Liaison Nurse For Indigenous Cardiac Patients

Executive Summary

Aims

- To improve patient care, care delivery and outcomes for Indigenous cardiology and cardiac surgery patients in SAHS
- To further develop learning from pilot project to streamline and improve processes for other Indigenous patient groups and for other rural and remote cardiac surgical patients. The current pilot project employs a 0.4 FTE RN and will end June 2006
- To implement a liaison nursing service (1.4 FTE) for Indigenous cardiology and cardiac surgery patients.

Context

During the last seven years there has been a steady increase in the number of Indigenous people admitted to FMC. During the 2003-2004 fiscal year 711 Indigenous patients were admitted to FMC, and 350 patients were admitted from remote areas. In 2003-4, 68 Indigenous patients were admitted to ward 6D for cardiac surgery. In 2005 that number had risen by 55% to 105 with a further 68 Indigenous patient admitted to FMC for other cardiac services. Given that FMC is the major cardiac surgery referral centre for the Royal Darwin Hospital and increasingly so for Central Australia, these numbers are likely to increase substantially over the next 12 to 24 months.

These patients are associated with physiological, cultural and social risk factors that result in a disproportionate burden to the individual and the health care service. Health related problems other than the admitting cardiac condition, for example MRSA or other infections, dental disease and medication-related coagulopathies result in hospital costs conservatively estimated at over $67,000 in 2004-5. In addition, 21 of 48 scheduled cardiac surgery patients fail to arrive at FMC (‘no shows’), costing an estimated additional $380,000 in that year. The physical, psychological, social and spiritual cost to patients and their families was inestimable.

The current system of care for Indigenous patients is uncoordinated and fragmented. Areas of concerns include referral processes (pre-admission community liaison, ongoing follow-up post-discharge), assessment (pre-admission, pre-operative, post-operative and post-discharge monitoring), education (patient, community, community health care providers). For example, patients from remote communities often have English as a fifth or six language, live a traditional lifestyle and have never left their families or communities before this time. Informed consent is difficult or impossible without extensive collaboration among referring doctors, remote area nurses, interpreter services, and FMC Cardiac Services.

Outcomes

Since implementation of the pilot 0.4FTE Remote Area Liaison Nurse position at FMC, the following outcomes have been achieved with Top End Indigenous cardiac surgery patients:

- Improved MRSA screening
  - Since the role of Remote Area Liaison Nurse, MRSA screening in the community five days prior to transfer to FMC, projected savings of at least $50 – 60,000 per year.

- Decreased “no shows”
  - For the period of 2004-2005, 21 patients out of 48 were “no shows”. Since the introduction of the remote area Liaison Nurse, the number of “no shows” is zero. The mean casemix cost for cardiac surgery is $18,089 equating to annual savings of almost $380,000.
  - Cancelled or postponed surgery is now communicated through the remote area nurse 3 weeks prior to scheduled admission, enabling rescheduling of cardiac surgery waiting list.
Decreased delay in surgery through initiating dental screening and blood tests prior to transfer
- In September of 2004, five patients had their surgery delayed for these reasons at a cost of approx. $13,000 in bed occupancy for that month alone, potentially costing over $150,000 annually.

Improved follow up
- Discharge communication with the remote area nurses in the home community. Data on re-admission rates not yet available.

Increased patient throughput
- Patient numbers up by 55% with a projected casemix revenue stream of $666,000 annually.

Care of cardiac Indigenous patients requires advanced clinical nursing practice, teaching and research including cardiac physiology, the pathophysiology of multiple co-morbidities, pharmacological interventions and monitoring, culturally and medically appropriate patient education and rehabilitation, and discharge and follow-up management within a context of limited resources. In addition, leadership, coordination and policy development is required across SA and NT in order to implement sustainable systems change and improve coordination of care for this vulnerable and complex patient cohort.

This proposal will establish a permanent full time Liaison Nursing Service for Indigenous cardiac patients extending across the SAHS Cardiac Service. The Liaison Service will continue the pilot project’s strategies to address identified areas of concern, provide direct patient care and systems change while expanding the service to include all Indigenous cardiac patients admitted to SAHS, and establishing effective data collection, audit and research processes.

Proposed Service
The proposed Liaison Nursing Service for Indigenous cardiac patients will expand the pilot project, employing 1.4FTE RN (1FTE Lvl 4 and .4 Lvl 1) to provide direct client care including pre-admission assessment, in-hospital monitoring and education, and follow-up assessment and monitoring of both the primary cardiac condition and co-morbidities. In addition, the Liaison Nursing Service will collaborate with other relevant service providers in SA and interstate to develop, implement, maintain and monitor a system coordinating care for Indigenous patients and families before, during and after admission to FMC for cardiac surgery or cardiology treatment. The service will work with Karpa Ngarrattendi, other relevant SAHS services and interstate department and organisations to establishing a more consistent and coordinated approach to Indigenous cardiac care in SAHS. It will operate M-F with flexible hours to meet patient needs, and will include backfill for leave and travel eg to liaise with key interstate service providers.

Key Objectives
The Liaison Nursing Service for Indigenous cardiac patients will develop, maintain and expand service networks, protocols and procedures to improve safety, quality and continuity of care for Aboriginal and Torres Strait Islander patients referred to cardiology or cardiac surgery at FMC. This role will aim to implement a model of care that incorporates:
- Establishing key links with the home community to facilitate patient and community assessment and health care interventions
- Health assessment prior to admission, during admission and post discharge
- Protocols and processes re-designing discharge planning and patient follow-up post discharge
- Evaluation of project and research projects to enhance evidence-based practice.
**Resources and Infrastructure**

Line reporting: Nursing Director, Medicine, Cardiac and Critical Care Services Division

Hours worked: no fixed hours

Allocation practice leave replacement plan: within 1.4 FTE allocation

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**Budget**

**SAVINGS**

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
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**REVENUE**

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**COSTS**

Staff

- RN Lvl 4 1.0 FTE incl. on-costs $99,558
- RN Lvl 1 0.4 FTE incl. on-costs $23,434

Infrastructure

- Administration:
  - Clerical support through FMC Cardiac Services In kind
  - Office space, consumables, telephone/fax/copying/networking etc In kind through FMC Cardiac Services
- Information technology
  - Laptop with internet access and software $3,000
  - PDA/mobile phone $1,250
- Travel:
  - Four trips/yr to Central Australia and Top End $8,568

**COSTS SUB-TOTAL** $135,810

**TOTAL PROJECTED ANNUAL SAVINGS** $1,120,190
1. BACKGROUND

During the last seven years there has been a steady increase in the number of Indigenous people who have been admitted to FMC. Key findings from the 2003-2004 fiscal year showed:

- 711 admissions for Indigenous patients
- 350 patients admitted from remote areas (plus their carers.)

The Australian Health Ministers’ Advisory Council’s Standing Committee on Aboriginal and Torres Strait Islander Health Working Party (2004) has reported that Aboriginal and Torres Strait Islander people do not receive the same quality and level of care from Australian health services as do other members of the community. This is particularly relevant in South Australia where Aboriginal and Torres Strait Islander people are up to four times more likely to be admitted to hospital (AMA 2003). The Aboriginal and Torres Strait Islander Survey Report, compiled from the South Australian Patient Evaluation of Hospital Services Survey data, should provide comprehensive data on the experience of Indigenous patients in SAHS.

A significant number of Aboriginal and Torres Strait Islander patients are admitted with health related problems other than their cardiac condition resulting in definitive treatment or surgery being delayed and prolonging hospital stay. Co-morbidities experienced by Aboriginal patients admitted to FMC for cardiac surgery include:

- Oral infections
- Seabies and other skin infections
- Lung infections
- Neutropaenia
- Thyrotoxicosis
- Carotid stenosis
- Severely impaired left ventricular dysfunction
- Dental caries
- Abnormal blood coagulopathy
- MRSA cross infection
- Sexually transmitted diseases
- Hyponatraemia

In one month alone (Sept 2005), 14 additional inpatient days resulted from inadequate pre-admission assessment of co-morbidities, costing an estimated $12,000 in direct costs and thousands of dollars more in lost surgical time and occupied beds.

The majority of Indigenous people admitted to FMC for either cardiac surgery or cardiology come from the Top End, but an increasing number are being admitted from Central Australia and South east South Australia. In 2003-4, 68 Indigenous patients were admitted to ward 6D for cardiac surgery. In 2005 that number had risen by 55% to 105 with a further 68 Indigenous patient admitted to FMC for other cardiac services. Given that FMC is a the major cardiac surgery referral centre for the Royal Darwin Hospital and increasingly so for Central Australia, these numbers are likely to increase substantially over the next 12 to 24 months.

1.1 Rationale

The current system of care for Indigenous patients is uncoordinated and fragmented. Research in progress (Lawrence, unpublished) and anecdotal evidence indicates that Aboriginal and Torres Strait Islander cardiac patients may not receive care that adequate addresses their health needs, especially in relation to cultural and language context and content.

Areas of concerns include referral processes (pre-admission community liaison, ongoing follow-up post-discharge), assessment (pre-admission, pre-operative, post-operative and post-discharge monitoring), education (patient, community, community health care providers). For example, patients from remote communities often have English as a fifth or sixth language, live a traditional lifestyle and have never left their families or
communities before this time. Informed consent is difficult or impossible without extensive collaboration among referring doctors, remote area nurses, interpreter services, and FMC Cardiac Services.

Since implementation of the pilot 0.4FTE Remote Area Liaison Nurse position at FMC, the following outcomes have been achieved with Top End Indigenous cardiac surgery patients:

Improved MRSA screening
- Since the role of Remote Area Liaison Nurse, MRSA screening in the community five days prior to transfer to FMC, projected savings of at least $50,000 - $60,000 per year.

Decreased “no shows”
- For the period of 2004-2005, 21 patients out of 48 were “no shows”. Since the introduction of the remote area Liaison Nurse, the number of “no shows” is zero. The mean casemix cost for cardiac surgery is $18,089 equating to annual savings of almost $380,000.
- Cancelled or postponed surgery is now communicated through the remote area nurse 3 weeks prior to scheduled admission, enabling rescheduling of cardiac surgery waiting list.

Decreased delay in surgery through initiating dental screening and blood tests prior to transfer
- In September of 2004, five patients had their surgery delayed for these reasons at a cost of approx. $13,000 in bed occupancy for that month alone.
- In the six months since implementation of the Liaison Nurse position, one patient has had a 2 day delay due to undetected STD (savings up to $150,000 annually).

Improved follow up
- Discharge communication with the remote area nurses in the home community. Data on re-admission rates not yet available.

Increased patient throughput
- Patient numbers up by 55% with a projected casemix revenue stream of $666,000 annually.

Care of cardiac Indigenous patients requires advanced clinical nursing practice, teaching and research including cardiac physiology, the pathophysiology of multiple co-morbidities, pharmacological interventions and monitoring, culturally and medically appropriate patient education and rehabilitation, and discharge and follow-up management within a context of limited resources. In addition, leadership, coordination and policy development is required across SA and NT in order to implement sustainable systems change and improve coordination of care for this vulnerable and complex patient cohort.

This proposal will establish a permanent full time Liaison Nursing Service for Indigenous cardiac patients extending across the SAHS Cardiac Service. The Liaison Service will continue the pilot project’s strategies to address identified areas of concern, expand the service to include all Indigenous cardiac patients admitted to SAHS, and establish effective data collection, audit and research processes.
1.2 Key Objectives of the Liaison Nursing Service

The Liaison Nursing Service for Indigenous cardiac patients will develop, maintain and expand service provision, networks, protocols and procedures to improve safety, quality and continuity of care for Aboriginal and Torres Strait Islander patients referred to cardiology or cardiac surgery at FMC.

This role will aim to implement a model of care that incorporating direct patient care and systems of care including:

- Establishing key links with the home community to facilitate patient and community assessment and health care interventions
- Health assessment prior to admission, during admission and post discharge
- Protocols and processes re-designing discharge planning and patient follow-up post discharge
- Evaluation of project and research projects to enhance evidence-based practice

1.3. Relationship to Organisational Aims and Objectives

A Liaison Nursing Service for Indigenous cardiac patients will support and advance the 2003-6 FMC critical success factors:

- Improved patient safety and clinical outcomes
  - improving continuity of care with a highly qualified health professional managing the patient across the care continuum;
- Greater consumer satisfaction and participation
  - improved communication and increased patient involvement in decision making;
  - culturally sensitive and appropriate clinical care, communication and educational support.
- Improved access to health services
  - improved community management, coordination between community providers and acute services and ongoing monitoring;
- Sound finances
  - targeted use of the available nursing and medical workforce;
  - strategies that promote effective use of resources, such as cardiac surgical theatre time and ward beds;
- Sustainable highly valued workforce
  - improved retention of expert and extended practice nurse clinicians; and
- Better systems of care
  - integrating education, research and clinical innovation.
2. DESCRIPTION OF SERVICE REQUIRED

- staffing – 1.0 FTE RN Lvl 3 and 0.4 FTE RN Lvl 1
- location – Cardiac Services
- client group/ the intended target population: Indigenous patients admitted to Flinders Medical Centre for cardiac treatment or cardiac surgery from South Australia, Central Australia and the Top End.

The proposed Liaison Nursing Service for Indigenous cardiac patients will expand the pilot project, employing 1.4FTE RN (1FTE Lvl 3 and .4 Lvl 1) to provide direct client care including pre-admission assessment, in-hospital monitoring and education, and follow-up assessment and monitoring of both the primary cardiac condition and co-morbidities. In addition, the Liaison Nursing Service will collaborate with other relevant service providers in SA and interstate to develop, implement, maintain and monitor a system coordinating care for Indigenous patients and families before, during and after admission to FMC for cardiac surgery or cardiology treatment.

Although the current 0.4 FTE cardiac surgery liaison nurse pilot project has achieved impressive outcomes, the role is not sustainable. Opportunities to improve interstate coordination are limited due to lack of time and a travel budget, there is no cover for days off or leave, and there is no scope to integrate additional patient numbers. This proposal will address these gaps and offer a sustainable, affordable and effective service for this highly vulnerable patient group.

3. POTENTIAL BENEFITS

3.1 Patient and Community Benefits

- Mentoring in community to support the appropriate pre-admission assessment and interventions including patient and community education and informed consent.
- Cardiac rehabilitation education specifically tailored for the needs of Indigenous people.
- Effective and efficient referral process for Indigenous patients referred to FMC cardiology from Central Australia and southeast South Australia.
- Collaboration with local, state and interstate groups to implement care pathways for patients referred to SAHS eg NT Infectious Diseases for patients with a history of STDs, Royal Darwin Hospital Rheumatic Heart Disease Register and NT Dental Quality Assurance for timely dental assessment, remote area nurses and community nurses for patients discharged to local communities.
- Collaboration with local, state and interstate Aboriginal groups to develop culturally and linguistically appropriate consent procedures.
- Collaboration with the FMC cardiac pharmacologist to explore culturally respectful methods of dispensing cardiac discharge medications and providing medication education.
- Working in collaboration with Nunkuwarrin Yunti South Australia Aboriginal Health to establish appropriate interpreting services.
- Facilitating establishment of community clinics in southeast South Australia, the Top End and Central Australia to provide culturally appropriate pre-admission assessment and education and post-discharge monitoring for Indigenous patients and communities.
3.2 Service

- Demonstrated cost savings through:
  - Improved pre-admission screening including MRSA, dental, STDs and other co-morbidities, medications
  - Decreased “no shows”
  - Improved use of surgical and ward resources
  - Decreased delays in surgery and treatments
- Improved post-discharge follow up resulting in fewer re-presentations and re-admissions
- Increased patient throughput
- Improved cardiac surgery and cardiology databases to support audit and research

3.3 Staff

- Enhanced education and support for nursing staff working with Indigenous cardiac patients
- Educational opportunities and clinical collaboration for Aboriginal Health Workers from Karpa Ngarrattendi
- Improved communication within the multi-disciplinary team including cardiologists and cardiac surgeons to manage clinical risks and co-morbidities

4. RELATIONSHIPS WITHIN THE DESIGNATED AREA AND OTHER KEY SERVICES

The Liaison Nursing Service for Indigenous cardiac patients will receive referrals from SAHS Cardiac Services and Cardiac Surgery consultants for assistance in the assessment, monitoring and management of Indigenous patients being admitted to FMC for cardiac conditions or surgery. Consultation regarding management will occur with medical officers regarding appropriate medical investigations and interventions on an individual patient basis. Education and support to patients will be given based on required investigations and interventions, plus social and cultural requirements. The Liaison Nursing Service will also work in collaboration with Karpa Ngarrattendi, nurses, physiotherapists, dieticians, pharmacists and other health care professionals as required for each patient, within the institutions of FMC and SAHS, as well as in community-based organisations as appropriate.

Community links include but are not limited to:

- **NT Dental Quality Assurance**
- **Royal Darwin Hospital Rheumatic Heart Disease Register**
- **Royal Darwin Hospital Infectious Diseases Register**
- **Nunkuwarrin Yunti of South Australia Incorporated Aboriginal Health**
- **RHD Dental Quality Assurance**
- **Remote Area Nurses and Visiting Medical Officers from NT remote communities**
- **Inner Southern Community Health Service**
- **Noarlunga Health Service – Aboriginal Health Team**
- **Aboriginal Home Care**
- **Neporendi Aboriginal Forum Inc**
- **Aboriginal Hostels Inc**
5. **KEY OUTCOME CRITERIA**

The key outcome criteria indicators for the first three years will include:

- **Access**
  - numbers, source and geographical distribution of patient referrals
  - types of treatment or surgery
  - pre-admission assessment and screening processes
  - establishment and utilisation of community clinics
  - establishment and utilisation of interpreter services
  - patient and community participation in pre-admission and follow-up care

- **Appropriateness**
  - patient, staff and key stakeholder perceptions
  - numbers and reason for patient withdrawal following referral
  - cardiac rehabilitation and education processes
  - clinical care pathways established eg dental, STDs, discharge etc.

- **Efficiency**
  - average LOS
  - days MRSA
  - numbers and reasons for dental examinations following admission
  - pre-admission checklist developed and completed for each patient
  - health assessment protocols for in-patient and community care developed and implemented

- **Effectiveness**
  - surgery and treatment delays or cancellations eg MRSA, dental, medication, other infection
  - ‘no shows’
  - re-presentations and re-admissions (SAHS and home community)
  - community follow-up plan and implementation

6. **AUDIT AND RESEARCH PLAN**

In the first three years of service, the Liaison Nursing Service will establish a database to facilitate data collection for audit, benchmarking and research purposes. Indicators as above will be monitored and reported six monthly.

