers
- care provided across multiple health care sites
- care that will extend over a long period of time.

This has meant changing established and traditional boundaries between specialist services, professions and across hospital and community settings.

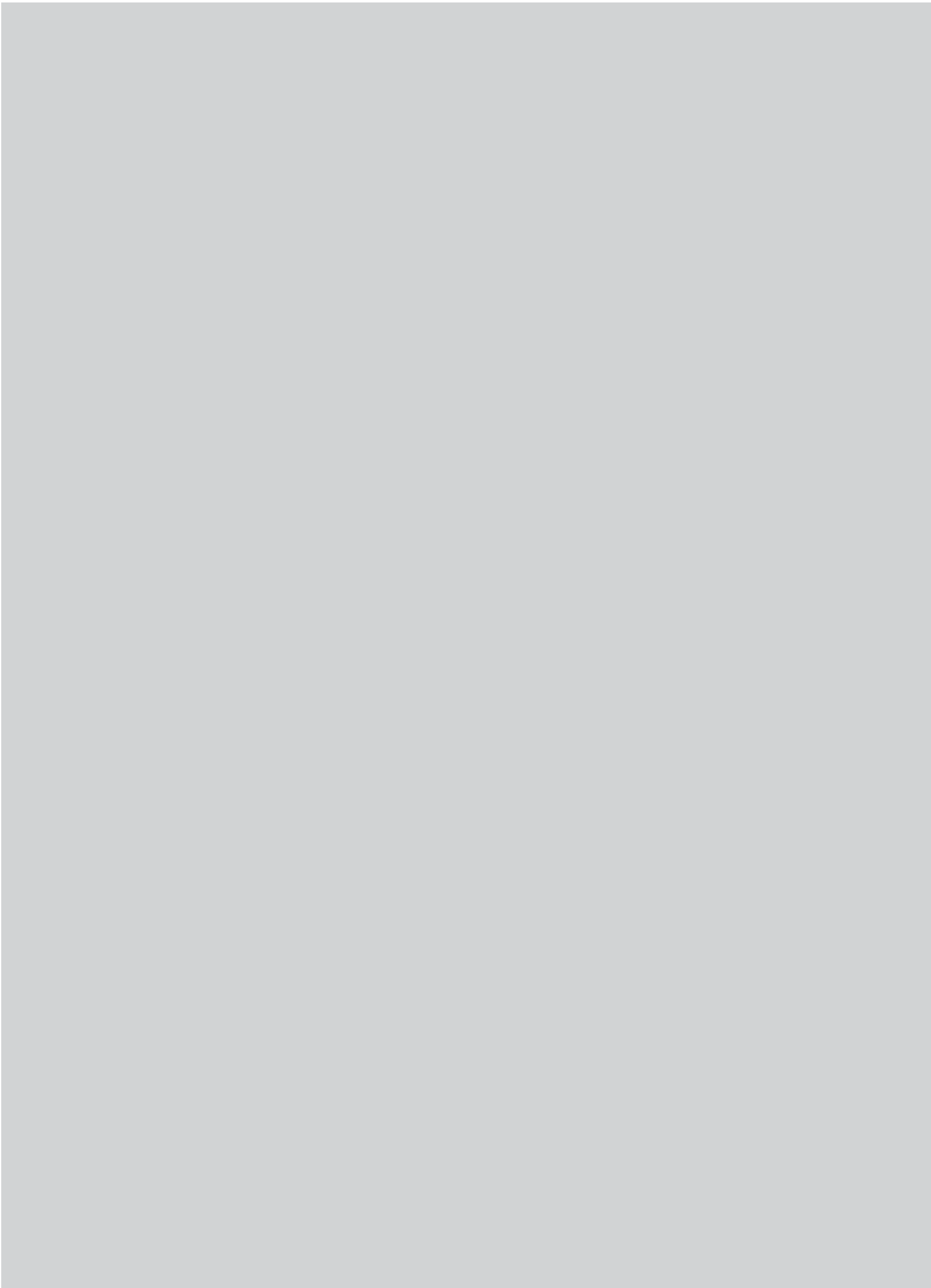
Building shared responsibility between the various health providers who interact with patients with chronic and complex conditions is a continuing challenge, yet a vital ingredient for improving quality of care.

### **Achieving sustainable organisational change**

Achieving sustainable change in chronic disease management was a key focus of the NSW Chronic Care Program. This often involved working with multiple staff across the health system to ensure that caring for people with chronic illness was integrated into mainstream health service delivery, with support from specialist staff as required.

This challenge is reflected in comments from some program staff regarding their programs having reached or nearly having reached capacity. With the increasing incidence of chronic illness there is an expectation of growing demand for chronic care services into the future.

This has highlighted the need to explore alternative models of care that can maximise resource allocation and mainstream service provision whilst still maintaining clinical standards.



# Disease-specific priority health care programs 5

This section provides an overview of the strategies undertaken by the priority health care programs in specific disease groups. A full list of programs, target populations and interventions is included in Appendix 1. A list of the resources developed by each program is included in Appendix 2.

## 5.1 Respiratory disease

Eighteen respiratory specific priority health care programs were implemented, with 10,137 people enrolled statewide to June 2003. Two programs specifically addressed the needs of children with respiratory disease. South Eastern Sydney Area Health Service implemented a coordinated paediatric asthma service and the Children's Hospital Westmead developed a transitional program for adolescents with cystic fibrosis moving to adult services.

### Spirometry

Spirometry is a valuable tool for the diagnosis and monitoring of respiratory disease. Improving access to spirometry has been problematic across several Area Health Services.

New England Area Health Service improved access to spirometry by purchasing and placing spirometers in key locations across their rural communities. A comprehensive program of staff education and skill development in the use of spirometers supported this approach.

Pulmonary rehabilitation programs featured strongly among priority health care programs. These were mainly group based rehabilitation interventions with a focus on:

- educating participants on the physiology of pulmonary disease
- developing skills in the administration of medications
- managing disease exacerbation
- coping with the lifestyle impact of chronic pulmonary disease
- improving physical conditioning through exercise.

Alternatives to group based programs, such as the Central Coast Area Health Service Home Education Respiratory Support Service, were implemented for people who experienced difficulty with transport, language and cultural barriers. Rural areas faced significant challenges in implementing pulmonary rehabilitation programs due to distance and lack of suitably skilled rehabilitation staff.

### Northern Rivers Area Health Service

#### PEAK respiratory rehabilitation program

The PEAK respiratory program provided inpatient management and pulmonary rehabilitation to adults with COPD and asthma. The program was designed and delivered in collaboration with the local Division of General Practice.

A respiratory liaison worker delivered specialised outreach services. Education and training was also provided to skill health workers in chronic respiratory care. The program was characterised by a high level of consumer involvement.

*This program received a NSW Baxter Award in 2003.*

People completing pulmonary rehabilitation demonstrated significant improvement in quality of life and functional capacity measurements. Providing long-term exercise and social activity to maintain these clinical improvements is a key component for sustained effectiveness. Program managers identified the need for maintenance programs as a growing area of demand.

Several strategies were undertaken to strengthen staff skill development and resource capacity in delivering respiratory care. These included:

- asthma educator training
- home oxygen therapy programs
- spirometry access and training
- twenty-four hour phone support for patients
- development and use of self-management action plans.

## Disease-specific priority health care programs

Staff, patient and carer resources developed through the priority health care programs to support respiratory chronic disease management included:

- clinical pathways and practice guidelines
- pulmonary rehabilitation procedure manuals
- general practitioner shared care guidelines for cystic fibrosis
- patient and carer education material, such as, rehabilitation workbooks and videos
- asthma and COPD education material in a range of languages
- asthma action plan training program for general practitioners
- databases and electronic monitoring systems.

## 5.2 Cardiovascular disease

Cardiovascular programs encompassed the disease groups of heart failure, stroke, diabetes and general cardiovascular disease including ischaemic heart disease. Twenty-five cardiovascular disease programs were implemented, with 29,096 patients enrolled across the state to June 2003.

Several priority health care cardiovascular programs worked closely with demonstration projects funded through the NSW Health Aboriginal Vascular Health Program. The Aboriginal Vascular Health Program was established in 2000 and supports the development of culturally responsive service development for Aboriginal people with or at risk of cardiovascular disease.

The Aboriginal health program implemented in the Greater Murray Area Health Service is an example of how priority health care programs and the Vascular Health Program worked together to improve the health of Aboriginal people in the local community.

### Aboriginal Health

The Greater Murray Area Health Service designed an integrated approach to the detection, intervention and coordination of diabetes care within the local Aboriginal community. A key feature of the program is the network of trained Aboriginal Diabetes Workers established across the area.

The model incorporated service providers from health and education, and was strongly supported by the statewide Aboriginal Vascular Health Program.

The following provides a summary of the key initiatives and issues identified for specific cardiovascular programs undertaken for diabetes, stroke, heart failure and general cardiovascular disease.

### 5.2.1 Diabetes

Priority health care programs focused on improving diabetes management addressed:

- amputation prevention
- access to podiatry services
- high risk and coordinated foot care
- adolescent to adult service transition
- general practitioner liaison
- diabetes health assessment
- ambulatory care services for children
- disease detection and care coordination strategies for Aboriginal people with diabetes.

Clinical complications and hospital admissions for diabetes-related conditions were reduced through the use of a multidisciplinary team approach, clinical pathways and practice guidelines. For example, following implementation of a common pathway of care, Central Sydney Area Health Service Diabetes Amputation Prevention Program demonstrated a reduction of two months (average) in the lead-time from ulcer occurrence to presentation to a high-risk clinic following implementation of a common clinical pathway.

Diabetes programs have continued to build and share capacity through telehealth initiatives that link metropolitan and rural service providers.

### 5.2.2 Stroke

Four programs targeted the needs of people who had experienced stroke and their carers. Care coordination was a core component with an emphasis on multidisciplinary care planning and strategies to support patient self-management skills. The priority health care program in the Illawarra Area Health Service worked in collaboration with the Greater Metropolitan Transition Taskforce (GMTT) and Towards a Safer Culture (TASC) teams to develop a comprehensive stroke management model that encompassed coordination of the inpatient and community continuum of care.

Supporting strategies developed in the stroke programs included patient education and exercise programs, activity programs, secondary prevention support and identification and early intervention for depression and anxiety.

Resources developed for general practitioners such as management plans and treatment algorithms further enhanced the coordinated multidisciplinary approach taken to stroke management.

### 5.2.3 Heart failure

Care coordination and rehabilitation strategies were the focus of programs targeting the needs of people with heart failure.

#### Northern Sydney Area Health Service

MACARF (Management of Cardiac Function) Program

The MACARF program bridges hospital and community settings to improve outcomes for patients with heart failure. The heart failure nurse first contacts the patient whilst in hospital and referrals are made to a general practitioner, specialist and allied health services.

Education and a follow up home visit, within seven days of discharge, are provided to patients, each of whom receives a Heart Failure Plan.

A new heart failure exercise program was introduced at Ryde Hospital and the existing cardiac program at Royal North Shore Hospital was expanded to include more heart failure patients.

Similar integrated and coordinated models of care for people with heart failure were used in rural areas, with flexible service and education modules developed to meet the challenges of distance and specialist staff access.

#### Echocardiograms

Echocardiograms are an essential feature in diagnosing heart failure. Program managers reported inconsistent access to echocardiograms across the state, with only a few programs being able to effect increased access.

Program staff reported difficulties with patients not being informed of their heart failure diagnosis or having their diagnosis couched in other terms such as “having a heart problem”. This was attributed to a perception of stigma for the diagnosis of “heart failure”. The confusion experienced by patients, their carers and service providers had an impact on the implementation of heart failure management strategies.

Appropriate pharmacological management of heart failure, such as the prescription of angiotensin-converting enzyme (ACE) inhibitors and beta-blockers, is an important aspect of effective heart failure management. Strategies such as clinical guidelines, treatment algorithms and titration schedules were developed to improve the pharmacological aspect of care.

### 5.2.4 General cardiovascular disease

Seven Area Health Services adopted a more generic approach to cardiovascular disease management. Identification of people at high risk of developing cardiovascular disease and timely intervention to modify risk behaviours were a key focus for these programs. Central Coast Area Health Service developed risk factor management guidelines for general practitioners, with linkage to a Risk Factor Clinic. Macquarie Area Health Service also implemented a Risk Factor Intervention Service supported by life style education programs in four sites across the area. Whilst in South Western Sydney Area Health Service hypertension clinics have been implemented.

Resources developed included:

- vascular screening tools
- assessment protocols
- treatment flow charts.

### 5.3 Cancer

The programs undertaken in the cancer stream demonstrated a diverse approach to improving cancer care based on local need.

A range of cancer types and stages of disease progression have been targeted within the programs. Target areas primarily included chemotherapy, palliative care, lung, head and neck, prostate, breast, colorectal and gynaecological cancers. Some palliative care initiatives incorporated end-stage palliation for malignant and non-malignant chronic diseases.

Program models for cancer aimed to:

- support coordination across the continuum of care, with a focus on supported transition from diagnosis, through treatment, recovery and palliation if needed
- facilitate an integrated approach to care planning across professional disciplines, medical specialties and services
- promote patient and carer access to timely and appropriate information
- develop systems of care for symptom management and psychosocial support.

#### **Western Sydney and Wentworth Area Health Service**

“Cancer service without walls”

Two Area Health Services worked together to develop strategies to provide a high level of coordinated care for patients with metastatic breast cancer, lung cancer, surgical oncology and haematology patients.

Through the development of the role of nurse coordinators/facilitators communication between all service providers has resulted in greater coordination of care and a smoother transfer of patient care between hospital and community services.

Although cancer programs used varying approaches, positive outcomes were achieved through improved patient and carer quality of life and reductions in avoidable hospital admissions. Strategies implemented through the cancer priority health care programs included the following:

- multidisciplinary teams to provide people with cancer and their carers access to the skills and support of a range of health professionals including medical, allied health and nursing
- inter-sectoral and service networks that aligned existing services and maintained continuity of care during the transfer of care process between hospital, community and primary care providers. Networks incorporated health services, government departments and non-government organisations
- nurse coordinators and care facilitators to provide a central point of contact and specialist skill for patients with cancer, carers and other staff to access information and support to manage the cancer journey
- twenty-four-hour telephone access to provide patients receiving cancer treatment with a central point of contact for information, advice and support
- multispeciality teams for the development of evidence-based treatment plans. Teams consisted of medical specialty representatives, who discussed and decided on treatment options for individual patients
- outpatient psycho-oncology services for the management of patients with cancer who have high levels of anxiety, depression or other mental health conditions
- outreach palliative care clinics to minimise the burden of travel and disruption to family life for people with cancer living in rural areas and their carers
- volunteer network development to enhance the scope of cancer support available in rural areas
- symptom action plans that facilitate the patient’s capacity to self-initiate management of the side effects or complications of cancer treatment, for example managing febrile neutropenia
- clinical guidelines and pathways to support evidence-based practice and standardised service delivery for patients with a range of cancer-related conditions, for example lymphedema therapy guidelines.

