Department of Human Services Victoria
Victorian Nurse Practitioner Project (VNPP) Phase 4 Funding Round

Deliverable 1: Description of the Service Model
Incorporating Nurse Practitioners

Deliverable 2: Nurse Practitioner Service Model’s
Five (5) year plan

BENDIGO HEALTH STROKE
NURSE PRACTITIONER
PROPOSED
MODEL OF CARE

Elizabeth Morley
Nurse Practitioner Project Officer
September 2009

ACKNOWLEDGEMENT: Bendigo Health’s stroke nurse practitioner model was developed from the input and advice of Bendigo Health’s Stroke Steering Committee and Stroke Reference Group members and the Stroke Clinical Network Facilitators. I would also like to acknowledge the previous health services listed below for making their final stroke nurse practitioner reports readily available. Much of their work has been used in the development of Bendigo Health’s stroke nurse practitioner model of care:

- Alfred Health, Round 4.2, Stroke Nurse Practitioner Health Service Final Report
- Austin Health, Round 4.2, Stroke Nurse Practitioner Health Service Final Report
- Eastern Health, Round 4.2, Stroke Nurse Practitioner Health Service Final Report
- Melbourne Health, Round 4.2, Stroke Nurse Practitioner Health Service Final Report
- St Vincents Health, Round 4.2, Stroke Nurse Practitioner Health Service Final Report
DELIVERABLE 1: DESCRIPTION OF THE SERVICE MODEL INCORPORATING NURSE PRACTITIONERS (NP)

BACKGROUND INFORMATION

In May 2009 Bendigo Health (BH) successfully applied for funds from the Department of Human Services (DHS) Victorian Nurse Practitioner Project (VNPP) Phase 4 Funding Round. The funds were sought to develop a nurse practitioner (NP) model of care in stroke. This was subsequent to identifying that an NP role within BH’s existing stroke model of care could enhance outcomes for people presenting to BH with suspected stroke and transient ischaemic attacks (TIA). Predominantly the funds were used for the project work to develop the model and commence the process to appoint a candidate. This Report, written in accordance with the DHS funding Deliverables, describes the proposed NP model of care within BH’s stroke model of care.

Bendigo Health Location

Bendigo Health (BH), situated in Bendigo Victoria, is Victoria’s largest regional health care provider. While it is the main provider of acute and sub acute health and aged care services to the city of Bendigo and nearby localities, it also provides a variety of health and aged care services throughout the Loddon Mallee (LM) health region. As shown in Figure 1, LM is geographically Victoria’s largest DHS health region, with many remote and sparsely populated areas.

- LM encompasses over 58,965 square kilometres or > 26% of Victoria’s land mass
- It has an approximate population of 300,000, which is only 6% of Victoria’s total population
- A 1/3 or 100,000 of LM residents reside in the City of Greater Bendigo, while;
- Another 60,000 people reside in the Rural City of Mildura
- Mildura is approximately 400 km north-west of Bendigo.

Figure 1: Map of Loddon Mallee region
Bendigo Health’s Range of Services

The services provided from BH’s main campuses in Bendigo include:

- 226 acute beds incorporating medical, surgical, maternity, critical care, intensive care and cardiac care beds;
- A nineteen cubicle emergency department (ED);
- Sixty sub-acute rehabilitation and geriatric evaluation and management (GEM) beds;
- A seven bed hospice unit;
- Cardiac catheter laboratory, diagnostic cardiology clinic and cardiac rehabilitation;
- Oncology services including chemotherapy and radiotherapy;
- Renal services including, haemo and peritoneal dialysis and community care;
- Inpatient and community mental health services;
- Aged care assessment services;
- The entire range of allied health services;
- Other community services including chronic disease management, district nursing, post acute care, palliative care and hospital in the home;
- Various outpatient clinics in accordance with the clinical specialities;
- Medical imaging services including 64 slice computerized tomography (CT) and magnetic resonance imaging (MRI).

BH also operates a number of high and low residential aged care facilities in Bendigo and provides a number of community and outpatient services throughout the LM region.

