

Stroke Nurse Practitioner  
Model Development Report  
The Alfred

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Victorian Nurse Practitioner Project  
Phase 4 Round 4.2

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## ABBREVIATIONS

ASUN	Australian Stroke Unit Network
ANPA	Australian Nurse Practitioner Association
ANMC	Australian Nursing and Midwifery Council
ANPA	Australian Nurse Practitioners Association
ATS	Australasian Triage Scale
CPG	Clinical practice guidelines
CTA	Computed Tomography Angiogram
CT	Computed Tomography
DVT	Deep vein thrombosis
ED	Emergency Department
ESC	European Stroke Council
GP	General Practitioner
MRA	magnetic resonance angiography
MRI	magnetic resonance imaging
mRS	modified Rankin Score
NIHSS	National Institutes of Health Stroke Scale
NBV	Nurses Board of Victoria
NP	Nurse Practitioner
NPB	Nurse Policy Branch
NPC	Nurse Practitioner Candidate
NSF	National Stroke Foundation
SCSV	Stroke Care Strategy for Victoria
SITS	Safe Implementation of Thrombolysis in Stroke
SNP	Stroke Nurse Practitioner
SNPC	Stroke Nurse Practitioner candidate
SPC	Stroke Prevention Clinic
TIA	Transient ischaemic attack
tPA	tissue plasminogen activator
PBS	Pharmaceutical Benefits Scheme
VAED	Victorian Admitted Episodes Dataset
VNPP	Victorian Nurse Practitioner Project
VSNPC	Victorian Stroke Nurse Practitioner Collaborative
VSCN	Victorian Stroke Clinical Network

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## EXECUTIVE SUMMARY

Stroke, along with heart and vascular diseases, are Australia's largest health problem. Stroke is the second leading cause of death in females and the third leading cause of death in males. The number of strokes will increase each year due to the ageing population and in the next ten years, more than half a million people will suffer stroke. The forecasts for stroke service demands across the State of Victoria are estimated to increase by 2.7 per cent per annum. Each year there are between 600-700 people presenting to The Alfred with stroke and transient ischaemic attacks (TIAs) symptoms. Consistent with this, local projections forecast a 25% increase in acute admissions for stroke at The Alfred over the next 10 years.

There is strong evidence that patient outcomes following stroke/TIA are significantly improved when signs and symptoms of stroke/TIA are recognised early and prompt treatment is provided. Over 80% of all stroke presentations are for thrombotic or embolic stroke and the therapeutic time window is limited to 4.5 hours from the onset of symptoms to treatment with thrombolytic agents. For patients presenting with TIA symptoms, early risk factor management and follow up is essential due to the increased risk of stroke of up to 10% within one week.

In 2007, the National Stroke Audit revealed that although 42% of patients in category A (or Level 4) hospitals arrived within 3 hours of onset of stroke symptoms, only 6% received thrombolysis therapy. This data suggests that barriers to this treatment are not just those associated with delay in presentation, but also factors associated with prompt assessment and intervention once the patient has arrived in the Emergency Department.

National guidelines and the Victorian Stroke Care Strategy emphasises the time-critical nature of management of acute stroke and recommends:

- promoting early recognition of stroke/TIA symptoms by the general public (the FAST Campaign)
- early transfer via ambulance to a health care facility able to provide acute stroke care
- treating acute stroke as a medical emergency – rapid assessment, investigation and diagnosis
- early intervention for ischaemic stroke with thrombolytic therapy, anticoagulation therapy or interventional radiology in experienced health facilities
- the initiation of investigations for TIA in the emergency department and instigation of pharmacological agents to treat known risk factors for stroke, and
- early follow up of TIA patients in a Stroke Prevention Clinic within **14** days.

While The Alfred is able to provide a comprehensive Level 4 Stroke Service, there are clear gaps in the acute management of stroke/TIAs that relate to the organisations capacity to rapidly triage,

assess and instigate time critical therapies for patients experiencing acute stroke, or follow up patients at high risk of potential stroke within one or two weeks of discharge from ED.

The Nurse Practitioner model offers an opportunity to introduce an advanced nursing role into the Stroke Service at The Alfred, with extensions to nursing practice that would increase the capacity of the Stroke Service to rapidly respond to acute stroke and TIA patients. The primary objectives of the Stroke Nurse Practitioner model are to optimise the management of acute stroke in the ED, decrease transit times through the ED (from ED to ward or ED to home) and ensure timely follow up of high risk TIA patients in a Stroke Prevention Clinic

When fully implemented the proposed SNP model will primarily focus on:

- early assessment and management of acute/TIA stroke patients in the ED including the initiation of relevant investigations, consultation with the stroke registrar and consultant, and discussion with the patient/family regarding the management plan
- facilitating the admission of the patient to the Stroke Unit
- initiation of further investigations or referrals to other clinics or services
- liaison with general practitioners for patients being discharged from the ED;
- follow up of low risk TIAs and minor stroke in the Stroke Prevention clinic
- education and policy development relating to acute management of stroke in ED

Preparation for a SNP candidate (SNPC) role would include academic preparation and workplace training, supervision and mentoring (both clinical and professional) in accordance with the requirements of the NBV and Alfred Health. Academic preparation for a candidate to become an endorsed SNP includes successful completion of an approved Master of Nursing program. Clinical practice for the SNPC would be guided by Clinical Practice Guidelines for ischaemic stroke and TIA and the implementation of the role and assessment of clinical competence would be overseen by a multidisciplinary the SNP Steering Committee.

The assessment, investigations and management of patients with acute stroke and TIA are protocol driven and can readily be performed by an experienced stroke nurse. The SNP model offers a means to increase the capacity of the Stroke Service to meet project future workload demands and enable skilled and experienced stroke nurses to exercise their clinical potential.

Further development activities for the SNP model are contingent on funding for the SNPC position. Milestone for the next six months include: completion and submission of a business case to support the implementation of the SNP model and enrolment of potential SNPCs in a suitable Masters of Nursing (Nurse Practitioner).

## Section 1 Introduction

In 2008 The Alfred was one of eight Victorian Health Services successful in obtaining funding from the Victorian Nurse Practitioner Project (VNPP) (Department of Human Services, 2008) to examine the opportunities for strategic, sustainable and integrated nurse practitioner service in the provision of stroke care. The purpose of this report is to:

- describe the proposed Stroke Nurse Practitioner (SNP) model and discuss how it will operate in the clinical setting at The Alfred;
- demonstrate how the SNP model will assist in meeting the strategic goals of Alfred Health as well as the recommendations for acute health services as outlined in the Stroke Care Strategy for Victoria (SCSV) (Department of Human Services, 2007a); and
- outline the implementation processes, tools and resources required to implement a SNP model at The Alfred.

Alfred Health (formerly known as Bayside Health) is the main provider of health services to people living in the inner south east suburbs of Melbourne. Alfred Health includes the following health care institutions: The Alfred, a 544 bed major metropolitan tertiary referral health service; Caulfield Hospital, a 348 bed major provider of aged care, rehabilitation, aged psychiatry and residential care; and Sandringham Hospital, a 101 bed community hospital which provides both elective and emergency surgery and general medicine as well as women's health and maternity services. Overall Alfred Health serves a local catchment population of approximately 400,000 and provides services across the continuum of care from ambulatory, to inpatient, home and community based services (Alfred Health, 2008).

The Alfred provides a comprehensive range of specialist acute health and mental health services and is a designated State-wide provider of Heart and Lung replacement and transplantation (including mechanical heart program and Paediatric lung transplantation), Adult Cystic fibrosis, Adult Major Trauma, Adult Burns, HIV/AIDS, Haemophilia, Sexual Health, Hyperbaric Medicine, Psychiatric Intensive Care and Statewide Elective Surgical Services. These services are provided in a range of inpatient and ambulatory settings and in partnership with other community service providers.

Between 2006 and 2011 the resident population of Alfred Health's primary catchment area of inner Melbourne is expected to experience a growth rate of 1.9%. The greatest population change will be in the proportion of people over the age of 60 years (Bayside Health, 2006a). Because older people have an increased burden of disease and use health services at a higher rate than younger people, the ageing population is expected to contribute to an increased demand for health services.

Stroke, along with heart and vascular diseases, are Australia's largest health problem. Stroke is the second leading cause of death in females (10.8% of all female deaths) and it is the third

leading cause of death in males (6.9% of all male deaths) (Australian Institute for Health and Welfare, 2008). Each year there are between 600-700 people presenting to The Alfred with stroke and transient ischaemic attacks (TIAs) symptoms. Local projections forecast a 25% increase in acute admissions for stroke at The Alfred over the next 10 years (see Section 2.2).

There is strong evidence that patient outcomes following stroke/TIA are significantly improved when signs and symptoms of stroke/TIA are recognised early and prompt treatment is provided (National Stroke Foundation, 2007a). Over 80% of all stroke presentations are for thrombotic or embolic stroke. In these instances, thrombolytic therapy should be instigated (where not contraindicated) within **4.5** hours of onset of symptoms (The European Stroke Organisation Executive Committee, 2009). For patients presenting with TIA symptoms, early risk factor management and follow up is essential due to the increased risk of stroke of up to 10% in the first week (Johnston, Gress, Browner, Sidney, 2000; Coull, Lovett, Rothwell, 2004; Johnston, Rothwell, Nguyen-Huynh et al, 2007). In 2007, the National Stroke Audit revealed that although 42% of patients in category A hospitals<sup>1</sup> arrived within 3 hours of onset of stroke symptoms, only 6% received thrombolysis therapy (National Stroke Foundation, 2007b). This data suggests that barriers to this treatment are not just those associated with delay in presentation, but also factors associated with prompt assessment and intervention once the patient has arrived in the Emergency Department.

The Alfred Stroke Service data mirrors the national results and current service gaps will only increase over time given the projected increase in Stroke Service workload. This, in addition to the National health workforce shortages (Productivity Commission, 2005) indicates a clear need to develop an innovative model of care to meet current and future Stroke Service workload demands.

The Nurse Practitioner model offers an opportunity to introduce an advanced nursing role into the Stroke Service, with extensions to nursing practice that would increase the capacity of the Stroke Service to rapidly respond to acute stroke and TIA patients. The extensions to practice would enable the Stroke Nurse Practitioner (SNP) to assess stroke/TIA patients on arrival to the emergency department, order appropriate radiological and other investigations, and prescribe and initiate appropriate drug therapy. The SNP would also be responsible for assisting in rapid transfer and admission of patients to the Stroke Unit or discharge home of many TIA patients with follow up in a Stroke Prevention outpatient clinic. The SNP would be an adjunct to existing roles and would not replace any existing role within the Stroke Service.

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<sup>1</sup> National Stroke Foundation (2007) classification: Category A hospitals are able to offer the following components of care: immediate access to CT, access to a high dependency unit; onsite neurosurgery, geographically located stroke unit (equivalent to Victorian classification for a Level 4 Stroke Unit)

The proposed SNP role meets many of the organisation's strategic goals:

- Optimising management of acute stroke patients across the continuum of care and stroke prevention in high risk TIA patients (Strategic Goal 1.1 Continually improve the quality of clinical care)
- Implementing an innovative model of care to meet the needs of patients with chronic conditions (Strategic Goal 2.1 Be a leader in maximising access to health care services)
- Optimising patient flow for outpatients and the emergency department (Strategic Goal 2.2 Manage capacity to best meet demand for health care services)
- Improving linkages with the patients general practitioner (GP) and other primary care providers to ensure continuity of care (Strategic Goal 2.3 Collaborate with funders and service providers across the continuum to meet the demand)
- Developing and implementing a new workforce model in stroke beyond the traditional roles and boundaries (Strategic Goal 3.2 Develop the expertise of our staff to meet the evolving skill requirements and patient needs) (Bayside Health, 2006a).

## Section 2 Background

### 2.1 History of Nurse Practitioner role within Alfred Health

The Alfred has demonstrated a strong commitment to the role of Nurse practitioners since its initial involvement in the DHS Emergency Department Nurse Practitioner Project in July 2004. Initially two nurses were identified as suitable candidates, with one candidate going on to become the first endorsed Emergency Nurse Practitioner (ENP) in Victoria in June of 2006. The ENP model at The Alfred has been very successful and has grown significantly in a short period of time, resulting in a total of six endorsed nurse practitioners and two candidates (as of December, 2008). Melbourne Sexual Health has one endorsed nurse practitioner and one candidate. A Psychiatry Triage nurse practitioner candidate was appointed late in 2008 and commenced earlier this year (see Table 1).

**Table 1 Alfred Health Nurse Practitioners and Candidates**

<b>Nurse Practitioner Category</b>	<b>Endorsed NPs</b>	<b>NP Candidates</b>
Emergency	6	2
Melbourne Sexual Health	1	1
Psychiatry Triage		1
<b>Total</b>	<b>7</b>	<b>4</b>

In total, The Alfred's endorsed NPs account for approximately 17.5 per cent of all endorsed NPs in the state of Victoria (Nurses Board of Victoria, 2008). This figure will increase as future candidates approach completion of their Master's program and endorsement requirements, and new candidates are employed. The relatively large numbers of NPs and candidates is indicative of the high level of support throughout the organisation for the NP role.

## 2.2 Priming the organisation for the Stroke Nurse Practitioner

In 2006, the Bayside Health Nurse Practitioner Service Plan Development Project (Bayside Health, 2006b) identified a number of potential areas where NP roles would offer significant value to the service model. The Stroke Nurse Practitioner was one of four NP models considered suitable for early development, as the role was conceptualised as an advanced practice role, there was clear evidence that the extensions to practice of the SNP would address a service gap or need, and there was a high level of medical support for the role in the clinical area. The implementation of this role is now identified as a priority in the Medical Specialities Quality Business Improvement Plan 2008/9.

The development of the proposed SNP model has been driven locally by the Head of Stroke Service, Head of Stroke Research and Education, Head of Neurology and the Co Director Medical Specialities (Nursing). Engagement with local stakeholders has ensured widespread support for the role. Consultation with the Emergency Department (ED), Medical Specialities medical, nursing and allied health teams as well as pharmacy, pathology and radiology departments occurred throughout the SNP development phase of the project and was overseen by a Multidisciplinary Steering Committee (see Appendix 1).

## 2.3 Incidence and prevalence of stroke

Up to 48,000 Australians have a stroke each year. One in five people having a “first-ever” stroke die within one month and one in three die within a year. Thirty per cent of people who have a stroke have another stroke within a year (Department of Human Services, 2005a). The number of strokes will increase each year due to the ageing population and in the next ten years, more than half a million people will suffer stroke. The 2001 Victorian Burden of Disease study (Department of Human Services, 2005b) indicates that although the number of deaths from stroke is decreasing, the prevalence of stroke in the community has increased (Table 2). Forecasts for stroke service demands across the State of Victoria are estimated to increase by 2.7 per cent per annum (Department of Human Services, 2005a). This has significant ramifications for the future given an ageing population and the fiscal and social burden of care associated with stroke is significant. The recurrent National health expenditure for stroke is estimated at 2% (AUD \$922million) (Cadilhac, Carter, Thrift, Dewey, 2007).