Resources and tools developed included:

- web-based chemotherapy guidelines and common toxicity criteria
- service directories and patient information guides for specific cancers
- computer-based psycho-oncology self-directed learning packages for health professionals
- community intervention database.

### 5.4 Generic chronic disease

Three Area Health Services implemented generic chronic disease management programs. The programs have taken diverse approaches to address the issues common to a range of chronic diseases or homogenous groups within local communities.

- South Eastern Sydney Area Health Service (Northern Sector) enhanced understanding of advanced care directives by people residing in nursing homes and their families through an education and promotional program conducted by a clinical nurse consultant. The program aimed to assist people with chronic diseases to make considered and informed decisions about the medical interventions they received in the event of acute disease exacerbation.
- South Eastern Area Health Service (Southern Sector) provided acute care interventions for people residing in nursing homes through a Hospital in the Nursing Home service. The program aimed to reduce the need for hospital admission and potential for complications associated with hospitalisation for the elderly.
- Wentworth Area Health Service enhanced the capacity of community health staff to maintain people with chronic illness in their home through improved community and workforce capacity. The Community Collaborative priority health care program focused on intervening early in the disease trajectory to provide appropriate support, monitoring and maintenance care as the disease progresses. The program developed strong linkages with local general practitioners and demonstrated a significant increase in the uptake of EPC items for care planning and case conferencing largely through the work of general practice liaison nurses.

- Macquarie Area Health Service implemented Get the Most Out of Life self-management programs for people with chronic illness. The program was based on the Stanford University (Kate Lorig) Model, and provided a structured approach to support participants in the development of skills to enhance their capacity for self-management. The model proved useful in addressing the challenges inherent in disease management in rural communities.

#### South Eastern Sydney Area Health Service

Chronic diseases among Aboriginal people

South Eastern Sydney Area Health Service developed a community-supported model of health care for a defined Aboriginal population. Health Link outreach clinics are conducted on a weekly basis in a local Aboriginal community. The clinics address a range of health care needs including education, health promotion and clinical interventions for people with chronic illness or at risk of health breakdown. The program worked successfully to engage effectively with the local Aboriginal community.

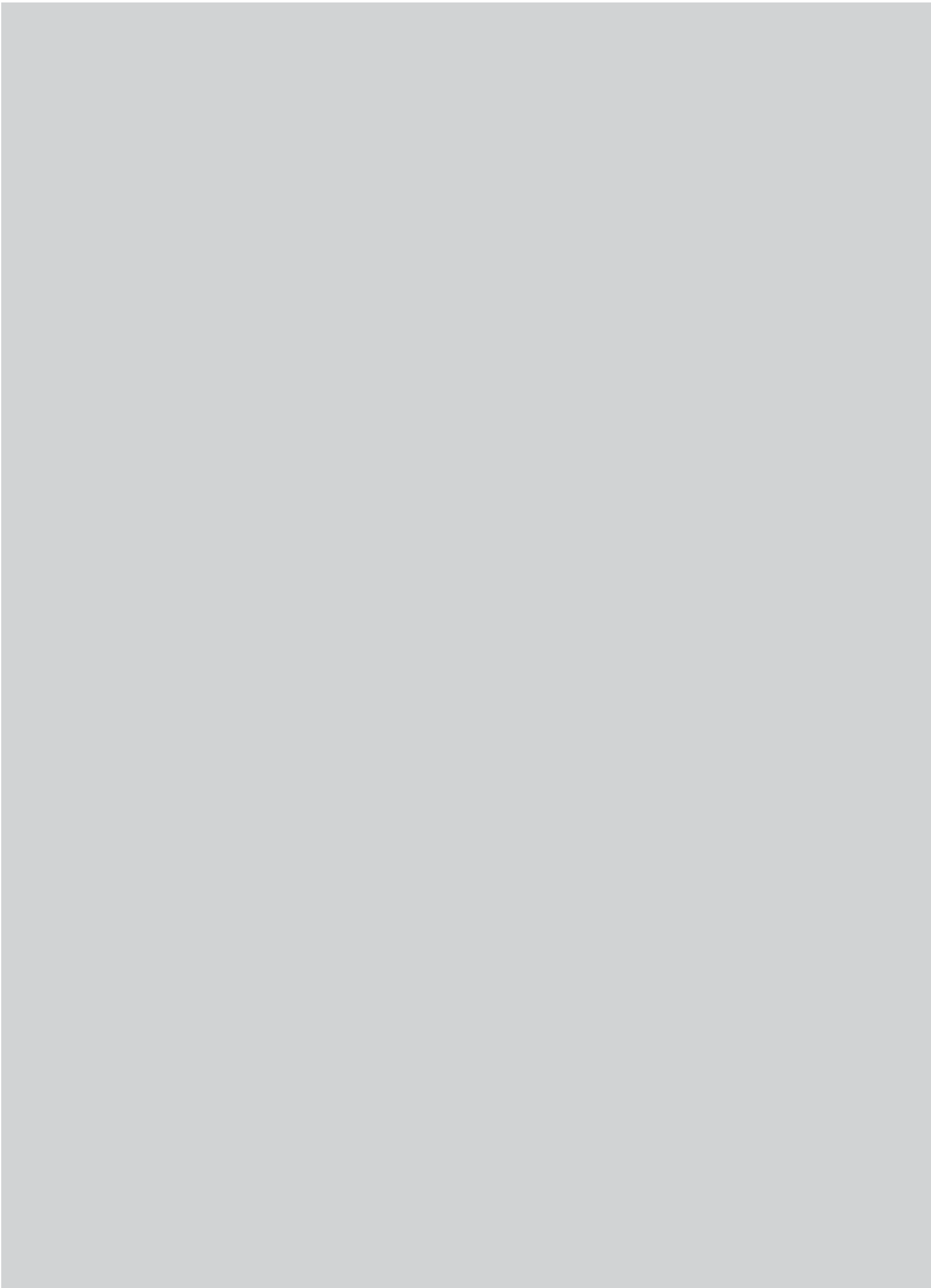
*This program received a National Baxter Award in 2003.*

#### Generic models across disease groups

Chronic care program managers identified a significant need for more generic strategies designed to provide care for people across a range of chronic illnesses.

As the priority health care programs developed, a number of commonalities in the provision of care between disease groups emerged, for example, care plans, care coordination, self-management, a multidisciplinary approach and the need for links between hospital and community-based care. Generic models of care have also shown the capacity to better manage the co-morbidities that many people with a chronic illness experience.

With the need to develop strategies that are both clinically effective and resource efficient, chronic care models across disease groups offer greater scope for viability and sustainability, particularly in areas where population demand and availability of specialised chronic care staff is challenging.



# Gearing the system to chronic care in the future 6

*Patients, health care workers, and most importantly, decision-makers must recognise that effective chronic condition care requires a different kind of health care system. ... A new paradigm will dramatically advance efforts to solve the problem of managing diverse patient demands given limited resources. Through innovation, health care systems can maximise their returns from scarce and seemingly non-existent resources by shifting their services to encompass care for chronic conditions.<sup>46</sup>*

The incidence of chronic illness is increasing and, as stated earlier, approximately 80 per cent of the disease burden in the developed world will be attributable to chronic illness by 2020. Establishing systems of care now for people with chronic illness is essential to ensure that the health system can meet chronic care needs in the future. The NSW Chronic Care Program over the three years to June 2003 has provided many successes and lessons about how to provide better care for people with chronic illness.

Progressing to phase two of the NSW Chronic Care Program (July 2003 to June 2006) provides the opportunity to build on the successes from Phase one, disseminate these across Areas and statewide and embed these as part of mainstream health care.

Recurrent funding of \$15 million per annum has been allocated to the NSW Chronic Care Program from July 2003. Funding has been allocated to Area Health Services to June 2006 to support the continued implementation of the Clinical Service Frameworks and for continuation of effective chronic care programs in Phase one.

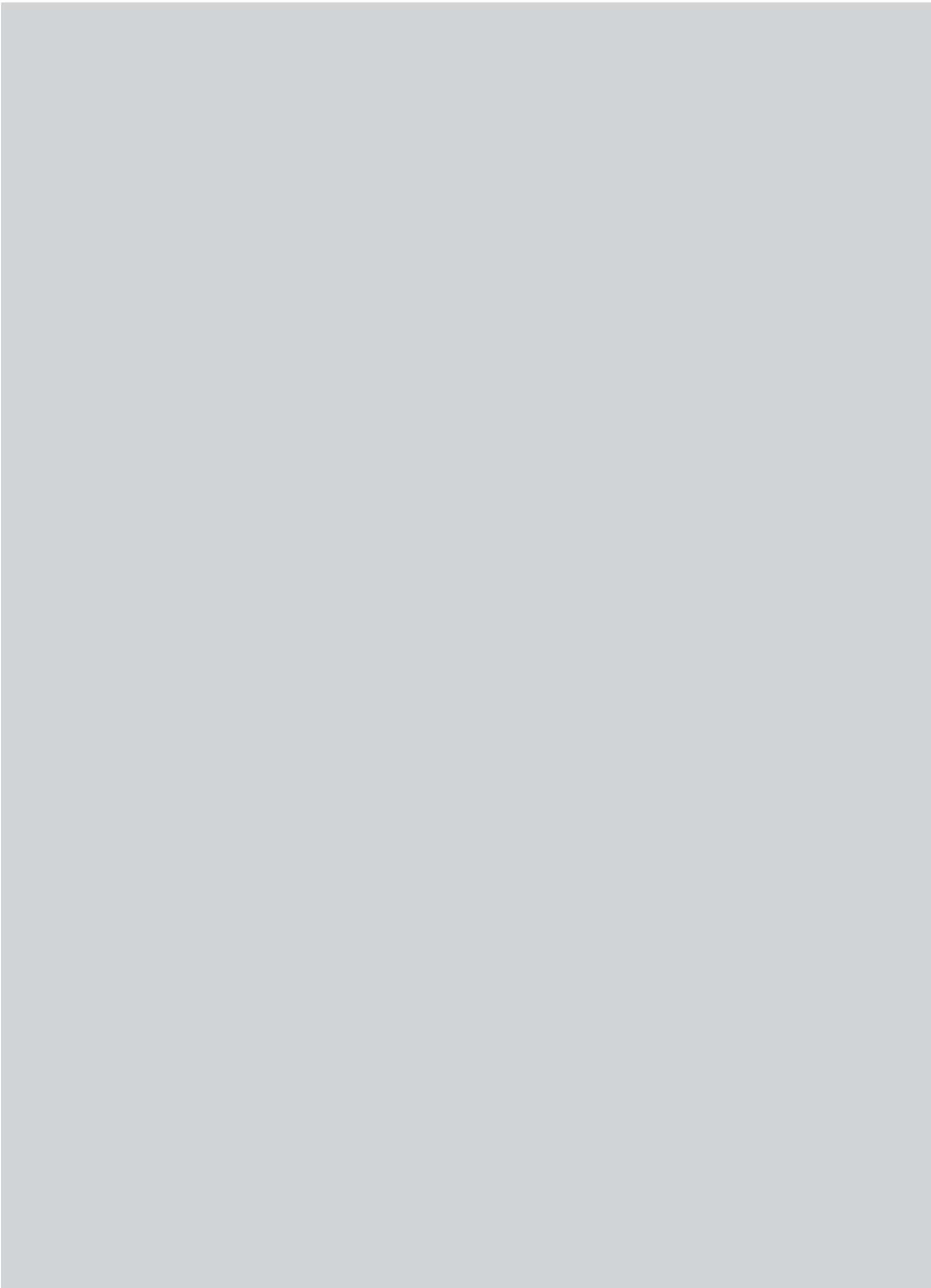
This chapter outlines the key issues in gearing the NSW health system to meet the challenge of improving the care provided to people with chronic illness into the future.

The ground swell of interest, support and collegiality experienced during Phase one of the NSW Chronic Care Program provides a solid foundation for the future of chronic care. Phase two of the NSW Chronic Care Program, 2003-2006, provides the opportunity to build on and ensure continuity of the aims and principles set out in Phase one of the program.

Based on the experiences and knowledge gained in the last three years the following strategic components for the second phase of the NSW Chronic Care Program have been identified for action:

- provide governance and leadership
- develop and integrate chronic care policy across:
  - chronic disease groups
  - health service systems
  - age and population groups
  - the spectrum of care
- strengthen workforce capacity for chronic care
- develop a chronic care funding model
- incorporate self-management
- strengthen the focus on patients and carers
- develop and refine chronic care information systems
- communicate the successes of the NSW Chronic Care Program and what has been learnt
- establish evaluation and monitoring processes.