Current Issues Facing Bendigo Health’s Acute Services

The acute hospital campus has outgrown its facilities and works have commenced to build an entirely new acute hospital on-site with the sub-acute campus. BH’s acute bed occupancy rate is between 92-110%, with the hospital facing daily bed block issues due largely to the inadequacy of the present facilities. Preliminary works have commenced to build the new hospital which will be constructed in stages and may take up to eight (8) years to complete. In the meantime, construction works are underway to increase the acute medical beds by eight (8), using some ‘dead space’ within the acute hospital building, and to redevelop an interim ED. Both are essential given the occupancy rate, and the physical structure of the present ED which can no longer adequately meet the needs of the community. Although the current ED only opened in 1999, there has been an unprecedented increase in the presentations rates and level of acuity.

The current medical unit and ED redevelopment though is only a temporary solution with the works being undertaken within the constraints of the existing hospital structure. The temporary ED includes a short stay unit, and coinciding with other strategies, is expected to have a positive impact on the bed block issues. In the meantime it is imperative that every available strategy is in place to reduce and / or prevent unnecessary presentations to ED, long waiting-to-be-seen times in ED, often on ambulance trolleys, extended stays in the ED due to inpatient bed shortages and admissions to the acute hospital. Other strategies that have been implemented include the rapid access clinic and residential-in-reach program.

Stroke in Australia

Stroke is a major health problem for Australia, leaving many stroke sufferers with serious and often life-long, disability. In line with Australia’s ageing population the incidence of stroke is increasing and the demands on health services across Victoria is estimated to increase by 2.7 per cent per year.

Time is critical in the management of stroke. The National Stroke Foundation (NSF)1 guidelines and the Stroke Care Strategy for Victoria2 recommend:

- Promoting early recognition of stroke / TIA symptoms by the general public;
- Early transfer via ambulance to a health care facility able to provide acute stroke care;

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2 Department of Human Services (2007) Stroke Care Strategy for Victoria, Metropolitan Health and Aged Care Services Division
• 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 fourteen days.

**Stroke and Transient Ischaemic Attack Statistics at Bendigo Health**

During the 2008 calendar year BH’s ED had 375 stroke and TIA related ED presentations. Of these, 86 (23%) were transferred out to other facilities, 78 were discharged home from the ED and four (4) people died in the ED. The remaining 207 required admission to the acute medical unit, resulting in 1364 stroke / TIA related bed-days. Despite the implementation of the thrombolysis protocol (Assessment and Management of Hyperacute Ischemic Stroke patients eligible for Thrombolysis (rt-PA) J40 Policy) in March 2009 only two (2) of the of the thirty-four ischaemic stroke related coded patient episodes received thrombolysis. It should be noted though, the overall figure does not take into account other factors which may influence the eligibility of these patients to receive thrombolysis, including time delays to presentation and co-morbidities.

**Bendigo Health’s Stroke Services and Stroke Model of Care**

The stroke team at BH provide comprehensive, interprofessional stroke management across the care continuum; ED, acute, sub-acute, including inpatient rehabilitation, allied health, community, acute outpatient and outpatient rehabilitation services. The team is inclusive of a wide-range of disciplines including general and nursing management staff, medical staff and consultants, speech pathologists, dieticians, occupational therapists, social workers, physiotherapists and pharmacists. Many of the individual people involved in stroke care have specific stroke and/or neurological qualifications and/or specific interest in stroke management. As a teaching hospital and a health service committed to professional and workforce development, junior nursing, medical and allied health staff are also members of the team caring for stroke and TIA clients. Through the Stroke Network Facilitators (SNF), BH is developing and implementing stroke pathways and strategies to improve outcomes for stroke and TIA patients.

BH does not have a dedicated stroke unit, a neurologist, a stroke liaison service / nurse, nor does it have an acute stroke physician or a sub-acute stroke physician, both of which are recommended in the Stroke Care Strategy for Victoria, DHS, 2007. BH is currently negotiating the appointment of a neurologist. A stroke unit feasibility study, in line with the strategic plan, is presently underway. The twelve month trial plan incorporates a designated stroke room in BH’s medical unit. Results of the trial will inform a decision on whether or not BH will operate a permanent acute stroke unit. However, with the ongoing bed block issues, beds cannot be dedicated to stroke patients.

