NSW Clinical Service Framework for Heart Failure

Executive Summary Executive Summary

Background

Chronic heart failure (CHF) is estimated to affect 1% of the general population, 3-5% of people over 65 years and 10% of people aged over 75 years in Western countries. In Australia and comparable countries, both the incidence and prevalence of CHF are increasing. In addition to the associated mortality, patients with chronic symptoms of CHF often have significant morbidity and poor quality of life.

Besides being an important condition treated in the community, CHF is also a leading cause of medical admission to hospital in patients over 65 years of age. Readmission rates are also high with 30-50% of patients being readmitted within six months of discharge. Many of these admissions are preventable through approaches that place the patient at the centre of care and emphasise hospital – community links and the key role of the general practitioner.

The Chronic and Complex Care Implementation Coordination Group (CCCICG) was established under the NSW Government's Action Plan for Health in 2000 to address the three priority health areas of cardiovascular disease (and its risk factors), cancer and respiratory disease. The NSW Chronic Care Program overseen by the CCCICG has three broad aims. These are to:

1. Improve the quality of life of people with chronic and complex conditions.
2. Improve the quality of life of their carers and families.
3. Reduce the number of crisis situations and avoidable admissions to hospital.

The Clinical Service Framework

The *NSW Clinical Service Framework for Heart Failure* has been developed as one of many initiatives being undertaken by the NSW Chronic Care Program under the leadership of the CCCICG to improve service provision for people with chronic and complex conditions. The CCCICG established the Cardiovascular Clinical Expert Reference Group that has overseen the development of this framework.

The *NSW Clinical Service Framework for Heart Failure* outlines best practice standards for the prevention, diagnosis and care of people with CHF in NSW.

The objectives of the framework are to:

- define statewide standards of care for the prevention, diagnosis, treatment, rehabilitation and palliation of CHF
- specify service models that enable the delivery of services which meet these standards across four different geographical settings
- specify criteria, including indicators, that can be used to evaluate the performance and quality of services for CHF
- provide linkages to other guidelines and information sources that might assist clinicians and others in delivering the services to communities and individuals, such as the *Aboriginal Chronic Disease Service Framework*
- highlight areas where action is warranted to improve the organisation and delivery of services.

The *NSW Clinical Service Framework for Heart Failure* draws on existing published guidelines, with particular reference to the *Guidelines on the Contemporary Management of the Patient with Chronic Heart Failure in Australia*, produced for the National Heart Foundation of Australia in 2002 by the Chronic Heart Failure Clinical Practice Guidelines Writing Panel of the Cardiac Society of Australia and New Zealand. It also draws on *National Service Frameworks* produced by the National Health Service (United Kingdom) and on evidence-based guidelines from the UK, Canada and the USA. The *NSW Clinical Service Framework for Heart Failure* consists of two volumes:

Volume 1 – Overview of the Framework and its Standards

Outlines the key components of a new approach to coordinated and integrated care for people with CHF. It provides a summary of the ten evidence-based standards and recommendations for best practice care for patients with or at risk of heart failure. It also sets out the targets and demonstrations of compliance for heart failure by which Area Health Services will mark their progress towards achieving these standards. A framework implementation plan and strategy are included.

Volume 2 – A Practice Guide for the Prevention, Diagnosis and Management of Heart Failure in NSW

Is a more clinically focused document. It presents in more detail the ten standards for the prevention, diagnosis and management of heart failure. The objectives, key prevention, diagnostic or management points, main recommendations and information underpinning each standard are provided. Specific recommendations and demonstrations of compliance are detailed for each standard. Wherever possible, levels of evidence (as defined by the National Health and Medical Research Council – see Volume 2, Appendix 1) are given to support key points and recommendations and relevant literature is briefly reviewed.

Volume 2 also includes four models of care that demonstrate the way in which care can be delivered in accordance with the standards in metropolitan, urban, rural and remote settings. The models of care refer to services for people with elevated risk of CHF or with asymptomatic early disease, stable symptomatic CHF, acute exacerbation of CHF and end-stage heart failure.

Standards

The following table provides a summary of the evidence-based standards and requirements for demonstration of compliance for preventing, diagnosing and managing heart failure. These standards and the underpinning evidence are presented in more detail in Volume 2 of the framework.