These strategic elements and associated activities are detailed and discussed in the *NSW Chronic Care Program: Phase Two. Strengthening health care for people with chronic illness. 2003-2006.*<sup>47</sup>



# Appendix 1

## Priority health care programs NSW 2000-2003

<b>Respiratory Programs – Chronic Obstructive Pulmonary Disease (COPD), including Chronic Airways Limitation</b>			
<b>Area Health Service</b>	<b>Description of intervention</b>	<b>Target population</b>	<b>Staffing establishment</b>
Central Coast	<ul style="list-style-type: none"> <li>■ Case management               <ul style="list-style-type: none"> <li>– Respiratory nurse case manager</li> <li>– Care coordination, planning and access</li> </ul> </li> <li>■ Pulmonary rehabilitation program               <ul style="list-style-type: none"> <li>– Increased access</li> <li>– Maintenance/refresher programs</li> </ul> </li> <li>■ Home education respiratory support               <ul style="list-style-type: none"> <li>– Respiratory liaison nurse</li> <li>– Self-management skill development</li> </ul> </li> </ul>	All patients admitted with COPD	4.1 FTE
Central Sydney	<ul style="list-style-type: none"> <li>■ Pulmonary rehabilitation program               <ul style="list-style-type: none"> <li>– Group-based, exercise and education</li> <li>– Physiotherapist-led multidisciplinary team</li> </ul> </li> <li>■ Smokers clinics               <ul style="list-style-type: none"> <li>– Multi-site clinics</li> <li>– Intensive individual counselling and intervention</li> </ul> </li> <li>■ Treatment plan with GP</li> <li>■ Nursing outreach</li> <li>■ Inpatient coordination and early discharge support</li> <li>■ Clinical pathway supported by community nurses and COPD outreach nurses</li> </ul>	All people with COPD	7 FTE
Greater Murray	<ul style="list-style-type: none"> <li>■ Case management               <ul style="list-style-type: none"> <li>– Respiratory care coordinators</li> <li>– Action plan education and promotion</li> <li>– Workforce development and capacity building</li> </ul> </li> <li>■ Pulmonary rehabilitation (under development)</li> </ul>	Asthma COPD	2.4 FTE
Hunter	<ul style="list-style-type: none"> <li>■ Pulmonary rehabilitation program (4 sites)               <ul style="list-style-type: none"> <li>– Group exercise and education, home-based program as required</li> <li>– Care planning/coordination for complex patients</li> <li>– Generic rural model trial (5 sites)</li> </ul> </li> <li>■ Workforce Development Plan</li> <li>■ General practice nurse development program</li> </ul>	COPD	3.2 FTE clinical 2.3 FTE project management and administration

## Appendix 1: Priority health care programs NSW 2000-2003

<b>Respiratory Programs – Chronic Obstructive Pulmonary Disease (COPD), including Chronic Airways Limitation cont</b>			
<b>Area Health Service</b>	<b>Description of intervention</b>	<b>Target population</b>	<b>Staffing establishment</b>
Illawarra	<ul style="list-style-type: none"> <li>■ Coordinated care and integrated care planning</li> <li>■ Clinical guidelines and action plans</li> <li>■ QUIT clinics</li> <li>■ Coordinated subsidised supply of oxygen and nebulisers</li> <li>■ CAREBridge – community nurse intervention               <ul style="list-style-type: none"> <li>– Supported hospital discharge</li> </ul> </li> <li>■ Pulmonary rehabilitation</li> <li>■ Outpatient, home-based and maintenance</li> </ul>	COAD Chronic Asthma Chronic Bronchitis (Aged > 45 years)	3.78 FTE
Mid North Coast	<ul style="list-style-type: none"> <li>■ Case management model               <ul style="list-style-type: none"> <li>– Care managers and PHCP liaison officers</li> <li>– Discharge care plans, self-management plans and action plans</li> </ul> </li> <li>■ Pulmonary rehabilitation program               <ul style="list-style-type: none"> <li>– Flexible delivery modules including equipment and resource kit</li> </ul> </li> <li>■ Workforce development</li> </ul>	COPD Asthma	1.4 FTE
Mid West	<ul style="list-style-type: none"> <li>■ Integrated model of chronic disease management               <ul style="list-style-type: none"> <li>– Primary prevention to palliative care</li> <li>– Reference group</li> <li>– Continuum of care pathway</li> <li>– Clinical guidelines, action plans and patient-held record</li> </ul> </li> </ul>		1.5 FTE
South Eastern	<ul style="list-style-type: none"> <li>■ Multidisciplinary teams               <ul style="list-style-type: none"> <li>– Pulmonary rehabilitation programs, group and home-based</li> <li>– Action plans</li> <li>– Pre-discharge case conferencing, care planning</li> </ul> </li> </ul>	COPD	8.5 FTE
Southern	<ul style="list-style-type: none"> <li>■ Lungsmart               <ul style="list-style-type: none"> <li>– Three-phase pulmonary rehabilitation</li> <li>– Seven-day inpatient clinical pathway</li> <li>– Acute management plan for emergency care</li> <li>– Pathway for community management and GP model</li> </ul> </li> </ul>	COPD	1.0 FTE Coordinator 0.2 x 6 Facilitators
South Western	<ul style="list-style-type: none"> <li>■ Respiratory liaison nurse – care coordination               <ul style="list-style-type: none"> <li>– Discharge care plan</li> <li>– Smoking cessation assistance plan</li> <li>– Referral to pulmonary rehabilitation</li> <li>– Education, counselling and liaison with other providers</li> </ul> </li> </ul>	COPD	5 FTE

<b>Respiratory Programs – Chronic Obstructive Pulmonary Disease (COPD), including Chronic Airways Limitation cont</b>			
<b>Area Health Service</b>	<b>Description of intervention</b>	<b>Target population</b>	<b>Staffing establishment</b>
Wentworth	<ul style="list-style-type: none"> <li>■ Chronic airways limitation management (CALM)                             <ul style="list-style-type: none"> <li>– Individual assessment</li> <li>– Education and exercise group program</li> <li>– Refresher courses and 24-hour phone support service</li> <li>– Support groups</li> </ul> </li> </ul>	COPD, emphysema, chronic bronchitis, bronchiectasis	3.5 FTE
Western Sydney	<ul style="list-style-type: none"> <li>■ Respiratory ambulatory care service                             <ul style="list-style-type: none"> <li>– Pulmonary rehabilitation program</li> <li>– Outreach nurse</li> <li>– 24-hour respiratory hotline</li> <li>– Multidisciplinary assessment and care planning</li> <li>– Continuing support and access to hotline</li> </ul> </li> </ul>	COPD, with at least one hospital admission for acute exacerbation	9.1 FTE

COPD: Chronic Obstructive Pulmonary Disease

COAD: Chronic Obstructive Airways Disease

CAL: Chronic Airway Limitation

<b>Respiratory Programs – Specialist, Combined/Multi Focus</b>			
<b>Area Health Service</b>	<b>Description of intervention</b>	<b>Target population</b>	<b>Staffing establishment</b>
Children's Hospital Westmead	<ul style="list-style-type: none"> <li>■ Cystic Fibrosis treatment centre (ambulatory)                             <ul style="list-style-type: none"> <li>– Transitional care, adolescent to adult services</li> <li>– Ambulatory IV therapy</li> <li>– Management of acute respiratory problems</li> <li>– Multidisciplinary assessment, education and management of ongoing care needs</li> <li>– Transition kit</li> <li>– Adolescent Clinic restructured to meet patient need</li> </ul> </li> </ul>	Cystic Fibrosis	1.0 FTE CNC 0.2 FTE Physio 0.2 FTE Dietician 0.2 FTE Social Worker
Macquarie	<ul style="list-style-type: none"> <li>■ Breath-up respiratory rehabilitation program (B-URP)                             <ul style="list-style-type: none"> <li>– Group and home-based education and exercise program</li> </ul> </li> <li>■ Airways management planning service                             <ul style="list-style-type: none"> <li>– Shared care education and management model</li> <li>– GPs, Aboriginal health education workers, specialist staff</li> </ul> </li> <li>■ Workforce development – network days</li> </ul>	COPD Asthma	2.5 FTE

## Appendix 1: Priority health care programs NSW 2000-2003

<b>Respiratory Programs – Specialist, Combined/Multi Focus cont</b>			
<b>Area Health Service</b>	<b>Description of intervention</b>	<b>Target population</b>	<b>Staffing establishment</b>
Mid North Coast	<ul style="list-style-type: none"> <li>■ Case Management model               <ul style="list-style-type: none"> <li>– Care Managers and PHCP Liaison Officers</li> <li>– Discharge care plans, self-management plans and action plans</li> </ul> </li> <li>■ Pulmonary rehabilitation program               <ul style="list-style-type: none"> <li>– Flexible delivery modules including equipment and resource kit</li> </ul> </li> <li>■ Workforce development</li> </ul>	COPD Asthma	1.4 FTE
New England	<ul style="list-style-type: none"> <li>■ Workforce Development               <ul style="list-style-type: none"> <li>– Flexible delivery education</li> <li>– Asthma Educator Accreditation (15 staff)</li> </ul> </li> <li>■ Pulmonary rehabilitation program</li> <li>■ Capacity building               <ul style="list-style-type: none"> <li>– Spirometers for emergency departments and community health centres</li> <li>– Rehabilitation equipment package for community health centres</li> </ul> </li> </ul>	COPD Asthma	1 FTE
North Sydney	<ul style="list-style-type: none"> <li>■ Acute/post acute care (APAC)               <ul style="list-style-type: none"> <li>– Acute hospital substitution program</li> </ul> </li> <li>■ Pulmonary rehabilitation program               <ul style="list-style-type: none"> <li>– Outpatient and home-based exercise/education</li> <li>– Community-based support Nnetwork</li> </ul> </li> <li>■ Multidisciplinary respiratory team               <ul style="list-style-type: none"> <li>– At-risk clients in the community, symptom control</li> </ul> </li> <li>■ Respiratory liaison nurse               <ul style="list-style-type: none"> <li>– Strong link between hospital services and community-based services</li> </ul> </li> </ul>	Disabling respiratory disease	10 FTE
Northern Rivers	<ul style="list-style-type: none"> <li>■ PEAK Program               <ul style="list-style-type: none"> <li>– Respiratory liaison worker</li> <li>– Care coordination</li> <li>– Pulmonary rehabilitation</li> <li>– Equipment loan kits, flexible site delivery</li> <li>– Specialist outreach service</li> <li>– Workforce development</li> <li>– Consumer participation program</li> </ul> </li> </ul>	COPD Asthma	4 FTE
South Eastern	<ul style="list-style-type: none"> <li>■ Coordinated Paediatric Asthma Service               <ul style="list-style-type: none"> <li>– Population-based program</li> <li>– Clinical guidelines for ED management</li> <li>– Workforce training (train the trainer)</li> <li>– Community network: GPs, child care providers, schools, pharmacies, community groups</li> </ul> </li> </ul>	Paediatric asthma	2.2 FTE

<b>Cardiovascular Programs – Diabetes</b>			
<b>Area Health Service</b>	<b>Description of intervention</b>	<b>Target population</b>	<b>Staffing establishment</b>
Central Sydney	<ul style="list-style-type: none"> <li>■ Amputation prevention program</li> <li>■ Multidisciplinary high-risk foot services (AHS wide)                             <ul style="list-style-type: none"> <li>– Clinical practice guidelines</li> <li>– Standardised data collection</li> <li>– Coordination between services</li> </ul> </li> <li>■ Education of health professionals</li> <li>■ High-risk foot education and post-ulcer education for patients</li> </ul>	Diabetic patients with: foot ulceration infection acute Charcot's arthropathy	2.8 FTE (Project coordinator and 3 project assistants)
Children's Hospital Westmead	<ul style="list-style-type: none"> <li>■ Ambulatory stabilisation program                             <ul style="list-style-type: none"> <li>– Diabetes day care centre</li> <li>– Limited re-education/stabilisation capacity</li> <li>– Psychosocial assessment and social work assistance for newly diagnosed families</li> <li>– Post-program discharge telephone contact (daily/monthly, dependant on family need)</li> <li>– Monthly follow up prior to entry into routine outpatient clinics</li> <li>– Supermarket tours, guidance for food choices/purchases.</li> </ul> </li> </ul>	Newly diagnosed children and adolescents	3.6 FTE
Greater Murray (Aboriginal)	<ul style="list-style-type: none"> <li>■ Detection, intervention and care coordination program                             <ul style="list-style-type: none"> <li>– Screening and Koori Health Checks</li> <li>– Case management for high risk clients</li> <li>– Self-management and support groups</li> <li>– Agency collaboration (TAFE)</li> <li>– Aboriginal health worker network</li> </ul> </li> </ul>	Aboriginal population and those diagnosed with diabetes (or high risk of disease development)	4 FTE Aboriginal Diabetes Workers 0.4 FTE Project Officer (until Feb 2003)
North Sydney	<ul style="list-style-type: none"> <li>■ Diabetes high risk foot service                             <ul style="list-style-type: none"> <li>– Multidisciplinary care coordination</li> <li>– Podiatrist assessment</li> </ul> </li> <li>■ Diabetes health assessment unit                             <ul style="list-style-type: none"> <li>– Multidisciplinary/speciality service</li> <li>– 'One stop shop'</li> <li>– Referral pathways and complications screening</li> <li>– Urgent response capacity</li> </ul> </li> </ul>	Diabetics with active foot problems All diabetics	4 FTE
South Eastern	<ul style="list-style-type: none"> <li>■ Area coordinated foot care service                             <ul style="list-style-type: none"> <li>– Coordination across 4 hospitals</li> <li>– Additional high-risk diabetic podiatry sessions</li> <li>– Assessment, education, management of high-risk and acute diabetic foot conditions</li> <li>– Care protocols/flow charts</li> <li>– Articles/Information packs in all Divisions of General practice newsletters and information sessions/in services</li> <li>– Workforce development and staff training</li> </ul> </li> </ul>	Diabetics over 16 years of age with active foot problem or identified as high-risk	1.85 FTE

## Appendix 1: Priority health care programs NSW 2000-2003

<b>Cardiovascular Programs – Diabetes cont</b>			
<b>Area Health Service</b>	<b>Description of intervention</b>	<b>Target population</b>	<b>Staffing establishment</b>
Wentworth	<ul style="list-style-type: none"> <li>■ GP liaison               <ul style="list-style-type: none"> <li>– Liaison Officer</li> <li>– “CARDIAB” database management: recall and performance reporting</li> </ul> </li> <li>■ After hours emergency hotline*               <ul style="list-style-type: none"> <li>– Action plans</li> </ul> </li> </ul> <p>* Discontinued due to limited cost effectiveness.</p>	Diabetic patients over the age of 15 years	0.5 FTE
Western Sydney (Linked to Children’s Hospital Westmead, South Western and Wentworth AHS)	<ul style="list-style-type: none"> <li>■ Transition care program               <ul style="list-style-type: none"> <li>– Care coordinator</li> <li>– Action plans</li> <li>– Patient education</li> <li>– Staff education</li> </ul> </li> </ul>	Diabetics aged 15-25 years, moving from paediatric to adult services	1 FTE

<b>Cardiovascular Programs – Stroke</b>			
<b>Area Health Service</b>	<b>Description of intervention</b>	<b>Target population</b>	<b>Staffing establishment</b>
Central Coast	<ul style="list-style-type: none"> <li>■ Community-based brief therapy intervention and group education</li> <li>■ Multidisciplinary</li> <li>■ Assessment and referral service</li> <li>■ Client-oriented goal setting</li> </ul>	All stroke patients	2.9 FTE
Central Sydney	<ul style="list-style-type: none"> <li>■ Secondary prevention education</li> <li>■ Care coordination</li> <li>■ Identification and early intervention for depression/anxiety</li> <li>■ Inter-agency/service affiliations and collaborations</li> <li>■ High-risk criteria</li> </ul>	Patients admitted with acute stroke or TIA	2 FTE
Illawarra	<ul style="list-style-type: none"> <li>■ Care coordinators and physiotherapists</li> <li>■ Inpatient to community and self-management coordination</li> <li>■ Lower limb circuit training program</li> <li>■ Maintenance activity program (Linked to GMTT funded stroke team and TASC 2 project)*</li> </ul>	Patients admitted to hospital with stroke or TIA	2.26 FTE
Southern	<ul style="list-style-type: none"> <li>■ Care coordination</li> <li>■ Community education, primary and secondary prevention</li> <li>■ Clinical guidelines</li> <li>■ Support group and living skills group</li> </ul>	At risk people Stroke and TIA	0.5 FTE Coordinator 6 x 0.2 FTE Facilitators

