# AUDITOR-GENERAL'S REPORT PERFORMANCE AUDIT

# Delivering Health Care out of Hospitals Department of Health



The Legislative Assembly Parliament House SYDNEY NSW 2000 The Legislative Council Parliament House SYDNEY NSW 2000

In accordance with section 38E of the *Public Finance and Audit Act* 1983, I present a report titled **Delivering Health Care out of Hospitals: Department of Health.** 

Peter Achterstraat Auditor-General

Pote Autestrant

Sydney September 2008

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#### Foreword

Most of us are aware that demand for care in the NSW public hospital system continues to grow. Ageing of the population, increasing costs and higher expectations of health care will continue to challenge health systems. Sometimes, unfortunately, the system struggles to cope.

This audit considers how NSW Health has adapted to meet this challenge by implementing new ways of providing services to people in their own homes or in the community. This can provide care in the way people want to receive it without compromising efficiency or safety. It can also relieve some of the burden on the hospital system.

The report shows that innovative ways of providing service can be successfully implemented. It highlights the need for agencies to develop compelling cases when they require funds to be invested in innovative approaches to service delivery. It reveals how agencies need to have good quality information on costs and performance if they are to show that planned investments will provide better value for money.

Peter Achterstraat Auditor-General

September 2008

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#### The focus of our audit

#### Need for change

Unless alternatives are developed, NSW Health estimates it will be necessary to open at least 300 new beds per annum to keep up with the predicted growth in demand. The implications are severe: in 1971-72 health expenditure represented 14.6 per cent of the total NSW budget, but by 2007-08 this had increased to around 28 per cent. At this rate, funding for health will consume the entire State budget by 2033.

In many jurisdictions out of hospital care is being used as an alternative way of responding to increasing demand. International evidence shows that these programs provide good outcomes for patients, reducing the number of times they need to go to hospital and the number of days they need to stay there.

Many patients already receive treatment which used to be exclusively delivered in hospitals. Dialysis, chemotherapy, palliative care and many other types of treatment are now delivered routinely and safely in patients' homes.

In this audit we have considered four of NSW Health's out of hospital programs:

- Community Acute/Post Acute Care (CAPAC)
- ComPacks
- Rehabilitation for Chronic Disease
- Healthy at Home.

This audit assesses how well NSW Health's out of hospital programs provide effective alternatives to treatment in hospital. The report answers the following questions:

- Does NSW Health have an effective approach to out of hospital care?
- Will NSW Health's out of hospital approach help achieve State Plan targets?

#### Audit opinion

## Programs provide good outcomes for patients

Nearly 45,000 patients per annum are currently being treated out of hospital in NSW Health's CAPAC, ComPacks and Rehabilitation for Chronic Disease programs.

We estimate that these out of hospital programs operate at around half the cost of providing the care in hospital, costing \$55 million less per annum. The number of patients cared for is equivalent to three per cent of inpatient admissions and two per cent of beds.

### Out of hospital care can free up beds

These programs help reduce the need for patients to attend emergency departments or occupy hospital beds. Treating suitable patients at home can thus save beds for the seriously ill patients who can only be treated in hospital.

### Limitations of some data

To make this assessment we have had to resort to data which may not reflect the way in which the programs currently work.

One program is still being developed

We also reviewed a fourth out of hospital program: Healthy at Home. While this is still being piloted, an evaluation commissioned by NSW Health suggests that it is not yet achieving its planned objectives.

Impact on access to hospitals

While access to emergency departments and to elective surgery have improved over the past two years, it is not clear whether NSW Health's out of hospital initiatives have contributed to this.

State Plan progress

NSW Health's out of hospital programs are intended to contribute to the State Plan target for reducing avoidable admissions. However, little progress towards the target has been achieved.

Need for a coordinated effort

Implementing a successful out of hospital program on the scale needed to have any significant impact on the NSW health system is a substantial undertaking. NSW Health needs not only to secure the necessary resources, but to implement major changes to provide these services.

**NSW Health's plans** 

NSW Health needs to demonstrate that expanding its out of hospital initiatives is an effective way to respond to growing demand on hospitals, and that it represents better value for money than increasing bed numbers.

NSW Health advises that it is preparing a proposal for funding to increase its out of hospital capacity. We urge NSW Health to ensure that any proposal addresses the following recommendations.

#### Key audit findings

Does NSW Health have an effective approach to out of hospital care? Area Health Services and hospitals have developed programs which can provide clinical outcomes as good for patients as in-hospital care and can reduce the time they spend in hospital. They have operated for several years and show considerable potential.

NSW Health has data to show that costs for out of hospital programs are lower than in-hospital care. However, some of the data are several years old, and some include only a fraction of the types of patients and conditions which the programs are treating. Hence costs may not reflect the way that programs currently operate.

While patients achieve good health outcomes, we are concerned that NSW Health needs more consistent measures of the quality of care it provides.

Will NSW Health's out of hospital approach help achieve State Plan targets? NSW Health needs to demonstrate that expanding its out of hospital initiatives is one of the practical alternatives to help meet growing demand. It needs to identify the number of patients who can potentially be treated out of hospital, and plan for securing the necessary resources and implementing significant changes.

In particular, it needs to ensure that the public (potential patients of out of hospital programs and their carers) are adequately informed of the programs so that they will confidently choose them. And health professionals need to be included in planning to ensure their support and cooperation.

It also needs to more clearly show the contribution of out of hospital programs to progress against State Plan targets.

#### Recommendations

- 1. NSW Health should establish an interim team to plan the expansion of out of hospital programs, coordinate it with existing Area Health Service responsibilities, and monitor progress of implementation (page 37).
- 2. NSW Health should prepare the community for the change that more extensive use of out of hospital services will mean for them and their carers (page 36).
- 3. To demonstrate that increasing out of hospital care capacity is a realistic way of responding to growing demand NSW Health should:
  - ensure that it has systems to monitor the number of patients being treated in out of hospital programs and the cost of providing this care (pages 30 and 34)
  - 3.2 confirm that increased out of hospital capacity is a realistic economic alternative to treating patients in hospital (page 38)
  - 3.3 determine the number and location of potential patients that can be treated in out of hospital programs (page 34)
  - 3.4 demonstrate the impact that the change will have on emergency department attendances and inpatient beds (page 38)
  - 3.5 identify the resources people, systems and funding required to achieve the increased out of hospital care capacity (page 36)
  - 3.6 ensure that health professionals are informed of how out of hospital care will affect them and their patients (page 36)
  - 3.7 establish quality indicators to ensure that out of hospital care is safe, appropriate and reliable (pages 28 and 33)
  - 3.8 set targets for out of hospital performance and ensure appropriate monitoring, evaluation and public reporting (page 38)
  - 3.9 report progress against the State Plan, ensuring that data reported on the State Plan website accurately reflect progress (page 33).
- 4. The Healthy at Home pilots should be continued until they more clearly demonstrate that the program is achieving its objectives (pages 27 and 30).

Timing of changes

NSW Health should be able to demonstrate significant progress toward the above recommendations by the end of the current financial year.

#### Response from the Department of Health

I am writing in response to your letter dated 21 August 2008 regarding the NSW Audit Office Performance Audit Report "Delivering health care out of hospitals".

I would like to submit the attached response for inclusion into the published report.

I would also like to take this opportunity to acknowledge the Audit team for the professional and collaborative manner in which this Performance Audit was conducted.

(signed)

Professor Debora Picone AM Director General

Dated: 12 September 2008

#### Attached Response from NSW Health

Thank you for the opportunity to provide comments on the performance audit "Delivering health care out of hospitals".

It is well known that service providers in hospitals and the community are all struggling with rising demand for health services. The nature of this demand is significantly changing as an increasing number of people are living longer with increasingly complex health care needs. Trends show that with every year demand for health services is escalating. In the period 2006-2007 the number of admissions to NSW public hospitals increased by 2.8 percent, emergency department's attendances rose by 7.9 percent and hospital expenses increased by 6.7 percent from the previous year. Exacerbations of chronic disease such as cardiovascular, respiratory diseases and diabetes were responsible for the majority of these admissions (AIHW, 2006) and account for almost 80% of healthcare costs in Australia.

A key priority for NSW Health is managing and responding to this growing demand for health care. A multi pronged strategy is underway which focuses on the system across the board with opportunities for redesign of health care across the continuum of care, with a focus not only on the inpatient setting but in the community as well.

The Clinical Services Redesign Program has been used as a vehicle to bring about substantial reform to the health system. It has created a platform to review and change the way health care is delivered. Clinical Redesign has encouraged innovation and the dissemination and adoption of best practice models across the state.

Increasingly NSW Health is investing in opportunities to provide care and treatment for patients using alternative modalities to hospitals. Attention is moving from the historical focus on acute hospital bed availability to a broader focus on treatment availability in a variety of settings.

The audit undertaken by the NSW Audit Office reviews four of the programs which NSW Health has recently embarked upon as part of a broader strategy to manage demand on the health care system. This focus on out of hospital care complements similar work which focuses on managing growing demand within the acute care system and also builds on the many services which we already deliver in the community such as dialysis, chemotherapy and palliative care.

In 2006-2007 in NSW 20,936 individual occasions of service were offered for patients receiving dialysis and over 300,000 for patients receiving oncology and chemotherapy services.