The interprofessional stroke team at BH provide a high standard of evidence-based care for stroke and TIA clients. This is evident in the results of the NSF’s 2007 clinical audit. BH’s results in the NSF’s audit are indicative of BH’s ability to provide stroke care in accordance with the NSF Guidelines and other contemporaneous evidence. Table 1, the Summary of NSF 2007 Acute Clinical Audit Report Findings highlights in green where BH achieved excellent results. Nevertheless, BH strives to continuously improve client outcomes, hence the inclusion of a stroke NP in the stroke team. The opportunities for improvement identified in the NSF audit are highlighted in red in Table 1 and the SNP role should help improve these areas of stroke management.

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Table 1: Summary of NSF 2007 Acute Clinical Audit Report Findings

<table>
<thead>
<tr>
<th>Intervention</th>
<th>BH result</th>
<th>Average result (of the 89 hospitals audited)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECG while in hospital</td>
<td>100%</td>
<td>93%</td>
</tr>
<tr>
<td>Assessed by speech pathology within 48 hours</td>
<td>100%</td>
<td>81%</td>
</tr>
<tr>
<td>CT within 24 hours</td>
<td>97%</td>
<td>91%</td>
</tr>
<tr>
<td>Antihypertensives on discharge</td>
<td>80%</td>
<td>74%</td>
</tr>
<tr>
<td>Ischaemic stroke patients on lipid lowering therapy on discharge</td>
<td>73%</td>
<td>62%</td>
</tr>
<tr>
<td>Received aspirin within 48 hours</td>
<td>92%</td>
<td>96%</td>
</tr>
<tr>
<td>DVT prophylaxis</td>
<td>48%</td>
<td>55%</td>
</tr>
<tr>
<td>Received lifestyle advice on discharge</td>
<td>31%</td>
<td>38%</td>
</tr>
<tr>
<td>Mood assessed during admission</td>
<td>18%</td>
<td>29%</td>
</tr>
<tr>
<td>Incontinent patients with incontinence management plan</td>
<td>5%</td>
<td>45%</td>
</tr>
<tr>
<td>Swallow screen before given food or drink</td>
<td>3%</td>
<td>50%</td>
</tr>
<tr>
<td>Ischaemic stroke patients thrombolysed</td>
<td>0%</td>
<td>3%</td>
</tr>
</tbody>
</table>

The Nurse Practitioner

The NP title is a protected title in Victoria. In order to become a NP, a nurse must meet the endorsement requirements of Nurse’s Board Victoria. Endorsed NPs are educated and authorised to function autonomously and collaboratively in an advanced and extended clinical role. An endorsed NP has a master’s of nurse practitioner (or equivalent), a minimum of a post graduate diploma qualification in their area of clinical speciality (for example neurological nursing) and will have been practicing nursing at an advanced level in their speciality area (i.e. stroke nursing) for many years preceding their NP endorsement.

The advanced and extended clinical practice of a NP means the scope of their nursing practice is beyond that of a division one registered nurse. Expansions to practice may include the direct referral of clients to other health care professionals, prescribing medications and ordering diagnostic investigations. Despite the advanced role of the NP it remains grounded in the nursing profession’s values, knowledge, theories and practise. The literature is replete with evidence that NP models of care improve client outcomes, and satisfaction with health care delivery.

Proposed Stroke Nurse Practitioner Role in Bendigo Health’s Stroke Model of Care

The BH proposed stroke NP (SNP) model is complementary to the existing stroke model of care. Embedded in the SNP’s practice are evidence-based practices such as the NSF Clinical Guidelines and other contemporaneous guidelines. As a member of the interprofessional stroke team the SNP will be involved in various aspects of stroke and TIA management across the care continuum. Table 2: Summary of Bendigo Health’s Stroke Nurse Practitioner Role depicts how and where the SNP will be involved. Despite the SNP’s involvement with stroke patients when available, responsibility for the patient remains with the assigned nurse / medical team. For example, in the ED the nurse assigned to the respective cubicle will remain responsible, and in the wards it will be the nurse / medical team whom the patient is allocated to / admitted under. The SNP will also be involved in capacity building, mentoring, education and research.