\* GMTT: Greater Metropolitan Transition Taskforce  
TASC: Towards a Safer Culture

<b>Cardiovascular Programs – General</b>			
<b>Area Health Service</b>	<b>Description of intervention</b>	<b>Target population</b>	<b>Staffing establishment</b>
Central Coast	<ul style="list-style-type: none"> <li>■ Area approach to managing cardiovascular disease risk factors:                             <ul style="list-style-type: none"> <li>– Population risk factor survey</li> <li>– Linked to risk factor clinic</li> <li>– Risk factor management guidelines for GPs</li> </ul> </li> <li>■ Electronic discharge summary – hospital to GP</li> </ul>	Local community Cardiac ward patients.	1.6 FTE
Far West	<ul style="list-style-type: none"> <li>■ Diabetes and complex care coordinator</li> <li>■ Care planning using Ferret information system</li> <li>■ Clinical networks for access to senior expertise, mentoring and professional support</li> <li>■ Specialist endocrinology services</li> </ul>	People with, or at risk of CVD. People with diabetes and cerebrovascular complications. General population	1 FTE
Greater Murray	<ul style="list-style-type: none"> <li>■ Care coordination                             <ul style="list-style-type: none"> <li>– High risk of readmission</li> <li>– Cardiac rehabilitation program</li> <li>– Workforce development</li> <li>– Interagency care planning and partnership strategies</li> </ul> </li> </ul>	All patients admitted for cardiac care	1 FTE
Macquarie	<ul style="list-style-type: none"> <li>■ Cardiac rehabilitation program                             <ul style="list-style-type: none"> <li>– Multidisciplinary</li> <li>– 15 sites, including general practices, community health centres and service clubs</li> <li>– Education and exercise</li> </ul> </li> <li>■ Risk factor intervention service                             <ul style="list-style-type: none"> <li>– Life style education programs, 4 sites</li> </ul> </li> <li>■ Cardiovascular care provider                             <ul style="list-style-type: none"> <li>– Identification, assessment, referral</li> <li>– Workforce development and capacity building</li> </ul> </li> </ul>	People with, or at risk of cardiac disease	1.5 FTE
Mid West	<ul style="list-style-type: none"> <li>■ Integrated Model of Chronic Disease Management                             <ul style="list-style-type: none"> <li>– Primary prevention to palliative care</li> <li>– Reference group</li> <li>– Continuum of care pathway</li> <li>– Clinical guidelines, referral process, action plans and patient-held record</li> </ul> </li> </ul>		1.5 FTE

## Appendix 1: Priority health care programs NSW 2000-2003

<b>Cardiovascular Programs – General cont</b>			
<b>Area Health Service</b>	<b>Description of intervention</b>	<b>Target population</b>	<b>Staffing establishment</b>
South Western	<ul style="list-style-type: none"> <li>■ Multidisciplinary Care Coordination               <ul style="list-style-type: none"> <li>– Specialist liaison nurse role</li> <li>– Assessment</li> <li>– Discharge care plan in conjunction with GP</li> <li>– Follow up and monitoring</li> <li>– Standardised practice guidelines</li> </ul> </li> </ul>	Patients with <ul style="list-style-type: none"> <li>– Heart failure</li> <li>– Stroke</li> <li>– Diabetes</li> <li>– Hypertension</li> </ul>	15.3 FTE
Western Sydney	<ul style="list-style-type: none"> <li>■ Vascular risk assessment and management program               <ul style="list-style-type: none"> <li>– Chronic care coordinators</li> <li>– Identification, assessment and coordination of care</li> <li>– Multidisciplinary care plan</li> <li>– three-monthly monitoring</li> </ul> </li> <li>■ Pathway of care for Aboriginal patients</li> <li>■ Workforce development</li> <li>■ Interagency collaboration</li> </ul>	Diabetes patients admitted under the care of a cardiologist following an acute coronary event	2.74 FTE

<b>Cardiovascular Programs – Heart Failure</b>			
<b>Area Health Service</b>	<b>Description of intervention</b>	<b>Target population</b>	<b>Staffing establishment</b>
Central Sydney	<ul style="list-style-type: none"> <li>■ Heart plus program               <ul style="list-style-type: none"> <li>– Supported transition from hospital to home</li> <li>– Home visit with phone review</li> <li>– Patient and carer education program</li> <li>– Medication compliance support</li> <li>– Self-management skill development</li> </ul> </li> </ul>	Heart failure <ul style="list-style-type: none"> <li>– CCF</li> <li>– LVF</li> </ul>	5 FTE
Illawarra	<ul style="list-style-type: none"> <li>■ Group and home education and exercise program</li> <li>■ Care coordination and case management (hospital/community)</li> <li>■ EPC care planning processes</li> <li>■ Supported flexible diuretic regimes</li> <li>■ ED to home – ambulatory IV diuretic program</li> <li>■ Aboriginal Chronic and Complex Care Group (linked to Aboriginal Vascular Health Program)</li> <li>■ NESB access strategy</li> <li>■ Transport strategy</li> </ul>	Heart failure	3.89 FTE

<b>Cardiovascular Programs – Heart Failure cont</b>			
<b>Area Health Service</b>	<b>Description of intervention</b>	<b>Target population</b>	<b>Staffing establishment</b>
Hunter	<ul style="list-style-type: none"> <li>■ Pulmonary rehabilitation program (four sites)</li> <li>■ Group exercise and education</li> <li>■ Home-based program as required</li> <li>■ Care planning/coordination for complex patients</li> <li>■ Generic rural rehabilitation model trial (five sites)</li> <li>■ 'Heartmoves' referral guidelines for GPs (collaboration with National Heart Foundation)</li> <li>■ Workforce development study and model developed</li> </ul>	Heart failure Other cardiac conditions contributing to chronic or complex needs	3.2 FTE clinical 2.3 FTE project management & administration
Mid North Coast	<ul style="list-style-type: none"> <li>■ Case management model                             <ul style="list-style-type: none"> <li>– Care managers and PHCP liaison officers</li> <li>– Discharge care plans, self management plans and action plans</li> </ul> </li> <li>■ Cardiac rehabilitation program                             <ul style="list-style-type: none"> <li>– Flexible delivery modules including equipment and resource kit</li> <li>– Workforce development</li> </ul> </li> </ul>	Heart failure Coronary Artery Disease	1.4 FTE
New England	<ul style="list-style-type: none"> <li>■ Area CVD coordinator                             <ul style="list-style-type: none"> <li>– Workforce development</li> <li>– Best practice development</li> </ul> </li> <li>■ Home-based self-management programs                             <ul style="list-style-type: none"> <li>– Referral to general cardiac rehabilitation programs</li> </ul> </li> <li>■ Interagency partnerships and coordination</li> </ul>	Heart failure Ischaemic event	1.0 FTE 0.4 FTE recurrent
Northern Rivers	<ul style="list-style-type: none"> <li>■ Care coordination                             <ul style="list-style-type: none"> <li>– Heart failure liaison nurse, home-based program</li> <li>– Education and self-management skill development</li> <li>– Risk stratification</li> <li>– Generic model development</li> <li>– Workforce development</li> <li>– Hospital, GP and community-integrated processes</li> </ul> </li> </ul>	Heart failure	3.6 FTE
North Sydney	<ul style="list-style-type: none"> <li>■ Management of cardiac function program (7 sites)                             <ul style="list-style-type: none"> <li>– Heart failure nurse coordinators</li> <li>– Two streams of care based on functional gain</li> <li>– Follow-up schedule</li> <li>– Heart action plan</li> <li>– Collaborative model with existing community nursing and rehabilitation programs</li> <li>– Heart failure clinic</li> <li>– Outpatient heart failure exercise program</li> </ul> </li> </ul>	All patients admitted with heart failure	0.6 FTE Program Officer 3.5 FTE nurses

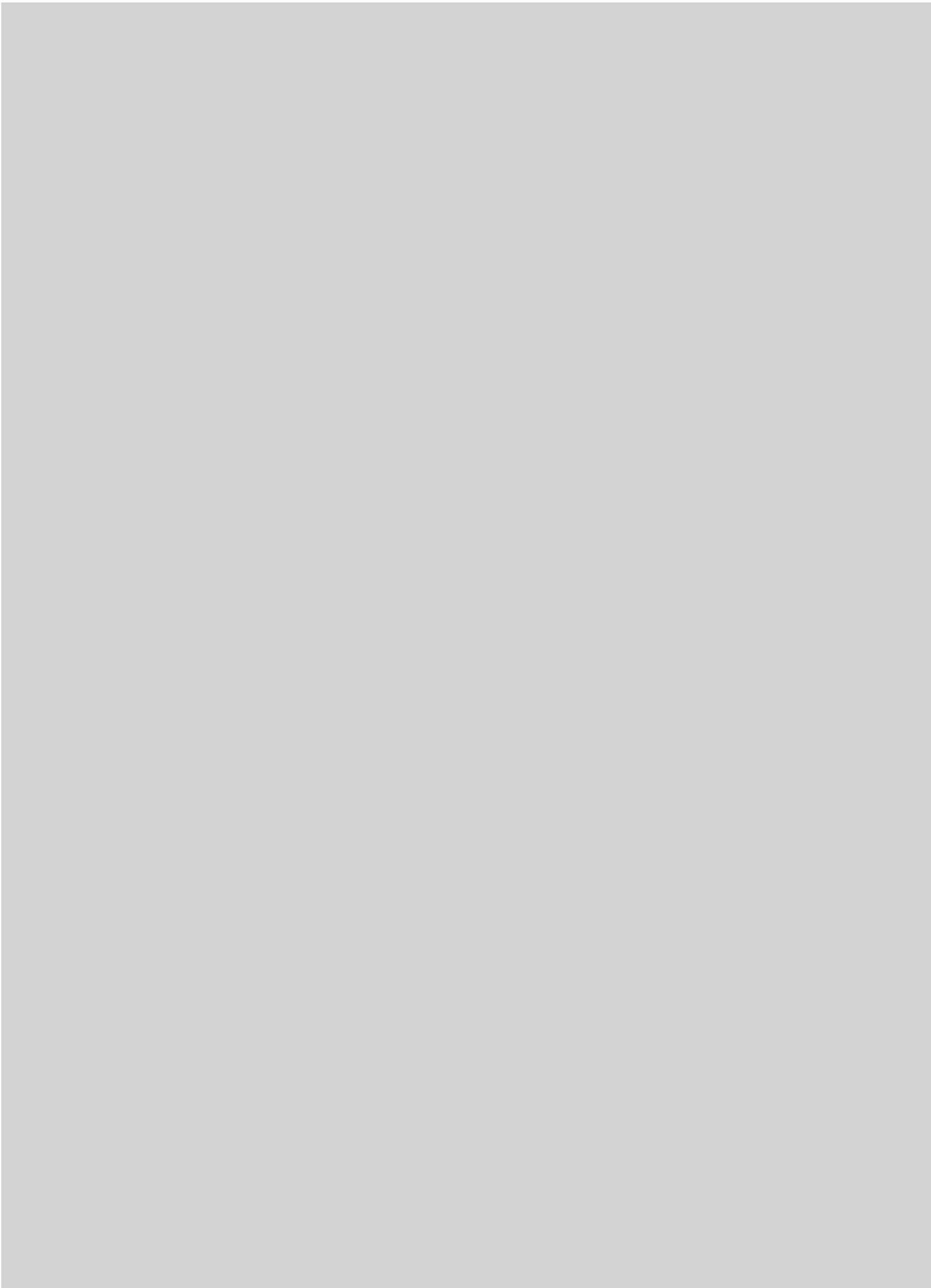
## Appendix 1: Priority health care programs NSW 2000-2003

<b>Cardiovascular Programs – Heart Failure cont</b>			
<b>Area Health Service</b>	<b>Description of intervention</b>	<b>Target population</b>	<b>Staffing establishment</b>
South Eastern Sydney	<ul style="list-style-type: none"> <li>■ Heart failure nurses               <ul style="list-style-type: none"> <li>– Care coordination</li> <li>– Education, counselling, monitoring</li> </ul> </li> <li>■ Exercise programs</li> <li>■ Clinical guidelines/treatment algorithms</li> <li>■ Community pharmacist</li> <li>■ Interagency collaboration – pharmacy, GPs</li> <li>■ Palliative care</li> <li>■ ED flagging system</li> </ul>	Heart failure	13.1 FTE

<b>Cancer Programs</b>			
<b>Area Health Service</b>	<b>Description of intervention</b>	<b>Target population</b>	<b>Staffing establishment</b>
Central Coast	<ul style="list-style-type: none"> <li>■ Chemotherapy Community Support Nurse.</li> <li>■ 24-hour telephone access</li> </ul>	All patients receiving chemotherapy	2.4 FTE
Greater Murray	<ul style="list-style-type: none"> <li>■ Coordinated care (Interagency and sector-wide)</li> </ul>	Palliative care (malignant and non-malignant diseases)	1 FTE + on call
Hunter	<ul style="list-style-type: none"> <li>■ Lung cancer multi-speciality team (MST)</li> <li>■ Psycho-oncology service</li> <li>■ Palliative care medical outreach</li> </ul>	Lung cancer All cancer patients Palliative care	2.7 FTE Clinical 1.3 FTE Project management/ admin
Mid North Coast	<ul style="list-style-type: none"> <li>■ Outreach palliative care clinics</li> <li>■ Volunteer networking – National Association for Loss and Grieving (NALAG)</li> <li>■ Self-management plans</li> </ul>	Palliative care	0.8 FTE
Mid West	<ul style="list-style-type: none"> <li>■ Population-based activities in prevention and screening</li> <li>■ Multidisciplinary teams and intersectoral networks</li> <li>■ Strengthen existing workforce capacity</li> </ul>	Oncology and palliative care All cancers	1.3 FTE
New England	<ul style="list-style-type: none"> <li>■ Integrated treatment plans and communication strategy</li> <li>■ Action plans – febrile neutropenia alert</li> </ul>	All chemotherapy patients	1.0 FTE
Northern Rivers	<ul style="list-style-type: none"> <li>■ Inpatient coordination and discharge support system service</li> <li>■ Support group facilitation</li> </ul>	Breast, prostate, lung and colorectal cancers	3.0 FTE
Northern Sydney	<ul style="list-style-type: none"> <li>■ 'Virtual cancer centre': coordinated care, multidisciplinary clinics and integrated communication</li> </ul>	Public sector: Breast, lung, head, neck, prostate, gyn-aecological, upper GI and oesophageal cancers	2 FTE