The Remote Area Liaison Nurse has been invited to participate in research being run from NT and Vic. In addition, a proposal to evaluate the outcomes from the expanded Liaison Nursing Service for Indigenous cardiac patients is being developed for submission.
7. INFRASTRUCTURE AND RESOURCES

7.1 Budget

SAVINGS

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SAVINGS SUB-TOTAL $590,000

REVENUE

| Increased patient throughput | $666,000 |

REVENUE SUB-TOTAL $666,000

COSTS

Staff

- RN Lvl 4 1.0 FTE incl. on-costs $99,558
- RN Lvl 1 0.4 FTE incl. on-costs $23,434

Infrastructure

- Administration:
  - Clerical support through FMC Cardiac Services In kind
  - Office space, consumables, telephone/fax/copying/networking etc through FMC Cardiac Services In kind
- Information technology:
  - Laptop with internet access and software $3000
  - PDA/mobile phone $1250
- Travel:
  - Four trips/yr to Central Australia and Top End $8568

COSTS SUB-TOTAL $135,810

TOTAL PROJECTED ANNUAL SAVINGS $1,120,190
7.2 Budget justification

Funding: new positions

- RN Lvl 4 1.0 FTE: Lvl 4 characteristics - state-wide service with substantial leadership, advanced clinical practice, teaching, coordination and policy development responsibilities. Care of cardiac Indigenous patients requires a post-graduate certificate in cardiology to provide specialist clinical knowledge eg. cardiac physiology, pathophysiology of multiple co-morbidities, pharmacological interventions and monitoring, discharge and follow-up management; and high level social, cultural and communication training eg. culturally and medically appropriate patient education and rehabilitation. In addition, leadership, coordination and policy development is required across SA and NT in order to implement sustainable systems change and improve coordination of care for this vulnerable and complex patient cohort.

- RN Lvl 1 0.4 FTE: cover for extended and flexible hours, leave; database, audit and research support.

Administration: clerical support through FMC Cardiac Services

Line reporting: Nursing Director, Medicine, Cardiac and Critical Care Services Division

Hours worked: no fixed hours

Allocation practice
leave replacement plan: within 1.4 FTE allocation

Additional resources / supports required:

- space and furnishings: office space for 1.4 staff
- information technology requirements inc. software and hardware and access to support: laptop with full inter and intranet access
- access to appropriate communication links with medical practitioners and other health professionals via telephone, fax, teleconference, video link and e-mail: mobile phone
- access to research applicable to the area of practice such as library resources, tertiary institutions and the Internet;
- access and use of vehicle: car allowance to visit Southeast clinical and community venues
- networking and travel: initially three trips/yr to Central and Top End to establish critical clinical links including Alice Springs, Darwin and remote communities
- opportunities for undertaking professional development relating to the area of practice; and
- facilities to evaluate work, undertake research and develop and provide evidence-based services

The key issues which may effect the implementation of a Liaison service include communication and resources. Successful implementation of this service will require clear and visible presence in key clinical venues, other partner organisations and Indigenous communities. Travel, communication and network must be seen as an integral component of this service and must be appropriately funded.

In addition, the service offers excellent opportunities to add to the evidence-base supporting Indigenous health care. The service should be supported and encouraged to initiate and participate in research.
8. **CONSULTATION**

The following stakeholders have been consulted in developing the Business case and proposed role:

- **Tony Bakarich**  
  Deputy Divisional Director (Medicine, Cardiac and Critical Care)
- **Rob Baker**  
  Director, Cardiac Surgery Research
- **Alwin Chong**  
  SA Aboriginal Health Council
- **Zell Dodd**  
  Director, Aboriginal Health Services, SAHS
- **Sandra Dunn**  
  Chair in Clinical Nursing Practice
- **Josie Kitch**  
  Director, Allied Health FMC
- **John Knights**  
  Head of Department (Cardiac Surgery)
- **Monica Lawrence**  
  Aboriginal Liaison Nurse (cardiac surgery)
- **Laney Mackean**  
  Manager, Karpa Ngarrattendi
- **Susan O’Neill**  
  Executive Director Nursing and Patient Services
- **Paddy Phillips**  
  Divisional Director (Medicine, Cardiac and Critical Care)
- **David Swan**  
  CEO SAHS