Target Patient Population of the Stroke Nurse Practitioner

The target population for the SNP will include all patients presenting to ED and other patients on the acute hospital campus with suspected stroke or TIA during SNP hours of operation. Other acute patients includes those referred from cardiac catheter laboratory, inpatients referred from the Medical Emergency Team (MET), patients in theatre, day surgery, renal dialysis and chemotherapy. The SNP will follow stroke and TIA patients up in the stroke room (medical unit), rehabilitation unit and the acute and sub-acute outpatient clinics as required.
### Table 2: Summary of Bendigo Health’s Stroke Nurse Practitioner Role

<table>
<thead>
<tr>
<th>Hyperacute Stroke Management</th>
<th>Acute Inpatients</th>
<th>Inpatient Rehabilitation</th>
<th>Outpatients</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Respond to suspected stroke/TIA presentations in Emergency Department (ED) and other acute campus departments&lt;br&gt;• Conduct advanced clinical neurological assessment&lt;br&gt;• Consult with:&lt;br&gt;  o Medical team&lt;br&gt;  o ED team&lt;br&gt;  o Specialist metropolitan stroke units&lt;br&gt;• Order and interpret diagnostics in collaboration with stroke team&lt;br&gt;• Implement hyperacute stroke treatment (this may include thrombolysis of ischaemic stroke patients)&lt;br&gt;• Co-ordinate referrals to physiotherapy, occupational therapy, social work, speech therapy and others&lt;br&gt;• Conduct dysphagia screen (in absence of speech pathologist)&lt;br&gt;• Facilitate patient transfer to acute inpatient unit OR&lt;br&gt;• Refer ED discharged TIA patients to Rapid Access Clinic or general practitioner&lt;br&gt;• Refer to outpatient rehabilitation clinic.</td>
<td>• Conduct advanced clinical neurological assessment&lt;br&gt;• Follow up on referrals and initiate referrals as required&lt;br&gt;• In consultation and collaboration with the treating medical team, initiate the ordering of diagnostics, interpret the results and suggest interventions, using protocols where available&lt;br&gt;• Monitor the implementation of evidence-based practice stroke care and management&lt;br&gt;• Collect data in relation to implementation of evidence-based stroke management.</td>
<td>• Monitor the implementation of evidence-based practice stroke care and management&lt;br&gt;• Attend weekly case conference meetings&lt;br&gt;• Assist with regional patients’ discharge: &lt;br&gt;  o Liaise with the service providers who will be taking over the patient’s care at the patient’s discharge destination (local hospital, home or residential care facility).</td>
<td></td>
</tr>
</tbody>
</table>

**Exclusions** for the SNP will include patients who are under the age of eighteen years; present with or, are suspected of having seizures; present with a Glasgow Coma Scale (GCS) of <9; are not able to maintain their own airway; present with a systolic blood pressure of <100 mmHg; are septic and / or have multiple medical issues.

**NP Service Hours of Operation:** 0800 – 1630 hours, Monday to Friday.

**Location:** Office space will be made for the SNP in the Medical Unit. The SNP will have a pager to attend emergency stroke/TIA presentations.

**Daily Routine:** 0800 Participate in ED medical handover; 0815 Participate in Medical Unit medical handover; 0830 Participate in Medical Unit Ward Round. NP will have a pager in order to be called to attend emergency stroke episodes on the acute campus. Participation in the rehabilitation unit weekly case conference, and outpatient rehabilitation and other meetings as required.
Some patients presenting with suspected stroke and TIA will be excluded. **Exclusions** from the SNP service will include patients who:
- Are under the age of eighteen years;
- Present with or, are suspected of having seizures;
- Present with a Glasgow Coma Scale (GCS) of <9;
- Are not able to maintain their own airway;
- Present with a systolic blood pressure of <100 mmHg;
- Are septic and / or have multiple medical issues.

The SNP will work collaboratively with the medical and nursing staff responsible for the management of the **excluded** patients. The SNP may be handed over the care of such patients at a later stage. For example, once a patient with a GSC of <9 with a definitive stroke diagnosis is stabilised their care may be handed over to the SNP.