<b>Cancer Programs cont</b>			
<b>Area Health Service</b>	<b>Description of intervention</b>	<b>Target population</b>	<b>Staffing establishment</b>
South Eastern	<ul style="list-style-type: none"> <li>■ Cancer outreach service – Hospital in the Home (HITH)</li> <li>■ Allied health support</li> <li>■ Palliative Care Database</li> <li>■ Clinical Protocols – web-based</li> </ul>	All cancers Palliative care	6.5 FTE
Southern	<ul style="list-style-type: none"> <li>■ Care coordinators and nurse facilitators</li> <li>■ Strengthen existing workforce capacity</li> <li>■ GP cancer Management kits</li> </ul>	All cancers	0.7 X 1 Coordinator 0.2 X 6 Facilitators
South Western	<ul style="list-style-type: none"> <li>■ 24-Hour palliative care phone support</li> <li>■ Palliative care register</li> <li>■ Extended community palliative care hours</li> <li>■ Care coordination</li> <li>■ GP training program</li> </ul>	All cancers Palliative care (including non-cancer end-stage palliation)	4.8 FTE
Western Sydney/ Wentworth (Combined program)	<ul style="list-style-type: none"> <li>■ ‘Cancer Without Walls’                             <ul style="list-style-type: none"> <li>– Module 1: Clinical linkage – communication and care coordinators</li> <li>– Module 2: Model of care – aligning existing services, transfer of care systems and patient/carer education</li> </ul> </li> </ul>	Breast and lung cancer, surgical, oncology and haematology patients	2 FTE (Wentworth) 7 FTE (Western Sydney)

<b>Generic Programs</b>			
<b>Area Health Service</b>	<b>Description of intervention</b>	<b>Target population</b>	<b>Staffing establishment</b>
Macquarie	<ul style="list-style-type: none"> <li>■ ‘Get the Most Out of Life’ self-management programs (Kate Lorig Model)</li> <li>■ Community capacity building</li> <li>■ Workforce capacity building</li> </ul>	All community members with a chronic illness	FTE not stated
South Eastern Sydney – Aboriginal	<ul style="list-style-type: none"> <li>■ Health link clinic – weekly clinic, home visits, health promotion, community consultation, education</li> </ul>	Aboriginal residents of La Perouse	1 FTE
South Eastern Sydney – Northern Sector	<ul style="list-style-type: none"> <li>■ ‘Plan for Treatment in Nursing Homes’ – advanced directives</li> </ul>	All nursing home residents	1.0 FTE
South Eastern Sydney – Southern Sector	<ul style="list-style-type: none"> <li>■ ‘Hospital in the Nursing Home’ (HITNH)</li> </ul>	All nursing home residents	0.8 FTE
Wentworth	<ul style="list-style-type: none"> <li>■ Community collaborative – ‘front end’ maintenance of chronic disease in the community                             <ul style="list-style-type: none"> <li>– GP liaison nurses</li> <li>– Workforce capacity building</li> <li>– Community support groups</li> </ul> </li> </ul>	All Community Health clients with a chronic illness	2.6 FTE



# Appendix 2

## Resources developed during NSW Chronic Care Program Phase one 2000-2003

<b>Respiratory disease resources: Clinical pathways, practice guidelines and manuals</b>	
<b>Area Health Service</b>	<b>Description</b>
Central Sydney	<ul style="list-style-type: none"> <li>■ Chronic Obstructive Pulmonary Disease (COPD) rehabilitation pathway</li> <li>■ Criteria for assessing suitability for early discharge</li> </ul>
Greater Murray	<ul style="list-style-type: none"> <li>■ Clinical pathways and guidelines for referral and management</li> </ul>
Hunter	<ul style="list-style-type: none"> <li>■ Rehabilitation program curriculum incorporating State and National standards/guidelines</li> <li>■ Exercise prescription tools and policy</li> <li>■ Clinical review guidelines</li> </ul>
Illawarra	<ul style="list-style-type: none"> <li>■ Inpatient clinical pathway for COPD (draft)</li> <li>■ Chronic Airway Limitation (CAL) community care map</li> <li>■ Pulmonary rehabilitation program manual</li> </ul>
Mid North Coast	<ul style="list-style-type: none"> <li>■ Pulmonary rehabilitation manual</li> </ul>
Mid West	<ul style="list-style-type: none"> <li>■ Standards for healthy lifestyle/rehabilitation services</li> <li>■ Primary health nurses documentation set</li> </ul>
New England	<ul style="list-style-type: none"> <li>■ Pulmonary rehabilitation manual (electronic)</li> </ul>
Northern Rivers	<ul style="list-style-type: none"> <li>■ Pulmonary rehabilitation – practice guidelines (group and home-based)</li> </ul>
North Sydney	<ul style="list-style-type: none"> <li>■ Clinical guidelines – oxygen therapy, spirometry, medication administration devices</li> <li>■ Smoking cessation algorithm</li> <li>■ Disabling Respiratory Disease Program (DRDP) referral process</li> <li>■ Pulmonary rehabilitation services process (outpatient and home-based)</li> </ul>
South Eastern Sydney	<ul style="list-style-type: none"> <li>■ COPD action plan prescribing guidelines for medical officers</li> </ul>
Southern	<ul style="list-style-type: none"> <li>■ Seven day inpatient pathway</li> </ul>
South Western Sydney	<ul style="list-style-type: none"> <li>■ Program pathway</li> <li>■ COPD action plan</li> <li>■ Pulmonary rehabilitation guidelines</li> </ul>
Wentworth	<ul style="list-style-type: none"> <li>■ Pathway – pulmonary rehabilitation</li> <li>■ Self-management plan (Action Plan)</li> </ul>
Western Sydney	<ul style="list-style-type: none"> <li>■ Respiratory hotline – policies and procedures</li> <li>■ Policies and procedures for exercise</li> </ul>

<b>Respiratory disease resources: Patient and carer education and self-management material</b>	
<b>Area Health Service</b>	<b>Description</b>
Central Coast	<ul style="list-style-type: none"> <li>■ Pulmonary rehabilitation patient information resource booklets</li> <li>■ Brochures and posters</li> <li>■ Oxygen education package</li> <li>■ COPD management guide (Action Plan)</li> </ul>
Children's Hospital Westmead	<ul style="list-style-type: none"> <li>■ Cystic Fibrosis information kit</li> <li>■ Transition information program (child to adult services)</li> </ul>

## Appendix 2: Resources developed during NSW Chronic Care Program Phase one 2000-2003

<b>Respiratory disease resources: Patient and carer education and self-management material cont</b>	
<b>Area Health Service</b>	<b>Description</b>
Greater Murray	<ul style="list-style-type: none"> <li>■ Asthma and COPD education material</li> <li>■ Rehabilitation patient education program</li> </ul>
Hunter	<ul style="list-style-type: none"> <li>■ COPD patient education workbook</li> <li>■ Service pamphlets</li> <li>■ Action plans</li> </ul>
Illawarra	<ul style="list-style-type: none"> <li>■ 'My COPD Kit'</li> <li>■ Action plan</li> </ul>
Macquarie	<ul style="list-style-type: none"> <li>■ 'A Hand Under the Elbow' book for people with COPD</li> </ul>
Mid North Coast	<ul style="list-style-type: none"> <li>■ Self-management plans – COPD and Asthma</li> <li>■ Adult Asthma education package</li> </ul>
Mid West	<ul style="list-style-type: none"> <li>■ Action plans</li> </ul>
New England	<ul style="list-style-type: none"> <li>■ Self-management tools</li> </ul>
Northern Rivers	<ul style="list-style-type: none"> <li>■ Exercise diary – pulmonary rehabilitation</li> <li>■ Chronic Respiratory Disease Patient Information Booklet</li> <li>■ Asthma booklet for patients and carers departing Emergency Department</li> </ul>
North Sydney	<ul style="list-style-type: none"> <li>■ Self monitoring diary and action plan</li> <li>■ Step out pulmonary rehabilitation workbook and video (with facilitator's guide)</li> <li>■ Oxygen therapy information sheet</li> </ul>
South Eastern Sydney	<ul style="list-style-type: none"> <li>■ Asthma: medication delivery device handouts</li> <li>■ COPD action plan and information sheet, and other education material available in English, Greek, Italian and Chinese</li> <li>■ Oxygen education package</li> </ul>
South Western Sydney	<ul style="list-style-type: none"> <li>■ COPD action plan</li> </ul>
Wentworth	<ul style="list-style-type: none"> <li>■ Patient education video (in progress)</li> <li>■ CALM (Chronic Airways Limitation Management) program handbook</li> <li>■ Energy conservation handbook</li> <li>■ Action plan</li> <li>■ Patient/carers education program as part of pulmonary rehabilitation</li> </ul>
Western Sydney	<ul style="list-style-type: none"> <li>■ COPD information booklet for patients</li> <li>■ Exercise diaries and action plans</li> <li>■ Patient education presentations</li> </ul>

<b>Respiratory disease resources: Staff education and training material</b>	
<b>Area Health Service</b>	<b>Description</b>
Central Coast	<ul style="list-style-type: none"> <li>■ Education packages for nurses</li> </ul>
Hunter	<ul style="list-style-type: none"> <li>■ Asthma action plan education program for GPs (case study based modules)</li> <li>■ Case review process</li> </ul>
Illawarra	<ul style="list-style-type: none"> <li>■ CAL education package</li> </ul>
Macquarie	<ul style="list-style-type: none"> <li>■ Asthma manual, booklet and video</li> </ul>
Mid North Coast	<ul style="list-style-type: none"> <li>■ Pulmonary rehabilitation manual including exercise and education programs, linked to intranet for all clinicians</li> </ul>

## Appendix 2: Resources developed during NSW Chronic Care Program Phase one 2000-2003

<b>Respiratory disease resources: Staff education and training material cont</b>	
<b>Area Health Service</b>	<b>Description</b>
New England	<ul style="list-style-type: none"> <li>■ Pulmonary rehabilitation video</li> <li>■ Spirometry education program (in progress)</li> </ul>
South Eastern Sydney	<ul style="list-style-type: none"> <li>■ Training Packages                             <ul style="list-style-type: none"> <li>- Asthma management at school for school staff</li> <li>- Asthma management for childcare staff</li> <li>- Asthma awareness for parents</li> <li>- Asthma medication delivery devices</li> </ul> </li> </ul>
Southern	<ul style="list-style-type: none"> <li>■ GP model</li> </ul>
South Western Sydney	<ul style="list-style-type: none"> <li>■ Asthma 3+ education for GPs</li> <li>■ Enhanced Primary Care (EPC) CD-ROM developed (Macarthur)</li> </ul>
Western Sydney	<ul style="list-style-type: none"> <li>■ Training modules for electronic medical record</li> </ul>

<b>Respiratory disease resources: Data collection and information management tools eg: assessment forms</b>	
<b>Area Health Service</b>	<b>Description</b>
Central Coast	<ul style="list-style-type: none"> <li>■ Exercise monitoring sheet</li> <li>■ Assessment tools</li> <li>■ Client and carer satisfaction survey</li> </ul>
Children's Hospital Westmead	<ul style="list-style-type: none"> <li>■ Treatment centre report proforma – GP communication</li> <li>■ Chronic disease self-management scale</li> </ul>
Greater Murray	<ul style="list-style-type: none"> <li>■ Referral systems/forms</li> <li>■ Database – client progress and CSF standards</li> <li>■ Assessment forms</li> </ul>
Hunter	<ul style="list-style-type: none"> <li>■ Referral and assessment tools</li> <li>■ Exercise and education monitoring form</li> <li>■ Electronic clinical outcomes database (CHIME * compatible)</li> </ul> <p>* CHIME: Community Health Information Management Enterprise</p>
Illawarra	<ul style="list-style-type: none"> <li>■ Chronic disease service directory</li> <li>■ COPD monitoring form</li> <li>■ CAL/COPD discharge checklist</li> <li>■ Assessment tools</li> <li>■ Exercise prescription tools (group and home-based)</li> </ul>
Macquarie	<ul style="list-style-type: none"> <li>■ Friendly information system for Community Health (FISCH) manual</li> </ul>
Mid North Coast	<ul style="list-style-type: none"> <li>■ Patient satisfaction survey</li> <li>■ Electronic clinical outcome reporting template</li> <li>■ Provision of equipment kits for assessment, monitoring and identification of target group</li> </ul>
Northern Rivers	<ul style="list-style-type: none"> <li>■ Respiratory inpatient checklist</li> </ul>
North Sydney	<ul style="list-style-type: none"> <li>■ Psychology assessment and outcomes toolkit</li> <li>■ Respiratory worksheet</li> </ul>
South Eastern Sydney	<ul style="list-style-type: none"> <li>■ Case conference and care plan proforma</li> <li>■ Respiratory admission / discharge summary</li> <li>■ Data collection forms – admission, rehabilitation and home visit</li> </ul>

## Appendix 2: Resources developed during NSW Chronic Care Program Phase one 2000-2003

<b>Respiratory disease resources: Data collection and information management tools, eg assessment forms cont</b>	
<b>Area Health Service</b>	<b>Description</b>
South Western Sydney	<ul style="list-style-type: none"> <li>■ Discharge planning proforma</li> <li>■ Care plan proforma</li> </ul>
Wentworth	<ul style="list-style-type: none"> <li>■ Multidisciplinary assessment for pulmonary rehabilitation</li> </ul>
Western Sydney	<ul style="list-style-type: none"> <li>■ Electronic clinical documentation/medical record</li> <li>■ Patient satisfaction survey</li> <li>■ COPD discharge summary</li> <li>■ Outreach nursing – assessment form</li> </ul>

<b>Respiratory disease resources: Other</b>	
<b>Area Health Service</b>	<b>Description</b>
Illawarra	<ul style="list-style-type: none"> <li>■ Home exercise program model</li> </ul>
North Sydney	<ul style="list-style-type: none"> <li>■ Community respiratory care model</li> <li>■ Home-based pulmonary rehabilitation model</li> </ul>
Southern	<ul style="list-style-type: none"> <li>■ Koori-specific hydrotherapy program (trial)</li> </ul>
South Western Sydney	<ul style="list-style-type: none"> <li>■ Integrated model of liaison nurse, smoking cessation, pulmonary rehabilitation and community care</li> </ul>