There is compelling international evidence that countries comparable to Australia that have a strong primary and community healthcare infrastructure have lower health care costs, less health inequality and generally healthier populations. Evaluations of recent international initiatives designed to shift care from hospitals demonstrates that such programs can reduce hospital length of stay and avert admissions and/or readmission to hospital. Empirical evidence also proves the importance of prevention and early intervention in achieving improved quality of and access to care, health outcomes and patient satisfaction.

Using this evidence NSW has implemented a strategy outlined in the NSW State Plan as "Health Care at Home". The audit has focussed on four programs which sit under this strategy, they are: Community Acute/Post Acute Care Services (CAPAC), ComPacks, Rehabilitation for Chronic Disease and Healthy at Home.

These programs focus on prevention, early intervention, avoidance; care coordination and home based maintenance to support people in the community and where possible reduce or avoid hospital stays.

As highlighted in the audit report implementing a successful out of hospital program on the scale needed to have any significant impact on the NSW health system is a substantial undertaking. The above four programs are the building blocks of a bigger suite of solutions which focus on a population based approach. However it must be recognised that each and every demand management strategy that is employed by NSW Health has an impact and contributes to the performance of the system.

NSW Health acknowledges that the collection of accurate data has been hampered by the lack of an electronic data set for community patients. Standard recording and reporting of activity around out of hospital services has commenced in the last 12 months and NSW Health is working to establish a reliable and robust source of data for these programs.

Key performance indicators included in sustainable access performance agreements with the Area Health Services ensure that there is ongoing commitment to and accountability for out of hospital services. The commissioning of an evaluation of out of hospital programs will assist to specifically cost out of hospital services and their potential impact on capacity and access to inpatient hospital services.

NSW Health is committed to growing and developing the delivery of out of hospital services. The audit has offered an opportunity to demonstrate that increasing out of hospital capacity is a realistic way strategy in managing demand. It also heralds an opportunity to actively engage with stakeholders and the community about the way forward for out of hospital care.

The table below describes how NSW Health aims to respond and demonstrate significant progress towards the specific recommendations made in the Audit report by the end of the current financial year.

Recommendation	Response			
1. NSW Health should establish an interim team to plan the expansion of out of hospital programs, coordinate it with existing Area Health Service responsibilities, and monitor progress of implementation	NSW Health is committed to expanding and monitoring the expansion of out of hospital programs and acknowledges that specific resources are required to execute this recommendation.  An interim team with carriage for out of hospital service expansion will be established within the Health Service Performance Improvement Branch. This branch is currently responsible for the central management of CAPAC, ComPacks, Rehabilitation for Chronic Disease and Healthy at Home.			
2. NSW Health should prepare the community for the change that more extensive use of out of hospital services will mean for them and their carers.	NSW Health is committed to working with Area Health Services in developing a strategic communication framework for ongoing communication and education of all relevant stakeholders regarding the approach of out of hospital care.			
3. To demonstrate that increasing out of hospital care capacity is a realistic way of responding to growing demand NSW Health should:				
3.1 Ensure that it has systems to monitor the number of patients being treated in out of hospital programs and the cost of providing this care	NSW health is currently in the process of building robust systems to monitor out of hospital programs. Standardised frameworks for reporting of CAPAC, ComPacks and Rehabilitation for Chronic Disease are being implemented across Area Health Services with monthly reportable data now available. These data collection methods are being reviewed and refined as required to improve consistency in the data collected. With the standardisation of reporting a consistent picture of patient utilisation of out of hospital programs and related costings will become increasingly available.  However, without a community IT system in place, this reporting framework relies heavily on manual data collection by clinicians.			
3.2 Confirm that increased out of hospital capacity is a realistic economic alternative to treating all patients in hospital	NSW Health has commissioned a financial evaluation of out of hospital programs. This evaluation will specifically evaluate:  1. Cost of the program  2. Potential impact on capacity and access (i.e. no of bed days saved)  3. Potential scale of the program required to meet demand, including geographical access issues.			
3.3 Determine the number and location of potential patients that can be treated in out of hospital programs	NSW Health will continue to explore opportunities to identify the number and location of the patient population suitable for out of hospital care.  As stated in item 3.2, NSW Health has commissioned an evaluation of demand for these programs.			

3.4	Demonstrate the impact that the change will have on emergency department attendances and inpatient beds	As stated in item 3.2 a financial evaluation will assist in demonstrating the impact of out of hospital services on emergency department attendances and inpatient beds.
3.5	Identify the resources - people, systems and funding - required to achieve the increased out of hospital care capacity	NSW Health continues to be informed by growing body of evidence about effective community management, especially around patients with chronic diseases. Evidence on best practice models and a better availability of data will assist in the planning and growth of resources required to support an increased out of hospital care capacity.
3.6	Ensure that health professionals are informed of how out of hospital care will affect them and their patients	As outlined in item 2, NSW Health will develop a strategic communication framework to involve and engage all relevant stakeholders.
3.7	Establish quality indicators to ensure that out of hospital care is safe, appropriate and reliable	NSW Health through its Quality and Safety Branch will establish measurable quality indicators to ensure that out of hospital care is safe, appropriate and reliable.
3.8	Set targets for out of hospital performance and ensure appropriate monitoring,	NSW Health will continue to monitor performance against current targets for ComPacks, CAPAC and Rehabilitation for Chronic Disease.
	evaluation and public reporting	Further targets will be developed with the growth of the out of hospital program.
		Data will be made available to the public via reporting on the NSW State Plan website.
3.9	Report progress against the State Plan, ensuring that data reported on the State Plan website accurately reflect progress	NSW Health will provide regular data updates for the State Plan website.
be c	The Healthy at Home pilots should ontinued until they more clearly constrate that the program is eving its objectives.	NSW Health will continue to support Healthy at Home at the designated pilot sites and continue to develop strategies to support robust patient referral mechanisms. Further evaluation will occur to inform NSW Health regarding its ongoing expansion.

I am very pleased with the level of co-operation that existed between NSW Health and the Audit Office in the preparation of the report, and thank the staff of both agencies for their efforts.

1.	How	import	tant is	out of	hospital	care?

#### 1.1 Pressure on health systems

Public hospitals across Australia continue to have difficulty in providing sufficient access to quality health care to meet demand:

Public hospitals are under 'severe strain' with the rate of admissions increasing by 3 per cent per annum - twice that of population growth.

### Challenges facing NSW

In NSW, demand for public health services is being driven by:

- population growth
- changes in population distribution
- an ageing population
- changing patterns of illness due to lifestyle related factors such as obesity
- changing technologies and clinical practices, including the availability of more expensive drugs and equipment
- community expectations that all conditions are treatable and that all treatments should be available.

### Increasing demand on public hospitals

In 2006-07 the number of admissions to NSW public hospitals increased by 2.8 per cent, emergency department attendances by 7.9 per cent and hospital expenses by 6.7 per cent over the previous year.

### Key measures of impact on patients

If demand on the public hospital system exceeds its capacity, patients will be affected in several ways:

- patients entering the hospital system through the emergency department may have to wait some time until they can receive treatment from a doctor or nurse. This is reported as triage waiting time
- if patients need to be admitted to a hospital inpatient bed for further treatment they may have to wait in the emergency department until an inpatient bed becomes available. The percentage of patients admitted from emergency departments to an inpatient bed within eight hours is reported as Emergency Admission Performance
- if a patient requires non-emergency surgery they will usually have to wait. The time they wait will depend on how urgently they require surgery and the number of patients already waiting. This is reported as elective surgery waiting time.

### Impact of the ageing population

Most efforts at responding to the problem of increasing demand have focused on the effect of the ageing population. People over 65 years of age were only 11 per cent of the population but represented 35 per cent of NSW public hospital admissions and 46 per cent of bed days (the time that inpatient beds are occupied) in 2003-04. By 2011, it is expected that they will account for 38 per cent of NSW public hospital admissions and 52 per cent of bed days.

Older people generally stay longer when in hospital. Each person aged 65 and over had an average stay in hospital of 8.6 days across Australia, compared with 6.2 days for all ages. The average length of stay was even higher in the oldest age groups, being more than 10.6 days for people aged 85 or more.

### Growing demand for beds

Since 2001-02 the number of beds in the NSW public hospital system has increased by an average two per cent per annum. However, beds are an expensive resource, costing between \$135,000 and \$375,000 each per annum to staff and operate. A 2007 report commissioned by NSW Health reveals that more than 300 new beds will be required each year to keep pace with demand if the health system continues to depend upon inhospital care.

## Unsustainable growth in the NSW Health budget

One consequence of ever-growing demand is the increasing health budget. In 2006, the Premier stated that:

In 1971-72 health expenditure represented 14.6 per cent of the total State budget and today it represents 25.5 per cent. If the trend of the past five years continues, by 2033 the health budget will consume the entire State budget.

Two years later health spending had increased to around 28 per cent of the total 2007-08 NSW State Budget.

#### 1.2 Other ways of delivering health care

There are alternative ways to care for many patients, young and old. Medical practitioners have concluded that patients with many non-serious medical conditions are more appropriately treated out of hospitals.

Many patients already receive treatment which used to be exclusively delivered in hospitals. Dialysis, chemotherapy, palliative care and many other types of treatment are now delivered routinely and safely in patients' homes.

Experience in NSW also demonstrates that it frees up hospital beds:

... inappropriate care, such as hospital admission for a condition that could be just as effectively treated on an ambulatory basis, may have an impact on access for other patients.

Research in the UK indicates that for elderly patients at least 20 per cent of bed use is avoidable.

## Few patients are receiving out of hospital care

However, only a small proportion of reported public hospital admissions in Australia are currently treated out of hospital. Victoria reported the highest proportion of any state or territory. NSW did not provide any data.

Exhibit 1: Public Hospital Admissions: hospital in the home 2006-07					
Admissions % total admission					
NSW	Not reported	Not reported			
Victoria	40,866	3.11			
Queensland	1,125	0.14			
WA	4,102	0.91			
SA	6,580	1.68			
Tasmania	Not reported	Not reported			
ACT	922	1.22			
NT	599	0.70			
Australia	54,194	1.16			

Source: The state of our public hospitals, June 2008, p31.

While the Australian Institute of Health and Welfare has defined 'hospital in the home' care, states may include different initiatives in the data collection. From data provided by NSW Health we estimate that NSW out of hospital programs currently treat three per cent of all admissions, a similar percentage to Victoria.

### Commonwealth priorities

The Commonwealth's priorities in the 2008-09 Budget are clearly focused on maximising out of hospital care:

The Australian Government will develop a National Primary Health Care Strategy ... including a greater focus on keeping patients out of hospital and increasing the focus of primary care teams on the provision of multidisciplinary care .... in order to curb the growth in chronic disease and the associated costs to the health system and broader economy ...

## Out of hospital care in other jurisdictions

The Victorian Department of Human Services has developed its Hospital Admission Risk Program. This aims to avoid unnecessary use of emergency departments and inpatient services and slow the increase in demand pressures on hospitals by:

- targeting patients with conditions associated with frequent use of hospital services
- using primary health services, particularly GPs, to avoid unnecessary emergency presentations and reduce hospital admissions.

Victoria also provides short term community-based services similar to those provided by NSW Health to assist people to recuperate after leaving hospital and to prevent hospital readmission. The most common services provided are community nursing, personal care and home care services.

#### 1.3 Out of hospital care and NSW Government plans

#### The State Plan

The NSW State Plan alludes to the need to deliver more health care outside hospitals:

Better coordination with the Commonwealth is needed to ensure that primary care works effectively to increase the proportion of people safely treated earlier in the community, thereby minimising the need for hospitalisation and improving people's wellness.

It includes two priorities directly relevant to this audit:

S1 - improved access to quality healthcare

F5 - reduced avoidable hospital admissions.

#### The State Plan notes that:

There are over one and a half million public hospital admissions every year in NSW. Demand for services continues to grow. Patients are telling us that if treatments could be safely delivered in the community or at home, they would prefer not to have to be admitted to hospital. Reducing avoidable hospital admissions through early intervention and prevention will lead to improved health outcomes and enable better management of hospital resources.

State Plan priority S8 is increased customer satisfaction with Government services, and is also relevant to out of hospital programs.

This audit considers the impact of out of hospital programs on State Plan priorities and targets S1 and F5. We have addressed issues of customer satisfaction as part of priority S1.

#### NSW State Health Plan

The 2007 NSW State Health Plan sets out a vision for the NSW health system for 2010.

#### It strives to:

... make the most effective use of the finite resources available and manage costs, services and infrastructure effectively to meet the State's health care needs while maintaining financial sustainability.

#### It includes commitments to:

... expand programs to prevent and reduce the impact of chronic diseases [and] develop and implement new community based models of care for older persons, those with chronic disease and those in need of post acute care.

However, the State Health Plan includes no specific comment on out of hospital programs.

2.	Does NSW Health have an effective approach to out of hospital care?

#### At a glance

#### The key question we wanted to answer was:

Does NSW Health have an effective approach to out of hospital care?

#### Our overall assessment:

Yes: Area Health Services and hospitals have developed programs which can provide clinical outcomes as good for patients as in-hospital care and can reduce the time they spend in hospital. They have operated for several years and show considerable potential.

NSW Health has data to show that costs for out of hospital programs are lower than in-hospital care. However, some of the data are several years old, and some include only a fraction of the types of patients and conditions which the programs are treating. Hence costs may not reflect the way that programs currently operate.

While patients achieve good health outcomes, we are concerned that NSW Health needs more consistent measures of the quality of care it provides.

#### 2.1 Out of hospital programs in NSW

NSW Health and other government and private organisations provide out of hospital care through a range of activities and programs, including home, community and clinic based services.

### Out of hospital care programs reviewed

However, this audit considers only four of the out of hospital programs currently operated by NSW Health:

- Community Acute/Post Acute Care (CAPAC) services
- ComPacks
- Rehabilitation for Chronic Disease
- Healthy at Home.

We have focused on these programs because NSW Health has established funding agreements for these programs with Area Health Services (AHSs). CAPAC, ComPacks and Rehabilitation for Chronic Disease are operated by all AHSs, while Healthy at Home is currently a pilot program operating in four AHSs.

AHSs are monitoring and reporting performance of the programs. NSW Health has evaluated all of them, although some evaluations are now several years old and may not reflect how the programs currently work.

### Purpose of out of hospital programs

NSW Health has not provided the public with clear goals, objectives or targets for its out of hospital programs. It has little publicly available information on how they work or what they are intended to achieve.

These programs are not intended to stop patients attending hospital when they need to. They are to provide opportunities for patients to be treated in their homes when this is clinically safe and more appropriate than treatment in hospital.

#### Community Acute/Post Acute Care (CAPAC)

An acute disease or condition is one with rapid onset, severe symptoms and of brief duration. Traditionally patients with acute conditions would be treated in a hospital and would remain there until they recovered.

Health's CAPAC program has been developed to assist people with acute conditions to have as much treatment as possible at home. Many CAPAC patients are discharged following a surgical procedure, and recover in their own homes rather than in hospital.

The services provided at home by CAPAC include treatments such as provision of intravenous antibiotics or anticoagulants or other therapy which can be delivered in the home.

CAPAC was initially developed to treat patients with specific medical conditions including cellulitis, pneumonia, bronchitis and asthma. Some services, when first established, focused on clinical care at home following surgery or hospitalisation. However, patients with many other conditions are now treated by CAPAC services.

Patients have the choice of being treated in hospital or within CAPAC programs, but many patients consider CAPAC a safe alternative to staying in hospital. CAPAC services must be short term (normally five to 14 days). Patients with long term issues or needs are offered referrals to community health centres, GPs or other agencies.

#### Exhibit 2: CAPAC case study

Gladys is 72 and lives with her husband in their own home. Over a six month period Gladys was admitted to hospital five times for pneumonia and once for an abscess. Gladys was hospitalised for a total of 100 days in this period. Finally she was referred to the AHS's CAPAC service.

The CAPAC nurse explained that Gladys would get the same care from all the health professionals that she was seeing in hospital, but it would be delivered in her home. She also explained how the CAPAC team would arrange her appointments in advance, depending on the care she needed. This would help Gladys and her husband to carry on life as normally as possible.

Once Gladys was discharged from hospital, CAPAC health professionals visited her at home three times a day. A physiotherapist visited each day to help with her exercises and recovery. An occupational therapist helped identify how simple changes could be made to their home environment and routine to assist with her recovery and long term care.

As Gladys got better she needed fewer visits. Throughout her treatment CAPAC nurses discussed her ongoing care needs with her GP. Since then, Gladys has not needed to be admitted to hospital for three years.

Source: CAPAC Patient Stories, NSW Health, January 2008.

The 2008-09 State Budget refers to CAPAC as Hospital in the Home, and includes measures of performance:

Exhibit 3: Budget measures for the Hospital in the Home program					
	2005-06 Actual	2006-07 Actual	2007-08 Budget	2008-09 Forecast	
Hospital in the Home episodes	9,000	12,000	15,000	20,000	

Source: NSW Budget Estimates 2008-09, 12-34.

Currently NSW Health is providing CAPAC services to around 17,000 patients each year. As well as the benefits to the patient, NSW Health claims that CAPAC also helps the hospital system by allowing more efficient use of hospital beds for other acutely ill patients and improving Emergency Admission Performance.

#### Rehabilitation for Chronic Disease

Chronic diseases are of long duration, with very slow changes in the patient's condition. They currently account for almost 80 per cent of the total disease burden in Australia. While not immediately life-threatening, chronic diseases are the most common and, ultimately, the leading cause of early deaths. People who live with chronic disease have the daily challenge of managing their disease and preventing complications.

Rehabilitation for Chronic Disease services help the patient self-manage their condition and improve their quality of life and that of their family. It can assist in avoiding unnecessary hospital presentations and admissions.

Chronic diseases commonly treated by rehabilitation programs include:

- cardiovascular diseases (including stroke and heart failure)
- cancer
- respiratory disease
- diabetes.

Rehabilitation services and support may be delivered in hospitals, at home or in community clinics by GPs, rehabilitation teams or community health professionals. These health professionals work with patients to develop a care plan, teaching them how to monitor their symptoms and reduce their risk factors.

#### Exhibit 4: Rehabilitation for Chronic Disease case study

George has a heart condition, and over a six year period had over 20 admissions to hospital. His GP decided that more active management of his condition, with treatment at home, could reduce these frequent admissions to hospital. George preferred treatment at home.

The GP arranged for a specialist Chronic Care team to visit George. They developed a care plan: the exercise physiologist showed George how to exercise to avoid angina; the clinical nurse consultant helped him manage his medications; the GP encouraged him to visit at pertinent times to have doses adjusted; the dietician helped him with weight loss and lowering his cholesterol.

It is now over seven years since George first attended the rehabilitation for chronic disease service and he has had only two hospital admissions: one for a planned procedure to try to relieve angina and another for gastric problems.

Source: Rehabilitation for Chronic Disease Patient Stories, NSW Health, January 2008.

Currently NSW Health is providing rehabilitation services to around 17,000 chronic cardiac and respiratory disease patients per annum. NSW Health does not report how much assistance is provided for other chronic diseases.

NSW Health claims that its rehabilitation for chronic disease program benefits the health system by:

- reducing unnecessary hospital re-presentations and readmissions
- improving Emergency Admission Performance
- freeing hospital beds for other more seriously ill patients.

#### ComPacks

After hospitalisation some patients may be clinically ready to return home. However, they may have other personal needs which must be met.

ComPacks is an early discharge program funded by AHSs and run by Community Options, a non-government organisation. Community case managers can assist patients to return home safely by arranging services such as:

- domestic assistance (cleaning, shopping, transport)
- health care (falls management, home modifications, medication education)
- personal care assistance (bathing, dressing, eating, grooming)
- participation in structured group activities aimed at developing, maintaining or supporting independent living and social interaction
- social support such as advice on accommodation matters.

Suitable patients are usually referred to ComPacks by hospital staff such as social workers or discharge planners. Ideally, patients are assessed in hospital by health professionals such as occupational therapists and physiotherapists and the case manager from Community Options.

Once the patient is discharged, the Community Options case manager arranges with community service providers to deliver the support services needed.

#### Exhibit 5: ComPacks case study

Joanne had been in hospital following a minor surgical procedure. She wanted to go home but the hospital team were concerned for her safety at home. She had early onset dementia and no family support.

The Community Options case manager visited her in hospital to arrange a ComPacks package as a way of going home safely. The case manager arranged to have a handrail installed in the shower, for assistance with house cleaning and support in preparing meals.

As a result of the ComPacks package, Joanne was able to go home from hospital a week earlier than the hospital team would have previously organised.

Source: ComPacks Patient Stories, NSW Health, January 2008.

NSW Health increased the number of ComPacks packages by 27 per cent over the last year, and Community Options is now providing around 10,300 patients with ComPacks packages per annum.

NSW Health claims that ComPacks benefits patients and the health system by:

- reducing length of stay in hospital
- reducing hospital-related adverse events
- reducing readmissions
- increasing patient and staff satisfaction
- greater cost effectiveness.

#### Healthy at Home

Healthy at Home is being piloted in four AHSs. This program includes a Referral Information Centre staffed by nurses and other clinicians who provide a telephone referral service to out of hospital care services. GPs, aged care assessment teams, community services workers and ambulance officers can refer patients, seven days a week, to a team for clinical assessment.

To be eligible for Healthy at Home, patients would normally be 65 years of age or older (45 years and over for Aboriginal and Torres Strait Islander peoples) and live in the area served by one of the four pilots. They are likely to suffer from deteriorating mobility or memory, and may be unable to look after themselves and their home. Many will be at imminent risk of needing to go to hospital. Their carers would also notice an increase in their needs, and may feel unable to cope.

#### Exhibit 6: Healthy at Home Case study

Mario had a respiratory infection and visited his GP, who prescribed antibiotics. However, the GP was concerned that Mario was at risk of pneumonia. Rather than sending him to hospital, the GP contacted the Referral Information Centre.

Within 48 hours the Healthy at Home team including a ComPacks case manager visited Mario. Their assessment indicated that he needed chest physiotherapy treatment and other support.

Mario received physiotherapy at home and continued his antibiotics course. The case manager took him for an X-ray and continued to monitor his condition. He also received assistance with house cleaning, shopping and transport to medical appointments.

Source: Healthy at Home Patient Stories, NSW Health, January 2008.

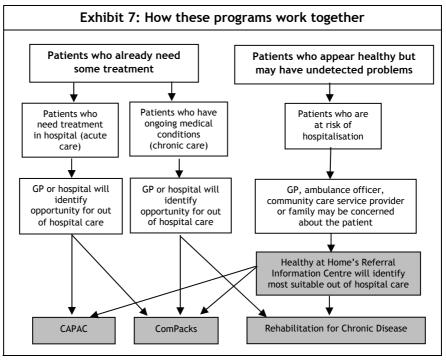
Healthy at Home pilots provided 1,325 referrals in 2007-08.

NSW Health claims that the benefits of Healthy at Home to patients and carers are:

- care at home or in the community rather than in hospital
- fast assessment and access to care
- holistic, integrated care coordinated through one central point
- access to community case management and services.

#### Benefits to hospitals are:

- decreased emergency department presentations and hospital admissions for people in the target age group
- improved Emergency Admission Performance, reduced bed occupancy rates and reduced pressure on staff.



Programs shown shaded were reviewed by this audit.

Source: Audit Office of NSW research.

We estimate that NSW Health is currently providing out of hospital care to over 44,000 patients per annum.

Exhibit 8: Out of hospital patients in NSW Health's AHSs				
Area Health Service	Number of out of hospital patients 2007-08			
Sydney South West	6,328			
South Eastern Sydney and Illawarra	7,958			
Sydney West	7,845			
Northern Sydney and Central Coast	9,289			
Hunter and New England	6,455			
North Coast	2,776			
Greater Southern	1,396			
Greater Western	2,753			
Total	44,800			

Source: NSW Health

Around 70 per cent of out of hospital services are being delivered in Metropolitan AHSs.

NSW Health has recently implemented improvements to these programs. It has:

- developed models of care for CAPAC, ComPacks and Rehabilitation for Chronic Disease and other out of hospital treatments to demonstrate and perpetuate best practices
- set targets and funding rules for out of hospital programs run by AHSs
- required AHSs to develop data collection methods to monitor and report progress against internal and State Plan targets.

### 2.2 Do out of hospital programs provide good outcomes for patients and their carers?

#### Our assessment

Yes: experience in NSW and internationally demonstrates that out of hospital care can provide clinical outcomes for patients similar to that of treatment in a hospital. Patients spend less time in hospital, make fewer visits and are satisfied with their treatment.

However, we saw significant variations and inconsistency in the monitoring of quality of care.

# Some professionals disagree that out of hospital care is of benefit

Some overseas research is sceptical of the benefits claimed for out of hospital care. In 2007, a UK study of an out of hospital program for older patients concluded that:

The [program] had no significant effect on rates of emergency admission, emergency bed days and mortality for a high risk population aged over 65 with a history of two or more emergency admissions in the preceding 13 months ... Without more radical system redesign this policy is unlikely to reduce hospital admissions.

Another recent UK review noted benefits for patients but not for carers:

Patients admitted to hospital at home did not generally have significantly different outcomes than those treated in hospital. While there is some evidence that patient satisfaction may be higher at home, the burden on carers can also be greater.

## NSW Health contends that there are benefits

NSW Health contends that similar clinical outcomes (which the UK review acknowledged) combined with the lower cost of out of hospital care summarised in chapter 2.2 support the advantages of out of hospital care.

### Most evidence is positive

Notwithstanding the UK studies cited above, published evidence predominantly supports the benefits of out of hospital care.

The results of studies demonstrate three key advantages of out of hospital care over conventional hospital-based treatment for patients with similar conditions:

- fewer subsequent admissions to hospital
- shorter stays in hospital
- greater patient and carer satisfaction with treatment.

#### Patients get out of hospital more quickly

#### Exhibit 9: Shorter length of stay for out of hospital patients

Patients in a US program were offered the option of receiving their care in the home rather than in the hospital. The 455 patients 65 years and over required hospital care for pneumonia, heart failure, chronic obstructive pulmonary disease or cellulitis. Those who chose out of hospital treatment were given an initial evaluation in the emergency department.

Patients who chose to be treated at home only stayed 3.2 days in hospital, compared to 4.9 days for those treated in hospital. Care in the home met quality standards similar to those of hospital care, and there was some evidence that patients treated at home had fewer complications.

Source: Hospital at Home: Feasibility and Outcomes of a Program To Provide Hospital-Level Care at Home for Acutely Ill Older Patients.

According to NSW Health, for some medical conditions CAPAC can reduce length of stay by an average of two days.

NSW Health's 2004 evaluation demonstrated that one group of ComPacks patients stayed in hospital for an average of 35 days compared to 51 days for those who did not receive such assistance, a reduction of around 16 days. However, this was based on a sample of only 47 patients, and may not be representative of all current ComPacks patients.

### Patients need fewer visits to hospital

#### Exhibit 10: Fewer hospital visits for out of hospital patients

This trial involved 739 patients aged 75 years and over at Prince of Wales Hospital.

Conventional practice for all patients who present at an emergency department is that they will receive treatment for their condition. They are advised of any follow up care required (e.g. further medication or visits to their GP) and then discharged.

Half the elderly patients were given this conventional treatment, and the other half received an assessment to develop a care plan in their homes following discharge from the emergency department.

The assessor, generally a nurse experienced in the care of the elderly, prepared a care plan. Patients' progress was reviewed weekly by a multidisciplinary team including geriatricians, nurses and physiotherapists. Patients were referred to their GPs, specialist physicians or surgeons, community health nurses or other community services.

Patients who received this support needed fewer visits to hospital in the 18 months following the initial intervention, and maintained a higher degree of physical and mental function. There was no difference in the number of deaths or admissions to nursing homes.

Source: A Randomized, Controlled Trial of Comprehensive Geriatric Assessment and Multidisciplinary Intervention After Discharge of Elderly from the Emergency Department—The DEED II Study.

NSW Health has documented the reduction in hospital visits required by cellulitis patients:

In a metropolitan Sydney hospital with an established CAPAC program, 30 per cent of cellulitis presentations to the Emergency Department were seen by the CAPAC service, avoiding admission to hospital. On an annual basis, this equates to a saving for the hospital of 741 bed days, or almost \$780,000 a year.

A study of the St George Respiratory Coordinated Care Program concluded that it reduced the number of hospital admissions required by patients with chronic and complex conditions from over four per annum to less than one per annum. The length of stay for patients was reduced from 6.9 days to 4.2. Together these represented savings equivalent to 21 inpatient beds.

Between 2000 and 2003, the Rehabilitation for Chronic Disease program claimed a statewide reduction of 56,000 hospital admissions for patients with cardiovascular and respiratory disease and cancer, equating to 89 beds saved. During 2004, it claimed savings of 25,000 bed days for patients with chronic obstructive pulmonary disease and heart failure.

The State Plan website reports that the Rehabilitation for Chronic Disease program achieved a reduction of over 35,000 bed days in 2005-06.

Success of similar programs in other states

Victoria's experience with its equivalent to the NSW Rehabilitation for Chronic Disease program shows that, compared to patients not in the program, there were:

- 35 per cent fewer emergency department attendances
- 52 per cent fewer admissions
- 41 per cent fewer days spent in hospital.

It reported that every patient in the program reduced the demand on hospitals by about one emergency department attendance, two emergency admissions and six days in hospital.

As evidence above shows, CAPAC, Rehabilitation for Chronic Disease and ComPacks can reduce attendances at hospital and length of stay. However, it is not yet possible to make similar claims for Healthy at Home.

Healthy at Home has not yet clearly demonstrated benefits In 2007, an independent evaluation of the Healthy at Home pilots claimed that 79 per cent of the people assessed would have needed to attend an emergency department if Healthy at Home had not been available. However, while the effect on patients was positive, the evaluation was unable to demonstrate that Healthy at Home actually reduced the number of emergency department attendances.

The evaluation also showed that the pilots only attracted half the number of patients planned, and concluded that:

Despite significant efforts to market the program by both the program management staff and the sites, the low number of referrals is because promotion of [Healthy at Home] to potential referral sources has been less than optimal.

#### Recommendation

The Healthy at Home pilots should be continued until they more clearly demonstrate that the program can attract and manage the number of patients expected and that it actually reduces emergency department attendances and hospital admissions of the elderly.

## Patients highly satisfied with out of hospital care

#### Exhibit 11: Patient and carer satisfaction with out of hospital care

Around 100 patients in the UK were surveyed about their out of hospital treatment. Most were more satisfied with home care than with treatment in hospital. Patients appreciated the more personal care and better communication offered by hospital in the home care and placed great value on staying at home. Patients largely felt safe with treatment at home, although some would have felt safer in hospital. Some patients and carers felt that better medical care would have been provided in hospital.

However, a US trial of 246 patients aged 65 years and over showed that preferences of a location for treatment was almost equally divided between home and hospital.

Source: Patient and carer satisfaction with 'hospital at home': quantitative and qualitative results from a randomised controlled trial, Older Persons' Preferences for Home vs Hospital Care in the Treatment of Acute Illness.

### Monitoring client satisfaction

ComPacks teams we visited routinely conduct patient satisfaction surveys. One survey reported generally positive responses, with suggestions to improve some of the team's processes, take carer issues into account during assessment of patients and improve communications between service providers. Another survey reported high levels of satisfaction with ComPacks.

One CAPAC service visited conducted a client satisfaction survey in 2006 rating the perceptions of 374 respondents on issues such as quality of service, professionalism of staff and convenience. Sixty-four per cent of clients gave an excellent rating to the overall quality of service, with none giving a rating lower than good.

We did not see evidence that other out of hospital services conducted patient satisfaction surveys.

#### Quality of care

Quality indicators are crucial, but NSW Health does not have any for out of hospital care.

NSW Health's models of care for CAPAC, Rehabilitation for Chronic Disease, ComPacks and Healthy at Home do not include any discussion of quality or indicators to demonstrate it. They do not mention client and carer satisfaction or feedback and complaint mechanisms.

Few of the out of hospital services we visited monitored quality of care. Some reported unplanned readmissions to hospital, but had no benchmarks for satisfactory or unsatisfactory performance.

## NSW Health's patient survey results

NSW Health's 2007 Patient Survey reported that 88 per cent of all patients rated their overall care as good, very good or excellent.

### State Health Plan commitments

The State Health Plan includes targets to increase customer satisfaction and ensure high quality care:

- measure, report and improve customer satisfaction through annual patient satisfaction surveys and widespread local monitoring of patient experience
- reduce unplanned/unexpected hospital readmissions occurring within 28 days of discharge from care
- work with other states and territories to establish a robust measure of quality within the next five years.

#### Recommendation

NSW Health needs to establish quality indicators to ensure that out of hospital care is safe, appropriate and reliable.

### 2.3 Do out of hospital programs cost less than treatment in hospital?

#### Our assessment

Yes: NSW Health has done some work in identifying the lower costs of its out of hospital programs when compared to conventional inpatient treatment in a hospital.

However, NSW Health needs to ensure that it has up to date and comprehensive information on the costs of its out of hospital services.

### 'Savings' may be illusionary

Running out of hospital programs is not a cost cutting measure. These programs can improve patient flow in hospitals by reducing the time people stay in a hospital bed, or avoiding admission altogether. These programs are not a means of cutting hospital staff or reducing bed numbers.

## Some research shows no clear effect on costs

Some overseas reports found that costs of out of hospital treatment were not necessarily lower:

Effects on health system costs were mixed ... The limited existing evidence indicates that, compared with hospital care ... the effects on social and health system costs appear to vary with condition.

#### A 2007 review concluded that:

... despite increasing interest in the potential of hospital at home services as a cheaper alternative to in patient care, this review provides insufficient objective evidence of economic benefit.

### Most evidence shows lower costs

However, published results of out of hospital programs in many jurisdictions show that costs are lower than treatment in a hospital.

#### Exhibit 12: Lower cost for out of hospital treatment

A UK report evaluated out of hospital trials of 754 patients with chronic obstructive pulmonary disease. Out of hospital treatment had lower costs than inpatient care and freed up hospital beds.

In the US, the cost of out of hospital treatment of 455 elderly patients suffering from heart or pulmonary disease or cellulitis was lower than for acute hospital care.

Source: Hospital at home for patients with acute exacerbations of chronic obstructive pulmonary disease, Ram et al, BMJ 2004;329:315; Hospital at Home: Feasibility and Outcomes of a Program To Provide Hospital-Level Care at Home for Acutely Ill Older Patients, Leff et al, December 2005 Annals of Internal Medicine Volume 143, Number 11, p798.

### Interstate experience on costs

While other states and territories operate out of hospital programs, we have located few recent reports or evaluations which quantify effect on costs. A 1999 study in Victoria found that out of hospital care was 38 per cent cheaper than in-hospital episodes.

Melbourne's Alfred Hospital operates an out of hospital program for patients requiring treatment for multiple conditions. It listed significant reductions in admissions, emergency department presentations and bed days, and substantially lower cost compared to in-hospital treatment.

WA's Department of Health collects value for money data on its homebased services for people with medical conditions. However, comprehensive value for money analysis has yet to be reported as the services are still relatively new.

### Rehabilitation for Chronic Disease

NSW Health's 2003 evaluation of its chronic care achievements between January 2001 and September 2002 calculated that they represented \$10.4 million in financial benefits, almost all due to reducing the length of time that patients needed to stay in hospital.

Several studies have documented the advantages of local CAPAC initiatives.

#### **CAPAC**

The Macarthur Ambulatory Care Service provides multidisciplinary care for patients in their homes or other community locations. A published study determined that out of hospital treatment was less costly than equivalent episodes of inpatient care for selected diagnoses. Costs were 63 per cent lower for some medical conditions when compared with hospital treatment.

Another trial at Prince of Wales Hospital of 100 patients with acute medical conditions showed healthcare in the home costs less than half that of hospital treatment with no significant difference in clinical outcomes and comparable or better user satisfaction.

#### ComPacks

The 2004 evaluation of ComPacks showed a reduction of 787 days of hospital care for the sample of 47 patients, equivalent to over \$250,000 in costs. Health claims that ComPacks is more than 90 per cent cheaper than hospital care.

#### Healthy at Home

The evaluation of Healthy at Home did not show the impact of the pilots on costs.

Healthy at Home is not ready for statewide use The 2007-08 budget commits significant expenditure to Healthy at Home: \$18 million over four years from 2007-08 to assist the elderly stay out of hospital. However, we are concerned that its impact on emergency department attendances and on costs have not been demonstrated clearly enough to justify its rollout to other AHSs.

#### Recommendation

The Healthy at Home pilots should be continued until they more clearly demonstrate that the program can attract and manage the number of patients expected and that it actually reduces emergency department attendances and hospital admissions of the elderly.

Estimated impact on the health system

Based on data provided by NSW Health we have estimated the impact that its out of hospital programs are currently making on the health system.

Exhibit 13: Estimated impact of out of hospital programs				
	Patients 2007-08	Estimated in-hospital cost	Estimated program cost	Approximate admissions saved
CAPAC	17,000	\$43M	\$14M	1.1%
Rehabilitation for Chronic Disease	17,300	\$21M	\$14M	1.2%
ComPacks	10,500	\$35M	\$15M	0.7%
Total	44,800	\$99M	\$43M	3.0%

Source: NSW Health

We estimate that these out of hospital programs free up around 500 beds, equivalent to two per cent of all beds in NSW public hospitals.

However, these estimates are based on small samples of data which may not be representative. CAPAC costs in particular are based on experience with patients treated for a small range of clinical conditions, whereas most CAPAC services are now treating a more diverse range of conditions. Although the program treats patients with many conditions, the Rehabilitation for Chronic Disease data represent only those with cardiac and respiratory conditions. ComPacks data are based on an evaluation published in 2004.

Area for improvement in ComPacks

The fee paid to ComPacks service providers is the same, no matter what the patient's condition, what services are delivered, or whether the patient lives in a metropolitan area or in a rural or remote one. So there are no means of ensuring that all ComPacks services represent good value for money.

#### Recommendation

NSW Health needs to ensure that it has systems to monitor the number of patients being treated in out of hospital programs and the cost of providing this care.

3.	Will NSW Health's out of hospital approach
	help achieve State Plan targets?

### At a glance

### The key question we wanted to answer was:

Will NSW Health's out of hospital approach help achieve State Plan targets?

#### Our overall assessment:

No: NSW Health needs to demonstrate that expanding its out of hospital initiatives is one of the practical alternatives to help meet growing demand. It needs to identify the number of patients who can potentially be treated out of hospital, and plan for securing the necessary resources and implementing significant changes.

In particular, it needs to ensure that the public - potential patients of out of hospital programs and their carers - are adequately informed of the programs so that they will confidently choose them. And health professionals need to be included in planning to ensure their support and cooperation.

It also needs to more clearly show the contribution of out of hospital programs to progress against State Plan targets.

### 3.1 The NSW State Plan

### The NSW State Plan

The November 2006 State Plan includes two priorities directly relevant to this audit:

- S1: improved access to quality health care
- F5: reduced avoidable hospital admissions.

Health care can be delivered in hospitals, community health centres or at home. If the care can be safely delivered at home without compromising patient health, this should also mean that fewer people will be admitted to hospital unnecessarily.

State Plan targets for access to quality health care The State Plan S1 priority has targets for:

- access to Emergency Departments
- access to elective surgery
- quality of health care.

State Plan targets for Emergency Department access The State Plan has target times within which patients in Emergency Departments must be seen by a doctor or nurse. The target time for commencing treatment varies with the urgency of the patient's need.

NSW Health is achieving most of these targets

The State Plan aimed to achieve all emergency access targets by 2008 and maintain them to 2016 in the face of increasing demand. Most patients were seen in emergency departments more quickly in 2008 than two years ago, but one of the five targets has not yet been achieved.

The latest national data show that the percentage of emergency department patients seen on time in NSW has improved over the last five years. More patients are seen on time in NSW emergency departments than any other state or territory.

## Targets for elective surgery

The targets for access to elective surgery specify the maximum time patients should expect to wait. These vary according to a clinical assessment of the urgency with which a patient requires surgery.

# NSW Health has not achieved these targets

While the percentage of elective surgery patients seen on time has improved markedly over the last two years, NSW Health has not yet achieved the State Plan targets.

However, national reports on elective surgery show that NSW patients are more likely to receive surgery within target times than in any other state.

# State Plan targets for quality of health care

The State Plan target for quality health care is to:

- develop a robust measure of quality over five years
- continue to reduce sentinel events (system failures which can lead to serious harm).

# No measures of quality for out of hospital programs

As noted in chapter 2.1, few out of hospital services monitor any measures of quality of care, and NSW Health has not developed benchmarks for satisfactory or unsatisfactory performance. Few also report client satisfaction.

### Recommendation

NSW Health needs to establish quality indicators to ensure that out of hospital care is safe, appropriate and reliable.

# State Plan targets for avoidable hospital admissions

The State Plan F5 target is to reduce by 15 per cent over five years hospital admissions for people who should not need to come to hospital. While there are many conditions that can be appropriately treated in the home, only eight specific conditions are measured for this target.

The target for Aboriginal people is to reduce their rate of avoidable hospital admissions by 15 per cent.

The State Plan website refers to the success of some of NSW Health's out of hospital programs in reducing the number of days that patients stay in hospital. It also includes plans to implement more CAPAC services.

## Baseline and targets are not transparent

NSW Health's funding agreements with each AHS include the maximum number of avoidable admissions to be achieved, but this information is not public. The State Plan does not include the number of avoidable admissions that needs to be achieved, so the public is not able to gauge whether or not NSW Health is making progress towards the avoidable admissions target.

The State Plan does not include the number of avoidable admissions of Aboriginal people that needs to be achieved or any deadline by which the reduction is to be achieved.

### Trends over time

The State Plan website reports the number of avoidable hospital admissions for all persons and for Aboriginal people since January 2006. Our analysis suggests that little progress against the target has been achieved, with negligible change in admissions in the last two years.

The State Plan website significantly lags NSW Health's avoidable admissions data collections. The website for Priority S1 was updated in May 2008 and contains data up to March 2008. However, the website for F5 Avoidable Admissions was updated in August 2008 and includes data only to December 2007.

### Recommendation

NSW Health should publicly report how out of hospital programs contribute to State Plan results, ensuring that avoidable admissions data reported on the State Plan website accurately reflect progress.

# 3.2 Has NSW Health identified where out of hospital facilities need to be located?

### Our assessment

No: NSW Health has not estimated the number of patients who could be cared for in out of hospital programs or where they are located.

# NSW Health is still developing reporting

NSW Health has implemented arrangements for AHSs to report the number of CAPAC, Rehabilitation for Chronic Disease and Healthy at Home patients. While most AHSs are complying, some are not yet able to report all services offered. Community Options routinely reports the number of ComPacks patients to NSW Health.

NSW Health aims in the longer term to provide rehabilitation assistance to 60 per cent of people with chronic disease. In 2007-08, it treated around 17,000 patients or approximately eight per cent of eligible patients.

However, it has no reliable estimates of the number of patients which could potentially be treated in its CAPAC or ComPacks programs.

In 2007-08, the Healthy at Home pilots had a target of 195 referrals per month but actually received 110 per month. The evaluation of Healthy at Home showed that it has received around 55 per cent of its target number of referrals since March 2006.

# Out of hospital service provision in other states

WA Health has estimated that no more than 10 per cent of patients needing hospital care would be suitable candidates for its Hospital in the Home program. This program most closely corresponds with NSW Health's CAPAC. As CAPAC is currently providing care for around one per cent of admissions, the WA experience suggests that the number of suitable patients is several times this.

Victoria's Hospital in the Home program does not exactly correspond with NSW Health's programs. However, we estimate that it is providing care for at least three times as many patients as the NSW CAPAC program.

## No NSW Health data in national reports

NSW and Tasmania are the only states which do not report out of hospital programs' statistics for the State of our Hospitals report.

### Recommendation

NSW Health needs to ensure that it has systems to monitor the number of patients being treated in out of hospital programs.

NSW Health needs to determine the number and location of potential patients that can be treated in out of hospital programs.

# 3.3 Has NSW Health identified the resources required to meet demand for out of hospital treatment?

#### Our assessment

No: we have seen no evidence that NSW Health has identified the resources which will be required to support out of hospital programs in future.

## Challenges in providing resources

NSW Health has several significant challenges in resourcing out of hospital care.

If enhancements to NSW Health's IT systems are required to deliver out of hospital care in future then NSW Health will have to allow for the significant resources and time in its plans.

## Staffing of out of hospital facilities

Expansion of out of hospital care will require additional staff such as doctors, nurses, physiotherapists and other medical professionals. However, there are well-publicised shortages of many health workers:

The rising demand for nurses and the imminent retirement of many existing nurses has led to projections of a national shortage of 40,000 nurses by 2010.

Staff for out of hospital services in rural locations may be more difficult to recruit. NSW Health's Area of Need program is a short-term strategy to assist in provision of clinical services while efforts continue to recruit permanent medical staff. The current Area of Need Vacancy List shows almost four times as many vacancies in rural AHSs as in metropolitan ones, suggesting a greater shortage in rural areas.

### Working with key health providers

GPs and other community health organisations and workers are key providers of effective out of hospital care. NSW Health must strengthen networks with these professionals to ensure that patient care is well coordinated.

## Good practice in involving GPs

The CAPAC program run by North Sydney Central Coast AHS has identified the crucial role played by GPs in setting up and running a successful program:

The GP and the CAPAC team work together to manage the patient in the community. The GP's role is to establish the clinical diagnosis, prescribe and administer the first dose of treatment. The CAPAC team under the ongoing clinical management of the GP continue the care.

This CAPAC's management attributes its success in building strong relationships with GPs:

The Central Coast Division of General Practice employed a Project Officer with a working knowledge of the operational function of CAPAC. The purpose of this role was to act as a conduit between the AHS and GPs and to provide guidance during the implementation of the shared care program within GP practices.

# Electronic information systems

At present, NSW Health has no information about the assistance patients receive from community-based services or GPs. Patient information needs to be shared among health professionals to ensure coordination and timeliness of appropriate care and to reduce duplication and significant conflicts in treatment plans.

NSW Health's Community Health Information Management Enterprise (CHIME) system is intended to share patient information electronically between health professionals. However, the evaluation of the Healthy at Home pilots referred to difficulties with CHIME's 'slow and cumbersome processes'.

# Informing the public about out of hospital care

NSW Health has only a small amount of information available to the public on how out of hospital programs work and for whom they are suitable.

Hospital staff will have a key role in informing and reassuring patients, and the support of patients' GPs will be crucial. Information provided to patients in brochures and on websites will probably be less helpful than advice and assistance from well-informed and motivated health professionals in ensuring acceptance of increased use of out of hospital care.

## Change management

AHSs will require time to build capacity of their out of hospital programs. They will need to:

- procure equipment such as vehicles and IT enhancements for information sharing and communication
- recruit sufficient clinical and non-clinical staff
- develop networks with other health providers in the community, and particularly with GPs, so they consider the alternatives to hospitalisation for health care.

### Recommendations

NSW Health needs to identify the resources - people, systems and funding - required to achieve the increased out of hospital capacity.

NSW Health should prepare the community for the change that more extensive use of out of hospital services will mean for them and their carers.

NSW Health needs to ensure that health professionals are informed of how out of hospital care will affect them and their patients.

# Advantages of more centralised management

At present, knowledge and information on out of hospital programs is held by different parts of NSW Health. The audit team needed to obtain material for this audit from various sources within NSW Health. We are concerned that this may impede the efficient and timely implementation of increased out of hospital capacity, as aimed for in the State Plan.

Drawing together all those responsible for different aspects of the out of hospital programs into one central unit within NSW Health appears to offer advantages in monitoring their current performance, evaluating their potential for further expansion, establishing best practice models and coordinating the resources required. Such a unit would provide support for AHSs in developing their out of hospital capacity, but AHSs would assume full responsibility for their ongoing operations.

In the longer term the funding, performance targets and reporting of out of hospital programs would be specified in AHS funding agreements with NSW Health.

#### Recommendation

NSW Health should establish an interim team to plan the expansion of out of hospital programs, coordinate it with existing AHS responsibilities, and monitor progress of implementation.

# 3.4 Has NSW Health identified the funding required for its out of hospital strategy?

### Our assessment

No: we note that NSW Health is developing a proposal to show by how much out of hospital capacity should be expanded, what this would cost, how it would be funded, and what impact it would have on health system performance. However, this document is currently Cabinet in Confidence.

### Out of hospital costs can be lower

As noted in chapter 2.3 audit estimates show that NSW Health's out of hospital programs are lower cost than treatment in hospital. However, these estimates are based on data which may not reflect current operations of the programs.

Chapter 2 provides international and Australian evidence that out of hospital programs can help alleviate the burden on hospitals by reducing the number of times that patients need to attend hospital or the time that they need to occupy beds. They appear to offer a viable alternative to increasing bed numbers. As noted in chapter 1, NSW Health estimates that at least 300 new beds per annum will otherwise be required to keep pace with demand.

## Planning for change and improvement

NSW Health has recently developed a number of business cases to demonstrate the need for change to the health system, the funding required and the planned benefits.

NSW Health's *Aged and Chronic Care Winter 2008 Plan* is an internal NSW Health plan for improving access to hospitals. It includes quantified goals for:

- reducing emergency department attendances by aged and chronic patients
- reducing emergency department workload
- reducing acute inpatient bed days for aged and chronic patients.

This plan includes recommended increases in capacity, the impact on access to the hospital system this would achieve, a timetable for implementing the increased capacity and how progress will be measured and reported. However, it does not include funding requirements.

NSW Health's 2005 *Clinical Services Redesign Program Business Case* drove changes to which NSW Health attributes improved emergency department and elective surgery access. It included:

- a risk/benefit evaluation (financial and non-financial) of alternatives
- an implementation plan, including change management plan for staff and stakeholders
- planned outcomes (qualitative and quantitative) and targets
- an analysis of project risks
- the process for monitoring progress and post-implementation evaluations
- relationships with Government priorities.

This business case included projected funding requirements and evaluated the financial benefit of the proposal over a ten year period.

Need for a strong business case for additional financial support We consider that both the above examples are very sound models for NSW Health to demonstrate in the longer term what increased out of hospital capacity can achieve and what will be required. Any proposal by NSW Health to expand out of hospital capacity should incorporate the best elements of these earlier plans.

### Recommendations

NSW Health's proposal needs to:

- confirm that increased out of hospital capacity is a realistic economic alternative to treating patients in hospital
- demonstrate the impact that the change will have on emergency department attendances and inpatient beds
- set targets for out of hospital performance and ensure appropriate monitoring, evaluation and public reporting.

<b>Appendice</b>	es
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### Appendix 1 About the audit

### Audit objective

The objective of this performance audit was to assess whether NSW Health's out of hospital programs provided effective alternatives to treatment in hospital.

### Lines of inquiry

In reaching our opinion against the audit objective, we sought to answer the following questions:

- 1. does NSW Health have an effective approach to out of hospital care?
- 2. will NSW Health's out of hospital approach help achieve State Plan targets?

#### Audit criteria

In answering the lines of inquiry, we used the following audit criteria (the 'what should be') to judge performance. We based these standards on our research of current thinking and guidance on better practice. They have been discussed, and wherever possible, agreed with those we are auditing.

For line of inquiry 1, we assessed the extent to which a sample of four out of hospital programs:

- out-of-hospital programs provide good outcomes for patients and their carers
- out-of-hospital programs cost less than treatment in hospital.

For line of inquiry 2, we assessed the extent to which NSW Health has:

- identified where out-of-hospital facilities need to be located
- identified the resources required to meet demand for out-of-hospital treatment
- identified the funding required for its out-of-hospital strategy.

## Audit focus and scope

This audit assessed four out of hospital care programs funded by NSW Health:

- Community Acute/Post Acute Care (CAPAC)
- Rehabilitation for Chronic Disease
- ComPacks
- Healthy at Home.

NSW Health and other government and non-government organisations provide a range of out of hospital activities and services at homes, in the community or clinically based. We restricted the assessment to these four key programs that are funded by NSW Health.

### Audit approach

We acquired subject matter expertise by:

- interviewing officers from NSW Health
- interviewing community service providers across the state who provide these services
- configuring data provided by NSW Health
- assessing information and reports provided by consultants, researchers and NSW Health
- examining policy and models of care for the programs issued to and by Area Health Services
- researching overseas and interstate activities, reports and research papers.

#### **Audit selection**

We use a strategic approach to selecting performance audits which balances our performance audit program to reflect issues of interest to Parliament and the community. Details of our approach to selecting topics and our forward program are available on our website.

### Audit methodology

Our performance audit methodology is designed to satisfy Australian Audit Standards AUS 806 and 808 on performance auditing, and to reflect current thinking on performance auditing practices. We produce our audits under a quality management system certified to International Standard ISO 9001. Our processes have also been designed to comply with the auditing requirements specified in the *Public Finance and Audit Act 1983*.

### **Acknowledgements**

The Audit Office gratefully acknowledges the cooperation and assistance provided by representatives of NSW Health. In particular, we'd like to thank our liaison officers Dr Tony O'Connell, Dan Comerford, Claire Gardiner and all NSW Health and hospital staff who participated in interviews or provided other material relevant to the audit.

We would also like to thank the service providers of the out of hospital programs across the state who gave their time to be interviewed and provided informative documentation.

### Audit team

This performance audit was completed by Geoff Moran, Rod Plant and Sandra Tomasi. Sean Crumlin provided direction and quality assurance.

### Audit cost

Including staff costs, printing costs and overheads, the estimated cost of the audit is \$416,189.

Appendix 2	Glossary		
Acute condition or acute illness	Serious but short term medical problem with rapid onset and severe symptoms but brief duration.		
Area Health Service (AHS)	There are eight Area Health Services in NSW. They are subject to the control and direction of the Director-General of NSW Health and are responsible for the planning, delivery and coordination of health services in the areas they cover.		
Avoidable hospital admissions	Unnecessary hospital admissions for patients with low complexity, low acuity type medical conditions.		
Bed days	Measure of the time that inpatient beds are occupied.		
CAPAC (Community Acute/Post Acute Care) program	Provides multidisciplinary clinical care to people in the community so the can manage their condition at home and prevent deterioration. It als provides clinical care to patients who have had an operation and can be discharged early to recover at home rather than in hospital. It is generall only for the short term (5-14 days).		
Care Plan	A written multidisciplinary plan of management in the community for patients with at least one complex medical condition that has been present for at least six months, or is thought to be terminal.		
Case manager	Coordinates the collaborative process of assessment, planning, facilitation and contracting of available resources and services to meet an individual's health needs to promote quality cost effective outcomes.		
	Consults carers and key service providers in developing a plan and monitors for effective, quality and financially accountable service provision based on specified and desired outcomes.		
Chronic disease or chronic condition	Ongoing medical conditions or illnesses of long duration, with very slow changes in the patient's condition, for example diabetes, cardiovascular disease, asthma, arthritis and mental health problems.		
Community health services	A range of community based prevention, early intervention, assessment, treatment and continuing care services delivered by a variety of providers.		
Community Options	A not-for-profit organisation which provides community care services for frail older people, people with disabilities and their carers. Responsible for delivering ComPacks.		
ComPacks	Non-clinical support, such as assistance in cleaning, personal care, food preparation or home modifications, to assist people to return home safely from hospital. The focus is on maximising patient independence in line with their preferences and goals. A package of services for a maximum of six weeks, delivered by Community Options and funded by NSW Health.		
Elective surgery	Surgery which, although deemed necessary by the treating clinician, can be delayed, in their opinion, for at least 24 hours.		

Healthy at Home

This program includes a Referral Information Centre staffed by nurses and other clinicians who provide a telephone referral service. GPs, aged care assessment teams, community services workers and ambulance officers can refer patients, seven days a week, to a team for clinical assessment. Currently being piloted in four AHSs.

Hospital in the Home Provides ongoing care and support that enables a person to leave hospital and return home, and reduce the length of hospital stay. The 2008-09 State Budget refers to CAPAC as Hospital in the Home.

Inpatients

Patients who are admitted to a hospital or health service facility for same day or overnight treatment.

Model of Care

A model of continuum of care for a patient focused on care delivery practices and care organisation practices, highlighting best practices.

Multidisciplinary health care

A team approach to health care by multiple medical and allied health disciplines. Multidisciplinary care includes the liaison and cooperation of all members of the team together and with the patient to diagnose, treat and manage to the highest standard of care.

**NSW Health** 

Includes both the NSW Department of Health and the eight Area Health Services. The Department is responsible for providing advice to government, strategic planning and policy development, performance management and strategic financial and asset management.

NSW State Health Plan Sets out a vision for the NSW health system for 2010. It does not include any specific comments on out of hospital programs.

**NSW State Plan** 

Sets out the NSW Government's goals. States the priorities on which the Government will focus its efforts for improvement, but does not cover everything the State Government does. It sets targets for improved outcomes and service delivery to which the community can hold the Government accountable.

Primary health care and services

Accessible, generalist services (e.g. GP, community nursing services) that address the health needs of individuals, families and communities across the life cycle. Includes early intervention, health promotion, treatment, rehabilitation and ongoing care. For most people, these are the first point of contact with the health care system.

Rehabilitation for chronic disease

A service to help patients self-manage their condition and improve their quality of life and their family's. It can assist them in avoiding unnecessary hospital presentations and admissions.

Unplanned/ unexpected readmissions Patients unexpectedly readmitted to hospital for further treatment of the same or a related condition.

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### Performance Auditing

### What are performance audits?

Performance audits determine whether an agency is carrying out its activities effectively, and doing so economically and efficiently and in compliance with all relevant laws.

Performance audits may review a government program, all or part of a government agency or consider particular issues which affect the whole public sector.

Where appropriate, performance audits make recommendations for improvements.

If you wish to find out what performance audits are currently in progress, visit our website at www.audit.nsw.gov.au.

### Why do we conduct performance audits?

Performance audits provide independent assurance to Parliament and the public that government funds are being spent efficiently and effectively, and in accordance with the law.

Performance audits seek to improve the efficiency and effectiveness of government agencies so that the community receives value for money from government services.

Performance audits also assist the accountability process by holding managers to account for agency performance.

### What are the phases in performance auditing?

Performance audits have three key phases: planning, fieldwork and report writing.

During the planning phase, the audit team will develop audit criteria and define the audit field work.

At the completion of field work we will meet with agency management to discuss all significant matters arising out of the audit. Following this, we will prepare a draft performance audit report.

We meet with agency management to check that facts presented in the report are accurate and that recommendations are practical and appropriate. Following this, a formal draft report is provided to the CEO for comment. The relevant Minister is also provided with a

copy of the final report. The final report, which is tabled in Parliament, includes any comment made by the CEO on the conclusion and the recommendations of the audit.

Depending on the scope, performance audits can take several months to complete.

Copies of our performance audit reports can be obtained from our website or by contacting our Office.

### How do we measure an agency's performance?

During the planning phase, the team develops the audit criteria. These are standards of performance against which the agency or program is assessed. Criteria may be based on best practice, government targets, benchmarks, or published guidelines.

### Do we check to see if recommendations have been implemented?

Every few years we conduct a follow-up audit. These follow-up audits look at the extent to which action has been taken to address issues or recommendations agreed to in an earlier performance audit.

The Public Accounts Committee (PAC) may also conduct reviews or hold inquiries into matters raised in performance audit reports. Agencies are also requested to report actions taken against each recommendation in their annual report.

### Who audits the auditors?

Our performance audits are subject to internal and external quality reviews against relevant Australian and international standards. This includes ongoing independent certification of our ISO 9001 quality management system.

The PAC is also responsible for overseeing the activities of the Audit Office and conducts a review of our operations every three years.

### Who pays for performance audits?

No fee is charged for performance audits. Our performance audit services are funded by the NSW Parliament and from internal sources.

### Further information

Further information can be obtained from our website <a href="www.audit.nsw.gov.au">www.audit.nsw.gov.au</a> or by contacting us on 9275 7277.

### **Performance Audit Reports**

No	Agency or Issues Examined	Title of Performance Audit Report or Publication	Date Tabled in Parliament or Published
182	Department of Health	Delivering Health Care out of Hospitals	September 2008
181	Department of Environment and Climate Change	Recycling and Reuse of Waste in the NSW Public Sector	11 June 2008
180	Follow-up of 2003 Performance Audit	Protecting Our Rivers	21 May 2008
179	NSW Office of Liquor, Gaming and Racing; NSW Police Force	Working with Hotels and Clubs to reduce alcohol-related crime	23 April 2008
178	Greyhound and Harness Racing Regulatory Authority	Managing the Amalgamation of the Greyhound and Harness Racing Regulatory Authority	3 April 2008
177	Office of the Director of Public Prosecutions	Efficiency of the Office of the Director of Public Prosecutions	26 March 2008
176*	Better Practice Guide	Implementing Successful Amalgamations	5 March 2008
175	Department of Commerce Department of Primary Industries	Managing Departmental Amalgamations	5 March 2008
174	Department of Education and Training	Ageing workforce - Teachers	13 February 2008
173	NSW Police Force	Police Rostering	5 December 2007
172	Department of Primary Industries	Improving Efficiency of Irrigation Water Use on Farms	21 November 2007
171	Department of Premier and Cabinet Department of Commerce	Government Advertising	29 August 2007
170	RailCorp	Signal Failures on the Metropolitan Rail Network	15 August 2007
169	NSW Police Force	Dealing with Household Burglaries	27 June 2007
168	Ministry of Transport	Connecting with Public Transport	6 June 2007
167	Follow-up of 2001 Performance Audit: Ambulance Service of New South Wales	Readiness to Respond	6 June 2007
166	Follow-up of Performance Audit Department of Education and Training	Using Computers in Schools for Teaching and Learning	9 May 2007
165	Homelessness	Responding to Homelessness	2 May 2007
164	Department of Juvenile Justice NSW Police Force	Addressing the Needs of Young Offenders	28 March 2007
163	Legal Aid Commission of NSW	Distributing Legal Aid in New South Wales	13 December 2006
162	NSW Health	Attracting, Retaining and Managing Nurses in Hospitals	12 December 2006
161	Follow-up of 2003 Performance Audit	The Police Assistance Line	6 December 2006

No	Agency or Issues Examined	Title of Performance Audit Report or Publication	Date Tabled in Parliament or Published
160	NSW Health	Helping Older People Access a Residential Aged Care Facility	5 December 2006
159	NSW Health	Major Infectious Disease Outbreaks: Readiness to Respond	22 November 2006
158	Department of Education and Training	Educating Primary School Students with Disabilities	6 September 2006
157	Roads and Traffic Authority	Condition of State Roads	16 August 2006
156*	Fraud Control	Fraud Control Improvement Kit: Meeting Your Fraud Control Obligations	20 July 2006
155	Follow-up of 2002 Performance Audit	Regulating the Clearing of Native Vegetation	19 July 2006
154	Follow-up of 2002 Performance Audit	Managing Sick Leave in NSW Police and the Department of Corrective Services	June 2006
153	Performance Information	Agency Use of Performance Information to Manage Services	21 June 2006
152	Roads and Traffic Authority	The Cross City Tunnel Project	31 May 2006
151	Department of Corrective Services	Prisoner Rehabilitation	24 May 2006
150	Follow-up of 2000 Performance Audit	Fare Evasion on Public Transport	26 April 2006
149	Agency Collaboration	Agencies Working Together to Improve Services	22 March 2006
148	Department of Education and Training	The New Schools Privately Financed Project	8 March 2006
147	Premier's Department	Relocating Agencies to Regional Areas	14 December 2005
146	Bus Transitways	Liverpool to Parramatta Bus Transitway	5 December 2005
145	Follow-up of 2002 Performance Audit	Purchasing Hospital Supplies	23 November 2005
144	NSW Treasury	Oversight of State Owned Electricity Corporations	19 October 2005
143	Asset Management	Implementing Asset Management Reforms	12 October 2005
142	Department of Juvenile Justice	Managing and Measuring Success	14 September 2005
141	State Budget	In-year Monitoring of the State Budget	28 July 2005
140	State Rescue Board of New South Wales	Coordination of Rescue Services	20 July 2005

<sup>\*</sup> Better Practice Guides

### Performance audits on our website

A list of performance audits tabled or published since March 1997, as well as those currently in progress, can be found on our website <a href="https://www.audit.nsw.gov.au">www.audit.nsw.gov.au</a>.

If you have any problems accessing these reports, or are seeking older reports, please contact our Office Services Manager on (02) 9275 7116.