**Clinical Components of the Stroke Nurse Practitioner Role When Fully Implemented**

When fully implemented the proposed SNP model will focus on:
- Early assessment and management of acute stroke and TIA patients including the initiation of relevant investigations and hyperacute treatment, referral to allied health and social work, consultation with the medical registrars and consultants, discussion with the patient and family regarding management and facilitating admission to the stroke room;
- Initiation of further investigations or referrals to other clinics or services;
- Liaison with general practitioners for patients being discharged from the ED;
- Referral of discharged ED patients to the rapid access clinic (RAC) and reviewing patients in RAC. In consultation with the RAC physician, this would include assessment, initiating and interpreting diagnostics, and initiating treatment;
- Following up stroke and TIA patients in the stroke room, including those who the SNP has not previously been involved with;
- Attending daily meetings with the medical teams managing stroke patients;
- Discharge planning for regional patients: Liaise with the service providers who will be taking over the patient’s care at the patient’s discharge destination, i.e. local hospital, home or residential care facility;
- Attending weekly rehabilitation unit case conferences and participating in the neurophysiology outpatient’s clinic;
- Liaising with the rehabilitation outpatient’s clinic to ensure patients discharged from ED are referred;
- Attending the rehabilitation outpatient clinic meetings and case reviews as required.

Given the estimated rise in stroke and TIA prevalence in Australia, the SNP hours of operation may need to increase. The letter of engagement will clearly state the SNP may be required to work out of normal business hours including night duty, weekends and public holidays.

**The Other Components of the Stroke Nurse Practitioner Role**

The SNP role will be involved in **capacity building** other care providers. This will occur somewhat incidentally as the SNP works alongside stroke team members. It is expected that the SNP will:
- Work with medical staff to increase the rate of thrombolysis for eligible ischaemic stroke presentations, where clinically indicated, out of NP service hours;
- Support staff in the ED, acute inpatient and rehabilitation units to implement NSF clinical guidelines and improve documentation of the care provided;
- Provide phone support and consultation to regional health care providers;
- Establish collaborative relationships with general practitioners.

The SNP role will include **education** and **mentoring** activities and providing **clinical supervision** for other nurse practitioner candidates (NPCs) and potential NPs. The SNP will be involved in **research** activities and fundamental to the role will include membership of, and active participation in, relevant peak bodies and groups such as the Loddon Mallee Nurse Practitioner Special Interest Group and quality improvement activities, particularly those
related to improvements in stroke care. An incidental benefit of the SNP service is the positive effect on workforce recruitment and retention at BH by way of another career pathway for nurses.

**The Expanded Scope of Nursing Practice for the Stroke Nurse Practitioner**

In accordance with all NP roles, expansions to nursing practice are required to perform the SNP role. Some of the expansions to practice are listed in Table 3: Suggested Skill Set of Competencies Required for Bendigo Health’s Stroke Nurse Practitioner Role. The skill set is only a suggested list and should be expanded as the SNP role develops, and in accordance with evidence-based stroke and TIA management. The skill set informs the SNP and SNP candidates’ clinical supervision and education program, both of which will be tailor-made to suit the individual nurse(s) who are appointed to the SNP position. For example, an endorsed SNP may already be competent in all or a number of the skill set, while a candidate may need to develop competence in the whole range of skills required for the SNP role.

**Clinical Supervision and Education for the Stroke Nurse Practitioner**

Until such time as BH has an endorsed SNP, clinical supervision will be deployed to BH’s stroke medical consultants. Among a range of experts in stroke management, Professor Peter Disler and Dr Michael Brignall have both actively participated in the SNP model development and are supportive of the role. The SNP’s development will be supported by Bendigo Health’s allied health, pathology, pharmacy and medical imaging staff. The SNP/candidate may need to go offsite for some aspects of the education program which will be clearly stated in the letter of engagement.

**Stroke Nurse Practitioner Clinical Governance**

BH has a clinical governance framework with policies and procedures to support nurses who are working in roles where the scope of nursing practice is expanded. The expanded scope of practice requirements are referred to in the SNP’s position description. The expanded scope of practice is depicted by the skill set of competencies required for the role. The skill set will be kept up to date in accordance with expanded scope of practice skills required for the SNP role.

**The Five Year Plan**

The Plan is a living, working document and items identified during the reviews of the model will be added to / deleted from it, as they arise. Some potential amendments to the model were identified during the model development process and are listed below:

- The SNP hours of operation may increase, most likely in increments, initially to seven (7) days a week and potentially 24 hours a day, 365 days a year;
- In the acute inpatient setting, the SNP may order diagnostics and medications. Divisional endorsement would be sought from all the medical teams in order for there to be consistency in diagnostic and medication ordering. This would include having an agreed upon range of ‘politically acceptable’ medications;
- The SNP role may become a neuro/stroke NP role;
- The SNP could support SNP role development and subsequent SNPs in LM regional centres;
- There may be a role for the SNP in spasticity management;
- The SNP may be involved with rehabilitation in the home.