<b>Cardiovascular disease resources: Clinical pathways, practice guidelines and manuals</b>	
<b>Area Health Service</b>	<b>Description</b>
Central Coast	<ul style="list-style-type: none"> <li>■ GP guidelines: cardiovascular disease (CVD) risk assessment and management</li> <li>■ Stroke support program curriculum</li> </ul>
Central Sydney	<ul style="list-style-type: none"> <li>■ Integrated diabetic foot care model to prevent amputation</li> <li>■ Clinical treatment protocol for the management of diabetic foot disease</li> <li>■ Stroke: algorithms for GPs</li> <li>■ Stroke policy and procedure manuals</li> <li>■ Heart failure algorithms for GPs with action plans</li> </ul>
Children's Hospital Westmead	<ul style="list-style-type: none"> <li>■ Medical management protocols tailored to stabilisation model/style</li> <li>■ Eligibility guide for program entry</li> </ul>
Greater Murray	<ul style="list-style-type: none"> <li>■ Aboriginal community screening pathway</li> <li>■ Cardio-Vascular Disease (CVD) pathway</li> </ul>
Hunter	<ul style="list-style-type: none"> <li>■ Rehabilitation program curriculum incorporating State and National standards/guidelines</li> <li>■ Exercise prescription tools and policy</li> <li>■ Clinical review guidelines</li> </ul>
Illawarra	<ul style="list-style-type: none"> <li>■ Stroke clinical pathways – Emergency Department/Diagnostic/Acute inpatient</li> <li>■ Heart failure – patient-initiated flexible diuretic regime template (approved by IAHS Drug and Therapeutic Committee)</li> </ul>
Macquarie	<ul style="list-style-type: none"> <li>■ Healthy heart manual (with Royal North Shore Hospital and National Heart Foundation)</li> </ul>
Mid North Coast	<ul style="list-style-type: none"> <li>■ Cardiac rehabilitation manual (home-based)</li> </ul>

## Appendix 2: Resources developed during NSW Chronic Care Program Phase one 2000-2003

<b>Cardiovascular disease resources: Clinical pathways, practice guidelines and manuals cont</b>	
<b>Area Health Service</b>	<b>Description</b>
New England	<ul style="list-style-type: none"> <li>■ Adaptation of heart failure guidelines (CSANZ* and National Heart Foundation) into service model</li> </ul> <p>* CSANZ: Cardiac Society of Australia and New Zealand</p>
Northern Rivers	<ul style="list-style-type: none"> <li>■ Diuretic titration guidelines</li> <li>■ Risk stratification</li> <li>■ Discharge care plans</li> <li>■ Heart failure hospital/community management pathways</li> </ul>
North Sydney	<ul style="list-style-type: none"> <li>■ Care Plan for community nurses/APAC*</li> <li>■ Medication info sheet for GP</li> <li>■ Heart failure action plan for nursing homes/hostels</li> <li>■ Proforma resource folder</li> <li>■ Diabetes assessment protocols</li> </ul> <p>* APAC–Acute and post-acute care</p>
South Eastern Sydney	<ul style="list-style-type: none"> <li>■ Heart failure management algorithms and guidelines</li> <li>■ Emergency department heart failure flagging system</li> <li>■ Diabetic foot care risk stratification and care flowchart</li> <li>■ Diabetic ulcer, infection and Charcot's foot podiatry care protocol/flow charts</li> <li>■ Podiatry policy and procedure manuals</li> </ul>
Southern	<ul style="list-style-type: none"> <li>■ Stroke                             <ul style="list-style-type: none"> <li>– Acute management plan for emergency department (ED)</li> <li>– GP management plan (flip chart)</li> </ul> </li> </ul>
South Western Sydney	<ul style="list-style-type: none"> <li>■ Lasix titration guidelines</li> <li>■ Program pathways for diabetes, stroke, hypertension and cardiac failure</li> <li>■ Guidelines for admission/discharge in heart failure (draft)</li> </ul>
Western Sydney	<ul style="list-style-type: none"> <li>■ Vascular risk screening guide</li> <li>■ Aboriginal health worker vascular guide and client pathway</li> <li>■ Standardised Area assessment procedure for high risk vascular patients</li> </ul>

<b>Cardiovascular disease resources: Patient and carer education and self-management material</b>	
<b>Area Health Service</b>	<b>Description</b>
Central Coast	<ul style="list-style-type: none"> <li>■ Stroke: client manual</li> <li>■ Stroke support – 'Understand your Rights and Responsibilities' brochure</li> </ul>
Central Sydney	<ul style="list-style-type: none"> <li>■ Heart failure education booklet</li> <li>■ Heart failure action plan and fridge magnet</li> <li>■ Diabetes education modules, brochures and booklets</li> <li>■ Stroke: patient and carer education sheets</li> </ul>
Children's Hospital Westmead	<ul style="list-style-type: none"> <li>■ Family guide for newly diagnosed diabetics</li> <li>■ Information booklet for newly diagnosed</li> <li>■ Supermarket tours</li> <li>■ 24-hour emergency contact service</li> </ul>
Greater Murray	<ul style="list-style-type: none"> <li>■ Aboriginal: client recording diary (with local artwork)</li> <li>■ CVD education material</li> <li>■ Cardiac rehabilitation resources</li> </ul>

## Appendix 2: Resources developed during NSW Chronic Care Program Phase one 2000-2003

<b>Cardiovascular disease resources: Patient and carer education and self-management material cont</b>	
<b>Area Health Service</b>	<b>Description</b>
Hunter	<ul style="list-style-type: none"> <li>■ Heart failure patient education workbook</li> <li>■ Service pamphlets</li> <li>■ Action plans</li> </ul>
Illawarra	<ul style="list-style-type: none"> <li>■ Heart failure patient education material</li> <li>■ Stroke information kit and handbook</li> </ul>
Mid North Coast	<ul style="list-style-type: none"> <li>■ Self-management plans for angina, heart failure and coronary artery disease</li> </ul>
New England	<ul style="list-style-type: none"> <li>■ Self-management tools</li> <li>■ Client-held record</li> <li>■ Heart failure                             <ul style="list-style-type: none"> <li>– Action plan</li> <li>– Flexible diuretic plan</li> <li>– 'No More Headache' booklet for ischaemic cardiac disease</li> </ul> </li> </ul>
Northern Rivers	<ul style="list-style-type: none"> <li>■ Self-management action plan</li> <li>■ Education package</li> <li>■ Daily weight recording booklet</li> <li>■ Information flyer</li> </ul>
North Sydney	<ul style="list-style-type: none"> <li>■ Heart action plan</li> <li>■ Patient information sheets, fluid/diet/weights</li> <li>■ Patient and carer seminars</li> <li>■ Diabetes information brochure</li> </ul>
South Eastern Sydney	<ul style="list-style-type: none"> <li>■ Heart failure information fridge magnet</li> <li>■ 24-hour specialist support service</li> <li>■ Heart failure action plan</li> <li>■ Diabetic foot care brochures</li> <li>■ After-hours contacts for diabetic foot emergencies</li> </ul>
South Western Sydney	<ul style="list-style-type: none"> <li>■ CVD fridge magnet</li> <li>■ CVD action plans</li> <li>■ Diabetes community information manual</li> </ul>
Western Sydney	<ul style="list-style-type: none"> <li>■ Diabetes brochures</li> <li>■ Self-management care plans</li> <li>■ Brochure series for Aboriginal people on cholesterol, blood pressure, smoking and heart disease</li> </ul>

<b>Cardiovascular disease resources: Staff education and training material</b>	
<b>Area Health Service</b>	<b>Description</b>
Central Coast	<ul style="list-style-type: none"> <li>■ Stroke poster presentation</li> </ul>
Central Sydney	<ul style="list-style-type: none"> <li>■ Stroke:                             <ul style="list-style-type: none"> <li>– GP, nursing and allied health education material</li> </ul> </li> <li>■ Heart failure web page</li> </ul>
Children's Hospital Westmead	<ul style="list-style-type: none"> <li>■ Accreditation guidelines for new staff in the Diabetes Day Care Program</li> <li>■ Mentor and resource for other centres and hospitals</li> </ul>

## Appendix 2: Resources developed during NSW Chronic Care Program Phase one 2000-2003

<b>Cardiovascular disease resources: Staff education and training material cont</b>	
<b>Area Health Service</b>	<b>Description</b>
Far West	<ul style="list-style-type: none"> <li>■ Australian Centre for Diabetes Strategies resource manual</li> </ul>
Greater Murray	<ul style="list-style-type: none"> <li>■ Diabetes education for Aboriginal diabetes workers</li> <li>■ Cardiac rehabilitation training for a range of staff across the AHS</li> </ul>
Hunter	<ul style="list-style-type: none"> <li>■ 'GP Guidelines for Heart Moves' information kit (with National Heart Foundation)</li> <li>■ Case review process</li> </ul>
Illawarra	<ul style="list-style-type: none"> <li>■ Stroke information kit</li> <li>■ Stroke swallowing information kit</li> <li>■ Heart failure education material</li> </ul>
Mid North Coast	<ul style="list-style-type: none"> <li>■ Distance education learning packages from the College of Nursing for selected clinicians in cardiac rehabilitation</li> </ul>
New England	<ul style="list-style-type: none"> <li>■ Interactive cardiac training programs for hospital and community staff</li> <li>■ Training programs for non-health people</li> </ul>
Northern Rivers	<ul style="list-style-type: none"> <li>■ Physical assessment and heart failure workshops</li> <li>■ GP education program</li> <li>■ Site-based education program</li> </ul>
North Sydney	<ul style="list-style-type: none"> <li>■ Diabetes                             <ul style="list-style-type: none"> <li>- Staff education manuals</li> <li>- Training scheme</li> <li>- GP information pack</li> </ul> </li> </ul> <p>Area-wide staff education program on heart failure (including residential care sector)</p>
Southern	<ul style="list-style-type: none"> <li>■ Stroke: Dysphagia education module (CD-ROM)</li> </ul>
South Western Sydney	<ul style="list-style-type: none"> <li>■ GP education packages</li> <li>■ Heart failure nurse workshop</li> </ul>
Western Sydney	<ul style="list-style-type: none"> <li>■ Vascular risk guidelines for health workers</li> <li>■ GP education program for diabetes</li> <li>■ Training in self-management models: Kate Lorig and Flinders (linked to national self-management initiatives)</li> </ul>

<b>Cardiovascular disease resources: Data collection and information management tools, eg assessment forms and databases</b>	
<b>Area Health Service</b>	<b>Description</b>
Central Coast	<ul style="list-style-type: none"> <li>■ Electronic discharge report</li> </ul>
Central Sydney	<ul style="list-style-type: none"> <li>■ Stroke database and tele-forms</li> <li>■ Stroke assessment forms</li> <li>■ Stroke web site</li> <li>■ Heart Plus database (Access)</li> <li>■ Heart failure web page</li> </ul>
Children's Hospital Westmead	<ul style="list-style-type: none"> <li>■ Discipline specific diabetes checklists</li> <li>■ In-house diabetes program database (EPMS)</li> <li>■ Allied health statistics reporting system</li> </ul>

## Appendix 2: Resources developed during NSW Chronic Care Program Phase one 2000-2003

<b>Cardiovascular disease resources: Data collection and information management tools, eg assessment forms and databases cont</b>	
<b>Area Health Service</b>	<b>Description</b>
Greater Murray	<ul style="list-style-type: none"> <li>■ CVD referral and assessment guidelines and forms</li> <li>■ Heart failure database – clinical service framework to make standards compatible</li> </ul>
Hunter	<ul style="list-style-type: none"> <li>■ Assessment tools</li> <li>■ Electronic clinical outcomes database (CHIME* compatible)</li> <li>■ Heart and stroke register (affiliated)</li> <li>■ Cardiac rehabilitation indicator project (affiliated)</li> </ul> <p>* Community Health Information Management Enterprise</p>
Illawarra	<ul style="list-style-type: none"> <li>■ Chronic disease service directory</li> <li>■ Heart failure – GP communication proforma</li> <li>■ Stroke assessment tool</li> <li>■ Heart failure assessment tools</li> <li>■ Stroke exercise prescription tools (group)</li> <li>■ Heart failure exercise prescription tools (group and home-based)</li> </ul>
Mid North Coast	<ul style="list-style-type: none"> <li>■ Patient satisfaction survey</li> <li>■ Electronic clinical outcome reporting template</li> <li>■ Provision of equipment kits for assessment, monitoring and identification of target group</li> </ul>
New England	<ul style="list-style-type: none"> <li>■ Heart failure <ul style="list-style-type: none"> <li>– Assessment tool</li> <li>– Carer satisfaction and Carer Strain Index tools</li> <li>– Quality of life tool (Minnesota)</li> <li>– GP referral tool</li> <li>– Issues flow chart</li> <li>– Rehabilitation database</li> </ul> </li> </ul>
Northern Rivers	<ul style="list-style-type: none"> <li>■ Heart failure <ul style="list-style-type: none"> <li>– Discharge plan proforma</li> <li>– Risk stratification and assessment forms</li> <li>– Community nurse documentation set</li> <li>– Excel database</li> <li>– Cardiac rehabilitation database</li> </ul> </li> </ul>
North Sydney	<ul style="list-style-type: none"> <li>■ MACARF* proforma</li> <li>■ MACARF database</li> <li>■ Diabetes assessment and report proforma</li> </ul> <p>*MACARF: Management of Cardiac Function program</p>
South Eastern Sydney	<ul style="list-style-type: none"> <li>■ Diabetic foot care assessment, review and quality of life forms</li> <li>■ Diabetes database</li> <li>■ Community podiatry referral process and forms</li> <li>■ GP referral proforma – foot care</li> <li>■ Koori health check assessment</li> <li>■ Podiatry services directory</li> </ul>
Southern	<ul style="list-style-type: none"> <li>■ Stroke case management plan and discharge planning proforma</li> </ul>
South Western Sydney	<ul style="list-style-type: none"> <li>■ Cardiovascular disease admission and discharge policies</li> <li>■ Patient Administration System (PAS) flagging system</li> <li>■ Hypertension database</li> <li>■ Care plan proforma</li> </ul>
Western Sydney	<ul style="list-style-type: none"> <li>■ Electronic assessment clinical database</li> <li>■ Diabetes web page</li> </ul>