Standard	Demonstration of compliance
Standard 1: Prevention of CHF	
1.1 NSW Health and all Area Health Services should ensure that all clinicians in NSW (whether employed by Area Health Services or not) are aware of current guidelines for the assessment and management of hypertension and other ischaemic heart disease risk factors.	**By September 2003**, the NSW Department of Health will ensure that the *NSW Clinical Service Framework for Heart Failure* is disseminated to all Area Health Services, Divisions of General Practice and Aboriginal Community Controlled Health Services for implementation across NSW.
1.2 NSW Health and all Area Health Services should coordinate programs for the general population that raise community awareness of hypertension and other risk factors for ischaemic heart disease, and the need to assess and manage these risk factors. Particular attention should be given to groups within the population that are at high risk of ischaemic heart disease, including Aboriginal and Torres Strait Islander populations. People from culturally and linguistically diverse communities may also require specific attention.	**By June 2004**, all Area Health Services will have health promotion programs that raise awareness of hypertension and other ischaemic heart disease risk factors and the need to assess and modify them. Programs will particularly target high-risk populations.

Standard	Demonstration of compliance
1.3 NSW Health and all Area Health Services should develop and implement population-wide policies to reduce hypertension and other ischaemic heart disease risk factors. To ensure appropriate reach to high-risk populations such as Aboriginal and Torres Strait Islanders, policies should be implemented through local Aboriginal Health Partnerships.	**By June 2004,** all Area Health Services will ensure that prevention policies and programs are in place in accordance with state and national public health strategies and population and settings based strategies for: • tobacco control • promotion of healthy eating • promotion of physical activity • reduction of overweight and obesity • safe alcohol use • mental health promotion. **By December 2003**, smoke free campus policies will be implemented in hospital areas in line with *Department of Health Smoke Free Workplace Policy (1999)*. **By June 2004**, all Area Health Services will have smoking cessation programs in place at all major hospitals, as per *Guide for the management of nicotine dependent inpatients (2002)*. **By December 2003**, 50% of admitted patients will be screened for smoking, referred to smoking cessation services or the Quitline (Tel. 131 848) and advised on nicotine replacement therapy or other pharmacotherapy for nicotine addiction. **By June 2004**, 100% of admitted patients will be screened for smoking, referred to smoking cessation services or the Quitline (Tel. 131 848) and advised on nicotine replacement therapy or other pharmacotherapy for nicotine addiction.
1.4 NSW Health and all Area Health Services should ensure that services are available to the general population to detect and manage hypertension and other ischaemic heart disease risk factors according to current guidelines as outlined in the *NSW Clinical Service Framework for Heart Failure*.	**From September 2003**, and at regular intervals thereafter, Area Health Services will demonstrate ongoing compliance with the framework's recommended standards.
1.5 Clinicians should monitor and control hypertension and other ischaemic heart disease risk factors and detect and manage manifestations of ischaemic heart disease in people who have CHF, or are at elevated risk of CHF. Consideration should be given to psychosocial risk factors such as depression, social isolation or lack of social support and catastrophic life events. Their possible presence may be simply ascertained through specific questioning.	**By June 2004**, Area Health Services will ensure that protocols/procedures are in place in hospitals to consider the ischaemic heart disease profile (in particular the presence of hypertension, hypercholesterolaemia, diabetes, smoking, psychosocial risk factors) of all adult patients who present to hospital or are admitted to hospital.
1.6 NSW Health and all Area Health Services should ensure that secondary prevention services (eg continuing cardiac care programs such as cardiac rehabilitation) are available for people with coronary heart disease, in accordance with relevant guidelines, recommendations and policies.	**By December 2004**, Area Health Services will ensure that protocols/procedures are in place in hospitals for the provision of continuing cardiac care/cardiac rehabilitation for patients with coronary heart disease as per the *Heart Foundation Guideline for Prevention of Cardiovascular Events* in those with known coronary heart disease, Heart Foundation recommendations for cardiac rehabilitation and the NSW Department of Health's *NSW Policy Standards for Cardiac Rehabilitation*.

Standard	Demonstration of compliance
Standard 2: Detection and management of factors that precipitate and exacerbate CHF	
2.1 All clinicians should be aware of the factors that precipitate or exacerbate CHF and should seek to identify precipitating factors in all patients who present with CHF or are at increased risk of CHF.	**By September 2003**, the NSW Department of Health will ensure that the *NSW Clinical Service Framework for Heart Failure* is disseminated to all Area Health Services, Divisions of General Practice and Aboriginal Community Controlled Health Services for implementation across NSW. **By June 2004**, Area Health Services will ensure that all patients admitted to hospital with CHF have the factors that precipitated their CHF identified and recorded.
2.2 NSW Health, Area Health Services and general practitioners should promote immunisation against influenza and pneumococcal disease in all patients with CHF, with reference to NHMRC recommendations.	**By June 2004**, 100% of patients with CHF who are admitted or present to Emergency Departments will be informed about the benefits of influenza and pneumococcal vaccination. **By June 2004**, the Alliance of NSW Divisions will take steps to encourage evidence based opportunistic immunisation of adults including those with CHF as required by the *NSW Immunisation Strategy 2003-2006*. **By June 2004**, Divisions of General Practice will encourage their member GPs to achieve the target outlined in the *NSW Immunisation Strategy 2003-2006* of 85% of people over 65 years being immunised against influenza.
2.3 All Area Health Services should ensure that all acute hospitals have intravenous fluid protocols that are designed to prevent, monitor for early signs of and correct fluid overload.	**By December 2003**, Area Health Services will ensure that all acute hospitals have intravenous fluid protocols in place.
2.4 All medical practitioners should be aware of the potential for certain medications to precipitate or exacerbate CHF. Practitioners should prescribe these medications, which include corticosteroids, non-steroidal anti-inflammatory medications and negative inotropic medications with due caution in patients who have or are at increased risk of CHF and should seek specialist advice where necessary.	**By September 2003**, the NSW Department of Health will ensure that the *NSW Clinical Service Framework for Heart Failure* is disseminated to all Area Health Services, Divisions of General Practice and Aboriginal Community Controlled Health Services for implementation across NSW.
Standard 3: Diagnosis of CHF	
3.1 Clinicians should ensure that all patients suspected of having CHF undergo a comprehensive clinical assessment, with history, physical examination and diagnostic investigations.	**By June 2004**, clinicians will ensure that all patients suspected of having CHF have clinical assessment and that diagnostic investigations are performed and recorded, including electrocardiograph (ECG), chest x-ray, full blood count and serum biochemistry. All patients with diagnosed heart failure should have an echocardiogram performed.

Standard	Demonstration of compliance
3.2 Clinicians should consider the need for additional tests to be undertaken if the clinical assessment and diagnostic investigations indicate that they are necessary.	**By June 2004**, clinicians will ensure that appropriate additional diagnostic tests are performed and recorded if indicated by clinical assessment and preliminary diagnostic investigations. Additional tests may include serum iron and ferritin levels, thyroid function tests, viral studies, coronary angiography, haemodynamic measurements, endomyocardial biopsy and gated radionuclide angiocardiography.
3.3 Clinicians should assess disease severity in all patients who have manifestations of CHF.	**By June 2004**, clinicians will ensure that the exercise capacity of patients with CHF is assessed and recorded (eg using the New York Heart Association (NYHA) Classification of Heart Failure or the Specific Activities Scale of Functional Capacity).
Standard 4: Treatment of acute, life-threatening manifestations of CHF	
4.1 All Area Health Services should ensure that Emergency Departments have protocols for the assessment and management of patients with acute heart failure.	**By June 2004**, Area Health Services will ensure that all Emergency Departments in NSW hospitals have protocols for the assessment and management of patients with acute heart failure.
4.2 All Area Health Services should ensure that mechanisms are in place to transfer patients with severe acute heart failure urgently to a tertiary referral centre for management, where indicated.	**By June 2004**, Area Health Services will ensure that mechanisms are in place across each Area to transfer patients with severe acute heart failure urgently to tertiary referral centres, where indicated.
4.3 All Area Health Services should ensure that patients with less severe heart failure who are assessed as being able to be discharged directly from Emergency Departments after initial therapy receive an appropriate management plan.	**By June 2004**, Area Health Services will ensure that all patients discharged directly from Emergency Departments following treatment for less severe heart failure receive a management plan including expedited appointment with their GP and specialist physician.
Standard 5: Pharmacological management of CHF	
5.1 All patients with systolic heart failure should be prescribed an angiotensin converting enzyme (ACE) inhibitor in the absence of contra-indications.	**By June 2004**, clinicians will ensure that all patients with systolic heart failure are prescribed an ACE inhibitor in the absence of contra-indications. If not prescribed, contra-indications will be recorded.
5.2 All patients with systolic heart failure should be considered for approved beta-blocker therapy once signs and symptoms of fluid retention (if present) have been corrected and in the absence of contra-indications.	**By June 2004**, clinicians will ensure that 40% of patients with systolic heart failure who are euvolemic and with no contra-indications are prescribed an approved beta-blocker. **By June 2005**, clinicians will ensure that 60% of patients with systolic heart failure who are euvolemic and with no contra-indications are prescribed an approved beta-blocker.
5.3 All hospitals should have dosage titration schedules for ACE inhibitor and beta-blocker therapy. All patients with systolic heart failure discharged on ACE inhibitors and/or beta-blockers should be given a clear discharge plan that specifies for their community-based doctor a suggested dosage titration schedule for these medications.	**By June 2004**, Area Health Services will ensure that titration schedules are available in hospital wards to assist in dose titration, and that all patients with systolic heart failure discharged on ACE inhibitors and/or beta-blockers are given a clear discharge plan that provides a suggested titration strategy to their community based doctor for these medications.