**Table 2 Stroke incidence, prevalence and deaths: 1996 and 2001  
(Department of Human Services, 2005b)**

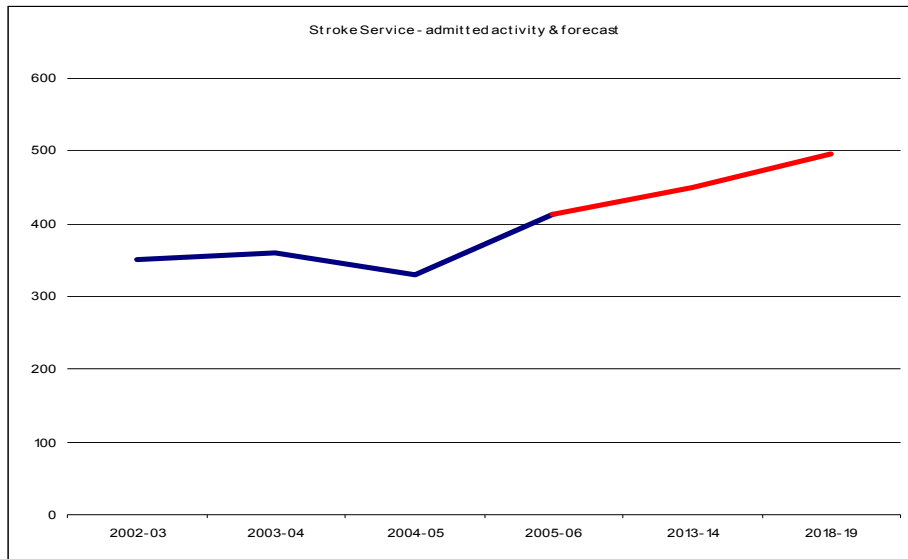
	1996	2001
Deaths	3,136	2,970
Incidence	6,917	6,937
Prevalence	20,084	33,664

## 2.4 Increase in local demands on stroke services

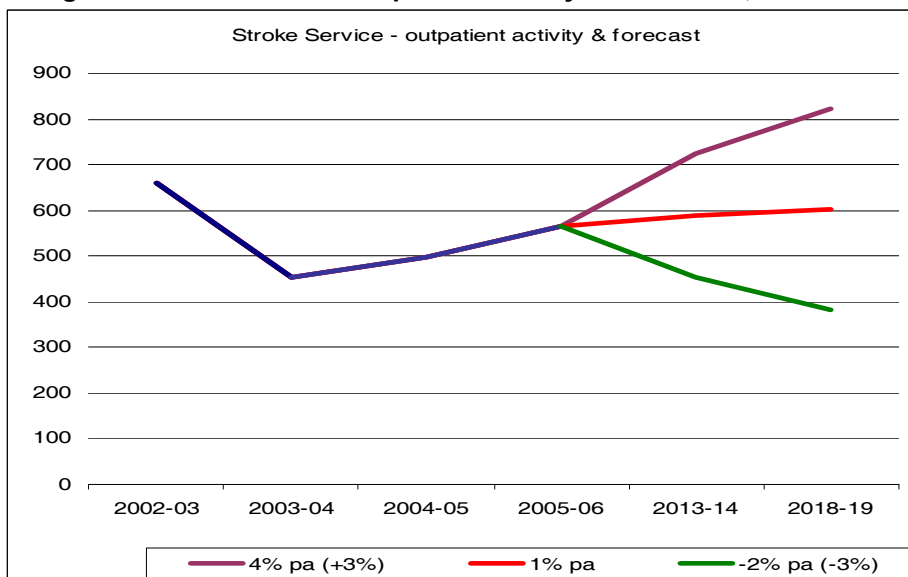
In 2008 projected admissions for The Alfred Stroke Service forecasted a 25% increase in acute admissions for stroke at The Alfred over the next ten years (see Figure 1)<sup>2</sup>. The projections were based on Victorian Admitted Episodes Dataset (VAED) activity for 03/04 – 05/06 and adjusted for key populations demographics for service planning purposes. Not all patients who suffer a stroke or TIA are admitted under the Stroke Service. National data indicates that 82% of patients who suffer a stroke are admitted to a Stroke Unit (National Stroke Foundation, 2007b). These projected figures may underestimate future workload.

The projected service demand for Outpatient Stroke Services at The Alfred is depicted in Figure 2. Outpatient forecast is based on each Unit's outpatient activity trends (public attendances via Cerner Scheduling data) for period 2002/03 - 2005/06, with a confidence range of 3% applied to either side of this forecast.

**Figure 1: Stroke service –admitted activity & forecast, The Alfred**



**Figure 2: Stroke Service outpatient activity and forecast, The Alfred**



<sup>2</sup> The Alfred 2008 Service Plan

## 2.5 Victorian Stroke Care Strategy – management of acute stroke/TIA

A significant amount of work has been conducted in the past ten years in stroke care and stroke prevention that has highlighted the need for a set of priorities to improve outcomes for stroke patients and better harness the efforts and resources of the health services (Australian Stroke Coalition, 2008). In 2007, the Victorian Government published the Stroke Care Strategy for Victoria (SCSV) (Department of Human Services, 2007a). The SCSV provides a framework for how stroke services should be organised to enhance stroke care delivery across the continuum of care. The VSCS is based on the National Stroke Foundation (2007) guidelines and provides 28 recommendations which can be viewed in full at [www.health.vic.gov.au/clinicalnetworks/downloads/stroke\\_care\\_strategy](http://www.health.vic.gov.au/clinicalnetworks/downloads/stroke_care_strategy).

The VSCS emphasises the time-critical nature of management of acute stroke and recommends:

- promoting early recognition of stroke symptoms by the general public (the FAST Campaign)
- early transfer via ambulance to a health care facility able to provide acute stroke care
- treating acute stroke as a medical emergency – rapid assessment, investigation and diagnosis
- early intervention for ischaemic stroke with thrombolytic therapy, anticoagulation therapy or interventional radiology in experienced health facilities.

Thrombolytic therapy has been evaluated in several randomised controlled trials in acute ischaemic stroke. There is strong evidence to suggest that thrombolytic therapy administered within 4.5 hours of onset of symptoms (thrombolysis time window) results in a significant reduction in death or disability (Wardlaw, del Zoppo, Jamaguchi et al, 2003; Hacke, Kaste, Blumki, et al, 2008).

Further recommendations for management of TIA include:

- assessment and investigation in the emergency department
- instigation of pharmacological agents to treat known risk factors for stroke
- early follow up of TIA patients in a Stroke Prevention Clinic within **14** days (Department of Human Services, 2007).

Early initiation of treatment following a TIA may be associated with an 80% reduction in the risk of early recurrent stroke (Rothwell, Giles, Chandratheva et al, 2007). There is strong evidence that almost one third of strokes are potentially preventable through lifestyle changes and management of known risk factors (hypertension, smoking, hyperlipidemia, atrial fibrillation, diabetes, obesity, alcohol abuse etc) (National Stroke Foundation, 2007a).

Perhaps the most important recommendation for acute stroke management is the care of patients within a geographically located stroke unit. There is overwhelming evidence that stroke unit care

significantly reduces death and disability after stroke. In a recent systematic review of stroke care research, twenty-six trials (5592 participants) compared stroke unit care with general ward care. Stroke unit care showed reductions in the odds of death recorded at final (median one year) follow up (odds ratio (OR) 0.86; 95% confidence interval (CI) 0.76 to 0.98); the odds of death or institutionalised care (OR 0.82; 95% CI 0.73 to 0.92) and death or dependency (OR 0.82; 95% CI 0.73 to 0.92) (Stroke Unit Trialists' Collaboration, 2007). The observed advantages of a geographically discrete Stroke unit over general care included:

- comprehensive assessment
- a coordinated interdisciplinary team
- early mobilisation and avoidance of bed rest
- staff who have an special interest in the management of stroke and access to ongoing professional education and training
- clear communication, with regular team meetings to discuss management (including discharge planning)
- active encouragement of people with stroke and their carers to be involved in the rehabilitation process (National Stroke Foundation, 2007a).

### **Section 3 Current Model of Stroke Care**

#### **3.1 The Alfred Stroke Service**

The Stroke Unit at The Alfred opened in 1991 and has functioned as a geographical unit from its inception. The unit is non-selective, accepting all stroke patients referred to the hospital, regardless of age or pre-morbid condition. The Alfred is able to provide all of the services of a level 4 Stroke facility as classified by the SCSV (Department of Human Services, 2007a); this includes:

1. immediate access to CT
2. magnetic resonance imaging (MRI) and magnetic resonance angiography (MRA)
3. interventional radiology for clot retrieval (there are two specialised interventional radiologists who are able to provide this service)
4. large emergency and trauma centre
5. state of the art intensive care facilities
6. neurosurgical services
7. specialist medical services.

The Alfred Health service is also able to streamline referrals to Caulfield Hospital for intensive inpatient neurological rehabilitation, outpatient rehabilitation, Therapy in the Home or to a Transition Care Program.

The Alfred Stroke unit beds are located in a 32 bed mixed specialist medical unit which comprises Renal, Endocrinology, Rheumatology, Infectious Diseases, Neurology and Stroke. At present there are no dedicated stroke beds, but the ward “flexes” to meet demand. Bed numbers for acute stroke

patients vary but the average number is 9.8 on any given day, with 7.76 patients being admitted to the Stroke ward (01/01/08 – 19/12/08). The Alfred does not have an acute stroke high dependency area where patients treated with thrombolysis may be monitored. Thus, patients who receive thrombolysis are cared for in the intensive care unit or remain in the emergency department until they no longer require monitoring.

### **3.2 The stroke service team**

The stroke service consists of a wide range of disciplines including general nursing staff, nurse manager, speech pathologist, occupational therapist, social worker, dietician, physiotherapist, pharmacist, neurosciences care co-ordinator, stroke resident, stroke registrar, and a stroke consultant on ward service.

A weekly multidisciplinary team meeting is held, where the progress and level of functioning of each of the patients admitted under the stroke unit is discussed and ongoing plans of care are formulated and reviewed. Radiological films and investigations are often reviewed at this time for team development and education. A Grand Round is also held weekly, with the entire stroke team visiting all inpatients. The Ground Round also includes roles such as: the rehabilitation assessment nurse, neurological rehabilitation registrar and neurological rehabilitation consultant, the stroke research nurse(s), neuropsychologist, psychiatrist, diabetes educator, wound nurse, stomal therapist, Royal District Nursing Service, Mobile Assessment and Treatment Service and Acute Aged Care (Caulfield Hospital).

Although there is approx 40 EFT of nursing staff on Ward 7 West it is difficult to recruit and retain nurses with expertise and skill in stroke care. There is currently one full time nursing staff member with post graduate qualifications in neurosciences and one staff member who is currently enrolling in a graduate certificate in neurosciences. Within our allied health team there are many permanent senior members of staff in addition to junior allied health members who rotate approximately every three months. There are two specialist stroke consultants who rotate ward service on a monthly basis. In 2009, three neurology registrars will each undertake a four month rotation on the stroke service and the medical residents rotate every 10 weeks. The transient nature of the workforce in a large teaching hospital presents an ongoing challenge for implementing change and ensuring a consistent approach to care in a complex area such as the Stroke Service.

### **3.3 Current management of acute stroke**

The time-critical imperative of treating acute stroke means that patients presenting to the Emergency Department (ED) should be triaged as a medical emergency ie. classified as ATS<sup>3</sup> 1 (seen immediately) or ATS 2 (seen within 10 minutes) but there are currently no protocols for immediate management of stroke and at times patients may be categorised as ATS 3 or lower.

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<sup>3</sup> Australasian Triage Scale

Patients presenting with stroke symptoms are assessed in the department by the Emergency medical staff and further assessment and observation is undertaken by the nursing staff. The stroke registrar is then called, often after a CT Brain (CTB) has been performed, and depending on competing demands (other patients, ward rounds, outpatient clinic responsibilities) they would attend the ED for further assessment of the patient. After confirmation of the diagnosis, discussion with the family and consultant, thrombolysis therapy maybe initiated if treatment is within the thrombolysis time window (National Stroke Foundation, 2007a).

### **3.4 Stroke prevention**

The assessment and treatment of TIA patients in ED is varied, despite evidence of the urgency of intervention in this high risk group (Rothwell et al, 2007; Gerraty, 2006). Not all TIA presentations are referred on to the Stroke Service. Some patients are managed solely in ED without reference to published guidelines, others are incompletely investigated, or not treated, but are referred to the stroke or neurology registrar or the weekly outpatient TIA clinic.

### **3.5 Gaps in current service model**

While The Alfred is able to provide a comprehensive Stroke Service, there are clear gaps in the acute management of stroke/TIAs that relate to the organisations capacity to rapidly triage, assess and instigate time critical therapies for patients experiencing acute stroke, or follow up patients at high risk of potential stroke within one or two weeks of discharge from ED. In the 2007 National Stroke Audit (National Stroke Foundation, 2007), only 2 (18%) Alfred patients eligible for thrombolytic therapy received thrombolysis within the thrombolysis time window.

There is currently no formal organisational agreement with Ambulance Victoria regarding transfers and pre-notification of stroke patient arrivals to the ED. There are also no emergency protocols for rapid assessment using standardised assessment tools or protocols for emergency management of acute stroke or high risk TIA patients.

## **Section 4 Shaping the Service Model**

### **4.1 Stroke nurse practitioner models from overseas**

The role of a stroke nurse practitioner is new to the Australian health care system but it is a role that is well established in North America and the United Kingdom. In London (November 2008) it was announced that as part of the National Health Service *Stroke Strategy for London*, all stroke patients in London will be treated in a 24 hour nurse-led specialist units where they will receive immediate access to a CT scan and “clot – busting” (thrombolytic) drugs within 30 minutes of arrival (National Health Service, 2008).

In a Canadian model (based in Calgary), the SNP model encompasses the acute stage of illness, stroke recovery, prevention and health promotion including risk factor management and secondary

prevention strategies. The SNP initiates the stroke care pathway and collaborates with other healthcare professionals in the delivery of comprehensive care (Donnelly 2003; Green and Newcommon, 2006). The SNP was seen as the major factor in improving stroke care as the role was pivotal in streamlining access to related health services such as diagnostic imaging and laboratory services (Green and Newcommon, 2006).

Where the SNP was been located in the ED and the focus of the role was on rapid triage, assessment and diagnosis of stroke patients. The benefits of the SNP in ED were: 1) improved access to the stroke team via the SNP – who was paged by triage as patients presented to the ED; and 2) improved compliance with stroke protocols with greater visibility of the SNP in the department (Hill et al.; cited in Green and Newcommon, 2006).

## **4.2 The Alfred Proposed SNP Model**

When fully implemented the proposed SNP model will primarily focus on:

- early assessment and management of acute/TIA stroke patients in the ED including the initiation of relevant investigations, consultation with the stroke registrar and consultant, and discussion with the patient/family regarding the management plan
- facilitating the admission of the patient to the Stroke Unit
- initiation of further investigations or referrals to other clinics or services
- liaison with general practitioners for patients being discharged from the ED;
- follow up of low risk TIAs and minor stroke in the Stroke Prevention clinic
- education and policy development relating to acute management of stroke in ED (see Appendix 2: Stroke Nurse Practitioner Project Overview).

The extensions to practice include:

- ordering of investigations eg. bloods and CT brain, Doppler ultrasound
- admission of patients to the Stroke Unit or discharge of patients from ED
- prescription of medications such as thrombolytic therapy; anticoagulation therapy

### **4.2.1 Target population**

The target population for the SNP would be all patients presenting to ED with suspected stroke or TIA.

Exclusion criteria for the SNP would be:

- patients under the age 18
- patients with seizure activity
- patients with a Glasgow Coma Scale score < 9
- patients with a systolic blood pressure < 100 mmHg
- patients with a compromised airway

- septic patients or those with multiple medical issues.

*In these circumstances the SNP will work collaboratively with the emergency medical and nursing staff who will remain responsible for care/management decisions.*

#### **4.2.2 SNP emergency management of stroke**

The SNP will be the first point of contact for ED staff for the emergency management of stroke patients. The SNP will be informed of potential stroke and TIA cases on arrival by the triage nurse or pre-arrival if the patient is transported by ambulance. The ED staff will triage stroke /TIA presentations.