## Appendix 2: Resources developed during NSW Chronic Care Program Phase one 2000-2003

<b>Cardiovascular disease resources: Other</b>	
<b>Area Health Service</b>	<b>Description</b>
Central Coast	<ul style="list-style-type: none"> <li>■ Stroke-service model applied to other diagnostic groups</li> </ul>
Children's Hospital Westmead	<ul style="list-style-type: none"> <li>■ Paediatric diabetes ambulatory stabilisation program</li> </ul>
Illawarra	<ul style="list-style-type: none"> <li>■ Stroke: lower limb circuit training model</li> <li>■ Heart failure: group and home exercise and education program model</li> </ul>
Northern Rivers	<ul style="list-style-type: none"> <li>■ Hospital/community management models</li> <li>■ Home-based exercise programs</li> <li>■ Aboriginal cardiovascular program</li> </ul>
North Sydney	<ul style="list-style-type: none"> <li>■ Multidisciplinary diabetes management model</li> <li>■ Heart failure exercise program</li> <li>■ Heart failure clinic</li> <li>■ Home-based program</li> <li>■ Interdisciplinary referral system</li> </ul>
South Eastern Sydney	<ul style="list-style-type: none"> <li>■ Heart failure exercise programs</li> <li>■ Aboriginal community awareness program</li> </ul>
South Western Sydney	<ul style="list-style-type: none"> <li>■ Integrated model including stroke, hypertension, diabetes, and heart failure liaison nurses – incorporating acute, clinic and community care</li> </ul>

<b>Cancer resources: Clinical pathways, practice guidelines and manuals</b>	
<b>Area Health Service</b>	<b>Description</b>
Greater Murray	<ul style="list-style-type: none"> <li>■ Protocols and procedures for palliative care</li> </ul>
Hunter	<ul style="list-style-type: none"> <li>■ Lung cancer multi-speciality team protocols and guidelines</li> </ul>
Mid North Coast	<ul style="list-style-type: none"> <li>■ Clinical guidelines for end-stage pain relief</li> </ul>
Mid West	<ul style="list-style-type: none"> <li>■ Manual to support roles and function of community-based nursing staff including:               <ul style="list-style-type: none"> <li>– Standards of practice</li> <li>– Roles and functions</li> <li>– Pathways of care</li> </ul> </li> </ul>
Northern Rivers	<ul style="list-style-type: none"> <li>■ Lymphedema standardised therapy protocols</li> </ul>
South Eastern Sydney	<ul style="list-style-type: none"> <li>■ Web-based clinical and nursing chemotherapy protocols</li> <li>■ Guidelines for administration of blood transfusions in aged care facilities</li> <li>■ Common toxicity criteria</li> <li>■ Febrile neutropenia alert card</li> </ul>
Southern	<ul style="list-style-type: none"> <li>■ Cancer care flowchart</li> <li>■ Care plan</li> </ul>
Wentworth/Western Sydney	<ul style="list-style-type: none"> <li>■ Care protocols</li> </ul>

## Appendix 2: Resources developed during NSW Chronic Care Program Phase one 2000-2003

<b>Cancer resources: Patient and carer education and self-management material</b>	
<b>Area Health Service</b>	<b>Description</b>
Central Coast	<ul style="list-style-type: none"> <li>■ Patient-held resource folder</li> </ul>
Greater Murray	<ul style="list-style-type: none"> <li>■ Patient-held record for palliative care</li> </ul>
Hunter	<ul style="list-style-type: none"> <li>■ Education package (psycho-oncology)</li> </ul>
Mid North Coast	<ul style="list-style-type: none"> <li>■ Self-management plans in palliative care</li> </ul>
New England	<ul style="list-style-type: none"> <li>■ Self-management plan</li> </ul>
Northern Rivers	<ul style="list-style-type: none"> <li>■ Disease-specific cancer information guide</li> <li>■ Prostate nurse brochure</li> <li>■ Lymphedema</li> <li>■ Service brochure</li> <li>■ Self-management plan</li> <li>■ Education sheet</li> <li>■ Cancer Support Group Directory</li> <li>■ Poster (generic)</li> </ul>
South Eastern Sydney	<ul style="list-style-type: none"> <li>■ Patient-held record</li> <li>■ Information brochures</li> </ul>
Wentworth/ Western Sydney	<ul style="list-style-type: none"> <li>■ Various patient education tools</li> </ul>

<b>Cancer resources: Staff education and training material</b>	
<b>Area Health Service</b>	<b>Description</b>
Hunter	<ul style="list-style-type: none"> <li>■ Psycho-oncology self-directed learning packages (electronic)</li> <li>■ Psycho-oncology group therapy manual</li> </ul>
Mid North Coast	<ul style="list-style-type: none"> <li>■ Training small groups education program</li> </ul>
Mid West	<ul style="list-style-type: none"> <li>■ Telehealth – multidisciplinary</li> <li>■ Case conference</li> <li>■ Breast cancer – multidisciplinary case conference</li> <li>■ Community nurse education strategies and resource material, including contact details</li> <li>■ Volunteer education program</li> </ul>
Southern	<ul style="list-style-type: none"> <li>■ Quick guide to case management</li> <li>■ GP kit</li> </ul>
Wentworth/ Western Sydney	<ul style="list-style-type: none"> <li>■ CNC education program</li> </ul>

## Appendix 2: Resources developed during NSW Chronic Care Program Phase one 2000-2003

<b>Generic resources: Clinical pathways, practice guidelines and manuals</b>	
<b>Area Health Service</b>	<b>Description</b>
Northern Rivers	<ul style="list-style-type: none"> <li>■ Standards for healthy lifestyle/rehab services</li> </ul>
South Eastern Sydney	<ul style="list-style-type: none"> <li>■ Plan of treatment (Advanced directive) protocol</li> </ul>
South Western Sydney	<ul style="list-style-type: none"> <li>■ Palliative care (generic)</li> <li>■ Program pathway</li> <li>■ 1300 – 24-hour guidelines</li> <li>■ Integrated care for dying patients guidelines</li> <li>■ GP education package</li> </ul>
Wentworth	<ul style="list-style-type: none"> <li>■ Implementation of generic assessment, incorporating tools such as:               <ul style="list-style-type: none"> <li>– Carer Strain Index</li> <li>– Duke's Social Support Questionnaire</li> <li>– Mini Mental Status Questionnaire</li> <li>– Geriatric Depression Scale</li> <li>– Lawton's Instrumental Activities of Daily Living Scale</li> <li>– Waterlow's Pressure Sore Scale</li> <li>– Self Care Barthell</li> <li>– Ongoing Needs Identification tool (ONI)</li> </ul> </li> <li>■ Clinical pathway for respiratory and palliative care (adapted Department of Veteran Affairs tool)</li> <li>■ Resources adopted within Community Nursing Team Chronic and Complex Care</li> </ul>
Western Sydney	<ul style="list-style-type: none"> <li>■ Generic transition procedures. Newly diagnosed Type 1 diabetes starter kit</li> </ul>

<b>Generic resources: Patient and carer education and self-management material</b>	
<b>Area Health Service</b>	<b>Description</b>
Greater Murray	<ul style="list-style-type: none"> <li>■ Aboriginal: self-management assessment tool</li> <li>■ Aboriginal: group self-management program (trial)</li> </ul>
Macquarie	<ul style="list-style-type: none"> <li>■ 'Get the Most Out of Life' brochure</li> <li>■ Marketing resources eg posters</li> <li>■ Recruitment resources</li> </ul>
Northern Rivers	<ul style="list-style-type: none"> <li>■ Education resource material for healthy lifestyle program</li> </ul>
South Western Sydney	<ul style="list-style-type: none"> <li>■ Palliative care (generic)</li> <li>■ 24-hour phone service model</li> </ul>
Wentworth	<ul style="list-style-type: none"> <li>■ Chronic illness support groups implemented across three diagnostic groups and three local government areas</li> <li>■ Self-sustaining <i>Puffers and Wheezers</i>, and <i>Mountain Air</i> support groups</li> </ul>

## Appendix 2: Resources developed during NSW Chronic Care Program Phase one 2000-2003

<b>Generic resources: Staff education and training material</b>	
<b>Area Health Service</b>	<b>Description</b>
Greater Murray	<ul style="list-style-type: none"> <li>■ Chronic disease self-management training for Aboriginal health workers and care coordinators: group program and individual assessment process</li> </ul>
Hunter	<ul style="list-style-type: none"> <li>■ Self-management trainers – Flinders University Model</li> <li>■ Workforce development evaluation model and survey tool</li> </ul>
Macquarie	<ul style="list-style-type: none"> <li>■ Workshop leaders manual</li> <li>■ Case conference kit</li> </ul>
Northern Rivers	<ul style="list-style-type: none"> <li>■ Education resource material for healthy lifestyle program</li> </ul>
South Western Sydney	<ul style="list-style-type: none"> <li>■ Palliative care (generic)                             <ul style="list-style-type: none"> <li>– Telehealth support</li> </ul> </li> <li>■ Clinical supervision program for clinical nurse consultants in palliative care</li> </ul>
Wentworth	<ul style="list-style-type: none"> <li>■ Palliative Care Module (24 contact hours) – targeting all employees within Wentworth Area Health Service and residential care facilities</li> <li>■ GP palliative care education, linked through Divisions of General Practice</li> <li>■ Generic assessment education module (18 contact hours)</li> </ul>

<b>Generic resources: Data collection and information management tools, eg assessment forms and databases</b>	
<b>Area Health Service</b>	<b>Description</b>
New England	<ul style="list-style-type: none"> <li>■ Client information assessment and referral record (CIARR)</li> <li>■ Electronic flagging system (Community Health Information System – CHIS)</li> </ul>
South Eastern Sydney	<ul style="list-style-type: none"> <li>■ Aboriginal: common assessment</li> </ul>
South Western Sydney	<ul style="list-style-type: none"> <li>■ Aboriginal: common assessment</li> </ul>
Wentworth	<ul style="list-style-type: none"> <li>■ Generic client assessment</li> <li>■ Centralised intake for Community Chronic and Complex Service stream</li> <li>■ Community interim database (based on CHIME*, for all Community Chronic and Complex Service stream clients)</li> <li>■ Community HOSPAS* – enables reporting of hospital presentations.</li> </ul> <p>* Community Information Management Enterprise</p> <p>* Hospital Patient Administration System</p>

<b>Generic resources: Other</b>	
<b>Area Health Service</b>	<b>Description</b>
Hunter	<ul style="list-style-type: none"> <li>■ Consumer participation model</li> </ul>
South Western Sydney	<ul style="list-style-type: none"> <li>■ Palliative care (generic)</li> <li>■ 24-hour service delivery model</li> </ul>

# Appendix 3

## Membership of the NSW Chronic and Complex Care Implementation and Coordination Group 2000-2003

### Co-chairs and Members of the NSW Chronic and Complex Care Implementation and Coordination Group

<b>Co-chairs</b>		
<b>Prof Ron Penny AO</b>	Chronic Care Program, Quality and Clinical Policy Branch, NSW Health Department	
<b>A/Prof Steven Boyages</b>	Director, Centre for Research and Clinical Policy, NSW Health Department (2000-2002)	
<b>Dr Peter Clyne</b>	Chief Executive Officer, Western Sydney Division of General Practice (2003)	
<b>Maureen Robinson</b>	Director, Quality and Clinical Policy Branch, NSW Health Department (2002-2003)	
<b>Members</b>		
Dr Tom Acheson	GP Director	Hornsby
Cynthia Ashley	Senior Respiratory Physiotherapist	Prince of Wales Hospital
Dianne Ayres	Manager, Clinical Information Systems	NSW Health Department
A/Prof Kathy Baker	Area Director of Nursing	Northern Sydney AHS
Jenny Becker	Area Director, Nursing Services	Central Coast Health
A/Prof Steven Boyages	Chief Executive Officer	Western Sydney AHS
Ros Bragg	Deputy Director, Policy	NCOSS
Prof Tony Broe	Director, Geriatric Medicine	Prince of Wales Hospital
Dr Gideon Caplan	Director, Post Acute Care Services	Prince of Wales Hospital
Sally Crossing	Consumer Representative	Breast Cancer Action Group
Dr John Cullen	Clinical Director General, Geriatric and Rehabilitation Medicine	Concord Repatriation Hospital CSAHS
Kerrie Goldston	Program Manager – Cardiac Rehabilitation and Secondary Prevention	National Heart Foundation
Jeanne Harlum	Clinical Nurse Consultant	Area Palliative Care Service Braeside Hospital
A/Prof Paul Harnett	Director and Staff Specialist, Medical Oncology and Palliative Care Unit	Westmead Hospital
Sue Harris	Allied Health Director	Lady Davidson Hospital
Dr Suzanne Hodgkinson	Chairperson, Medical Staff Council Department of Neurology	Liverpool Hospital
Betty Johnson, AO	Consumer Representative	
Prof John Kearsley	Prof, Cancer Services	St George Hospital
Gabrielle Kibble	Consumer Representative	
A/Prof Stephen Lillioja	Director, Endocrinology	Liverpool Hospital
Dr Lynette Lee	Advisor Health Policy	NSW Department of Aging, Disability and Home Care
Prof Katherine McGrath	Chief Executive Officer	Hunter AHS
A/Prof David McKenzie	Director, Respiratory Medicine	Prince of Wales Hospital

### Appendix 3: Membership of Chronic and Complex Care Implementation and Coordination Group 2000-2003

Prof Kim Oates	Chief Executive Officer	The Children's Hospital at Westmead
Julienne Onley	Nursing Supervisor	Australian Nursing Homes and Extended Care Association (NSW)
Heather Pratt	Manager, Diabetes Centre	Blacktown Hospital
Prof Beverly Raphael	Director, Centre for Mental Health	NSW Health Department
Kim Roe	A/Director Community Health Services	Illawarra AHS
Dr Ana Singer	Chief Executive Officer	South Eastern Division of GP
Dr Peter Smerdely	Director, Continuing and Community Services	St George Hospital
Prof Allan Spigelman	Director, Clinical Governance Unit	Hunter AHS
A/Prof Graeme Stewart	Director, Clinical Immunology and Allergy	Westmead Hospital
Prof Geoff Tofler	Prof, Cardiology	Royal North Shore Hospital
Dr Paul Torzillo	Clinical Director of Respiratory and Critical Care	Royal Prince Alfred Hospital Missenden Road CAMPERDOWN NSW 2050
Dawn Vanderkroft	Manager, Nutrition Department	Central Coast AHS
Prof Ian Webster	Director, Population Health	Central Sydney AHS
Prof Les White	Executive Director	Sydney Children's Hospital
Kim White	Senior Policy Analyst	Primary Health and Community Care
Rose Xuereb	Clinical Nurse Consultant, Aged Care and Primary Health Care	Blacktown Hospital