Standard	Demonstration of compliance
Standard 6: Multidisciplinary approach to CHF management	
6.1 All CHF patients admitted to hospital should be referred to a cardiologist or physician for review and advice on management of their CHF and should have access to appropriate specialist review for complex co-morbidities.	**By June 2004**, Area Health Services will ensure that all CHF patients admitted to hospital are reviewed by a cardiologist or physician, and have access to specialist review for complex co-morbidities.
6.2 All CHF patients admitted to hospital should have access to allied health professionals including dietitian, pharmacy, physiotherapy, exercise physiology, social work, occupational therapy, psychology, cardiac rehabilitation services and other health providers as indicated.	**By June 2004**, all CHF patients admitted to hospital will have access to allied health professionals including dietitian, pharmacy, physiotherapy, exercise physiology, social work, occupational therapy, psychology, cardiac rehabilitation services and other health providers as indicated.
6.3 All CHF patients admitted to hospital should be assessed by a heart failure registered nurse specialist to ensure that heart failure education is initiated in hospital, and that coordinated management is continued on discharge from the hospital in liaison with general practice and community health services.	**By June 2004**, Area Health Services and clinicians will ensure that all patients admitted to hospital with CHF are assessed by a heart failure registered nurse specialist to ensure that heart failure education is initiated in hospital and that coordinated management is continued on discharge from hospital in liaison with general practice and community health services.
Standard 7: Continuing care of CHF	
7.1 All clinicians treating patients with CHF should provide advice on non-pharmacological interventions in the control of CHF, and Area Health Services should provide specific programs designed to enhance the implementation of non-pharmacological interventions and to promote adherence to these interventions.	**By December 2003**, Area Health Services and clinicians will ensure that all patients with a diagnosis of CHF (and their family/carers where appropriate) receive education on specific non-pharmacological interventions to promote adherence.
7.2 All patients with CHF should have access to programs that equip and enable them and their carers to actively participate in self-management of their CHF following discharge. These ongoing programs should provide an action plan, which covers self-management of important aspects of the disease, recognition of symptoms and signs that signal the need for professional attention and information on how to obtain this attention.	**By December 2003**, Area Health Services will ensure that all patients admitted with CHF are provided with a personal health record in which information relevant to their CHF management is recorded to assist with coordination of their care. (*My Health Record* has been developed and distributed to hospitals and general practitioners by the NSW Department of Health for use by patients with chronic conditions. Further copies are available from the Better Health Centre on (02) 9816 0452. **By June 2004**, Area Health Services will ensure that all CHF patients attending NSW hospitals have individually tailored programs that include education, comprehensive follow-up and clinical monitoring, with a self-management action plan and information on when and how to obtain professional help.
7.3 All patients with CHF should have access to prompt advice from appropriate health professionals, including after-hours support and points of contact.	**By December 2003**, all Area Health Services will ensure that arrangements are in place for after-hours support and points of contact.