The SNP would ensure early assessment using the National Institute of Health Stroke Scale (NIHSS), modified Rankin Score (mRS) and other neurological assessments. The examination findings would be discussed with the stroke registrar or consultant. The SNP would order all radiology, pathology and any other required investigations. The results of the investigations would be assessed and evaluated and again the results would be discussed with either the registrar or consultant. The SNP would then prescribe therapy as appropriate, i.e. thrombolysis for an ischaemic stroke which meets the strict criteria, blood pressure management, anticoagulation therapy or further treatment such as arterial clot retrieval (see Appendix 3 Ischaemic Stroke Clinical Practice Guidelines).

The SNP would see TIA patients presenting to the ED and ensure that appropriate investigations are carried out. This would include an ABCD<sup>2</sup> score<sup>4</sup> to determine whether they are perceived to be at high risk of stroke. Patients with a score of greater than 4 would be admitted to the Stroke Unit for investigation and intervention. Those with scores of 4 or less would be discussed with the consultant and most likely discharged home with early follow up in the Stroke Prevention Clinic. The SNP would then assist in facilitating the patient's disposition from the Emergency Department in a timely manner (see Appendix 4 TIA Clinical Practice Guidelines).

#### **4.2.3 SNP acute stroke care**

The SNP would ensure that where possible, all patients who suffer a stroke are cared for on the Stroke Unit during the acute stroke phase. The SNP would liaise with a number of stakeholders including the Patient Flow Manager, bed assignment office and relevant clinical area to arrange admission to an appropriate bed. Other facets of the SNP role would include early referral to the allied health team, and initiation of an individualised stroke care pathway to reflect the needs of the patient and their family. This may include referral to the palliative care team and transfer to a suitable bed for ongoing management and care.

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<sup>4</sup> ABCD 2 Score: **A**ge, **B**lood Pressure, **C**linical symptoms **D**uration, **D**iabetes (Rothwell, Giles, Flossmann et al, 2005)

It is anticipated that the SNP would play a vital part in decreasing the patient's length of stay in the ED by facilitating a transfer to the Stroke Unit in a timely manner. If the stroke beds are occupied the SNP would be able to identify patients who could be moved from the stroke beds i.e. patients who are awaiting rehabilitation and liaise with the resource nurse on the ward to facilitate admission. Once the patient is settled into the ward and appropriate therapies instituted the SNP would then handover care of the patient to ward staff.

#### **4.2.4 Discharge from ED**

Patients who present with TIA represent the greatest opportunity to preserve life and avoid death or disability caused by stroke. Early access to a Stroke Prevention clinics is imperative as the risk of stroke is much higher immediately after a TIA (National Stroke Foundation, 2007a).

The SNP would arrange an outpatient appointment for the Stroke Prevention clinic prior to the patients discharge from the ED. Patients diagnosed with TIA, would be referred to the Stroke Prevention clinic within **14** days for prompt assessment and further investigations (Department of Human Services, 2007). Timely diagnosis of contributing risk factors for stroke will facilitate prompt preventative measures, such as referral to a vascular surgeon for carotid endarterectomy. Liaising with the patient's GP will also be an important component of the SNP's role within the Stroke Prevention clinic.

Secondary prevention will play a major role in the SNP model of care. The SNP will refer patients on to appropriate services to assist in modifying clinical and lifestyle risk factors, whilst also providing supportive education and information to patients and their families, and arranging suitable follow up to monitor compliance as the clinical need dictates.

### **4.3 SNP protocols and guidelines**

The implementation of a SNP candidate role would be overseen by a multidisciplinary Steering Committee (Appendix 1). The following protocols and guidelines have been developed as part of the SNP model development project.

#### **4.3.1 Clinical Practice Guidelines**

The Nurses Board of Victoria no longer requires candidates to present Clinical Practice Guidelines (CPG). However, it is a requirement of Alfred Health to develop them as part of the internal approval process. The SNP Project Steering Committee felt that it was important to develop initial CPGs for the project in order to clearly define the scope of practice of the SNP, identify the target population treated by the SNP, the type of medications the SNP may prescribe, and the radiological and pathology investigations that may be ordered by the SNP.

Once completed all nurse practitioner CPGs are ratified by the Alfred Health Scope of Practice Committee following approval by the local Steering Committees.

Full details of the two proposed clinical practice guidelines for TIA and Ischaemic stroke maybe viewed in Appendix 3 & 4.

#### **4.3.2 Drug Formulary**

The proposed drug formulary (see Appendix 5) is based upon the two clinical practice guidelines which have been developed to date. Other medications may need to be added once a candidate is employed in the position as they will further develop patient needs throughout their continuum of care. The proposed formulary has been approved by the SNP Steering Committee and would need to be ratified by Alfred Health's Drugs and Therapeutics Committee and the Alfred Health Scope of Practice Committee once a SNPC was appointed.

The Victorian Stroke Nurse Practitioner Collaborative will assist the Nurses Board of Victoria with the formulation of future Neurological formulary.

#### **4.3.3 Pathology**

A number of pathology investigations are required for acute stroke and TIA presentations and these may be viewed in Appendix 6.

#### **4.3.4 Radiology**

Being able to order radiological investigations is an integral element to the SNP model and the SNP Steering Committee in conjunction with the Radiology Department has agreed the following investigations would be within the expertise of the SNP to order; CTB, CT Angiogram, CT Perfusion, Carotid Doppler, chest x-ray and in consultation with the consultant or stroke registrar MRI / MRA. (see Appendix 6).

#### **4.3.5 Referrals**

The SNP will have the ability to make open referrals based on the needs of the patient (Appendix 6).

### **Section 5 Potential Issues or Barriers**

A number of potential issues or barriers to the SNP model were identified during the development phase of this project. Each issue was discussed with the SNP Steering Committee and possible solutions were identified.

#### **5.1 Delay in patients suffering stroke/TIA presenting to ED**

In the National Stroke Audit only 42% of patients arrived at a Category A hospital within the thrombolysis time window. There are a number of factors that may contribute to this delay: failure to recognise stroke symptoms; delay in transporting patients to the nearest health facility able to provide thrombolytic therapy.

## **Action**

The SNP will play an important role working with local community groups to promote stroke prevention education and warning signs of stroke (eg. FAST campaigns). The SNP will also play an important role in establishing a relationship between Ambulance Victoria and The Alfred Stroke Service. Organisations that have established agreements with state ambulance services regarding rapid transport and pre-arrival notification of stroke have reduced delay to hospital admissions and time to CT scan (Department of Human Services, 2007).

### **5.2 Failure to notify the SNP of a potential stroke or TIA arrival in ED**

Failure to notify the SNP of a stroke or TIA patients arrival in ED may be due to staff having no knowledge of the SNP role and the rapid assessment protocol of stroke/TIA.

## **Action**

As part of the project development process the project officer trialled a Stroke Nurse as 'first point of contact approach' with the ED staff. Triage staff were asked to page the Stroke Nurse when a patient with potential stroke/TIA presented.

The Stroke Nurse project officer placed signs at the triage desk and on the "flight deck" in the ED, met with the Nurse Manager and the Associate Charge Nurse Group, liaised with the disposition and resource nurses. The Stroke Nurse Project officer also visited the triage desk on a daily basis introducing the project or reminding staff to page when a patient presented. This regular contact with the triage, resource nurse and disposition nurse greatly increased the Stroke Nurse profile which was invaluable in increasing contact with the ED staff as well as educating Ambulance Victoria staff regarding stroke services at The Alfred.

### **5.3 Failure to recognise stroke as a medical emergency**

Triage classification of patients presenting to ED is based on a clinical assessment of physiological stability. Some physiologically stable Stroke and TIA patients may be classified as ATS category 3 or less. Because of the time critical nature of thrombolytic therapy Stroke should be classified as a medical emergency (ATS category 1 or 2) (Department of Human Services, 2007).

## **Action**

The introduction of the SNP role will provide an opportunity to monitor the triage classification and time to 'first seen by Stroke Service'. Where Stroke Nurses have been introduced to EDs there has been a noted reduction in time to treatment. This is largely due to the introduction of rapid assessment protocols and education of emergency staff by the SNP.

#### **5.4 Expansion of professional boundaries**

The sensitive nature of professional boundaries when developing roles with extended scope of practice may present challenges for the SNP in working with other members of the Stroke Service or other services.

##### **Action**

Role clarity within the Stroke team is essential to assist team members to understand and value this new clinical role. Internal key stakeholders were invited to participate in the development phase of SNP model. Stakeholders such as Senior ED staff, senior allied health staff attached to the Stroke Service, pharmacy and diagnostic services were involved in the development of clinical practice guidelines, SNP position description, drug formulary and investigation and referral protocols.

When a SNPC is appointed to the position, information sessions across the relevant services will be an important component of the communication strategy. Other activities such as collaborative research and quality improvement projects will also assist in developing the relationship SNPC and the extended health care team.

#### **5.5 Failure to capture all patients presenting with stroke or TIA symptoms**

Not all patients who suffer a stroke or TIA are treated by the Stroke Service. The majority of patients presenting with stroke occur during the day, the SNP will initially be limited to a Mon-Fri service.

##### **Action**

The SNP will follow up all patients presenting with Stroke/TIA out of hours the next business day. In order for the SNP role to have maximum benefit it ideally would be a seven days per week service. This would require at least two SNP's and would allow for leave coverage and ensure long term sustainability of the role.

### **Section 6 Evaluation of the SNP model**

The primary objectives of the SNP model are to optimise the management of acute stroke in the ED, decrease transit times through the ED (from ED to ward or ED to home) and ensure timely follow up of high risk TIA patients in a Stroke Prevention Clinic. The evaluation of the SNP model will focus on the impact of the role on the primary outcomes and clinical indicators for the Stroke Service

#### **1. Rapid assessment of acute stroke**

- % of Stroke patients (suitable for thrombolysis) presenting to ED within the thrombolysis time window
- % of Stroke/potential stroke patients triaged as Cat 1-2

- Time to 1<sup>st</sup> assessment by stroke service
- Time from “door to CT Brain”

## 2. Improved instigation of thrombolytic therapy for ischaemic stroke

- “door to needle time”
- Proportion of patients eligible for thrombolysis who receive therapy within the thrombolysis time window.

## 3. Improved transit through ED

- % Stroke patients admitted within 8 and 12 hours
- % non-admitted stroke patients with LOS < 4 hours
- % patients with stroke admitted to the Stroke Unit

## 4. Early follow up of high risk TIA patients

- No. of patients discharged from ED seen in Stroke Prevention Clinics within 14 days

There are a number of secondary benefits associated with the SNP role that reflect improved communication within the Stroke Unit and with inter-departmental service providers and improved compliance with National Stroke Guidelines. These are all listed in the SNP Evaluation Plan (see Appendix 7). This evaluation plan is linked to the National Stroke Audit (National Stroke Foundation 2007b & c) and will be adapted to meet the needs of the Australian Stroke Registry recently funded by the Australian Commission on Safety and Quality in Health Care.

## Section 7 Preparation for a Stroke Nurse Practitioner Candidate

Preparation for a SNP candidate role would include formal academic preparation and workplace training, supervision and mentoring in accordance with the requirements of the NBV and Alfred Health (see Appendix 8 & 9). These competing streams of professional development must be managed by the SNPC. This section outlines academic preparation, clinical and professional mentoring processes. The educational framework will be customised to the individual learning needs of the SNPC. Table 3 defines common terms used throughout the section.

**Table 3 Definition of terms**

<p><b>Patient Log</b> - a record of all patients seen by the SNPC along with presentation details, assessment findings, tests ordered, diagnosis, plan of care and details of mentor review. It provides a mechanism to ensure the consistent follow up of results, and provides details of the number of patients seen by the Nurse Practitioner according to CPG.</p> <p><b>Clinical Audit</b> – a weekly review conducted by the Clinical Mentor and SNPC of each presentation seen by the SNPC as per the patient log. This assists in ensuring practice is consistent with Clinical Practice Guidelines, provides an opportunity for SNPC education and the recognition of ongoing learning needs, and assists in the identification and follow up of any unexpected patient outcomes.</p> <p><b>Case Presentation</b> - monthly formal presentations of a SNPC case to Medical Mentor +/- other team members. To be assessed by the medical mentor according to the relevant CPG and the ANMC competency standards for Nurse Practitioners.</p> <p><b>Professional Portfolio</b> - a record of clinical audits and other meetings with Clinical Mentor – including learning needs identified, objectives set, learning activities undertaken, and details and feedback from case presentations. Provides an audit trail of training and competency processes for quality purposes, and assists the SNPC in the preparation for endorsement</p>
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## **7.1 Clinical vs non-clinical hours**

It is recognised that both clinical and professional tuition is required to support the education and development of the SNPC. During the candidacy, it is estimated that the SNPC would require one day per week of non-clinical time for training/education and the development of CPGs. If the candidate is eligible for four hours of study leave per week for the 26 weeks of the academic year, this will be factored in as part of the non-clinical time (see Appendix 10 Proposed SNPC weekly timetable).

## **7.2 Academic Preparation**

Academic preparation for a candidate to become an endorsed SNP includes successful completion of an approved Master of Nursing program. In Victoria the NBV is responsible for accrediting NP courses. There are three pathways which may lead to endorsement by the NBV (see Appendix 11 Pathways to endorsement for NP). It is envisaged that academic preparation may take anywhere from eighteen months to two and a half years to complete depending upon the individual candidate.

## **7.3 Clinical Mentorship**

The focus of the clinical mentorship is to ensure that the SNPC has well developed clinical skills in the areas of advanced clinical assessment, diagnostic skills and knowledge, pharmacology knowledge, demonstrated competence in medication management and knowledge of treatment options. The clinical mentorship forms the basis of a discipline specific education and training program that will prepare the SNPC to advance toward SNP endorsement.

### **7.3.1 Who can be a clinical mentor?**

A Medical Consultant (or team of Medical Consultants) currently practicing in stroke who has a good understanding of the SNP model and extended scope of practice for this role. Consideration may be given to involving an experienced Nurse Practitioner in this process as opportunities arise. It is recommended that a Nurse Practitioner taking on this role for the first time would do so within a model of co-supervision with a medical consultant.

Clinical mentors must be:

- accessible within the clinical environment for teaching and reviewing patients seen by the SNPC
- actively involved in clinical research
- able to observe and assess the SNPC working clinically and provide thorough feedback on their performance in the role
- committed to participating in the Stroke Nurse Practitioner Steering group which will work to oversee the development of the Stroke Nurse Practitioner Model
- able to create and maintain a positive learning relationship/environment
- committed to supporting critical reflection and independent adult learning.

The Stroke service is fortunate to have two highly respected Neurologists specialising in Stroke care. Both the Head of Stroke and Head of Research and Education (Stroke) have committed to being clinical mentors and providing teaching sessions to the SNPC. Other professionals who will also play an important role in the education of the SNPC will include the allied health team, radiology and pathology staff, as well as pharmacy staff.

The Victorian Stroke Nurse Practitioner Collaborative (VSNPC) have also discussed the potential for candidates to spend time at other organisations to assist in training and development but this will need to be explored further at a later date. Further, the SNPC will also participate in education sessions which the Victorian Stroke Nurse Practitioner Collaborative (VSNPC) instigated in association with the Victorian Stroke Clinical Network (VSCN).