# Appendix 4

## Membership of the NSW Clinical Expert Reference Groups 2000-2003

### Co-chairs and Members of the Cancer Clinical Expert Reference Group

<b>Co-chairs</b>		
<b>A/Prof Paul Harnett</b>	Director of Cancer Services, Western Sydney and Wentworth AHSs	
<b>Dr Tom Acheson</b>	GP Director, Hornsby-Kuringai-Ryde Division of General Practice	
<b>Members</b>		
Phillipa Cahill	Nursing and Patient Service Manager	Cancer Services/Clinical Support Services Cancer Care Centre, St George Hospital
Sally Crossing	Consumer Representative	Breast Cancer Action Group
Dr Peter Davidson	General Practitioner	Cowra NSW
Mary Hicks	Clinical Nurse Consultant	Tamworth Base Hospital
Aspasia Iosifidis	Social Worker in Charge	Wollongong Hospital
Dr Shanti Kanagarajah	Head Geriatric Medicine	Port Kembla Hospital
Prof John Kearsley	Prof Cancer Services	St George Hospital
Dr Karen Luxford	Evidence-based Medicine Manager	National Breast Cancer Centre
Halina Nagiello	Senior Planner	Royal North Shore Hospital
Dr Andrew Penman	Chief Executive Officer	NSW Cancer Council
Dr Michael Smith	Palliative Care Unit	Mt Druitt Hospital

### Co-chairs and Members of the Cardiovascular Clinical Expert Reference Group

<b>Co-chairs</b>		
<b>Prof Geoffrey Tofler</b>	Prof of Cardiology, Royal North Shore Hospital	
<b>Dr Ana Singer</b>	GP Director, South Eastern Division of General Practice	
<b>Members</b>		
A/Prof Stephen Colagiuri	Director, Endocrinology Department	Prince of Wales Hospital
Dr John Cullen	Clinical Director, General, Geriatric and Rehab Medicine	Concord Repatriation General Hospital
Trish Davidson	Clinical Nurse Consultant	St George Hospital
Shannon Doughty	Physiotherapy Adviser	Moruya Hospital
A/Prof Karen Duggan	Hypertension Diagnostic Service	Bankstown-Lidcombe Hospital
Peter Edwards	Consumer Representative, Cardiovascular Disease Expert Advisory Group and Illawarra Stroke Unit Project	Primbee NSW 2502
Kerrie Goldston	Program Manager, Secondary Prevention	National Heart Foundation of Australia (NSW Division)
Dr Suzanne Hodgkinson	Director, Department of Neurology	Liverpool Hospital

## Appendix 4: Membership of the NSW Clinical Expert Reference Groups 2000-2003

A/Prof Peter Macdonald	Cardiologist	St Vincents Hospital
Dr Brian Morton	General Practitioner	Willoughby NSW
Prof Andrew Sindone	Cardiologist	Concord Repatriation General Hospital
Dr Elizabeth Swinburn	Director, Emergency Department	Mona Vale Hospital

### Co-chairs and Members of the Respiratory Clinical Expert Reference Group

<b>Co-chairs</b>		
<b>A/Prof David McKenzie</b>	Director of Respiratory Medicine, Prince of Wales Hospital	
<b>Prof Michael Hensley</b>	Director of Respiratory Medicine, John Hunter Hospital (Co-chair: 2000-2002)	
<b>Dr Peter Clyne</b>	Chief Executive Officer, Western Sydney Division of General Practice Inc	
<b>Members</b>		
Prof Christine Jenkins	Respiratory physician	Royal Prince Alfred Hospital
Prof Norbert Berend	Director	Institute of Respiratory Medicine Royal Prince Alfred Hospital
Lindsay Cane	Chief Executive Officer	Asthma NSW
A/Prof Daniel Chan	Geriatrician Aged Care and Rehabilitation	Bankstown Hospital
Barbara Hodges	Physiotherapy Adviser	Wollongong Hospital
David Lillystone	Community Paediatrician	Hornsby Child Health Centre
Dr Guy Marks	Respiratory Medicine	Liverpool Hospital
Dr Matthew Peters	Respiratory Unit	Concord Repatriation General Hospital
Kate Laurie	Clinical Nurse Consultant, Chest Clinic	Tamworth Base Hospital
Patricia Strachan	A/Director Health Service Development	Bathurst Base Hospital

# Appendix 5

## Membership of Special Interest Groups 2000-2003

In addition to the Co-chairs and Members of the Clinical Reference Group, the Special Interest Groups included the following:

### Membership of Cancer Special Interest Group

Gilli Appleby	Director, Integrated Care Hunter AHS
Dr Rodney Aroney	Medical Oncologist, Gosford Hospital
Dr Robert Arthurson	Chairperson, Cancer CRG Southern AHS
Dr Martin Berry	Director, South Western Sydney Area Cancer Service South Western Sydney AHS
Dr Bart Cavalletto	Sydney Children's Hospital South Eastern Sydney AHS
John Cavenagh	Hunter AHS
Michelle Davies	Coordinator Palliative Care and Oncology Services, Mid Western AHS
Margaret Duckett	Director, Health Development Division, NSW Cancer Council
Beth Fuller	Clinical Leader, Priority Health Care Program for Cancer Mid North Coast AHS
A/Prof David Goldstein	Medical Oncologist, Prince of Wales Hospital
Dr David Gorman	Palliative Care Physician, Calvary Hospital South Eastern Sydney AHS
Jenny Grosvenor	Mid Western AHS
Janeane Harlum	South Western Sydney AHS
Cassandra Hobbs	CNC, St George Hospital South Eastern Sydney AHS Hobbs
Sara Hurren	Cancer Coordinator, Priority Health Care Program Northern Rivers AHS
Ruth Jones	Mid Western AHS
Jill Lack	Hunter AHS
Merran	South Western Sydney AHS Lethbridge
Morag McPherson	Acting NUM Central Coast AHS
Ken Marr	South Western Sydney AHS
Gayle Mortimer	Chronic and Complex Care Program Coordinator Northern Sydney AHS
Barbara Plichta Richardson	Northern Sydney AHS
Dr Kathy Rainbird	National Breast Cancer Centre
Lesley	Central Coast AHS
Yvonne Rohr	Mercy Hospice Hunter AHS
Helen Snodgrass	Mid Western AHS
Patrice Thomas	Nursing Unit Manager, St George Hospital South Eastern Sydney AHS

## Membership of Cardiovascular Special Interest Group

Gilli Appleby	Director, Integrated Care Hunter AHS
Melanie Anderson	Clinical Nurse Consultant, St George Hospital
Karen Aplin	Central Sydney AHS
Kimberley Bardsley	Heart Failure CNC, Cardiac Chronic and Complex Care Priority Health Care Project, St. Vincent's Hospital
Sasha Bennett	Pharmacist, Cardiac Chronic and Complex Care Priority Health Care Project, St Vincent's Hospital
Elaine Buggy	Wentworth AHS
Paula Candlish	Cardiac Liaison Nurse, Chronic Disease Management Project, Hunter AHS
Stela Chan	South Eastern Sydney AHS
Cathy Cronin	CNC Sutherland Heart and Lung Health Team, Sutherland Hospital
Dr Jan-Maree Davis	Palliative Care Specialist, Clinical Superintendent (Calvary hospital), St George Hospital
Lynda Denbesten	CNC, Cardiac Services, Central Coast AHS
Sophie Drake	Cardiology CNC, Prince of Wales Hospital
Dr Peter Fletcher	John Hunter Hospital
A/Prof Michael Frommer	Deputy Director, Effective Healthcare Australia, Associate Director, School of Population Health and Health Service Research, University of Sydney
Richard Gilbert	Central Sydney AHS
Susan Hales	MACARF program, Ryde Hospital
Caroline Harris	Aboriginal Vascular Health Program Manager, Division of Population Health and Planning, Illawarra AHS
Jo Ann Harvey	South Western Sydney AHS
Lynette Higgs	Chronic Care Community Liaison Nurse, Sydney Hospital and Sydney Eye Hospital
Jukie Hildritch	Illawarra AHS
Judy Holland	Physiotherapist, Hunter AHS
Claire Hoolahan	Exercise Physiologist, Shoalhaven Hospital
Elizabeth Huppatz	Stroke Program Coordinator, Southern AHS
Kate Introna	CNC, Palliative Care, St George Hospital
Barbara James	Community Cardiac Rehabilitation, Illawarra AHS
Pam Johnson	Mid North Coast AHS
Dr Peter Kelleher	Director Cardiology, Bankstown Health Service
Jane Kerr	Area Cardiovascular Coordinator, New England AHS
Julie Kesby	Heart Failure Coordinator, Nowra Community Health Centre
Anne Lea	Coordinator Clinical Services Development, Mid Western AHS
Vanessa Lewis	South Western Sydney AHS
Paul Lillyman	Exercise Physiologist, Port Kembla Hospital
Karen Lintern	CNC Cardiac Services, Liverpool Health Service
Robyn MacDonald	Heart Failure Program Coordinator, Concord Hospital CSAHS
Sue Mayerhofer	Physiotherapist, South Eastern Sydney AHS

## Appendix 4: Membership of Clinical Expert Reference Groups 2000-2003

Julia McGinty	Case Mix Officer, St George Hospital
James McVeigh	CNC, CHF Program Prince of Wales Hospital and Community Health
Robin Meehan	South Eastern Sydney AHS
Craig Mills	Chronic Care Project Officer, Mid Western AHS
Nicole Morrison	Specialist Liaison Nurse, Cardiac Failure, Bankstown Hospital
Gayle Mortimer	Chronic and Complex Care Program Coordinator, Northern Sydney AHS
Christine Newman	Western Sydney AHS
Ruth Nielsen	Dietitian
Dr Charles Pain	Area Director of Medical Services, South Western Sydney AHS
Glenn Paull	Heart Failure CNC, St George Hospital
Rene Pennock	Chronic and Complex Care Program Manager, South Western Sydney AHS
Dr Michele Puech	Medical Epidemiologist, Department of Public Health and Community Medicine, Western Sydney AHS
Robyn Pickworth	Bed Manager, Mid North Coast AHS
Dr John Quinlan	Rehabilitation Physician, Port Kembla Hospital
Dr Ian Rewell	South Eastern Sydney AHS
Sylvia Seniuk	Chronic and Complex Care Program Manager, Port Kembla
Dr Gabriel Shannon	Physician, Mid Western AHS
Robyn Speerin	CNC Cardiac Rehabilitation, South Western Sydney AHS
Rosemary Stapleton	Heart Health, Mid Western AHS
Geoffrey Strange	Heart Plus Clinical Nurse Specialist, CSAHS
Helen Topia	Heart Plus Liaison Nurse, CSAHS
Robyn Tumeth	South Western Sydney AHS
Dr Edward Vogl	Cardiologist, Wollongong Hospital
Vicki Wade	CNC, Cardiology, South Western Sydney AHS
Dr Warren Walsh	Cardiology Department, Prince of Wales Hospital
Darron Webber	CNC, Port Kembla Hospital
Kerry Wilcox	Clinical Coordinator, Northern Rivers AHS

## Membership of Respiratory Special Interest Group

Beth Fuller	Manager Priority Health Care Programs, Mid North Coast AHS
Dr Peter Gibson	Respiratory Physician, John Hunter Hospital
Chris Hanna	Physiotherapist, Kempsey District Hospital
Prof Michael Hensley	Prof of Medicine and Head of the School of Medical Practice, University of Newcastle
Neil Heron	CNC Co-ordinator, Respiratory Program, Westmead Hospital
Barbara Hodges	Physiotherapist, Illawarra AHS
Eva Jandera	Asthma Educator, Asthma NSW

## Appendix 4: Membership of Clinical Expert Reference Groups 2000-2003

Dr Christine Jenkins	Respiratory Physician, Concord Hospital
Helen Jobson	CALM Co-ordinator, Nepean Hospital
Dr Peter Keith	General Practitioner, Greater Murray
Kate Laurie	Respiratory Clinical Nurse Consultant, New England AHS
Dr David Lillystone	Community Paediatrician, Hornsby Child Health Centre
Serina Lynch	Respiratory Program Coordinator, Southern AHS
Janice Maher	Physiotherapist, Dubbo Base Hospital
Dr Guy Marks	Chairperson, Respiratory Disease Advisory, Committee South Western Sydney AHS
Annette Marley	Physiotherapist Acute Post Acute Care, Royal North Shore Hospital
Nicholas Marlow	Acute/Post-Acute Care Manager, Royal North Shore Hospital
Anne Marsh	CAL Community Coordinator TACT, Wollongong Hospital
Connie McCulloch	Respiratory Liaison Nurse, John Hunter Hospital
Craig Mills	Chronic Care Project Officer, Orange Health Centre
Peter Mitchell	Physiotherapist, Wentworth AHS
Dr Lucy Morgan	Respiratory Physician, Nepean Hospital
Dorothea Moroney	Senior Nursing Unit Manager, Northern Sydney Home Nursing
Gayle Mortimer	Chronic and Complex Care Program Coordinator, Royal North Shore Hospital
Barbara Parker	Nursing Unit Manager, Wentworth AHS
Rene Pennock	Chronic and Complex Care Program Manager, South Western Sydney AHS
Prof Ron Penny AO	Co-Chair, Chronic and Complex Care Implementation Group Director, Centre for Immunology, St Vincent's Hospital
Dr Matthew Peters	Respiratory Unit, Concord Repatriation General Hospital
Beverley Ring	Physiotherapist, Illawarra AHS
Dr Tracey Robinson	Respiratory Program Director, Westmead Hospital
Jennie Sadler	Respiratory Nurse Case Manager, Wyong Health Centre
Sylvia Seniuk	Chronic and Complex Care Program Manager, Illawarra AHS
Kerrie Shaw	Clinical Nurse Consultant Respiratory Chest Clinic, Wollongong Hospital
Wendy Siddall	Physiotherapist Acute/Post-Acute Care Team, Royal North Shore Hospital
Lissa Spencer	Pulmonary Rehabilitation Coordinator, Royal Prince Alfred Hospital
Carole Wallace	Program Coordinator, Southern AHS
Amanda Wilson	Researcher and Consultant, Newcastle Institute of Public Health
Pam Woolfe	Director of Nursing Division of Community Health, Gosford Hospital
A/Prof Iven Young	Head, Department of Respiratory Medicine, Royal Prince Alfred Hospital

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