**Stroke Nurse Practitioner Service Evaluation**

The SNP service is expected to enhance the existing systems to manage stroke and TIA patients at BH, which should inevitably improve outcomes for patients. Some of the improvements in stroke care that might be expected include:

- A reduction in the ED in-cubicle assessment and management time;
- More timely definitive stroke diagnosis, and subsequent transfer to stroke room, although this may be impeded by the bed block issues;
- An increase in the number of eligible ischaemic stroke patients receiving thrombolysis;
• Better compliance with, and documentation of, the NSF’s clinical standards for acute inpatients and a subsequent improvement in the BH’s results in the NSF’s bi-annual acute clinical audit results;
• Improved communication with and consistency of, information and education for, patients and relatives;
• Improved transition to home following discharge from rehabilitation for regional stroke patients;
• Improved follow up of TIA patients in RAC;
• Improved preventative stroke / TIA education and care, with subsequent reduction in the re-presentation to ED for stroke / TIA patients, and subsequent admissions to the acute hospital.

Data should be collected in relation to the above expected outcomes to evaluate both the SNP role within the stroke model of care and BH’s stroke model of care itself. The results of the evaluations can be used to improve the management of stroke and TIA patients at BH.
Table 3: Suggested Skill Set of Competencies Required for Bendigo Health’s Stroke Nurse Practitioner Role

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Radiology</th>
<th>Pathology</th>
<th>Referral/Discharge</th>
<th>Pharmacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Advanced neurological assessment including National Institute of Health Stroke Scale (NIHSS), modified Rankin scale, Barthel Scale, FIM score</td>
<td>Request:</td>
<td>Request:</td>
<td>Refer to:</td>
<td>• Prescribe from agreed BH Stroke Nurse Practitioner Formulary</td>
</tr>
<tr>
<td>• Dysphagia screening</td>
<td>• CT Brain</td>
<td>• FBE</td>
<td>• TIA / neuro clinic</td>
<td></td>
</tr>
<tr>
<td>• Glucose management</td>
<td>• CT Angio</td>
<td>• U&amp;E</td>
<td>• Neuro-psychology</td>
<td></td>
</tr>
<tr>
<td>• Blood pressure control</td>
<td>• CT Perfusion</td>
<td>• Lipids – fasting cholesterol</td>
<td>• Neuro-diagnostics (EEG)</td>
<td></td>
</tr>
<tr>
<td>• Screening for eligibility of acute stroke therapies</td>
<td>• CXR</td>
<td>• Fasting glucose</td>
<td>• Endocrinology</td>
<td></td>
</tr>
<tr>
<td>• Stroke mimic</td>
<td>• Carotid Doppler</td>
<td>• Pro Thrombin screen</td>
<td>• Cardiology: diagnostics including angiogram</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• MRI – stroke</td>
<td>• INR</td>
<td>• To metro hospital for vascular surgery – carotid intervention</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• MRA</td>
<td>• APTT</td>
<td>• Neuro-radiological intervention</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Echo-cardiography</td>
<td>• Clotting studies</td>
<td>Discharge from ED:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• EEG / Neuro-diagnostics</td>
<td>• Homocysteine</td>
<td>• To stroke room</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Transcranial ultrasound</td>
<td>• HBA1C</td>
<td>• Outpatient clinics: Rapid access, neurophysiology and outpatient rehabilitation</td>
<td></td>
</tr>
</tbody>
</table>

Refer to:
- TIA / neuro clinic
- Neuro-psychology
- Neuro-diagnostics (EEG)
- Endocrinology
- Cardiology: diagnostics including angiogram
- To metro hospital for vascular surgery – carotid intervention
- Neuro-radiological intervention

Discharge from ED:
- To stroke room
- Outpatient clinics: Rapid access, neurophysiology and outpatient rehabilitation
### Deliverable 2: 2009 to 2013 Five (5) Year Plan for Bendigo Health’s Stroke Nurse Practitioner Role Development