<table>
<tr><th>Standard</th><th>Demonstration of compliance</th></tr>
<tr><td>7.4 All Area Health Services should ensure that strategies are in place to facilitate effective communication and linkage between hospital and community based services for all patients with CHF.</td><td>By June 2004, Area Health Services will ensure that for all CHF patients discharged from hospitals in NSW:
• Contact is made with their nominated medical attendant (usually their general practitioner) on the day of discharge either through a faxed discharge summary or telephone call.
• A management plan is provided as part of the discharge summary, giving details of ongoing management in the community, including follow-up appointments for a prompt initial post-discharge visit to the GP, and continuation of designated therapy, as well as dose titration schedules for ACE inhibitors and beta-blockers where prescribed.</td></tr>
<tr><td>7.5 All Area Health Services and clinicians caring for patients with CHF should ensure that mechanisms are in place to identify high-risk patients and to address their special needs.</td><td>By June 2004, all Area Health Services and clinicians caring for patients with CHF will establish mechanisms to identify high-risk patients and to address their special needs.</td></tr>
<tr><td colspan="2">Standard 8: Rehabilitation for patients with CHF</td></tr>
<tr><td>8.1 All CHF patients should have access to a comprehensive hospital or community based rehabilitation program that is individually tailored to their needs and part of an overall cardiac failure management program.</td><td>By June 2005, all Area Health Services will ensure that all CHF patients discharged from NSW hospitals have access to an individually tailored rehabilitation program that is linked with a comprehensive cardiac failure management program.</td></tr>
<tr><td colspan="2">Standard 9: Palliative care for patients with end-stage heart failure</td></tr>
<tr><td>9.1 All Area Health Services should ensure that patients with intractable CHF have access to appropriate palliative care services.</td><td>By June 2005, all Area Health Services in NSW will provide access to palliative care services for patients with intractable CHF.

By June 2005, palliative care services in each Area Health Service will have protocols in place for appropriate management of CHF patients.</td></tr>
<tr><td colspan="2">Standard 10: Monitoring of quality and outcome indicators</td></tr>
<tr><td>10.1 All Area Health Services should ensure that strategies are in place to record and provide timely feedback on designated process and outcome indicators to improve quality of care.</td><td>By June 2004, all Area Health Services will establish mechanisms for recording process and outcome indicators, and providing timely feedback. The process measures will be based on the above standards, including ACE inhibitor and echocardiogram usage, discharge contact with GP, and the outcome measures* will include:
• number of patients presenting to Emergency Departments with primary diagnosis of heart failure
• number of patients admitted to hospital with primary diagnosis of heart failure
• average length of stay of patients admitted to hospital with primary diagnosis of heart failure
• number of patients readmitted to hospital following hospital discharge including total unplanned readmissions, heart failure readmissions, non-heart failure readmissions.

* Until full implementation of the Unique Patient Identifiers (UPI) program, these outcome indicators are to be collected on an episode rather than a patient basis.</td></tr>
</table>

Implementation

Milestones and targets by which compliance is to be demonstrated for each standard are clearly set out in this framework. They will be monitored in a systematic manner. Each Area Health Service will also be required to ensure that an effective system is in place to:

- provide an environment that fosters quality
- monitor and report regularly on the quality of care
- identify and effectively address issues in the quality of care.

It is recognised that rural areas face specific challenges as a result of geography and resources, with factors such as access to specialist services, patient support, workforce issues and training being of particular concern. It is intended that the framework should allow for some variation in the strategies employed by areas in achieving the standards set depending on their different circumstances and requirements, while ensuring that standards of care are improved across NSW. Potential strategies are described in more detail in Volumes 1 and 2 of the framework.

A key strategy to support implementation of the *NSW Clinical Service Framework for Heart Failure* is the Chronic Care Collaborative. Collaboratives are a proven change management methodology that have been used successfully in the UK, USA and Scandinavian countries. Collaborative methodology will be used to identify, disseminate and facilitate uptake of best practice across NSW.

The success of this framework in meeting its key objectives depends on the strong and demonstrated commitment of the NSW Department of Health and each Area Health Service in supporting its implementation. It also hinges upon the active participation of clinicians and health care providers in both the hospital and the community setting. Strong and effective partnerships between all of these groups will ensure meaningful and improved outcomes for people with heart failure in NSW.

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