### **7.3.2 Responsibilities of the clinical mentor**

The role of the clinical mentor is to provide clinical support and supervision on a daily basis to:

- Ensure the development of the SNPC and the safety and quality of care given to the patient under the care of the SNPC. At times the clinical mentor may require the assistance of medical colleagues to perform this aspect of the role.
- Assist the SNPC in the development of clinical skills – including patient assessment, diagnosis, ordering medications, specific clinical skills etc, as relevant to the clinical practice guidelines.
- Assist with extensions to practice which are not supported by legislation during the period of candidacy eg: countersigning of prescriptions, WorkCover certificates etc, as per legislative requirements.
- Provide supervision of the clinical components of each CPG until both the SNPC and Mentor are satisfied that they can be performed safely and independently. There may be some high risk or highly invasive procedures, or particular skills where the process of supervision and assessment of competence is more formalised (i.e.: signing off on a certain number of supervised procedures). This would be predetermined by the SNP Steering Committee.
- Assist the SNPC to identify research opportunities from practice and support the research design and external resources to assist with the research process;
- Ensure that the SNPC is attending appropriate seminars/meeting in the clinical specialty.

In addition to this, the clinical mentor(s) will play an important role in the further development of the SNP model as they:

- Work with the SNPC and other members of the Stroke Nurse Practitioner Steering group to identify patient groups which will be seen by the SNPC within their scope of practice in the clinical setting.

- Develop Clinical Practice Guidelines in conjunction with the SNPC, focusing in particular on clinical relevance and levels of evidence within the guidelines.

### **7.3.3 Responsibilities of the SNPC within the Clinical Mentorship Model**

The responsibilities of the SNPC within the clinical mentorship model include:

- a commitment to self directed learning and the active pursuit of additional learning opportunities to meet identified learning needs
- completion of Therapeutic Medication Module (as per the Victorian Nurses Board requirements) within 12 months of commencing candidacy to support medication prescription as per CPGs
- maintenance of patient log and commitment to the process of clinical audit
- preparation and presentation of case studies
- maintenance of a professional portfolio
- progression towards endorsement in a timely manner.

## **7.4 Professional mentorship**

The focus of professional mentorship is to ensure that the SNPC has well developed research abilities, advanced clinical leadership and communication skills. Professional mentorship will assist the SNPC in developing the portfolio to support successful endorsement as SNP.

### **7.4.1 Who can be a Professional Mentor?**

The professional mentor would be nurse in a senior leadership role in the clinical area who:

- has a good understanding of the SNP model and extended scope of practice of the role;
- is committed to participating in the Stroke Nurse Practitioner Steering group which will work to oversee the development of the role (for the SNPC this could be the Co-Director (Nursing), Medical Specialties, The Alfred).

### **7.4.2 Responsibilities of the Professional Mentor:**

The Professional Mentor will have direct involvement in the performance management meetings and plans for the SNPC and will work with them to:

- provide supervision and support to assist in the development of the professional leadership skills required in the Nurse Practitioner role
- encourage critical thinking, reflection and problem resolution
- support the development of research and quality improvement activities
- assist with the development of change management skills and strategies
- monitor and support the candidate's progression towards endorsement
- ensure that the SNPC is involved in appropriate organisational activities relevant to advanced nursing practice
- encourage the SNPC's involvement in external Professional Nursing bodies/ issues.

The frequency of meetings will be determined locally, however once per month would be considered a minimum requirement.

#### **7.4.3 Responsibilities of the SNPC within the Professional Mentorship Model**

Within the professional mentorship model the SNPC is expected to:

- engage in reflective processes and activities;
- utilise feedback and other opportunities to further develop leadership capacity;
- participate in performance management as per organisational requirements;
- progress towards endorsement in a timely manner.

### **Section 8 Governance of the SNP Model**

The SNPC would be clinically accountable to the Head of Unit for Stroke and professionally accountable to the Co-Director (Nursing) Medical Specialties. The SNP Steering Committee would guide further development of the role and assist in communication with key stakeholders. The SNPC extensions to scope of practice would be governed by Alfred Health's Scope of Nursing Practice Committee, and the Alfred Health Drugs and Therapeutics Committee would be responsible for over seeing and approving the SNP drug formulary.

### **Section 9 Milestones for the next twelve months**

Further development activities for the SNP model are contingent on funding for the SNPC position.

Feb – Apr 2009	Completion and submission of a business case to support the implementation of the SNP model
March 2009	Potential SNPC commences Masters of Nursing (Nurse Practitioner)
Jun – July 2009	Await confirmation for funding for the SNP model
July 2009	Second potential SNPC to commence Masters of Nursing (Nurse Practitioner)

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Authorised by:	Chief Nursing Officer

**Statement of Purpose:**

The Bayside Health Stroke Nurse Practitioner Candidate (SNPC) Steering Committee has been established to play a key strategic role in the development, implementation, monitoring and continuous improvement of the Stroke Nurse Practitioner Project.

**The Committee shall:**

- Oversee the development of a potential Stroke Nurse Practitioner Candidate Role in the local setting
- Develop a timeframe for the development of the role and monitor progress of the project accordingly
- Develop a communication, education and marketing strategy for a potential Stroke Nurse Practitioner Candidate role with other key stakeholders.
- Identify any issues or barriers that may arise during the development and implementation of a potential Stroke Nurse Practitioner Candidate role
- Ensure the development of the scope of practice of a potential Stroke Nurse Practitioner Candidate role complies with relevant legislation
- To identify a potential clinical mentor who would assist, support and review the development of Clinical Practice Guidelines with a potential Stroke Nurse Practitioner Candidate.
- Ensure input & approval from all relevant specialty areas and key stakeholders – as per the Bayside Clinical Practice Guidelines Development and Approval Process
- Develop a local evaluation strategy for the Stroke Nurse Practitioner Candidate Role, that is consistent with the Bayside Nurse Practitioner Evaluation Framework
- Development of a business case to appoint a Stroke Nurse Practitioner Candidate and ensure the sustainability of the role.

**2. Composition**

2.1 The Executive Director of Nursing shall appoint the Bayside Health SNP Steering Committee.

The Committee shall comprise:

- Executive Director Nursing, Ambulatory & Mental Health Services & Chief Nursing Officer or delegate (Chair)
- Co Director (Nursing) Medical Specialties
- Director Radiology or delegate
- Director Pathology or delegate
- Nurse Manager, Ward 7 West

- Head of Stroke service
- Head of Stroke Research and Education
- Stroke Nurse Practitioner Project Officer
- Manager of Allied Health or delegate
- Clinical Director of Pharmacy or delegate
- Nurse Manager Emergency & Trauma Centre or delegate
- Director of Emergency & Trauma Centre or delegate

### ***In Attendance***

- 2.2 The Committee may recommend to the Executive Director of Nursing the appointment of additional members.
- 2.3 By invitation of the Chair, others may attend one or more meetings of the Committee as a resource or in an advisory capacity.
- 2.4 Secondments and other protracted but temporary absences from the position held will create a casual vacancy on the Committee that will be filled by the person formally appointed to act in the role.
- 2.5 There is an expectation that members who know in advance that they will not be able to attend a meeting, attempt to organise a suitable proxy.

### **3. Meetings**

- 3.1 The Committee will meet at least every two to three weeks at the start of the project and then the meetings would decrease to monthly or bi-monthly as required.

The Committee will:

- 4.1 Refer the minutes of its meetings to the Bayside Scope of Practice Committee, highlighting its decisions on policies and guidelines;

### **5. Committee Procedures**

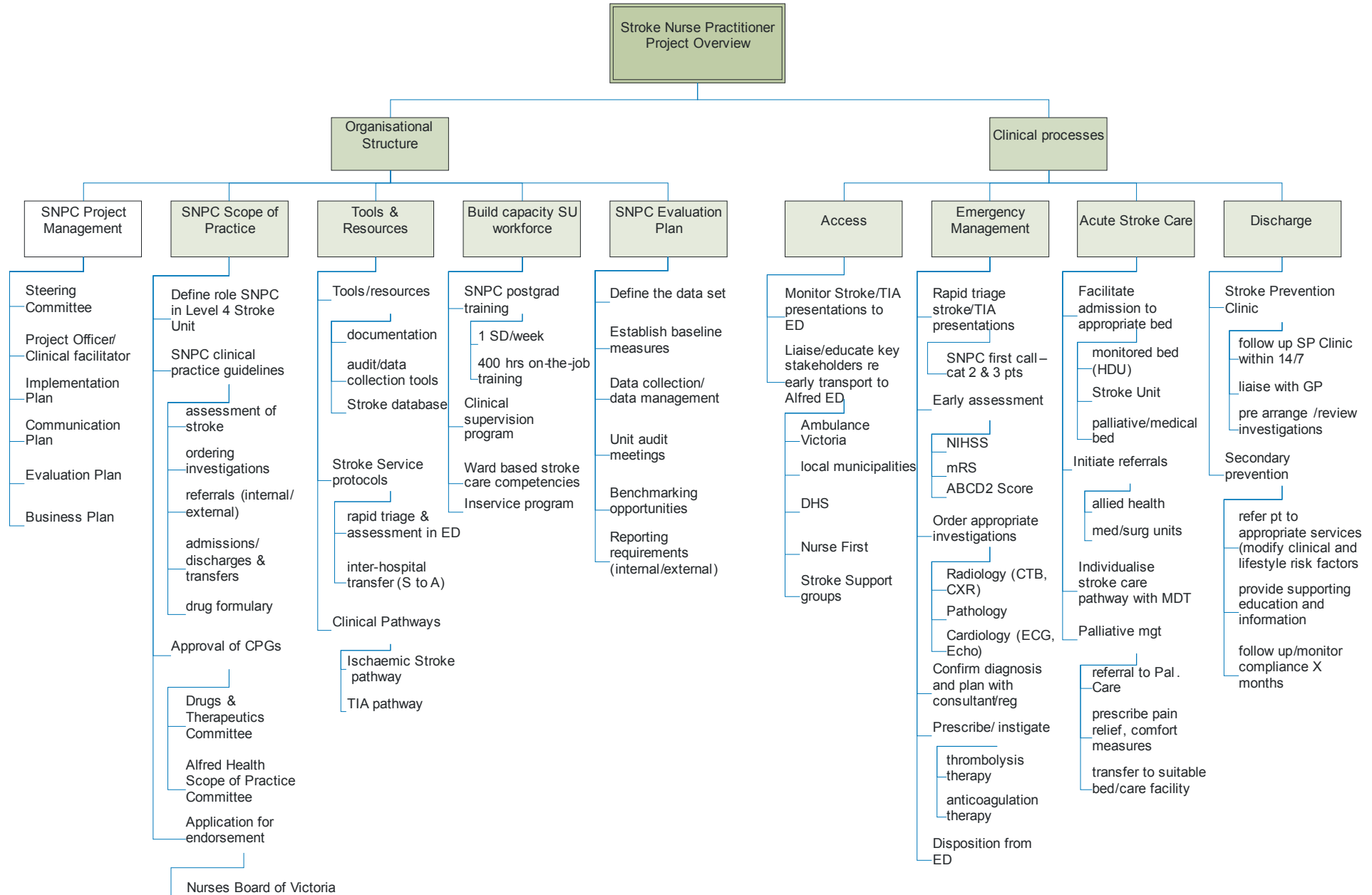
The procedures of the Committee shall include:


- An agenda that includes appropriate documentation to inform the Committee and support decision making shall be circulated before each meeting to ensure that members have time to consider the contents and raise questions they may have before the meeting date;
- Minutes of each meeting shall be prepared, circulated and retained as the complete and formal record of each meeting of the Committee. The minutes of each meeting shall be confirmed or amended and confirmed at the next ordinary meeting of the Committee;
- Meetings may be held in person, by telephone, via the internet or by any other suitable means of audio or visual communication;


The terms of reference of the Committee shall be reviewed by the Executive Director of Nursing at least once each year.


### **6. Quorum**


- 6.1 50% of members





 <b>TheAlfred</b>	<p style="text-align: center;"><i>Proposed</i>  <i>Stroke Nurse Practitioner</i>  <b>CLINICAL PRACTICE GUIDELINE 1</b>  <b>ISCHAEMIC STROKE</b></p>	<p style="text-align: center;">Comprehensive Stroke Unit</p>
<b>Scope</b>		<b>Outcomes</b>
<b>Nurse Practitioner</b>	<ul style="list-style-type: none"> <li>• Patient presents with acute neurological symptoms consistent with stroke</li> </ul>	Identify patients suitable for SNPC CPG
<b>Medical Practitioner and Nurse Practitioner</b>	<p>Patient outside SNPC scope of practice.</p> <ul style="list-style-type: none"> <li>• Patients with seizure activity</li> <li>• Patients with a GCS less than 9</li> <li>• Patients with BP less than 100 systolic</li> <li>• Patients with a compromised airway</li> <li>• Septic patients</li> <li>• Patients with multiple medical issues</li> <li>• Patients under the age of 18 years</li> </ul>	Identify patients not suitable for SNPC CPG and redirect to usual ED care +/- SNPC in team.
<b>Initial Assessment &amp; Interventions</b>		<b>Outcomes</b>
<b>Primary Survey</b>	<ul style="list-style-type: none"> <li>• AIRWAY</li> <li>• Breathing</li> <li>• Circulation</li> </ul>	Abnormal primary survey identified → exit CPG
<b>History</b>	<ul style="list-style-type: none"> <li>• Vital-signs, treatment- given pre hospital management- time</li> <li>• Past medical history / medications</li> <li>• Risk factors</li> <li>• Allergies</li> <li>• Last food / fluid intake</li> <li>• Risk factors – hypertension, high cholesterol, smoker, diabetes, over weight</li> <li>• Compensable status - Private Insurance / DVA / TAC / WC</li> </ul>	Identify patients not suitable for SNPC CPG → exit CPG and redirect care to medical unit or ED.
<b>Focused clinical assessment</b>	<p>Assess neurological status and examine for signs and symptoms by: -</p> <ul style="list-style-type: none"> <li>• Neurological examination</li> <li>• NIHSS</li> <li>• Oxford Classification</li> <li>• mRS</li> <li>• Blood Glucose level</li> <li>• Is the patient suitable for t-PA</li> <li>• Loss or alteration in conscious state &amp; duration</li> <li>• Seizure activity- duration &amp; description</li> <li>• Glasgow Coma Score</li> <li>• Ensure CTB is prioritised and check results</li> <li>• Order urgent bloods as per Alfred tPA protocol</li> </ul>	Determine neurological signs and symptoms of episode. If patient is found to be unsuitable for SNPC CPG → exit CPG

 <b>TheAlfred</b>	<p style="text-align: center;"><i>Proposed</i>  <i>Stroke Nurse Practitioner</i>  <b>CLINICAL PRACTICE GUIDELINE 1</b>  <b>ISCHAEMIC STROKE</b></p>	<p style="text-align: center;">Comprehensive Stroke Unit</p>
<b>Pain Assessment</b>	Pain scale <sup>1</sup>	Determine need for and type of analgesia
<b>t-PA Suitability or potential trial enrolment</b>	<p>Is the patient a t-PA candidate</p> <ul style="list-style-type: none"> <li>• Less than 4.5 hours of symptom onset</li> </ul> <p>Contra-indications to treatment – any of :</p> <ul style="list-style-type: none"> <li>• Blood pressure &gt; 185 systolic, and / or 110 diastolic</li> <li>• Blood glucose &lt; 2.8 or &gt; 22</li> <li>• Seizure at onset, or in a coma</li> <li>• Recent trauma or surgery (within 30days)</li> <li>• On anticoagulants (with INR &gt; 1.7) N.B. Antiplatelet agents are acceptable, but must be withheld for 24 hrs after t-PA</li> <li>• Previous intracranial haemorrhage, subarachnoid haemorrhage</li> <li>• Active G I (or other) bleeding (i.e. Malaena or haematemesis, active ulcer seen on gastroscopy within the last 30 days)</li> </ul>	As per tPA Protocol
<b>Working Diagnosis and Investigations</b>		<b>Outcomes</b>
<b>Imaging</b>	Urgent CT Brain required on all suspected stroke patients Consider <ul style="list-style-type: none"> <li>• CT Angiogram</li> <li>• CT Perfusion</li> <li>• MRI / MRA</li> </ul> (In collaboration with consultant / registrar) <ul style="list-style-type: none"> <li>• Carotid Doppler</li> <li>• CXR</li> </ul>	Determine cause and type of stroke
<b>Further Imaging-Heart Centre</b>	Consider <ul style="list-style-type: none"> <li>• Holter Monitor</li> <li>• Transthoracic Echocardiogram</li> </ul>	

	<p style="text-align: center;"><i>Proposed</i> <i>Stroke Nurse Practitioner</i> <b>CLINICAL PRACTICE GUIDELINE 1</b> <b>ISCHAEMIC STROKE</b></p>	<p style="text-align: center;">Comprehensive Stroke Unit</p>
<p>Pathology</p>	<p>Routine Bloods include</p> <ul style="list-style-type: none"> <li>• U &amp; Es</li> <li>• FBE</li> <li>• Coag Screen</li> <li>• Creatinine</li> <li>• LFTs</li> <li>• CK / Troponin</li> <li>• ECG</li> <li>• IV access and insert cannulae if required</li> </ul> <p>t-PA Candidates – Urgent Bloods</p> <ul style="list-style-type: none"> <li>• Group &amp; save, FBE, INR &amp; APTT, Fibrinogen,</li> <li>• U&amp;Es, Glucose</li> </ul> <p>Consider</p> <ul style="list-style-type: none"> <li>• MSU</li> <li>• CRP</li> </ul>	<p>As per Alfred tPA Protocol</p> <p>Ongoing assessment of need for intravenous access</p>
<p><b>Management</b></p> <ul style="list-style-type: none"> <li>• <b>Swallow screen</b></li> </ul>	<p>Patients should have a swallow screen performed for swallowing deficits before being given food, drink or oral medications. Patients who fail should be referred to Speech for a comprehensive assessment.(NSF, 2007)<sup>2</sup></p>	
<p><b>Associated Care</b></p>	<ul style="list-style-type: none"> <li>• Consider IV fluids for patients (non dextrose)</li> <li>• Monitor BSL levels 12/24 hourly as required</li> </ul>	
<p><b>Acute Referral</b></p>	<p>Referral to;</p> <ul style="list-style-type: none"> <li>• Occupational Therapist (Blanket)</li> <li>• Physiotherapy (Blanket)</li> <li>• Speech Pathologist (Blanket)</li> <li>• Nutrition</li> <li>• Social worker</li> <li>• +/- care coordination</li> <li>• +/- interpreter</li> <li>• +/- Diabetic Educator</li> </ul> <p>As required</p>	

 <b>TheAlfred</b>	<p style="text-align: center;"><i>Proposed</i>  Stroke Nurse Practitioner  <b>CLINICAL PRACTICE GUIDELINE 1</b>  <b>ISCHAEMIC STROKE</b></p>	Comprehensive Stroke Unit
<b>Inpatient admission</b>	Patient requires inpatient admission to Stroke Unit (7 West) for ongoing care and treatment.	
<b>Medication</b>		<b>Outcomes</b>
<b>All medication will be stored, labelled and dispensed in accordance with hospital policy and relevant legislation<sup>3</sup></b>		
<b>Simple analgesia S2</b>	<b>Paracetamol 500mg:</b> 1 or 2 tablets orally 4-6/24, not to exceed 8 tablets in 24 hrs.	Patients given analgesia appropriate to allergies, current medications and past medical history
<b>Anticoagulants / antithrombotics S2-4</b>	<b>Aspirin</b> 100mg, oral , daily  <b>Clopidogrel Hydrogen Sulfate</b> 75mg, Oral <b>Dipyridamole</b> 25-200mg, Oral <b>Enoxaparin</b> 20mg/0.2mL-80mg/0.8mL, S/C, daily <b>Heparin Sodium</b> 5,000unit/0.2mL, S/C <b>Heparin Sodium</b> 25,000unit/5mL, IV <b>Warfarin Sodium</b> 1-5mg, Oral	Should be administered as soon as possible after the onset of stroke symptoms (i.e. within 48 hours) if CTB / MRI excludes Haemorrhage.  As per Alfred Anticoagulation Guidelines (2006) <a href="http://www.alfred.org.au">www.alfred.org.au</a>
<b>Antihypertensive agents S4</b>	<b>Hydralazine</b> 2.5mg-5mg Intravenous <b>Labetalol HCl</b> 100mg/20mL, Intravenous <b>Perindopril</b> 2-8mg, oral, daily <b>Perindopril arginine</b> 2.5-10mg, oral, daily <b>Perindopril-Indapamide</b> 5mg-1.25mg, oral daily	
<b>Fibrinolytic agent S4</b>	<b>Alteplase (Actilyse)</b> 50mg, IV Dose dependent upon weight	As per Alfred Health tPA Guideline <sup>5</sup>
<b>Beta-adrenergic blocking agents S4</b>	<b>Metoprolol</b> 50-100mg, Oral <b>Metoprolol Succinate</b> 23.75-190mg , Oral <b>Metoprolol Tartrate</b> 50mg, Oral <b>Metoprolol Tartrate</b> 5mg/5mL, IV	

 <b>TheAlfred</b>	<p style="text-align: center;"><i>Proposed</i>  Stroke Nurse Practitioner  <b>CLINICAL PRACTICE GUIDELINE 1</b>  <b>ISCHAEMIC STROKE</b></p>	Comprehensive Stroke Unit
<b>Hypolipidaemic agents</b> <b>Statins</b> <b>S4</b>	<b>Atorvastatin</b> 10-80mg, Oral, daily <b>Ezetimibe-Simvastatin</b> 10mg-80mg, Oral, daily <b>Pravastatin</b> 10-80mg Oral, daily <b>Rosuvastatin calcium</b> 5-40mg daily <b>Simvastatin</b> 5-80mg, oral, daily	
<b>Hyperacidity, reflux and ulcers</b> <b>S4</b>	<b>Omeprazole</b> 20-40mg oral, daily <b>Pantoprazole</b> 20-40mg, oral / IV, daily	
<b>Diuretics</b> <b>S4</b>	<b>Indapamide</b> 2.5mg, oral, daily <b>Indapamide Sustained Release</b> 1.5mg, oral, daily	
<b>Anti-emetic PRN</b> <b>S4</b>	<b>Metoclopramide hydrochloride 10-20mg:</b> Orally or Intravenously 8/24 PRN  <b>Prochlorperazine 5-10mg:</b> 1-2 Tablets Orally 8-12/24, initially 20mg if acute. Intramuscularly 12.5 mg every 8/24	
<b>Intravenous fluids</b> <b>S4</b>	<b>0.9% Sodium Chloride Intravenous Solution:</b> Intravenous infusion 1000mls 6-12/24 titrated to patient requirements.	Maintain patients hydration
<b>Clinical audit evaluation strategies</b>		
<b>Missed problem</b>	Stroke Unit X-ray review	
<b>Process</b>	SNPC clinical audit & evaluation plan Length of stay Patient outcomes	
<b>Pt Satisfaction</b>	Patient satisfaction surveys	

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## REFERENCES


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2. National Stroke Foundation (2007) Clinical Guidelines for Acute Stroke Management
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<http://intranet.alfredhealth.org.au/Assets/ContentFiles/1/AnticoagulationGlineRev3.pdf>
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[http://intranet.alfredhealth.org.au/Assets/ContentFiles/1/Alteplase\\_tPA\\_InfusionforAcuteIschaemicStrokeRev1.pdf](http://intranet.alfredhealth.org.au/Assets/ContentFiles/1/Alteplase_tPA_InfusionforAcuteIschaemicStrokeRev1.pdf)


## Key to terms


**SNPC**- Stroke Nurse Practitioner Candidate  
**EP**- Emergency Physician  
**NIHSS**-National Institute Health Stroke Scale  
**mRS**- Modified Rankin Score  
**PS**- Pain Score  
**S1-S4**- Schedule of the drug administration act  
**LMO**- Local Medical Officer  
**OP**- Outpatients  
**CPG**- Clinical Practice Guideline  
**WC**- Work cover  
**TAC**- Transport Accident Commission  
**DVA**- Department of Veteran Affairs


## Appendices


Pain scale  
Alfred Health tPA Protocol  
Alfred Hospital Anticoagulation Guidelines (2006) [www.alfred.org.au](http://www.alfred.org.au)


 <b>TheAlfred</b>	<p style="text-align: center;"><i>Proposed</i>  <i>Stroke Nurse Practitioner</i>  <b>CLINICAL PRACTICE GUIDELINE 1</b>  <b>ISCHAEMIC STROKE</b></p>	<p style="text-align: center;">Comprehensive Stroke Unit</p>
<b>AUTHOR(S) &amp; ENDORSEMENT</b>		
<p>This CPG was written by:</p> <p>Anne-Marie Watson Stroke Nurse Practitioner Project Officer Stroke Unit, Alfred Hospital</p> <p>Natasha Jennings Emergency Nurse Practitioner The Alfred Emergency Department and Trauma Centre</p>	<p><b>Reviewed &amp; Authorised by:</b></p> <p>Ms Chris Batey Nurse Manager The Alfred Emergency Department and Trauma Centre</p> <p>Julie Cairns Co Director (Nursing) Medical Specialities The Alfred Hospital</p> <p>Ms Shin Choo / Erica Tong Senior Clinical Pharmacist The Alfred Hospital</p> <p>Dr Judith Frayne Head of Stroke Unit The Alfred Hospital</p> <p>A/Prof Richard Gerraty Head of Stroke Research The Alfred Hospital</p> <p>Dr Anthony Kam Head of MRI The Alfred Hospital</p> <p>Mr Tony Ryan Nurse Manager, 7 West The Alfred Hospital</p> <p>Dr De Viliers Smit Acting Director Of Emergency Medicine, The Alfred Emergency Department and Trauma Centre</p>	
<p><b>Date written: December 2008</b>  <b>Reviewed: N/A</b></p>	<p><b>Review date: December 2010</b></p>	


 <b>TheAlfred</b>	<p style="text-align: center;"><i>Proposed</i>  <i>Stroke Nurse Practitioner</i>  <b>CLINICAL PRACTICE GUIDELINE 2</b>  <b>TRANSIENT ISCHAEMIC ATTACK</b></p>	<p style="text-align: center;">Comprehensive Stroke Unit</p>
<b>Scope</b>		<b>Outcomes</b>
<b>Nurse Practitioner</b>	<ul style="list-style-type: none"> <li>• Patient presents with acute neurological symptoms consistent with TIA</li> </ul>	Identify patients suitable for SNPC CPG
<b>Medical Practitioner and Nurse Practitioner</b>	<p>Patient outside SNPC scope of practice</p> <ul style="list-style-type: none"> <li>• Patients under the age of 18 years of age</li> <li>• Patients with seizure activity</li> <li>• Patients with a GCS less than 9</li> <li>• Patients with BP less than 100 systolic</li> <li>• Patients with a compromised airway</li> <li>• Septic patients</li> <li>• Patients with multiple medical issues</li> <li>• Patients under 18 years of age</li> </ul>	Identify patients not suitable for SNPC CPG and redirect to usual ED care +/- SNPC in team.
<b>Initial Assessment &amp; Interventions</b>		<b>Outcomes</b>
<b>Primary Survey</b>	<ul style="list-style-type: none"> <li>• AIRWAY</li> <li>• Breathing</li> <li>• Circulation</li> </ul>	Abnormal primary survey identified → exit CPG
<b>History</b>	<p><b>History – General</b></p> <ul style="list-style-type: none"> <li>• Presenting complaint</li> <li>• Past medical history / medications</li> <li>• Risk factors</li> <li>• Allergies</li> <li>• Last food / fluid intake</li> <li>• Risk factors – hypertension, high cholesterol, smoker, diabetes, over weight</li> <li>• Compensable status - Private Insurance / Department Veteran Affairs / TAC / Workcover</li> <li>• Onset of signs and symptoms</li> <li>• Pre hospital care / observations / medications / interventions</li> <li>• Identify TIA mimics</li> </ul>	Identify patients not suitable for SNPC CPG → exit CPG and redirect to ED or medical care.
<b>Focused clinical assessment</b>	<p>Assess neurological status and examine for signs and symptoms by: -</p> <ul style="list-style-type: none"> <li>• Neurological examination</li> <li>• ABCD<sup>2</sup> score</li> <li>• Blood Glucose level</li> <li>• Loss or alteration in conscious state &amp; duration</li> <li>• Seizure activity- duration &amp; description</li> <li>• Glasgow Coma Score</li> </ul>	Determine neurological signs and symptoms of episode. If patient is found to be unsuitable for SNPC CPG → exit CPG

 <b>TheAlfred</b>	<p style="text-align: center;"><i>Proposed</i>  <i>Stroke Nurse Practitioner</i>  <b>CLINICAL PRACTICE GUIDELINE 2</b>  <b>TRANSIENT ISCHAEMIC ATTACK</b></p>	<p style="text-align: center;">Comprehensive Stroke Unit</p>
<b>Pain Assessment</b>	Pain scale <sup>1</sup>	Determine need for and type of analgesia
<b>Working Diagnosis and Investigations</b>		<b>Outcomes</b>
<b>Imaging</b>	<ul style="list-style-type: none"> <li>• Carotid Ultrasound</li> <li>• CTB</li> <li>• MRI + MRA (In collaboration with consultant / registrar)</li> </ul>	Identify if further investigation is required
<b>Further Imaging-Heart Centre</b>	Consider <ul style="list-style-type: none"> <li>• Holter Monitor</li> <li>• Transthoracic Echocardiogram (In collaboration with consultant / registrar)</li> </ul>	Identify if further investigation is required.
<b>Pathology</b>	Routine Bloods include <ul style="list-style-type: none"> <li>• U &amp; E's</li> <li>• FBE / ESR / CRP</li> <li>• Coag Screen</li> <li>• Creatinine</li> <li>• LFT's</li> <li>• ECG</li> <li>• IV access and insert cannulae if required</li> </ul>	Ongoing assessment of need for intravenous access
<b>Patients identified as high risk (ABCD<sup>2</sup> score&gt;4)</b> <ul style="list-style-type: none"> <li>• Admit to unit<sup>2</sup></li> </ul>	SNPC R/V in consultation with Reg/consultant <ul style="list-style-type: none"> <li>• Pt education / health promotion</li> <li>• Medication prescribed as per formulary in consultation with Reg / Consultant</li> <li>• Ensure appropriate investigations are ordered</li> <li>• Follow up appointment with GP if required and Stroke prevention clinic</li> </ul>	
<b>Patients identified as low risk (ABCD<sup>2</sup> score&lt;4)</b> <ul style="list-style-type: none"> <li>• D/C home with follow-up<sup>2</sup> post discussion with registrar/consultant</li> </ul>	SNPC R/V with view to discharge in consultation with Reg/consultant <ul style="list-style-type: none"> <li>• Pt education /health promotion</li> <li>• Medication prescribed as per formulary</li> <li>• Follow up appointment with GP if required and Stroke prevention clinic</li> </ul>	Ensure patient understands problem, treatment, follow up and is safe for discharge home.

 <b>TheAlfred</b>	<p style="text-align: center;"><i>Proposed</i>  <i>Stroke Nurse Practitioner</i>  <b>CLINICAL PRACTICE GUIDELINE 2</b>  <b>TRANSIENT ISCHAEMIC ATTACK</b></p>	<p style="text-align: center;">Comprehensive Stroke Unit</p>
<b>Associated Care</b>	<ul style="list-style-type: none"> <li>• Consider IV fluids if patient dependent on hydration status or in need of antibiotic therapy</li> <li>• ECG for all patients</li> </ul>	
<b>Acute Referral</b>	<p>Referrals may be made for specific patient problems or as required to</p> <ul style="list-style-type: none"> <li>• Occupational Therapist (Blanket)</li> <li>• Physiotherapy (Blanket)</li> <li>• Speech Pathologist (Blanket)</li> <li>• Nutrition</li> <li>• Social worker</li> <li>• Care co-ordinator</li> <li>• Interpreter</li> <li>• Diabetic Educator</li> </ul>	
<b>Inpatient admission</b>	<p>Patient requires inpatient admission to Stroke Unit (7 West) for ongoing care and treatment.</p>	<p>Handover to 7 West staff for ongoing care and management. Inform patient +/- family of need for admission and stroke education.</p>
<b>Patient discharge education</b>		<b>Outcomes</b>
<b>When to return</b>	<ul style="list-style-type: none"> <li>• Verbal patient education and instructions from SNPC</li> <li>• Written patient information</li> </ul>	
<b>Follow up appointments</b>	<ul style="list-style-type: none"> <li>• Verbal instructions from SNPC</li> <li>• Written instructions for LMO review if applicable and OPD follow up</li> </ul>	
<b>Medication instructions</b>	<ul style="list-style-type: none"> <li>• Verbal instructions from SNPC</li> <li>• Clinical pharmacist will provide medication education for patient. Written information, medication list, medication compliance aid and referral to Pharmacy Outreach service if needed.</li> </ul>	
<b>Specific care</b>	<ul style="list-style-type: none"> <li>• Verbal instructions from SNPC</li> <li>• Written information regarding risk factor modification</li> </ul>	
<b>Safety</b>	<ul style="list-style-type: none"> <li>• Patients requiring language interpretation -referral to interpreter or NOK contacted</li> </ul>	<p>Ensure patient understands problem, treatment, follow up and is safe for discharge home</p>

 <b>TheAlfred</b>	<p style="text-align: center;"><i>Proposed Stroke Nurse Practitioner</i>  <b>CLINICAL PRACTICE GUIDELINE 2</b>  <b>TRANSIENT ISCHAEMIC ATTACK</b></p>	<p style="text-align: center;">Comprehensive Stroke Unit</p>
<b>Discharge referrals</b>	<ul style="list-style-type: none"> <li>• Referrals may be made for specific patient problems or as required to <ul style="list-style-type: none"> <li>- Speech pathologist</li> <li>- Occupational therapist</li> <li>- Social work</li> <li>- Physiotherapy</li> <li>- Drug and alcohol counsellor</li> <li>- Aboriginal liaison officer</li> <li>- other as appropriate</li> </ul> </li> </ul>	
<b>Certificates</b>	<ul style="list-style-type: none"> <li>• Absence from work certificates</li> <li>• WC/TAC certificate (Requires Medical Officer Signature)</li> <li>• Certificate of attendance</li> </ul>	<p style="text-align: center;">Appropriate documentation completed</p>
<b>Letters</b>	<ul style="list-style-type: none"> <li>• Local medical officer letter</li> </ul>	<p style="text-align: center;">Ensures continuity of care and referral to health care team</p>
<b>Medication</b>		<b>Outcomes</b>
<b>All medication will be stored, labelled and dispensed in accordance with hospital policy and relevant legislation<sup>3</sup></b>		
<b>Simple analgesia S2</b>	<b>Simple analgesics and antipyretics</b>  <b>Paracetamol 500mg:</b> 1 or 2 tablets orally 4-6/24, not to exceed 8 tablets in 24 hrs.	<p style="text-align: center;">Patients given analgesia appropriate to allergies, current medications and past medical history</p>
<b>Anticoagulants / antithrombotics S2-4</b>	<b>Aspirin 100mg, Oral</b> <b>Clopidogrel Hydrogen Sulfate 75mg, Oral</b> <b>Dipyridamole 25-200mg, Oral</b> <b>Enoxaparin 20mg/0.2mL-80mg/0.8mL, S/C</b> <b>Heparin Sodium 5,000unit/0.2mL, S/C</b> <b>Heparin Sodium 25,000unit/5mL, IV</b> <b>Warfarin Sodium 1-5mg, Oral</b>	
<b>Antihypertensive agents i.e.</b>	<b>Hydralazine 2.5mg-5mg Intravenous</b> <b>Labetalol HCl 100mg/20mL, Intravenous</b> <b>Perindopril 2-8mg, oral, daily</b> <b>Perindopril arginine 2.5-10mg, oral, daily</b> <b>Perindopril-Indapamide 5mg-1.25mg, oral daily</b> <b>Indapamide SR 25mg orally, daily</b>	

 <b>TheAlfred</b>	<p style="text-align: center;"><i>Proposed</i>  <i>Stroke Nurse Practitioner</i>  <b>CLINICAL PRACTICE GUIDELINE 2</b>  <b>TRANSIENT ISCHAEMIC ATTACK</b></p>	<p style="text-align: center;">Comprehensive Stroke Unit</p>
<b>Beta-adrenergic blocking agents</b> <b>S4</b>	<b>Metoprolol</b> 50-100mg, Oral <b>Metoprolol Succinate</b> 23.75-190mg , Oral <b>Metoprolol Tartrate</b> 50mg, Oral <b>Metoprolol Tartrate</b> 5mg/5mL, IV	
<b>Hypolipidaemic agents</b> <b>Statins</b> <b>S4</b>	<b>Atorvastatin</b> 10-80mg, Oral, daily <b>Ezetimibe-Simvastatin</b> 10mg-80mg, Oral, daily <b>Pravastatin</b> 10-80mg Oral, daily <b>Rosuvastatin calcium</b> 5-40mg daily <b>Simvastatin</b> 5-80mg, oral, daily	
<b>Hyperacidity, reflux and ulcers</b> <b>S4</b>	<b>Omeprazole</b> 20-40mg oral / IV , daily <b>Pantoprazole</b> 20-40mg, oral / IV, daily	
<b>Diuretics</b> <b>S4</b>	<b>Indapamide</b> 2.5mg, oral, daily <b>Indapamide Sustained Release</b> 1.5mg, oral, daily	
<b>Anti-emetic PRN</b> <b>S4</b>	<b>Metoclopramide hydrochloride 10-20mg:</b> Orally or Intravenously 8/24 PRN  <b>Prochlorperazine Maleate 5-10mg:</b> 1-2 Tablets Orally 8-12/24, initially 20mg if acute. Intramuscularly 12.5 mg every 8/24 PRN	
<b>Clinical audit evaluation strategies</b>		
<b>Unexpected representation</b>	Emergency Department attendance register and SNPC clinical log book	
<b>Missed problem</b>	Stroke Unit Radiology meeting	
<b>Process</b>	SNPC clinical audit Length of stay Patient outcomes	
<b>Pt Satisfaction</b>	Patient satisfaction surveys	

	<p><i>Proposed</i>  <i>Stroke Nurse Practitioner</i>  <b>CLINICAL PRACTICE GUIDELINE 2</b>  <b>TRANSIENT ISCHAEMIC ATTACK</b></p>	<p>Comprehensive Stroke  Unit</p>
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### REFERENCES


1. National Institute of Clinical Studies (2004). Pain scale adaptation. Institutional Approaches to Pain Assessment and Management and National Emergency Department Report, April 2004
2. National Stroke Foundation (N.S.F) Clinical Guidelines for Acute Stroke Management (2007)
3. Alfred Health Medication: Storage, Security & Administration Guideline (2007)  
[www.alfred.org.au](http://www.alfred.org.au)

### Key to terms

<b>BSL</b>	Blood Sugar Level
<b>CPG</b>	Clinical Practice Guideline
<b>CTB</b>	Computerised tomography brain
<b>ED</b>	Emergency department
<b>GCS</b>	Glasgow Coma Score
<b>SNPC</b>	Stroke Nurse Practitioner Candidate
<b>S1-S4</b>	Schedule of the drug administration act
<b>TAC</b>	Transport Accident Commission
<b>ABCD<sup>2</sup></b>	Assessment Tool
<b>MRI</b>	Magnetic Resonance Imaging
<b>MRA</b>	Magnetic Resonance Angiogram

### Appendices

Pain scale
Alfred Health Anticoagulation guidelines

 <b>TheAlfred</b>	<p style="text-align: center;"><i>Proposed Stroke Nurse Practitioner</i>  <b>CLINICAL PRACTICE GUIDELINE 2</b>  <b>TRANSIENT ISCHAEMIC ATTACK</b></p>	<p style="text-align: center;">Comprehensive Stroke Unit</p>
<b>AUTHOR(S) &amp; ENDORSEMENT</b>		
<p>This CPG was written by:</p> <p>Anne-Marie Watson Stroke Nurse Practitioner Project Officer Stroke Unit, Alfred Hospital</p>	<p><b>Reviewed &amp; Authorised by:</b></p> <p>Ms Chris Batey Nurse Manager Emergency Department and Trauma Centre The Alfred Hospital</p> <p>Julie Cairns Co Director (Nursing) Medical Specialities The Alfred Hospital</p> <p>Ms Shin Choo Senior Clinical Pharmacist The Alfred Hospital</p> <p>Dr Judith Frayne Head of Stroke Unit The Alfred Hospital</p> <p>A/Prof Richard Gerraty Head of Stroke Research The Alfred Hospital</p> <p>Dr Anthony Kam Head of MRI The Alfred Hospital</p> <p>Mr Tony Ryan Nurse Manager, 7 West The Alfred Hospital</p> <p>Dr De Viliers Smit Acting Director Of Emergency Medicine, The Alfred Emergency Department and Trauma Centre</p>	
<p><b>Date written: December 2008</b> <b>Reviewed: N/A</b></p>	<p><b>Review date: December 2010</b></p>	

<b>Hyperacidity, reflux and ulcers</b>	Omeprazole 20-40mg, Tablet/Capsule Pantoprazole 20-40mg, TABLET Pantoprazole 40mg, VIAL	Oral Oral IV
<b>Antihypertensive agents</b>	Labetalol HCl 100mg/20mL, Ampoule	IV
<b>ACE Inhibitors</b>	Perindopril 2,4 & 8mg, Tablet Perindopril arginine 2.5-10mg, Tablet Perindopril-Indapamide 5mg-1.25mg, Tablet	Oral Oral Oral
<b>Beta-adrenergic blocking agents</b>	Metoprolol 50-100mg, Tablet Metoprolol Succinate 23.75- 190mg, Tablet Metoprolol Tartrate 50mg, Tablet Metoprolol Tartrate 5mg/5mL, Ampoule	Oral Oral Oral IV
<b>Diuretics</b>	Indapamide 2.5mg, Tablet Indapamide Sustained Release 1.5mg, Tablet	
<b>Hypolipidaemic agents Statins</b>	Atorvastatin 10-80mg, Tablet Ezetimibe-Simvastatin 10mg-80mg, Tablet Pravastatin 5-80mg, Tablet Rosuvastatin calcium 5-40mg, Tablet Simvastatin 5-80mg, Tablet	Oral Oral Oral Oral Oral
<b>Anticoagulants, antithrombotics</b>	Aspirin 100mg, Tablet Aspirin-Dipyridamole 25mg-200mg, Capsule Clopidogrel Hydrogen Sulfate 75mg, Tablet Dipyridamole 200mg, Capsule Dipyridamole 25-100mg, Tablet Enoxaparin 150mg/1mL, Syringe Enoxaparin 20-100mg/0.2mL-1mL, Syringe Heparin Sodium 5,000unit/0.2mL, Ampoule Heparin Sodium 25,000unit/5mL, Ampoule Heparin Sodium 5,000units/5mL, Ampoule Warfarin Sodium 1, 2,3 & 5mg, Tablet	Oral Oral Oral Oral Oral Oral S/C S/C IV S/C Oral
<b>Fibrinolytic agent</b>	Alteplase 50mg, Vial	IV
<b>Antiemetics, antinauseants</b>	Prochlorperazine Maleate 12.5mg/1mL, Ampoule Prochlorperazine Maleate 25mg, Supp Prochlorperazine Maleate 5mg, Tablet Metoclopramide 10mg/2mL, Ampoule Metoclopramide 5mg/5mL, Mixture Metoclopramide 5mg/5mL, Mixture Metoclopramide 10mg, Tablet	IM PR Oral IV / IM Oral Oral Oral
<b>Simple analgesics and antipyretics</b>	Paracetamol 500mg, Tablet	Oral
<b>Oral and parenteral electrolytes</b>	Sodium Chloride 0.9%, 1000mL, Infusion	IV

Pharmacy	Pathology	Radiology	Referrals
<p><b>Prescribed from SNP formulary</b></p>	<p>Request: U &amp; E's Creatinine FBE Coag Screen LFT's CRP Mg/PO4/Ca CK/Troponin MSU</p>	<p>Request: CTB CT Angio CT Perfusion Carotid Doppler MRI MRA CXR</p>	<ul style="list-style-type: none"> <li>• Neurology Unit</li> <li>• Cardiac Unit</li> <li>• Orthopaedic Unit</li> <li>• Endocrine Unit</li> <li>• PGMU</li> <li>• Renal Unit</li> <li>• Rheumatology Unit</li> <li>• Neurosurgical Unit</li> <li>• Psychiatry</li> <li>• Intensive Care Unit</li> <li>• Acute Aged Care Services</li> <li>• Allergy, Immunology and Respiratory Medicine (AIRmed)</li> <li>• Audiology</li> <li>• Burns Unit</li> <li>• Cardiovascular Medicine Services</li> <li>• Hyperbaric Service</li> <li>• Infectious Disease Unit</li> <li>• Lung Health Promotion</li> </ul> <p>The SNPC will have the ability to make open referrals based upon the needs of the patient.</p>
<p><b>Stroke Prevention Clinic</b></p>	<p><b>Admission &amp; Discharge Rights</b></p>	<p><b>Heart Centre</b></p>	
<ul style="list-style-type: none"> <li>• Patient and family education, both written and verbal information</li> <li>• Risk factor modification / Secondary prevention</li> </ul>		<p>ECG Holter Monitor Transthoracic Echocardiogram</p>	

# STROKE NURSE PRACTITIONER EVALUATION PLAN

# APPENDIX 7

Domains	SPNC Program Outcomes	Performance Measures <ul style="list-style-type: none"> <li>▪ activity/utilization indicators</li> <li>▪ prevention indicators</li> <li>▪ safety indicators</li> </ul>	The Alfred (07/08)	National benchmarks <sup>5</sup>	Data Source (Periodic & Continuous)	References
<b>Project Management</b>						
Implementation of Stroke Service Nurse Practitioner Project	Steering Committee Terms of Reference Meeting minutes Project newsletters, information sessions/forums, Project presentations, publications Participation in NP Stroke Collaborative	No. of meetings, plans and reports No. of communications documents No. of presentations No. of publications		NA	Project documentation	<b>SCSV Rec 27 NBV (2008)</b>
<b>Stroke Service structure</b>						
SNPC Scope of Practice in Level 4 (Cat A) Stroke Unit	SNP /C position description Application for SNP/C <ul style="list-style-type: none"> <li>▪ Alfred Health Nursing Scope of Practice Committee</li> <li>▪ DTC – drug formulary</li> </ul>	SNPC endorsement by Nurses Board of Victoria				<b>SCSV Rec 26 DHS (2007) BH1106</b>
	↑ service capacity of Stroke Unit	Activity: Separations/beds/beddays/LOS Utilization: procedures/investigation/therapy Composition/FTE of Stroke Unit Team	384 sep (CPU) 406 (CLAUD) av LOS 10.7 days	SU beds: 6 (IQR 4-10) Median FTE 10 bed SU: 8 (all disciplines)	National Stroke Audit HIS/CPU Stroke db	<b>SCSV Rec 12, 13, 15- 17, 20</b> ref Table 5 NSF (2007b)
	SNP clinical practice guidelines/protocols: <ul style="list-style-type: none"> <li>▪ ischaemic stroke</li> <li>▪ haemorrhagic stroke</li> <li>▪ TIA's</li> </ul>	SNPC guidelines comply with NSF Clinical Guidelines for Acute Stroke Management			Peer Review	NBV (2008) NSF (2007a)
Tools/Resources	SNP case notes pro forma SNP audit tool/case report form Stroke database/registry	% Compliance with documentation requirements		38% Vic hosp. use a Stroke Register	NSA	NSF (2007b)
	Protocol/prearrangement with ambulance service to facilitate rapid transfer to ED	↓ Time from onset of symptoms to arrival @ hospital	88% cases arrived by ambulance	19% Hosp. had arrangements with ambulance services to facilitate rapid transfer	NSA	NSF (2007b)

<sup>5</sup> Unless otherwise noted the National benchmark data is from the 2007 National Stroke Audit Organisation Report (NSF 2007b) and Clinical Report (NSF 2007c) Alfred Health 2008

**STROKE NURSE PRACTITIONER EVALUATION PLAN**

**APPENDIX 7**

<b>Domains</b>	<b>SPNC Program Outcomes</b>	<b>Performance Measures</b> <ul style="list-style-type: none"> <li>▪ activity/utilization indicators</li> <li>▪ prevention indicators</li> <li>▪ safety indicators</li> </ul>	<b>The Alfred (07/08)</b>	<b>National benchmarks<sup>5</sup></b>	<b>Data Source (Periodic &amp; Continuous)</b>	<b>References</b>
	Protocol for inter-hospital transfer (SH, CH to Alfred)	↑ pre-notification of arrival by Ambulance	13% cases transferred from another hospital	44% hosp. had inter-hospital transfer protocol	NSA	NSF (2007b)
	Protocol for triage and rapid assessment of stroke (or potential stroke patients)	% stroke/potential stroke patients triaged as Cat 1 or 2		38% hosp. had ED protocol for rapid triage	NSA Stroke Case Report Form ED db/CPU (?)	NSF (2007b)
	Multidisciplinary Ischaemic Stroke pathway	Ischaemic. Stroke clinical pathway complies with NSF Clinical Guidelines % Completion/compliance with Ischaemic Stroke clinical pathway	Yes	84% SU used care pathways	Peer review  Documentation audit	NSF (2007b)
Build capacity of SU workforce	Successful completion of Master of AdvNurs (NP)	SNPC endorsement by Nurses Board of Victoria		NA	Academic transcript (each semester)	<b>SCSV Rec 26</b> NBV (2008)
	Clinical Supervision program SNPC Training log/record Participation in NP Stroke Care Collaborative	Incidence of Clinical Supervision On-the-job training hours Learning outcomes achieved		NA	SNPC Training log/record	ANMC Comp Standard 1.4
	Stroke Care Education & Training <ul style="list-style-type: none"> <li>▪ learning packages</li> <li>▪ competency assessment packages</li> </ul>	% of nursing staff that demonstrate competency in Stroke Care		NA	Ward staff competency register	
	Stroke in-service <ul style="list-style-type: none"> <li>▪ ward staff</li> <li>▪ E&amp;TC</li> <li>▪ junior medical staff</li> </ul>	In-service hours		NA	In-service register	
Stroke Service/SNP program evaluation	Stroke database  Evaluation program that includes the following performance metrics 1. Patient level KPIs 2. Unit level KPIs  3. Hospital level KPIs	No. of internal and external program reports  Participation in external benchmarking activities			NSA (biannual) NP Stroke Care Collaborative  Australian Stroke Coalition	<b>SCSV Rec 10</b> ANMC Comp Standard 1.4, 2.3, 3.1, 3.2

**STROKE NURSE PRACTITIONER EVALUATION PLAN**

**APPENDIX 7**

<b>Domains</b>	<b>SPNC Program Outcomes</b>	<b>Performance Measures</b> <ul style="list-style-type: none"> <li>▪ activity/utilization indicators</li> <li>▪ prevention indicators</li> <li>▪ safety indicators</li> </ul>	<b>The Alfred (07/08)</b>	<b>National benchmarks<sup>5</sup></b>	<b>Data Source (Periodic &amp; Continuous)</b>	<b>References</b>
<b>Clinical Care</b>						
Access	<p>↓ Time from onset of symptoms to arrival @ hospital</p> <p>↑ pre-notification of arrival by Ambulance</p>	% of Stroke patients (suitable for thrombolysis) presenting to ED within thrombolysis time window	18%(n=2) arrived within 3 hours	42% pts in Cat A hospitals arrived within 3 hrs of onset	NSA	<b>SCSV Rec 4, 19</b> NSF (2007c)
Emergency Management	Stroke identified as medical emergency	% Stroke/potential stroke patients triaged as Cat 1-2			Stroke Case Report Form (Stroke CRF)	<b>SCSV Rec 5</b> ANMC Comp Standard 1.1, 1.2, 1.3, 2.1  NSF (2007c)
	Earlier assessment of acute patients.  Consistent & routine measurement of NIHSS + mRS scores	Time to 1 <sup>st</sup> assessment by stroke service  % pt with diagnosis of stroke/TIAs seen by Stroke Service			Stroke CRF  HIS/CPU	
	↓ Time to CT scan Earlier confirmation of diagnosis Decrease time to initiation of therapy	% patients with stroke/TIA who receive CTB % patients who have an ECG while in hospital Door to CT time (< 30 min) Door to needle time (< 60 min)	100% CTB  68% ECG	92% pts in Cat A hosp had CTB within 24 hrs 82.25% CTB during episode of care (ACHS: Int Med 6.1) 91% pts in Cat A hosp had ECG while in hospital	Stroke CRF HIS/CPU  Stroke CRF	
Instigation of appropriate therapy	Increase in number of patients who receive thrombolysis	% patients eligible for thrombolysis who receive therapy with X time	17%(n=2)	6% pts in Cat A hosp arriving within 3 hrs received IV thrombolysis	Stroke CRF NSA	<b>SCSV Rec 6</b> ANMC Comp Standard 1.2 NSF (2007c)
	Increase in number of patients who receive anticoagulation therapy within 48 hours of presentation	% patients eligible for anticoagulation therapy who receive therapy within 48 hours of presentation		92% in Cat A hosp received aspirin within 48 hrs	Stroke CRF NSA	
	Decrease time in E&TC	% Stroke patients admitted w/in 8 hrs % Stroke patients admitted w/in 12hrs % non-admitted with LOS < 4hrs	45% 65% <b>N/A</b>		HIS/CPU	

**STROKE NURSE PRACTITIONER EVALUATION PLAN**

**APPENDIX 7**

<b>Domains</b>	<b>SPNC Program Outcomes</b>	<b>Performance Measures</b> <ul style="list-style-type: none"> <li>▪ activity/utilization indicators</li> <li>▪ prevention indicators</li> <li>▪ safety indicators</li> </ul>	<b>The Alfred (07/08)</b>	<b>National benchmarks<sup>5</sup></b>	<b>Data Source (Periodic &amp; Continuous)</b>	<b>References</b>
Acute Stroke Care	Increase in no. of stroke patients admitted to Stroke Unit	% Patients with diagnosis of stroke admitted to the Stroke Unit	95%	In Cat A hosp with SU: 82% of pts received SU care during their admission	Stroke CRF HIS/CPU	NSF (2007c)
	Earlier notification and assessment of patients by SU allied health team and med/surgical units	Assessed by physiotherapy w/in 48 hrs Assessed by occupational therapy w/in 48hrs Assessed by speech pathology w/in 48 hrs Assessed by nutrition w/in 48 hrs Assessed by social work w/in 7 days Mood assessed during admission	83% physio 62% OT 69% speech 54% diet 86% soc work 25% mood	Cat A hospitals: 76% physio 57% occ therapy 83% speech 45% diet 78% social work 33% mood	NSA	ANMC Comp Standard 2.1 NSF (2007c)
	Improved stroke care	Swallow screen before given food or drink IDC within the first week of admission Incontinent patients with incontinence management plan DVT prophylaxis	40% swallow 8% IDC 100%Inc plan 68%	Cat A (approx) 53% Swallow 22% IDC 69% Incont plan 66% DVT	NSA	NSF (2007c)
	Reduced rate of complications/adverse events associated with stroke	Rate of adverse events/complications <ul style="list-style-type: none"> <li>▪ fever</li> <li>▪ pressure ulcers</li> <li>▪ shoulder pain</li> <li>▪ falls</li> <li>▪ AMI</li> <li>▪ DVT</li> </ul>	8% fever 3% pu 3% shoulder 0 falls 0 AMI X DVT	Cat A hosp 8% fever 1% press ulcer 2% shoulder 6% falls 1% AMI	RiskMan HIS	NSF (2007c)
	Improved health status at discharge	Mortality rate (observed/expected) Length of stay % discharge home % discharge to a rehabilitation facility % discharge to residential care facility	10% mortality av LOS 8.7 d 19% home 50% rehab 19% resi care	13% Mortality av LOS 11 days 40% home 26% rehab 14% resi care	HIS/CPU  NSA	<b>SCSV Rec 7</b> NSF (2007c)
	Improved functional status at discharge	% improvement in functional status at discharge (mRS and/or NHISS)	45% mRS 0-2	49% mRS 0-2	Stroke CRF	NSF (2007c)
Palliative Care	Appropriate & timely disposition to suitable bed / facility	Discharge destinations			Stroke CRF	<b>SCSV Rec 9</b>

# STROKE NURSE PRACTITIONER EVALUATION PLAN

# APPENDIX 7

Domains	SPNC Program Outcomes	Performance Measures <ul style="list-style-type: none"> <li>▪ activity/utilization indicators</li> <li>▪ prevention indicators</li> <li>▪ safety indicators</li> </ul>	The Alfred (07/08)	National benchmarks <sup>5</sup>	Data Source (Periodic & Continuous)	References
<b>Discharge</b>						
Stroke Prevention clinic for pts TIA/Stroke with good recovery.	Decrease number of patients discharged from ED lost to follow-up  Continuity of assessment of patients discharge from E & TC to TIA clinic  Review / follow-up of patients in a timely manner (<14/7)	Number of patients discharged from E & TC, seen in TIA clinic within 14/7  Patients discharged from E & TC who experience a stroke within X months  % patients referred to TIA clinic not seen by Stroke Services in ED				<b>SCSV Rec 3</b> ANMC Comp Standard 2.2
Secondary prevention	Improve communication with GP's post discharge	% pt's GP sent a letter / discharge summary	86%	80% Cat A hosp	NSA	NSF (2007c)
	Increase compliance with management of known risk factors	% on antihypertensives on discharge % on lipid lowering therapy on discharge % on antithrombotics on discharge	86% 67% 89%	Cat A hosp 75% anti/HT 62% lipid lowering 90% on anti thromb	NSA	NSF (2007c) <i>indicators may not be directly related to NPSC role</i>
		Percentage of patients compliant with management at 3, 6 or 12 months				<b>SCSV Rec 1</b>
	Improved patient understanding of stroke, investigations, prevention and treatment plan	% Patients receiving lifestyle advice on discharge  % Patient satisfaction / knowledge of stroke prevention/lifestyle changes	19%	Cat A hosp 38%	NSA	NSF (2007c)

## References

- Australian Nursing & Midwifery Council (2006) National Competency Standards for the Nurse Practitioner
- Alfred Health (2007) Change to Nursing Scope of Practice Guideline (BH1106)
- Department of Human Services (2007), Stroke Care Strategy for Victoria, Metropolitan Health and Aged Care Services Division, Victorian Government Department of Human Services (DHS): Melbourne.
- National Stroke Foundation (2007a) Clinical Guidelines for Acute Stroke Management, National Stroke Foundation [[www.strokefoundation.com.au](http://www.strokefoundation.com.au)]
- National Stroke Foundation (2007b) National Stroke Audit Organisational Report Acute Services, National Stroke Foundation [[www.strokefoundation.com.au](http://www.strokefoundation.com.au)]
- National Stroke Foundation (2007c) National Stroke Audit Clinical Report Acute Services, National Stroke Foundation [[www.strokefoundation.com.au](http://www.strokefoundation.com.au)]
- Nurses Board of Victoria (2008) Process for Nurse Practitioner Endorsement [[www.nbv.org.au](http://www.nbv.org.au)]

<b>POSITION:</b>	<b>Stroke Nurse Practitioner Candidate</b>
<b>DEPARTMENT:</b>	Nursing
<b>CLASSIFICATION:</b>	Substantive Salary during Nurse Practitioner Candidacy
<b>DEPARTMENT CODE:</b>	According to location
<b>QUALIFICATIONS:</b>	<p><u>Academic</u> Current registration with the Nurse's Board of Victoria as a Division 1 Registered Nurse. Working towards an approved Masters Qualification Working towards an approved Therapeutic Medication Management Unit Graduate Diploma or Certificate in Neurosciences or related area</p> <p><u>Experience</u> Significant years experience post specialist qualification, and evidence of working at a level of advanced practice in the clinical area</p>
<b>ACCOUNTABLE TO:</b>	Co-Director (Nursing) – Professional Nursing functions Medical Director- Clinical functions
<b>POSITION SUMMARY:</b>	Is a registered nurse who has acquired the expert knowledge base, complex decision making skills and clinical competencies to prepare for expanded practice. The Nurse Practitioner Candidate is an integral member of the health care team who is working towards an increased level of professional autonomy in collaboration with other health professionals to assess and manage clients within their clinical context using nursing knowledge and skills. The Nurse Practitioner Candidate is engaging in clinical education, mentorship and professional activities to assist the development of extensions to practice including prescription of medications and <i>at least one</i> of the following; ordering diagnostic investigations, direct referral to other health care professionals, the ability to admit and discharge patients and/or provision of absence from work certificates, within the limitations of their registration as a Registered Nurse.

## ROLE RESPONSIBILITIES

### 1. Clinical Practice

- Undertakes and completes a period of clinical mentorship during which knowledge and skills are developed through education activities, mentored clinical practice, supervision, assessment and feedback
- Demonstrates excellence in advanced clinical nursing practice in stroke
- Delivers patient centred care and operates within a nursing model of holistic practice
- Maintains a focus on best patient outcomes
- Demonstrates developing competency within the scope of relevant, current and evidence based Clinical Practice Guidelines **under the supervision/guidance of their Clinical Mentor**, including;
  - Conducting advanced comprehensive patient assessment.
  - Initiating and interpreting appropriate diagnostic tests
  - Formulating diagnoses and management plans
  - Performing and demonstrating increasing understanding of appropriate therapeutic procedures, treatments and interventions including medication prescription as part of the management plan
  - Facilitating appropriate referrals to specialists/units
  - Admitting and Discharging patients as required
  - Providing patient education
  - Communicating patient management plans to all relevant members of the health care team, including the GP
  - Evaluating client assessment and management on completion of the episode of care and taking appropriate action
  - Documenting episode of care
- Uses critical judgement to vary practice according to contextual and cultural influences
- Recognises limits to own practice and consults appropriately
- Identifies potential adverse outcomes and implements proactive strategies to achieve risk minimisation
- Actively engages community/public health information to inform interventions, referrals and coordination of care

### 2. Leadership

- Acts as a positive role model for all staff in a manner that is consistent with the values, standards and policies of the organisation and the Nursing Division
- Demonstrates leadership qualities such as vision, openness, flexibility and integrity
- Works closely with Professional Mentor to reflect upon and further develop leadership capacity
- Establishes and ensures the ongoing functioning of the local working group in conjunction with their Professional Mentor, to support the development of the Nurse Practitioner role in the clinical area
- Builds effective and collaborative relationships with patients, colleagues and other stakeholders to achieve best practice and ensure optimal outcomes for patients
- Actively promotes the NP role and advanced nursing practice through activities such as presenting at hospital and departmental meetings, local working groups and/or special interest groups
- Builds partnerships with other departments and health services developing Nurse Practitioner roles
- Influences and manages organisational change as appropriate

### 3. Research, Evaluation & Quality Improvement

- Monitors processes and outcomes of clinical care provided by the Nurse Practitioner Candidate
  - Maintains patient log
  - Conducts weekly clinical audit in conjunction with Clinical Mentor
  - Presents monthly case studies to mentor and other team members
- Critically appraises and applies relevant research to the development and promotion of evidence based practice
- Develops and maintains evidence based Clinical Practice Guidelines with multidisciplinary input
- Develops and pursues an evaluation strategy for the Nurse Practitioner role in the clinical area – as per the Bayside Health Nurse Practitioner Evaluation Framework
- Leads and contributes to quality improvement and best practice activities that evaluate current practices in the clinical area
- Initiates, leads and participates in research projects/activities in the clinical area

### 4. Education/training and professional development

#### ***Provides education in the clinical discipline***

- Participates in the education of nursing staff and other health professionals through role modelling and facilitating the exchange of knowledge to improve patient outcomes
- Provides in-service education as appropriate and as requested
- Delivers patient education
- Assists other staff in the development and implementation of patient education
- Promotes a clinical environment conducive to learning

#### ***Supports the professional development and learning of other staff***

- Demonstrates clinical leadership in the area of specialty
- Shares knowledge of research, education and clinical practice issues and information gained from professional activities
- Assists, develops and supports colleagues in the area of research
- Facilitates special interest groups or other forums as relevant to the clinical discipline or local needs

#### ***Ongoing commitment to professional development and learning***

- Develops and maintains own clinical development and competence, particularly in the areas of:
  - Advanced Health Assessment and Diagnostic Skills
  - Advanced Clinical Decision making
  - Pharmacological Interventions
  - Procedural care/management
  - Selection and interpretation of Diagnostic Tests
  - Process of referral to other Health Professionals
  - Evaluation and Documentation
- Works closely with Clinical Mentor to develop advanced clinical competence
- Maintains professional portfolio as a record of educational and training activities and competency
- Actively pursues additional learning opportunities to meet identified learning needs
- Works towards completing Therapeutic Management Module within the first 12 months of the commencement of the candidacy
- Works towards approved Masters Qualification
- Works towards submitting for endorsement as a Nurse Practitioner within 18 months to 2 years of the commencement of the candidacy, or as negotiated with Nursing Manager

- Actively participates in professional development and continuing education, conferences, seminars and professional groups.
- Presents and publishes at/in appropriate professional conferences and journals
- Develops strong collegial links and partnerships with other nurse practitioners
- Actively participates in professional mentorship relationship

#### **5. Knowledge/Skills/Abilities**

- Extensive advanced knowledge of clinical specialty area
- Peer recognition as a leader within clinical field
- Developing knowledge of research methods and processes, the ability to generate own research, as well as the ability to analyse and interpret existing data
- High level interpersonal and communication skills across a broad range of health professionals
- Ability to work both autonomously and collaboratively
- Demonstrated ability to be self motivated and innovative
- Capacity for critical reflection
- An understanding of the political sensitivity of developing the Nurse Practitioner role and an ability to promote the role in a positive manner

#### **References:**

Position Specifications Policy Alfred Health (2005)

Alfred Health Nurse Practitioner Service Plan Development Project Report June 2006

Position Description authorised by Ms Julie Cairns

Co-Director (Nursing) Medical Specialties

Created 11<sup>th</sup> November 2008

<b>POSITION:</b>	Endorsed Stroke Nurse Practitioner
<b>DEPARTMENT:</b>	Nursing
<b>CLASSIFICATION:</b>	Nurse Practitioner Year 1: Grade 6 Year 1 (201 – 300 beds) Nurse Practitioner Year 2 and thereafter: Grade 6 Year 2 (301 – 400 beds)
<b>DEPARTMENT CODE:</b>	Medical Specialties, Stroke
<b>QUALIFICATIONS:</b>	<p><u>Academic</u> Current endorsement by the Nurse’s Board of Victoria as a Stroke Nurse Practitioner Completed an approved Masters Qualification Completed an approved Therapeutic Medication Management Unit</p> <p><u>Experience</u> Evidence of competent utilisation of extensions to advanced nursing practice according to approved Clinical Practice Guidelines in stroke care.</p>
<b>ACCOUNTABLE TO:</b>	Co-Director (Nursing) – Professional Nursing Functions Medical Director- Clinical Functions
<b>POSITION SUMMARY:</b>	<p>Is a registered nurse who has acquired the expert knowledge base, complex decision making skills and clinical competencies for expanded practice<sup>1</sup>. The Stroke Nurse Practitioner is an integral member of the health care team who practices autonomously but in collaboration with other health professionals to assess and manage clients within their clinical context using nursing knowledge and skills. Extensions to practice include prescription of medications and <i>at least one</i> of the following; ordering diagnostic investigations, direct referral to other health care professionals, the ability to admit and discharge patients and/or provision of absence from work certificates</p>

## ROLE RESPONSIBILITIES

### 1. Clinical Practice

- Demonstrates excellence in advanced clinical nursing practice
- Delivers patient centred care and operates within a nursing model of holistic practice
- Maintains a focus on best patient outcomes
- Demonstrates competency within the scope of relevant, current and evidence based Clinical Practice Guidelines as they are developed, including;
  - Conducting advanced comprehensive patient assessment.
  - Initiating and interpreting appropriate diagnostic tests
  - Formulating diagnoses and management plans
  - Performing and demonstrating comprehensive understanding of appropriate therapeutic procedures, treatments and interventions including medication prescription as part of the management plan
  - Facilitating appropriate referrals to specialists/units
  - Admitting and Discharging patients as required
  - Providing patient education
  - Communicating patient management plans to all relevant members of the health care team, including the GP
  - Evaluating client assessment and management on completion of the episode of care and taking appropriate action
  - Documenting episode of care
- Uses critical judgement to vary practice according to contextual and cultural influences
- Recognises limits to own practice and consults appropriately
- Identifies potential adverse outcomes and implements proactive strategies to achieve risk minimisation
- Actively engages community/public health information to inform interventions, referrals and coordination of care

### 2. Leadership

- Acts as a positive role model for all staff in a manner that is consistent with the values, standards and policies of the organisation and the Nursing Division
- Demonstrates leadership qualities such as vision, openness, flexibility and integrity
- Builds effective and collaborative relationships with patients, colleagues and other stakeholders to achieve best practice and ensure optimal outcomes for patients
- Actively promotes the NP role and advanced nursing practice through activities such as presenting at hospital and departmental meetings, local working groups, committees and/or special interest groups
- Builds partnerships with other departments and health services developing Nurse Practitioner roles
- Develops mentorship skills and works towards mentoring new NP candidates
- Participates and facilitates organisational committees/working groups as required
- Influences and manages organisational change as appropriate

### 3. Research, Evaluation & Quality Improvement

- *Monitors processes and outcomes of clinical care provided by the Nurse Practitioner*
- Critically appraises and applies relevant research to the development and promotion of evidence based practice
- Develops and maintains evidence based Clinical Practice Guidelines with multidisciplinary input
- Develops and pursues an evaluation strategy for the Nurse Practitioner role in the clinical area – as per Bayside Health Nurse Practitioner Evaluation Framework
- Leads and contributes to quality improvement and best practice activities that evaluate current practices in the clinical area
- Initiates, leads and participates in research projects/activities in the clinical area

#### 4. Education/training and professional development

##### ***Provides education in the clinical discipline***

- Participates in the education of nursing staff and other health professionals through role modelling and facilitating the exchange of knowledge to improve patient outcomes
- Provides in-service education as appropriate and as requested
- Delivers patient education
- Assists other staff in the development and implementation of patient education
- Promotes a clinical environment conducive to learning

##### ***Supports the professional development and learning of other staff***

- Demonstrates clinical leadership in the area of specialty
- Shares knowledge of research, education and clinical practice issues and information gained from professional activities
- Assists, develops and supports colleagues in the area of research
- Facilitates special interest groups or other forums as relevant to the clinical discipline or local needs

##### ***Ongoing commitment to professional development and learning***

- Develops and maintains own clinical development and competence
- Maintains professional portfolio as a record of ongoing clinical activity and competence
- Actively participates in professional development and continuing education, conferences, seminars and professional groups at state, national and government levels.
- Remains informed of current literature
- Presents and publishes at/in appropriate professional conferences and journals
- Develops strong collegial links and partnerships with other nurse practitioners

#### 5. Knowledge/Skills/Abilities

- Extensive advanced knowledge of clinical specialty area
- Peer recognition as a leader within clinical field
- Knowledge of research methods and processes, the ability to generate own research, as well as the ability to analyse and interpret existing data
- High level interpersonal and communication skills across a broad range of health professionals
- Ability to work both autonomously and collaboratively
- Demonstrated ability to be self motivated and innovative
- Capacity for critical reflection
- An understanding of the political sensitivity of developing the Nurse Practitioner role and an ability to promote the role in a positive manner

#### **References:**

Position Specifications Policy Alfred Health (2005)

Alfred Health Nurse Practitioner Service Plan Development Project Report June 2006

Position Description authorised by Ms Julie Cairns

Co-Director (Nursing) Medical Specialties

Created 11<sup>th</sup> November 2008

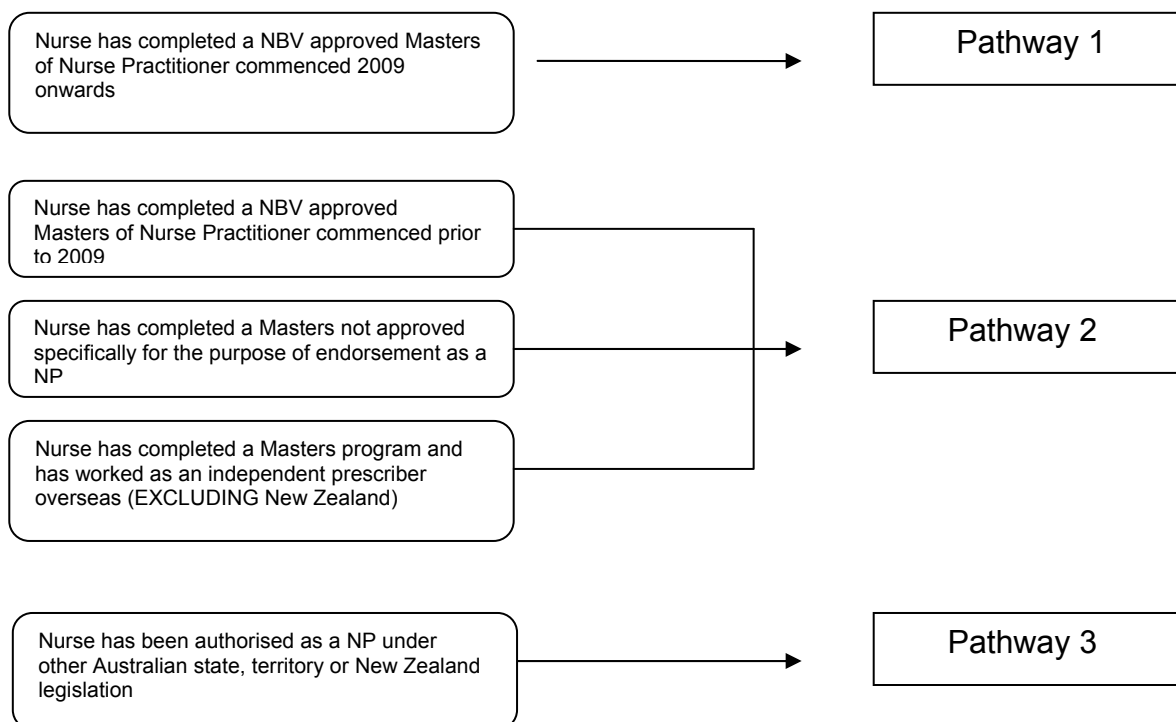
**PROPOSED STROKE NURSE PRACTITIONER  
WEEKLY TIMETABLE**

**APPENDIX 10**

<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>
<p>Time with clinical mentors</p> <p>D/C monitoring meeting</p>	<p>Allied Health meeting</p> <p>Stroke clinic</p> <p>Education sessions by VSNPC + VSCN</p>	<p>Case reviews with Stroke / Neurology</p> <p>Radiology meeting</p> <p>Stroke Grand Round</p>	<p>Registrar training (stroke specific component only)</p>	<p>S T U D Y</p> <p>D A Y</p>

**Other Activities to be included:**

- Participation in the Victorian Stroke Nurse Practitioner Collaborative
- Participation in Professional Groups or Associations



**Courses**

As of 20<sup>th</sup> November 2008 the following are courses which may lead to endorsement as a Nurse Practitioner.

Education Provider	Campus	Course Name	Accreditation Expiry Date
Deakin University	Burwood & Geelong Waterfront	Masters Nursing Practice	January 2011
Flinders University	Adelaide	Masters of Nursing (Nurse Practitioner)	April 2009
		Pharmacology for Advanced Professional Practice	April 2009
La Trobe University	Bundoora & Bendigo	Masters of Nursing (Nurse Practitioner)	July 2009
Monash University	Peninsula campus	Therapeutic Medication Management Unit	June 2010
Melbourne University	Parkville	Therapeutic Medication Management Education Program	October 2013

Nurses Board of Victoria – July 2008

## Scholarships

In order to undertake a Master's course candidates will have to pay up to \$15 000:00 dollars as there are no Fee Free Masters positions thus they will be full fee paying students. Fortunately there are several different scholarships available to those enrolled in their Master's of Nursing. Those offering scholarships include:

- **Department of Human Services - Nurse Policy Branch (NPB) postgraduate scholarship program.** NP scholarships of up to \$6000 per nurse for nurses undertaking study that lead to endorsement as a NP. In 2008-2009, priority weighting will be given to NP scholarship applications from nurses employed at public health services:
  - whose area of practice is stroke, renal (and Mental health or Drugs), or
  - who are employed as an NP candidate at a health service that is funded for NP models in Stroke or Renal care development.

Postgraduate scholarships for nurses working in public health services who are undertaking courses that lead to endorsement as an NP are offered by NPB for semester 1 & 2 for each academic year and are advertised twice yearly. (VNPP Rounds 4.2-4.3 Policy and funding application)

Application closed Thursday 4<sup>th</sup> December 2008

- **Royal College of Nursing, Australia. Nurse Practitioner Scholarship Scheme** Is an Australian Government initiative seeking to support registered nurses who are studying to become an endorsed nurse practitioner. Successful applicants will receive scholarship funding to assist with the costs associated with their course. Scholarships are worth up to \$7,500 per semester for full time study and \$3,750 per semester for part time study. Funding will be provided up to \$30,000 for two years full time or four years part time study.

Application closed Friday 5<sup>th</sup> December 2008

**Victorian Stroke Clinical Network Post Graduate Scholarships 2009** aimed at public sector nursing and allied health employees working in stroke care (acute/subacute/community) to undertake post graduate studies in stroke care. Several scholarships are available in each of two categories:

1. Single subject scholarships of \$2,000
2. Masters and higher degree scholarships of \$5,000

Application close Monday 12<sup>th</sup> January, 2009

<http://www.health.vic.gov.au/clinicalnetworks/strokescholarships>

**Summary**

Total Salaries (28/7/08 - 9/1/09)	\$	34,760
Salary Oncosts @ 14.2%	\$	4,936
Purchase of Computer for staff's use	\$	1,150
<b>Total Costs</b>	<b>\$</b>	<b>40,845</b>