<table>
<thead>
<tr>
<th>YEAR</th>
<th>DATE</th>
<th>ACTIVITY</th>
<th>RESPONSIBILITY</th>
<th>METHOD (WHERE APPLICABLE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>September 30th</td>
<td>Submit the Bendigo Health (BH) stroke nurse practitioner (SNP) model of practice to the Department of Human Services (DHS) as an interim report</td>
<td>BH NP Project Officer following BH executive ratification</td>
<td>Four (4) page document</td>
</tr>
<tr>
<td></td>
<td>October 30th</td>
<td>Complete the business case for the (SNP) based on need and available resources</td>
<td>BH NP Project Team</td>
<td>As per BH procedure</td>
</tr>
<tr>
<td></td>
<td>November 2nd</td>
<td>From a successful business case, commence process to establish and subsequently advertise for SNP / SNPC candidate (SNPC)</td>
<td>BH Human Resources on recommendation from Stroke Steering Committee (SSC)</td>
<td>Usual BH procedures</td>
</tr>
<tr>
<td></td>
<td>December 7th</td>
<td>Appoint a SNP or a SNPC</td>
<td>To be determined by SSC</td>
<td>As per BH policy</td>
</tr>
<tr>
<td></td>
<td>December 31st</td>
<td>Provide confirmation of SNPC(s) &amp; log summaries to DHS</td>
<td>BH NP Project Officer</td>
<td>DHS electronic return</td>
</tr>
<tr>
<td></td>
<td>December 31st</td>
<td>Provide model development funds budget acquittal to DHS</td>
<td>CHERC Operations Manager with BH Executive sign off</td>
<td>½ page Excel spreadsheet</td>
</tr>
<tr>
<td></td>
<td>September 30th</td>
<td>Provide SNPC(s) log summaries to DHS</td>
<td>BH NP Project Officer</td>
<td>DHS electronic return</td>
</tr>
<tr>
<td></td>
<td>October 30th</td>
<td>Complete an interim evaluation report on the SNP model of practice</td>
<td>BH NP Project Officer and SNPC(s)</td>
<td>Internal Report: PDF Document</td>
</tr>
<tr>
<td></td>
<td>November 2nd</td>
<td>Based on the results of the interim evaluation report make recommendations in relation to amendments to the SNP model</td>
<td>SSC</td>
<td>Internal Report: PDF Document</td>
</tr>
<tr>
<td></td>
<td>December 31st</td>
<td>Provide SNPC(s) log summaries to DHS</td>
<td>SNPC(s)</td>
<td>DHS electronic return</td>
</tr>
<tr>
<td></td>
<td>June 30th</td>
<td>Provide SNPC(s) log summaries to DHS</td>
<td>SNPC(s)</td>
<td>DHS electronic return</td>
</tr>
<tr>
<td></td>
<td>June 30th</td>
<td>Complete an interim evaluation report on the SNP model of practice</td>
<td>SSC and SNPC/C(s)</td>
<td>Internal Report</td>
</tr>
<tr>
<td></td>
<td>July 31st</td>
<td>Based on the results of the interim evaluation report make recommendations in relation to amendments to the SNP model</td>
<td>SSC</td>
<td>Internal Report</td>
</tr>
<tr>
<td></td>
<td>December 31st</td>
<td>Provide SNPC(s) log summaries to DHS</td>
<td>SNPC(s)</td>
<td>DHS electronic return</td>
</tr>
<tr>
<td></td>
<td>December 31st</td>
<td>SNPC(s) will have completed academic studies in preparation for the NP endorsement process</td>
<td>SNPC(s)</td>
<td>DHS electronic return</td>
</tr>
<tr>
<td>2011</td>
<td>March 31st</td>
<td>SNPC(s) will be endorsed</td>
<td>SNPC(s)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>April 30th</td>
<td>Full implementation of the SNP service within the stroke team and subsequent implementation report</td>
<td>SSC</td>
<td>Internal Report</td>
</tr>
<tr>
<td></td>
<td>June 30th</td>
<td>Complete an evaluation report on BH’s SNP model of practice</td>
<td>To be determined</td>
<td>Internal Report</td>
</tr>
</tbody>
</table>
References:


