CARDIAC SOCIETY OF AUSTRALIA AND NEW ZEALAND (CSANZ) QLD BRANCH - 2004 SUBMISSION RE CARDIAC SERVICES IN QUEENSLANI TO QUEENSLAND HEALTH. 29th July 2004

To: Dr Steve Buckland, Queensland Health
Dr John Scott, Queensland Health
The Honourable Gordon Nuttall, Minister for Health
The Honourable Peter Beattie, Premier of Queensland

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Prepared by Qld Branch CSANZ 2004 (submission regarding models of cardiac care and appropriate ratios of cardiologists to population as requested by Queensland Health Feb 2004):

Assoc Prof CN Aroney (Chairman), Dr JA Atherton (Secretary), Dr D Walters, Dr R Denman, Dr W Parsonage, Dr D Burstow, Dr R Justo, Dr D Radford, Dr C Ward, Dr C Whight and in consultation with other Qld CSANZ members and incorporating conclusions made at the extra-ordinar meeting of the Qld Branch with Queensland Health on Feb 15th 2004.

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OVERVIEW

In Queensland, cardiovascular disease provides the single largest burden of disease. In terms of years of life lost due to disability and premature death no other disease state exceeds cardiovascular disease, and the bulk of this relates to ischaemic heart disease. (Queensland Health, The State of Health of the Queensland Population, 2001)

A meeting between the Qld Branch of the Cardiac Society and Queensland Health (15th February 2004) resulted in the following conclusions regarding the manifestly inadequa state of management of public cardiac services in Queensland which were unanimously accepted by Society members:

All tertiary cardiac units in Queensland require major upgrades in service to cope w increased demand:

- Major unmet demand for cardiac outpatient services
- Major unmet demand for Electrophysiologic Studies, RFAblations, Pacemakers and AICDs
- Major unmet demand for treating the acute coronary syndrome, angiography, an PTCA/Stents
- Major unmet demand for paediatric cardiology
- Major unmet demand for heart failure services
- Crisis in Central and North Queensland

There is major deficiency in the public cardiology workforce

- Only 1/3 the appropriate number of public cardiologists in Queensland as regarded international benchmarks (UK Taskforce 2003).
- The benchmark 35 cardiologists per million people means that instead of the current full time equivalent public cardiologists, 75 are needed.
- The number of paediatric cardiologists should be doubled.

Lack of transparency of cardiology outpatients, waiting lists and bed access block

- Waiting lists for cardiac outpatients, coronary angiography, angioplasty/stenting AICDs, EP studies and RF ablations are excessive and dangerous and must be fully transparent and published regularly on the QHealth web site
- Patients on cardiac waiting lists must be appropriately categorized according to international standards transparent, and independently audited
- Time delays for transfer of urgent cases to tertiary centres are unacceptable: delays in access should be made public on a regular basis

Whilst the trend in cardiovascular mortality in Queensland and Australia is declining, b Queensland Health data, this state has the highest coronary heart mortality rate in Australian second only to the Northern Territory.(Queensland Health, The State of Hea of the Queensland Population, 2001). There is considerable interaction between the various cardiac disciplines, with a deficiency of acute interventions for coronary syndromes leading to increased numbers of myocardial infarctions, an increased burder for heart failure and increased need for ACID implants and bi-ventricular pacemakers.

2. MANAGEMENT OF CORONARY ARTERY DISEASE & THE ACUTE CORONARY SYNDROME

Why Queensland has a higher demand from the acute coronary syndrome (ACS)?

- Increased identification of high-risk ACS with new diagnostic methods and new guidelines.
- Greater burden of untreated coronary heart disease (historically low revascularisation rates for years; rural and regional populations less likely to be transferred till they are sicker).
- Ageing population.
- Rapid increase in population particularly in S-E Queensland.

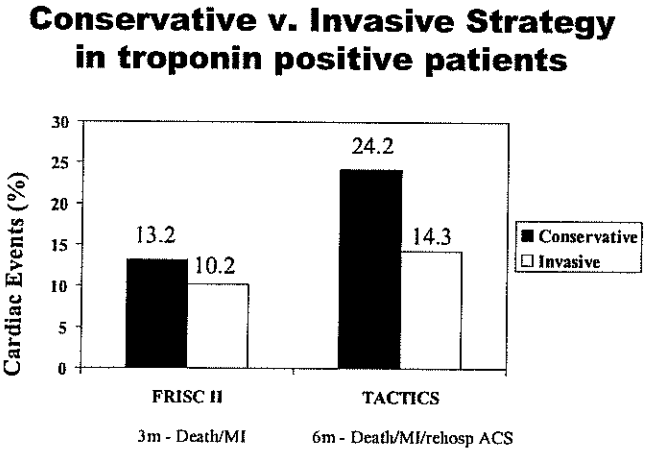
Increased identification of high-risk ACS patients and unplanned demand on services

The use of risk stratification, and in particular the utility of cardiac troponin (Med J Au: 173: S65-S88) has led to a greatly increased number of high risk ACS patients (especia NSTEMI and high risk unstable angina) being identified since 2000. As a result, the interhospital transfer rates for non-surgical cardiac DRGs has exponentially grown ove the last 2 years. Inter-hospital transfers now account for over 50% of catheter lab PCI activity. In Queensland, this increase has not been met by an increased infrastructure, a the number of Cardiac DRGs fell in Queensland in 2001-2, while there were increases i other states (National Hospital Data Collection).

The ageing population is expected to contribute to an increasing burden of cardiovascul disease into the future. (Queensland Health Strategic Document Smart State: Health 20: Directions Statement). Lower coronary revascularisation rates in Queensland compared with other states for many years means that there is a larger burden of untreated disease than in other states. In addition, despite a decline in cardiovascular deaths, mortality reduction has not been achieved equally amongst the population. Gains continue to be linked to higher socio-economic groups who are more likely to be managed in the priva healthcare system. Thus the major burden in terms of funding and demand rests on the public health system. Queensland's tyranny of distance results in mortality increasing with distance from large population centres. The Queensland Health Information Centr confirms that mortality rates are statistically higher in remote areas (25%) and socioeconomically disadvantaged areas (10%).

Whilst primary preventative strategies are known to potentially reduce the incidence of morbidity and mortality from cardiovascular disease such strategies have been plagued with problems that include: a long lag phase between implementation and effect, relatively costly per life year saved, are most effective amongst the educated and afflue middle class and most often ignored by those with the most to gain from such strategies (Paterson, J. and Phelan, P. (2003). A severe case of elephantiasis: the need to reform th health system Quadrant, 47 (1), 48-57.) In the setting of a large burden of disease with severe supply demand mismatch preventative strategies are unlikely to significantly impact on demand in the next 3-5 years.

Current National and International Benchmarks for the management of acute coronary syndromes including myocardial infarction emphasize these core principles:
1) High risk patients require intensive medical management.
2) High risk patients should be managed with an early invasive strategy that seeks to undertake early coronary angiography and revascularisation where possible.
3) Rural centers and other community centers that do not have the facility to offer such an invasive service should consider the early transfer of patients to centers that can offe this therapy.
Ref: The National Heart Foundation of Australia and Cardiac Society of Australia and New Zealand (2000) *Guidelines for the Management of Unstable Angina*, Med J Aust; 173: S65-S88 and addenda (http://www.csanz.edu.au/guidelines/practice/UnstableAnginaAddenda.pdf).



There is widespread recognition that with the increased demand for acute interventiona cardiac services there is a need to establish and foster specialized acute care centers tha are capable of providing high level interventional services on a regional basis. (Topol a Kereiakes , Regionalization of care for Acute Ischaemic Heart disease, 2003: Circulatio 107; 1463-66). The challenge facing hospitals and catheter laboratories is managing th increasing demand, both metropolitan and rural/remote. Increased demand from region public hospitals to transfer at-risk patients to tertiary centres has occurred as clinical management has evolved to reflect the evidence-base available as summarised in the national guidelines.

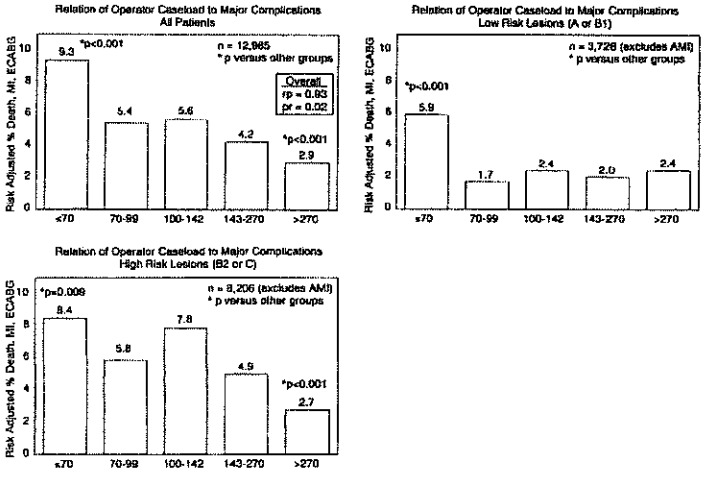
Hub and Spoke System

A hub and spokes system of managing all severe cardiac problems, and in particular acute coronary syndrome patients requires sufficient infrastructure and workforce at the hub hospitals to accommodate all urgent referrals, whilst not jeopardizing the elective waiting lists. The policy of canceling elective coronary angiography and angioplasty ov holiday periods, should be discontinued as it leads to a blow-out of the elective waiting list, resulting in un-necessary deaths and myocardial infarctions. Waiting lists of corona angiograms and angioplasties therefore need to be transparent and open to public scrutiny. Hub hospitals should not be restrained in their ability to treat urgent cases and bed access to urgent patients is essential.

A sufficient workforce of interventional and EP cardiologists are required at hub hospitals to make them sustainable. Currently there are insufficient interventional cardiologists to offer a comprehensive 24hour PTCA service for acute myocardial infarction from regional to hub hospitals in either north Brisbane (PCH/RBWH), south Brisbane (PAH) or Townsville (TGH). This type of service has become the benchmark treatment for AMI and its provision will require a major increase in appropriately traine cardiologists for all hub hospitals. It is unlikely that a comprehensive 24hour PTCA services for acute myocardial infarction can be established in the near future on the Gol or Sunshine Coasts, until then transport of such patients to fully staffed North (PCH/RBWH) and South Brisbane (PAH) hubs would be the preferred option. Unfortunately, neither the North Brisbane, South Brisbane nor Townsville hubs are staffed or funded to provide this service.

"Hub hospitals" must have the characteristics of high volume operators and a high volume of primary angioplasties, which has been shown to have a lower mortality rate than lower volume hospitals (Risk ratio 0.72) (NEJM 2000, 342:1573) and which has a lower than mortality than using thrombolytic therapy. Door to balloon time should be lower than two hours (JAMA 2000; 283:2941), and institutions should be performing a least 3 primary PCIs per month.

Califf and Faxon (Circulation 2003: 107:1467) state that "outcomes in ACS, both ST-elevation and non–ST-elevation, are better at high-volume institutions, and specialty ca seems to provide a benefit. Several studies have reported the volume-outcome relationship. Centers with invasive facilities (JAMA 2000; 284:1256) also have better outcomes, although whether this reflects the facilities or the presence of greater clinical expertise has been debated. Patients with a final diagnosis of myocardial infarction hav better outcomes if cared for by cardiologists, (JAMA 2000; 284:1256) and these better outcomes are at least partly due to better adherence to professional Clinical Practice Guidelines.(JAMA 2000; 284:1256) Of course, substantial data exist to support the volume-outcome relationship in PCI (NEJM 1994; 331:1625, Am Heart J 2002: 143:833) which has become relevant to both conditions.



From Ellis et al Circulation 1997; 95:2479-84

High volume operators (>270 cases per year as defined by Ellis et al above) have the lowest risk of major complications, particularly in high-risk patients. With regard to primary angioplasty for treating AMI, hospital volume is directly related to in-hospital mortality: compared with hospitals performing < 1 case per month, the risk ratios are 0. and 0.67 respectively in hospitals performing 1-3 cases per month and >3 cases per month (JAMA 2000; 283: 2941-7). The benefit of high-hospital volume may be closely related to door-to-balloon time, which is lower in most high-volume centres (JAMA 2000; 284: 3131-8).

The CSANZ currently recommends that the minimum number of procedures for maintenance of competence of angioplasty operators is 75 cases per year, and for centre is 200 per year. The Society also recommends ongoing audit of the centres and operator including regular morbidity and mortality review.

The ACC/AHA recommends: "Given the concerns regarding operator volume and surgical standby, it is recommended that PCI be performed by higher volume operators 75 cases/year) with advanced technical skills (e.g., subspecialty certification) at institutions with fully equipped interventional laboratories and experienced support staf This setting will most often be in a high-volume center (>400 cases/year) associated wi an on-site cardiovascular surgical program." (Circulation 2001; 103: 3019). Given the results of the analysis of Ellis et al (Circulation 1997; 95: 2479) high risk patients, including those with AMI, should be managed by very-high volume (>250 cases per year) operators (see Fig above).

In non–ST-elevation ACS, a large study has shown that centers with better adherence tc professional standards have better outcomes. Peterson and colleagues (JACC 2002; 39:279A) showed that when centers were scored on the basis of adherence to Clinical Practice Guidelines and scores were summed over the different recommendations, those with better adherence had significantly lower mortality rates. The estimated life-saving effect of better adherence was greater than the estimated effect of reperfusion."

Categorisation and Risk Stratification of non-ST elevation ACS patients.

The Australian unstable angina guidelines categorises the following patients as "high risk" and recommends angiography within 48 hours ((Med J Aust; 173: S65-S88 and addenda (http://www.csanz.edu.au/guidelines/practice/UnstableAnginaAddenda.pdf).

High risk features of unstable angina/NSTEMI

- Prolonged (> 10 min) ongoing chest pain/discomfort.
- ST elevation or depression (> 0.5 mm) or deep T wave inversion in three or more leads.
- Elevated serum markers of myocardial injury (especially cardiac troponin I or T).
- Associated syncope.
- Associated heart failure, mitral regurgitation or gallop rhythm.
- Associated haemodynamic instability (systolic blood pressure < 90 mmHg, cool peripheries, diaphoresis).
- Associated diabetes mellitus.

Risk stratification of patients may be quantitated with tools such as the TIMI risk score:

TIMI Risk Score (JAMA 2000; 284:835) for ACS patients

Age≥65 years

3 or more coronary risk factors

Prior coronary stenosis of 50% or more

ST deviation on presenting ECG

2 or more anginal episodes in prior 24 hours

Aspirin use in prior 7 days

Elevated serum cardiac markers

Score	Adverse cardiac event in 14 days
0/1	4.7%
2	8.3%
3	13.2%
4	19.9%
5	26.2%
6/7	40.9%

Risk score for non-ACS patients awaiting coronary angiography

Risk Factor	Score
Angina	
Class I	1
Class II	2
Class III	8
Class IV	18
Exercise Test	
Bruce Stage IV or negative at stage III	0
Stage III positive	8
Stage II positive	12
Stage I positive	22
Could not exercise	10
Age	
>49	4
>64	8
Male gender	10
Diabetes	7
Hyperlipidemia	7
Previous myocardial infarction	8

Categorisation

Score> 60 = Urgent
Score 40-60 = Semi-Urgent
Score <40 = Elective

Refs:

- Naylor CD et al. Lancet 1990; 335:1070-3
- Debono et al. Heart 1996 ; 79 : 448-53

Management of high-risk non-ST elevation ACS

Triple anti-platelet therapy used immediately (do not wait for further infarction)

- Aspirin
- IV Tirofiban
- Clopidogrel*

Enoxaparin (dose reduced if renal dysfunction present, or omit if immediate angiography is planned)
Beta Blocker (unless contraindicated)
Nitrates for refractory pain

Transfer for angiography and intervention (optimally within 48 hours), unless patient is very frail or has severe comorbidities.

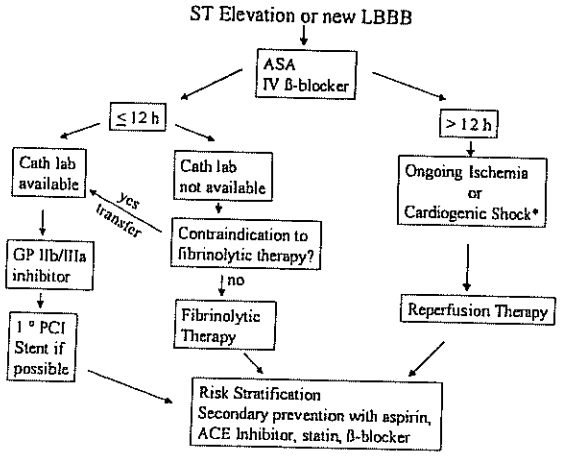
*Omit clopidogrel, in selected cases where immediate angiography is planned or if there is a high likelihood of a need for emergency cardiac bypass surgery (haemodynamic instability, severe widespread ST depression).

High risk non-ST elevation acute coronary syndrome patients as described above, shou be transferred to a "cardiac hub" hospital and have coronary angiography within 48 hou (Aust NHF/CSANZ guidelines). Recent data (Nambour Hospital audit) shows that an increasing number of patients at regional centres are delayed for long periods of a week or more, due to bed access block at cardiac hub hospitals. Improved bed access (within 48 hours) will allow prompt management with angiography and revascularisation whicl have been shown to greatly improve outcomes and reduce recurrent myocardial infarcti in these high risk patients. Prompt access to modern therapy is currently denied to many patients in regional areas.

ST-elevation myocardial infarction patients require benefit from immediate transfer to hub hospitals from regional centres, with better outcomes than local treatment with fibrinolytic therapy, even if transfer to the hub hospital takes 2 hours (Eur Heart J 2003 23: 94-104, NEJM 2003; 349:733-42, Eur Heart J 2003; 24: 21-3). Currently, this management is limited to patients presenting to tertiary hospitals in Brisbane or Townsville, when an interventional cardiologist is available, and certainly not on a 7 da 24 hour basis at any hospital. Transfer of patients from "spoke" regions to "hub" hospitals is not offered on a routine basis because of inadequate staffing and bed access problems. Transfer within 2 hours is often also limited by an inadequate response by th ambulance/retrieval services. This service should be offered to all patients residing with 2 hours of a "hub" hospital (see below).

Management algorithm for ST elevation MI

(Aroney & de Lemos. Management of acute coronary syndromes. Pp15-36. In Cardiac Marke
(2nd Edition, 2003) Editor AH Wu. Humana Press.)



ST Elevation MI (STEMI) Management
Patients outside of a "Hub Centre"

Rural, regional or suburban hospital <u>within 2 hours of transfer</u> to interventional hospital

<u>Emergency transfer</u> for coronary intervention, provided transport time is less than one hour and angioplasty is immediately available on arrival; if not administer fibrinolytic therapy prior to transfer.
If patient is very frail and not a candidate for interventional treatment, administer fibrinolytic therapy unless contraindications are present.

Rural or regional hospital <u>more than 2 hours of transfer</u> to interventional hospital

Administer <u>fibrinolytic therapy</u> <u>and</u> also consider early transfer if

- Contraindication to fibrinolyt
- A large amount of ST elevati or new LBBB is present
- Late presentation after sympt onset (> 3 hours)
- Onset of cardiogenic shock
- Failure of reperfusion
- Recurrent infarction

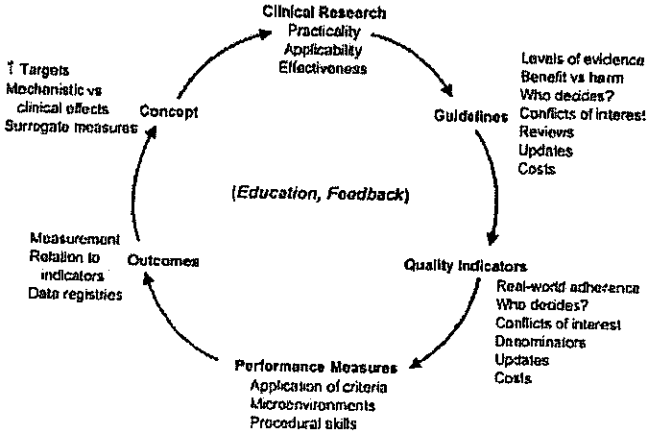
Requirements for a Cardiac "Hub" and "Spoke" system.

- Facilities
  - Cath Lab with full interventional capabilities, including intra-aortic balloon pump
  - High volume cath lab (>1400 angiograms per year; >400 PCI per year)
  - Primary angioplasty must be provided around-the-clock for a large proportion of patients with acute myocardial infarction, to ensure streamlined care paths and increased case volumes.
  - Ideally cardiac surgery on-site
    - Patients with high-grade left main or multi-vessel disease and clinical instability should be considered for intra-aortic balloon pump insertion and urgent cardiac surgery, with treatment of the occluded infarct-related artery in selected cases.
  - Adequate CCU beds for accepting transferred high-risk ACS

- Staff
  - "Regional" physicians or cardiologists, trained in risk stratification and aggressive medical management of high risk ACS.
  - High-volume interventional "hub" cardiologists (optimally performing >250 PCI per year – not necessarily at one hospital)
    - enough to provide 24 hour – 7 day coverage
  - Experienced Cath Lab nurses/radiographers to provide the same coverag
  - Experienced CCU nurses

- Other funding
  - Stents/drugs/equipment

- Ambulance Support.
  - Rapid transfer of STEMI and high-risk NSTEMI patients to the cardiac "hub". Chest pain patients would ideally be triaged in ambulances supplied with 12 lead ECG which could be electronically sent to the "hu for diagnosis. STEMI patients who are haemodynamically stable could b sent directly to the "hub" hospital in the same ambulance, up to two hou away, for emergency PCI. NSTEMI patients would be transferred to the regional hospital for aggressive medical management and later transfer f angiography.



from Califf & Faxon Circulation 2003; 107:1467-70.

"This approach has been called "the continuous cycle of quality." Major (US) national projects, such as Get With the Guidelines, the Cardiac Hospitalization Atherosclerosis Management Program (CHAMPS), the Guidelines Applied in Practice (GAP) project,[7] the National Registry of Myocardial Infarction (NRMI), and the Can Rapid Risk Stratification of Unstable Angina Patients Suppress Adverse Outcomes with Early Implementation of the ACC/AHA Guidelines (CRUSADE) project, have emphasized th value of a focus on system quality. Only by systematically measuring processes and outcomes can we be assured that they are improving."

Queensland hospitals have been participating locally in the Collaborative for Healthcar Improvement (CHI), nationally in the Heart Protection Partnership, and international comparisons and benchmarks are available in the GRACE registry. The CHI has been funded in part by Queensland Health, but participation in other projects is usually funde by hospitals or their own research trust funds, without support from Queensland Health All Queensland hospitals should participate in quality control projects assessing adherence to the national (NHF/CSANZ) guidelines with regard to the management and outcomes of the acute coronary syndrome. Quality of care assessment of existing and emerging public cardiac catheter laboratories and operators is also essential.

Urgent Goals for 2004-2006.

- A large investment in acute cardiac service be undertaken to bring Queensland i line with national benchmarks for coronary revascularisation so that current problem with severe supply-demand mismatch is alleviated in the short to medium term, as demanded by Qld Health's own strategic intents statement (QHealth website): "We will systematically identify people at greatest risk of illness, injury or complications from existing health conditions and take steps to reduce their risk and improve their quality of life".
  - in particular QHealth needs to promote changes in infrastructure (particularly increased staff, proactive recruitment strategies) which will ensure a real increase in public coronary interventions, not one-off approaches to reducing waiting lists and reactive crisis-management approaches to waiting list blow-outs.

- Adherence to the national NHF/CSANZ guidelines for managing ACS includin continuous quality assessment of adherence and outcomes, as demanded by Qld Health's own strategic intents statement (QHealth website): "We will ensure tha throughout Queensland Health, treatment is based on evidence-based decisions policies, and programs".
  - promulgation and implementation of national NHF/CSANZ guidelines f treating ACS to all Qld hospitals
  - funding of continuous quality assessment programs to evaluate adherenc to national guidelines; compulsory enrolment by tertiary and major regional hospitals; yearly audit of adherence and outcomes.
  - funding of uniform cath lab databases with regard to quality managemen and outcomes; 3 yearly credentialing of cardiac catheter laboratories; mandatory reporting of all cath labs/operators to Qld Angioplasty Group morbidity and mortality meetings.

- Fully resourced and staffed "Cardiac Hub" hospitals in North Brisbane (PCH/RBH), South Brisbane (PAH) and Townsville.
  - early/immediate bed access for ACS patients (currently severely limited
  - currently there is no hub hospital in Qld which offers a complete 7 day a week ACS/STEMI service to all its regional hospitals
  - at least 4-5 rostered interventional cardiologists per hub to provide for adequate coverage and leave
  - cardiac surgical services at PAH, PCH and Townsville must have a sufficient workforce to make them sustainable

- Appropriate categorization and risk stratification of patients awaiting transfer to hub hospitals for managing the acute coronary syndrome, and patients awaiting "elective" coronary angiography, with transparent accountable waiting lists.
  - TIMI risk score for ACS patients (see above)
  - Non-Invasive risk score for non-ACS patients (see above)
  - Clear point of contact for regional/rural referrals of patients for urgent transfer of ACS patients or "elective" coronary angiography.

- Improved ambulance support for rapid/emergency transfer of ACS patients.

- Major increase in staffing/infrastructure for all tertiary cardiology outpatients so that the maximum waiting time for semi-urgent patients (chest pain, refractory heart failure or syncope) is 3 weeks.

- QHealth needs to be proactive in recruiting cardiologists, and in association witl Qld hospitals, provide positions for newly trained cardiologists to join public hospitals. Many of the recently trained cardiologists have gone directly into private practice rather than remain in the public system. The provision of increased training positions for two non-invasive cardiology trainees, who migh be bonded to work in regional or rural Queensland for 5 years after completion training should be considered.

Strategic Goals for 2004-2010.

- Enough trained cardiologists working in the public system
  - As per Qld Health's strategic intents statement (QHealth website): "We will recruit, develop and retain a highly skilled workforce".
  - To meet international benchmark standards, public cardiologist FTEs should be increased from 25 to 75 over the next 5-6 years (similar to increases planned by the UK NHS).
  - Infrastructure for between 2-4 non-invasive cardiologists in all major regional centres such as Nambour, Rockhampton, Mackay, Bundaberg, Cairns, Hervey Bay, Gladstone, Mt Isa, Redcliffe, Caboolture, Logan, Redlands, QE2, Toowoomba.
  - Funding for staff and cardiac catheter laboratories at the Gold Coast and Cairns Hospitals to offer diagnostic angiography to their respective area (adequate staffing to provide a sufficient volume for "cardiac hub" interventions as described above is not likely in this time-frame). Numbe of high-risk patients unable to access their "Hub" hospitals (PAH and Townsville respectively) due to bed-access block and inordinate delays should be recorded, and when these numbers along with other referrals attain a volume sufficient for "cardiac hub" status, then funding for this should be considered.

3. ELECTROPHYSIOLOGIC STUDIES, RADIOFREQUENCY ABLATIONS, PACEMAKERS AND IMPLANTABLE DEFIBRILLATORS.

In 1997 Eugene Braunwald wrote "Two new epidemics of cardiovascular disease are emerging: heart failure and atrial fibrillation. (1)". In the last 2 years several advances i electrophysiology have result in improved treatments in patients with these conditions. Conclusive evidence has now been presented that shows implantable defibrillators (AICDs) improve mortality in appropriately selected patients with left ventricular dysfunction. Biventricular pacing improves quality of life and reduces hospitalizations selected patients with heart failure.

Radiofrequency ablation can now offer the potential for cure in patients with paroxysm atrial fibrillation.
These advances in the treatments of two of the most common cardiovascular reasons fo presentation to hospital in 2004 must be appropriately planned for and resourced, if the people of Queensland are to have continued access to high quality care.

Implantable Defibrillators

With the presentation of 3 large clinical trials in patients with left ventricular dysfuncti in the last 2 years (MADIT 2, COMPANION, SCDHeFT) (2-4), there is now overwhelming evidence that AICDs improve mortality in patients with severe LV dysfunction. The improvement in mortality is approximately 26% (5), with the absolute reduction in mortality being 8%. This makes it one of the most effective cardiovascular interventions currently available. This improvement is in addition to optimal medical therapy and does not appear to adversely affect quality of life. As Eric Topol, Director Cardiology at the Cleveland Clinic recently stated following the presentation of the SCDHeFT results "This is the ultimate collision of evidence-based medicine and the resources to support that." (6). The evidence to support the role of AICDs in patients w left ventricular dysfunction has now reached the point where they should be considered the standard of care in most patients with severe left ventricular dysfunction.

The emphasis now has to shift to finding ways that will allow these devices to be delivered to the people of Queensland. The number of patients that would be potential candidates for these therapies is difficult to estimate. It is likely however that the curren number of devices implanted in Queensland represents less than 5% of the potential patients that would benefit from this therapy. (7).

If we are to offer this therapy to the people of Queensland there are many issues apart from the device costs that need to be addressed. The cost of the devices will reduce ove time. With increased demand this is likely to be significant but the timing of the fall wil be influence by re imbursement issues in the United States and not here. At present the Queensland Health department is fortunate enough to obtain AICDs at some of the mos competitive prices in the world.

If the vary large supply demand mismatch in access to AICDs is to be address an appropriate trained workforce is needed. At present Queensland Health employs less th 3 FTE electrophysiologists for the state. This number needs to be greatly increased if tl potential demand for these devices is to be met. The exact number required will be influenced by the funding allocated. At the same time there will be a requirement for further investment in infrastructure to allow these devices to be implanted. If the deman is to be truly met it would require the establishment and staffing of appropriate fluoroscopy suites in most major population regions within Queensland. Especially as t current electrophysiology infrastructure at TPCH and PAH is inadequate to cope with current demand. Follow up clinics will need to be expanded to cope with the increased number of implants. Ideally this should be close to the patient's place of residence. Internet based technology is being developed and will be commercially released in the very near future that will allow some of this follow up to be done remotely, which shou reduce travel costs significantly and potential result in cost savings.

Biventricular pacing

In recent years biventricular pacing has emerged as a novel therapy up to one third of patients with severe left ventricular dysfunction. With the publication of the MIRACL and COMPANION trials (3), there is now evidence that it improves quality of life, improves functional class, reduces hospitalization for heart failure and reduces mortalit when combined with an ICD. Nearly all patients that will be considered for this therapy are considered candidates for AICDs. The cost of biventricular AICDs is approximately 15% more than a standard ICD. The real cost however at present is the implant times fo these devices, which is significantly longer than a standard ICD. Most implants take somewhere between 2-3 hours, compared to 75minutes for a standard ICD. Given the current limitations on infra structure performing biventricular implants will significantl affect the case mix of the current electrophysiology facilities. It is likely that this will result in even fewer radiofrequency ablations being perform despite the already extremely long waiting times for this curative procedure.

Radiofrequency Ablation

Radiofrequency ablation is one of the few procedures in cardiology that has the potenti to truly cure patients. Procedural success rates for the common arrhythmias exceed 90% Radiofrequency ablation was first performed in Queensland in the early 1990 however the demand for this curative procedure has always exceeded the public sectors ability tc provide. This has resulted in excessive waiting times and despite increase activity in recent years the routine elective patient at the start of 2004 is still waiting over 500 day: The true demand for this procedure is unknown and many patients are simply not referr because of these excessive waiting times or advised to take out private medical insuran as it will be quicker.

Atrial fibrillation is at least 3 times more common that the arrhythmias that are currentl treated with radiofrequency ablation. With an aging population the number of patients suffering with atrial fibrillation will increase. In recent years there has been considerabl

progress in the ablation of atrial fibrillation. Several centers have now reported success rates of up to 90% in selected patients with atrial fibrillation (8), and some researchers see this as a potentially alternative to drug therapy which is only modestly effective in most patients with atrial fibrillation. The ablation of atrial fibrillation continues to evolv but if we are to achieve results close to those published access to advanced technologies will be required.

As previously discussed in the sections on AICDs and biventricular pacing if these procedures are to be provided to the people of Queensland within acceptable waiting times then further investments will be required in infrastructure and staff. Unlike the investment in device implantation there are many reasons for retaining centralization in the provision of ablation services (along the lines of cardiac surgery). The newer procedures in particular those related to atrial fibrillation are complex, and should be done in high volume centers with extensive experience in radiofrequency ablation to achieve the best results.

New Technologies

Over the last 5 years there have been considerable advances in electrophysiology technology. This has allowed more complex arrhythmias to be treated (i.e. arrhythmias associated with congenital heart disease, ventricular tachycardia and atrial fibrillation), improve outcomes and provide dramatic reductions in radiation exposure to both the patient and staff.

Advanced non fluoroscopic 3D mapping systems, intracardiac ultrasound and cryoablation technology have become standard in electrophysiology laboratories that have a referral base as large as the Queensland public hospital facilities. At present non of this technology is available in Queensland public facilities with only cryoablation available at one private facility within Queensland. Despite this patients are still referred interstate because no suitable public - private relationship existing at this point in time. This new technology is relatively expensive and while potentially useful in most ablatic procedures has real advantages in a relatively small number of cases. This makes it difficult for an individual centre to justify its purchase. The problem exists in the private sector with respect to the newer expensive technologies also, and a more co- ordinate approach to the evaluation and purchase of this technology needs to be found. In some cases it may be more appropriate to have the cost of this technology shared between the public and private sectors at least in the initial stages, so both sectors can receive the benefits of advances in technology.

Resources

Like all areas of cardiology within Queensland health the most important issue in electrophysiology relates to human resource issues and infrastructure. Considerable

increases in staffing is required if Queenslanders are to see the benefits of these advanc in electrophysiology. Money alone for devices will not solve the problems. Further investments in infrastructure is required immediately (increases in EP lab operating times). Conditions need to improve so we can attract people to work in the public secto While salary packages are important, reasonable workloads by national and internation standards, research opportunities and access to and continued evaluation of new technologies is also of key importance. A high priority is to retain newly trained specialists with in the public sector in some capacity. Fellowships to aid in the training the future work force should be considered.

Conclusions

The major issues relate to the rapid advancements in electrophysiology of recent years. AICDs and biventricular pacing have demonstrated a clear reduction in morbidity and mortality. Radiofrequency ablation techniques have expanded and most arrhythmias ca now be potentially cured. The increased volume of device implants and the complex radiofrequency ablation procedures if implemented will place extreme pressure of the current infrastructure. At present the current workforce will not be able to provide these services. If the demand is to be met there needs to be considerable investment in the workforce, resources and infrastructure.

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4. NON-INVASIVE SERVICES

Provision of non-invasive diagnostic cardiac investigations remains variable, and in general inadequate, throughout Queensland public hospitals. This in part is due to the lack of suitably trained physicians/cardiologists in most centres as has been previously addressed. One would expect that a centre staffed by a suitably qualified physician should be able to provide, at least, exercise stress testing, 24 hour holter monitoring and also transthoracic echocardiography. However, adequate provision of these services is also dependant on a number of other factors that include

1. Adequate numbers of support staff to conduct investigations, primarily cardiac scientific staff in each centre. Staffing and training in most public hospitals is currently limited
2. Suitable infrastructure and equipment necessary to perform high quality investigations

Echocardiography, which over the past 20 years has become a fundamental investigatio applicable to many branches of medical and surgical practice, poses specific challenges due to the detailed training required both for cardiac scientists working as sonographers performing investigations and also for cardiologists responsible for reporting examinations. Fortunately, this mode of investigation lends itself well to application of modern digital technology and telemedicine resources. It is suggested therefore that novel solutions to these problems be explored, which should include, but not be limited

1. Centrally organised training of cardiac scientists utilising the extensive experien and educational resources of existing centres
2. A working group should be established to explore the application digital imagin archiving and transfer of data between institutions in order to provide a satisfactory transthoracic echocardiography service to centres throughout the state.

5. HEART FAILURE

A separate submission has already been submitted, but it must be emphasized th an inadequate response to the management of the acute coronary syndrome, adds greatl to the burden of chronic heart failure, as well as to the need for biventricular pacemaker and implantable defibrillators.

6. STRATEGIC PLANNING OF PAEDIATRIC CARDIOLOGY SERVICES QUEENSLAND 2004-201C

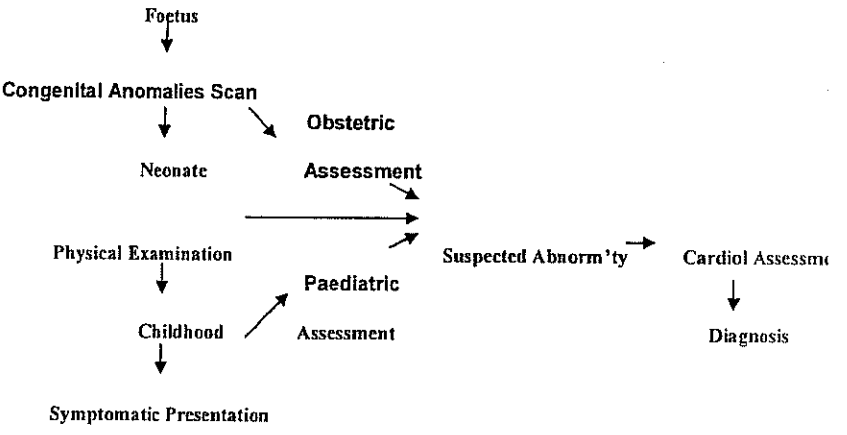
BACKGROUND

Provision of services to children with congenital heart disease and acquired heart disea is to be developed as an innovative state-wide service with its own administrati managerial and quality control structure. Standards will be developed to addr diagnosis, surgical and other treatments and continuing care, within the framework primary care, tertiary care and social care.

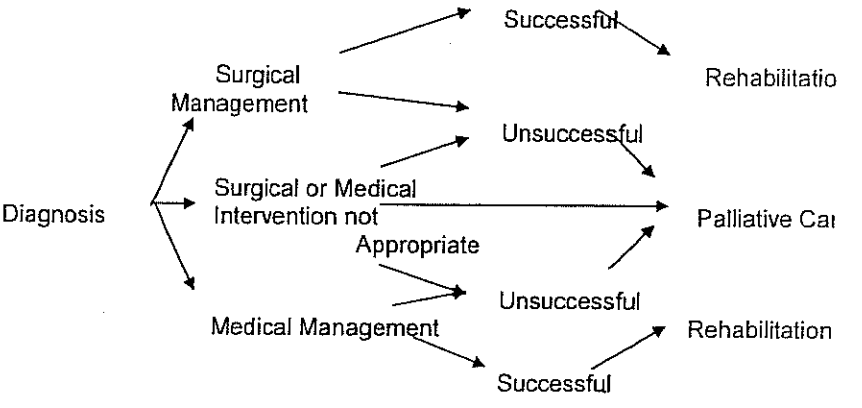
The Report of the Paediatric and Congenital Services Review Group (November 200 which reviewed practices in 14 hospitals in the United Kingdom, established import principles in the provision of care which must be considered in the development of effective strategic plan:

1. **There needs to be a commitment to care for children in an environment that appropriate for their needs and stage of development.**
2. There needs to be strong support and leadership of the team with evidence of ongoi commitment to developing the service and obtaining improved outcomes.
3. Excellent communication and liaison must exist between the different parts of t service.
4. There are varying models for delivery of care, and the service must identify a develop the model which best meets its needs.
5. Best practice standards should be developed, maintained and audited to ensure tl parents/users of the service are confident that the centre is operating within acceptable level of safety.
6. Introduction of new procedures should be routinely considered in local clini governance, where management and clinicians would need to be satisfied tl introduction was justified, taking into account demand for the procedure, skills a experience of the team and likely effect on the service and outcomes. This m include external peer review.
7. It is imperative that families are carefully supported throughout their child's thera emotionally, socially and educationally.
8. Care pathways were developed which are relevant when planning a high qual service for the state:

Identification to Diagnosis



Diagnosis to Outcome of Intervention



Management of Transitions as the Child Grows

Foetus → Neonate → Infant → Adolescent → Adult

CURRENT PAEDIATRIC CARDIOLOGY SERVICE

The current service, which is responsible for the provision of paediatric cardiology care to the population of Queensland and Northern New South Wales, is a fragmented, unde resourced, poorly organised service, with no recognised managerial or organisational structure, that spans a subspecialty hospital (Prince Charles) and two children's hospita (Royal Children's, Mater Childrens). Funding resources are derived from the public an private health systems in multiple health districts, with no defined business structure.

Queensland is a rapidly growing population with the 2001 census reporting a populati of 3.57 million. The projected population of 5.19 million by 2021 will approach that Victoria, making Queensland's paediatric cardiac service the second largest in Austral This would suggest that the population of Queensland will be 4.38 million by 2010. Tl population growth will place increased demands on the currently under resourced servi It should also be recognised that the geography of Queensland increases the difficulty providing high quality care to all children in the state with congenital and acquired he disease.

SERVICE PROVISION

	Cases in 2002/2003
1. Paediatric Cardiac Surgery	278
2. Paediatric Ward Admissions	415
3. Paediatric Intensive Care Admissions	339
4. Paediatric Cardiac Catheters	230
5. Paediatric Electrophysiology Studies	44
6. Paediatric Cardiac MRI	unknown
7. Paediatric Echocardiograms	unknown
8. Paediatric Outpatient Services	unknown
9. Paediatric Inpatient Consults	unknown
10. Paediatric Outreach Clinics	unknown
11. Paediatric Cardiac Teleconferences	28

CURRENT STAFFING FOR SERVICE DELIVERY

1. Paediatric Cardiologist	4 FTE
2. Paediatric Cardiac Surgeon	2 FTE
3. Paediatric Intensive Care	3.5 FTE
4. Paediatric Cardiac Anaesthetics	2.4 FTE
5. Paediatric Ward Nursing Staff	26.5FTE
6. Paediatric ICU Nursing Staff	29 FTE
7. Allied Health	unknown
8. Secretarial Support Staff	unknown

INFRASTRUCTURE FOR PAEDIATRIC CARDIAC SERVICE DELIVERY

1. Paediatric Ward	10 funded beds
2. Paediatric Intensive Care	4 funded beds
3. Outpatient Service	Integrated with adult OPD at TPCH (paediatric clinics at MCH and RCH)
4. Operating Theatre	1 paediatric theatre
5. Catheter Laboratory	1 biplane lab (shared adult)
6. Echocardiography Machine	no dedicated paediatric equipment at TPCH (dedicated equipment at MCH and RCH)
7. Pacemaker Service	integrated with adult service
8. Teleconferencing Service	Limited service at RCH and MMH
9. Information Management	Incorporated in adult systems
10. Quality Control	Auditing of cardiac ICU and cardiac catheter resu

GOALS FOR 2004-2010

1. Establish Paediatric Cardiology as a service recognised by Queensland Hea with the responsibility of providing high quality care and ensuring time introduction of new innovations in patient care, for children and their famil affected by congenital and acquired heart disease. This implies that the servi will have its own administrative structure with a director, and a defined budg As this is a state-wide service, this budget should be derived centrally fr Queensland Health, rather than piecemeal from each service district.
2. Ensure that service delivery achieves benchmarks described by 'The Report the Paediatric and Congenital Services Group' as a minimum required standard

   : One person in the team should have a lead role, with responsibility for maintaining quality of care and representing the team to Queensland Health.

   : Develop audit program which is adequately financed and staffed.

   : Develop an active research program which is appropriately funded.

   : Develop clinical governance structures which are sufficient and effecti in monitoring timely introduction of new technology and procedures.

: All areas in which the child is treated must demonstrate a commitment a child centred environment

: All high risk mothers should be offered a foetal cardiac echocardiogr at 18-20 weeks, and any foetus thought to have a heart problem should offered a tertiary scan within 7 days.

: The service should have a minimum of 1 consultant cardiologist 500,000 population served.

: Maximum waiting time for any cardiac catheter procedure should b months

: The interventional service should have one lead interventio cardiologist (80 procedures per year) and 1 or 2 others (40 proc / year).

: Cardiology services should contain a paediatric electrophysiologist

: The service should have a minimum of 3 paediatric cardiac surgeons.

: Anaesthetists should be trained in both paediatric and congenital cardi anaesthesia, and should undertake at least one session per week in t field.

: Post-operative care should take place in a paediatric intensive care wh the physical environment, medical staff and nursing staff satisfy requirements of the Faculty of Paediatric Intensive Care.

: The lead paediatric intensive care clinician with recognised PIC traini should be responsible for all aspects of the intensive care service.

: Within ICU staffing levels should allow routine 1:1 nursing for critica ill infants.

: A full cardiac liaison service should be resourced and maintained.

: Outreach clinics should be developed as a planned network, providi early review of patients in reliable facilities, so that patients are o required to travel to a tertiary centre when essential.

: Patients should receive age appropriate care at each stage of th development.

: Educational needs of these children must be recognised and servi should be available to support the child in the school environment, sho the parent request this.

: Transition to an adult congenital service should be an agreed decisi between physician and patient.

: In general there should be no circumstances in which patients under years are cared for in an adult ward, nor patients over 18 years in children's ward. There should be separate inpatient facilities for you people.

: Adults with complex congenital heart disease should be treated specialised university/teaching centres.

: There should be adequate facilities and accommodation for parents wh children are admitted to hospital.

: High quality bereavement support must be provided.

3. Rapidly progress the further development of telemedicine in paediat cardiology, as it has great potential to improve care of patients and assist famil in remote regions of Queensland

4. Ensure that the Queensland cardiac surgical unit has appropriate cardi ventricular support equipment and skilled staff, provide a safe environment all surgery for congenital heart disease.
5. Develop programs which will identify and develop strategies to reduce t incidence of acquired heart disease which has a major impact in the ad population, but has its beginnings in during childhood years in our community.

CURRENT ISSUES WITH SERVICE ACCESS

1. There is no defined paediatric cardiology organisation in Queensland responsil for service provision.
2. Inadequate staffing with paediatric cardiologists means that there a unacceptable waits for cardiac review. This is particularly an issue for outpati services at the Mater Children's Hospital, inpatient services at the Ro Children's Hospital and most provincial centres. There is no trained paediat electrophysiologist in Queensland.
3. There have been major issues with access of patients to cardiac cathe procedures. This relates particularly to interventional procedures where waiti periods of up to 1 year have been encountered. These delays have related to pc local clinical governance and poor financial modeling to deal with transitions best patient care.
4. There is no paediatrically trained cardiac electrophysiologist. This service currently provided by a skilled adult electrophysiologist, who freely admits tl his understanding of complex congenital heart disease is limited.
5. Queensland requires a third paediatric cardiac surgeon. It should also recognised that the current senior paediatric cardiac surgeon is likely to ret within 5 years, and there is no succession planning for this.
6. Anaesthetic service for paediatric cardiology was established for first time November 2003. This service remains inadequately staffed and these deficienc have resulted in cancellation of elective procedures.
7. The physical environment where children undergoing surgery for congenital he disease are treated postoperatively does not meet the current guidelines of t Faculty of Paediatric Intensive Care and it is not a ' child centred environmer This compromises the quality of care of the children and their families.
8. Current nursing staff levels do not meet the requirements of the Faculty Paediatric Intensive Care, particularly in the area of nurse education.
9. Access to other paediatric subspecialties and allied health services are tota inadequate at present. Inpatients who are critically ill may wait up to 1 we before appropriate review is achieved. There is no structured service to meet t neurodevelopmental needs of this at risk group of c..ildren.
10. There is no centralised service for Adult Congenital Heart Disease and no servi provision for regional Queensland. Significant numbers of adult patients are l to appropriate follow-up.

11. Current Red Cross room accommodation for parents of affected children, many whom are from regional centres in Queensland, is sub-standard.
12. The current telemedicine service is a very limited service, with links from t Royal Children's to Mackay and Hervey Bay, and the Mater Mothers Townsville. A large proportion of the states regional population has no access this service.
13. The absence of ventricular assist devices increases the risk associated with routi complex paediatric cardiac surgery, and has necessitated the transfer of patie interstate for their surgery.
14. There are no programs in the paediatric population directed at reducing t incidence of acquired heart disease. This has major adverse consequences in la adult life.

RISK IMPACT OF SERVICE GAPS

1. *Missed Diagnoses*: It is not uncommon for a child with significant congeni heart disease to be diagnosed late because of inadequate access to a cardiologist the of Queensland. This has major medico-legal implications and would leave t Health Department exposed.
2. *Absence of Preventive Programs*: This results in increased morbidity and cost the health system in the adult population. The most obvious areas of concern a ischaemic heart disease and lifestyle issues, and rheumatic heart disease.
3. *Inadequate Services*: The global deficiency in service resource allocation a clinical expertise would leave the Health Department exposed in the event adverse outcomes. This does not take into account the cost and social impact such an event on a child and their family.

PREDICTED SERVICE DEMANDS

Paediatric Cardiology

The predicted population of Queensland for 2010 is 4.38 million. This does not acco for the population of northern New South Wales which we serve. This would suggest tl Queensland will require **9 paediatric cardiologists by 2010**. Two of the current st cardiologists may retire during this period, suggesting that there may be a requirement 7 new appointments during this 6 year period. No funding currently exists for 5 of the appointments. This unacceptable position will create significant long-term proble unless strategies for appropriate training, recruitment and succession planning are put i action immediately.

Two models are possible for developing the funding of these positions. The first creating full-time staff positions with rite of private practice. The second is creating pa time VMO positions. Given the nature of paediatric cardiology we believe that full-ti appointments are the most desirable manner in which the department can be develop as much of the subspecialty work is very labour intensive and time consuming. Al

successful applicants to such positions are more likely to be interested in and have ti
for research, which has been identified as an essential requirement of any accredit
paediatric cardiology program.

It takes a minimum of 3 years to train as a Paediatric cardiologist, and thus planni
needs to be in place to ensure that there sufficient trainees to fill the required positio
and that their training reflects the needs of the current service. The most acute need is
the area of paediatric electrophysiology, but other areas of identified need would inclu
echocardiography (foetal, 3-D, telemedicine), MRI and cardiac transplantation.

Electrophysiology:

There is currently no subspecialty paediatric electrophysiology service in Queenslar
Paediatric cardiologists provide general electrophysiology services with support from
adult electrophysiologist. 40-50 invasive electrophysiology procedures are perform
each year in children each year by the adult electrophysiologist. Currently there
demand for a 0.5 FTE paediatric electrophysiologist, responsible for invasive a
therapeutic studies, pacemaker management, AICD management and clinical services.
is likely that this will develop into a full-time work requirement over the next 5 years,
was the experience at the Royal Children's Hospital in Melbourne.

Echocardiography:

Because of changing medical, parental and medicolegal expectations there is an e
increasing demand for screening echocardiograms. Obstetric ultrasonographers
increasingly requiring tertiary foetal cardiac scans to accurately define the most accur
diagnosis. The advent of telemedicine will also place increasing demands on the curr
service to provide timely review of transmitted images. For these reasons and with
increasing population there will be further need for paediatric cardiologists with exp
echocardiographic skills.

Cardiac Catheterisation:

About 250 paediatric cardiac catheter procedures are performed each year and this
number is likely to remain constant over the next 6 years, although the proportion of
interventional procedures is likely to increase from current levels of 23% (n=52 in 2002
There are currently 2 cardiologists of similar age with interventional training who shou
be able to support the paediatric interventional service performing at least 40 procedure
each per year, as they operate together to maintain skill levels and patient numbers. The
rapid progress being made in this field and appropriate succession planning would
suggest that an appointment in this field may be appropriate in the 5-10 year time fram

Paediatric Cardiac MRI:

Cardiac MRI is a rapidly expanding field in paediatric cardiology and the number of
studies performed will slowly increase. Currently this area is very ably supported by Dr
Richard Slaughter, but a paediatric cardiologist with specific training in this field will b
required by 2010.

Paediatric Cardiac Transplantation:

There is no paediatric cardiac transplantation service offered in Queensland with all
patients being transferred to the Royal Children's Hospital in Melbourne. The
requirement to transfer these patients to Melbourne increases the stress and dislocation
experienced by their families and it has been argued that it prejudices the likelihood of
successful transplantation. A strong case could be made for establishing this service in

Queensland. This would require the appointment of a trained paediatric transplant cardiologist and all of the appropriate support personnel.

Services to Children's Hospitals:
The Mater Children's Hospital is significantly under resourced with waiting times to se a paediatric cardiologist approaching 3 months. It is totally inappropriate that an organisation the size of the Royal Children's and Royal Women's Hospitals does not have continuous on site paediatric cardiac cover – a consultant has to drive from anothe hospital to provide an urgent consult, and this would not meet the criteria for appropriat standards of care. Both the Mater and Royal Children's will require access to 1.5 to 2 FTE paediatric cardiology positions. The rapidly increasing workloads in the area of foetal cardiac echocardiography, suggests that this may be an underestimate of the requirements for both Children" Hospitals.

Outreach Clinics:
Outreach clinic services are currently provided to Gold Coast, Toowoomba, Hervey Bi Rockhampton, Mackay, Townsville, Cairns and Mt. Isa. These clinics have a hi workload, and up to 30 patients can be seen in 1 day. In many of these regional centi not all patients who should be seen at the next clinic can be seen, placing undue pressi on local paediatricians. With increased numbers of cardiologists, ideally one cardiolog would be assigned to each major regional centre, allowing increased numbers of visits each centre per year, allowing consultation times for our regional patients to be at least minutes, approaching Brisbane standards. Appropriate nursing and echocardiograpl support is essential.

Telehealth:
Telehealth should play an increasingly important role in delivering care to patients w congenital heart disease. At present this occurs on an ISDN based format, but it is like to also develop as digitally based QPAC service. This will prove invaluable performing accurate acute diagnoses in peripheral centres. This service should be bas at the tertiary centre, and will require increased staffing levels.

Nursing:
The role of nursing staff in this service must extend beyond that of care of inpatien Because of our large patient catchment area, the requirement for a full cardiac liais service, increasing numbers of outpatient and outreach clinics and the potential telemedicine which has not yet been utilised by this service, the requirement for skill nurses with a good understanding of the management of these complex children w increase. There is a desperate need for clinical nurse educator / advanced nur practitioner to ensure that the demand for these innovations in patient care are met.

Paediatric Cardiac Surgery

It is likely that the number of paediatric cardiac operations performed each year w remain constant or increase slowly as the population grows to 2010. Developments whi may stimulate a downward trend in number of surgical procedures performed inclu increased utilization of interventional technology, and the influence of foetal diagnosis an increasing foetal wastage rate. We also have an obligation to offer treatment patients in the South Pacific rim and South East Asia who can't receive adequate care

their own country. This should include both fee paying patients and charitable cas
(funded by charitable organisations and any profits made from fee paying patients)

Three paediatric cardiac surgeons are required are required to maintain this servi
One of the current surgeons may retire in the next 5 years so Queensland may require t
appointment of 2 paediatric cardiac surgeons by 2010.

Paediatric Cardiac Anaesthesia

The paediatric cardiac anaesthetic service with its own on-call roster was established
late 2003. It is responsible for providing anaesthesia for the following procedures:

1. Cardiac surgery	250-300 per year
2. Cardiac catheter	200-250 per year
3. Cardiac electrophysiology	40-60 per year
4. Cardiac MRI	30-50 per year
5. Other (TOE, lines etc)	20-30 per year

It is likely that these requirements will grow slowly with population growth, although t
requirements in MRI have potential to increase dramatically. The current staffing of 2
FTE is totally inadequate, as cases are regularly cancelled, and cases are scheduled
weekends, because of the poor availability of anaesthetic services during the week.
long-term issue with provision of these services relates to staff retention which is poor.

4 Full-time equivalents in paediatric anaesthesia are required by 2010. It is likely tl
the most reliable way to ensure sustainability of the service, is to develop an integrat
model with the anaesthetic departments in Brisbane's two other Children's hospitals
model which has solved many of the problems of paediatric cardiac intensive care). T
creation of paediatric cardiac anaesthetic VMO sessions must also be considered to h
ensure staff retention in a competitive environment.

Paediatric Cardiac Intensive Care

The recent creation of the statewide paediatric cardiac intensive care service with
Tony Slater as Director has seen the resolution of long-standing issues with medi
staffing in paediatric cardiac intensive care. 3.5 FTE paediatric intensivists are n
responsible for the 350-400 annual admissions to cardiac intensive care.

However, the current service does not meet the current guidelines of the Faculty
Paediatric Intensive Care. Areas which require urgent attention include:

1. Current physical environment doesn't meet college guidelines
   : Intensive care unit should have a minimum of 6 beds
   : Floor area of current ICU beds is inadequate
   : The current intensive care unit is not a child centred environment
   : Inadequate facilities for counselling parents who are often extrem
   distressed in this environment.

2. Inadequate nursing staffing, particularly with regard to senior positic including nurse education.
3. Inadequate allied health resources

Future developments which would significantly impact on service provision:

1. Changes in service care delivery in USA and other centres in Australia m dictate that 24 hour in-house consultant cover may become the accepl standard of care for Paediatric Intensive Care units. The requirement provide such a service would be 11 FTE paediatric cardiac intensivists.
2. The development of LVAD and ECMO services for cardiac surgical patie is essential. The population of Queensland will only support a single servi of this nature. There is a role for this therapy in the management of critica ill general paediatric patients, and consequently the development of tl service will result in the current cardiac service transforming to a true gene paediatric unit. While the utilisation of ECMO in the general paediat population is low, the presence of such a service will dictate that the ma critically ill patients should be managed in the unit where this service available. A unit of this nature will require 10 funded beds.
3. As the concept of the unified service evolves, allied health, nursing a medical equipment standards are likely to become constant throughout t service. Increased movement of resources be.ween the units may incre efficiencies.

PATIENT FLOW ISSUES

The care pathways highlighted in the Paediatric and Congenital Services Revi illustrate the patient flows in managing children with congenital heart disease. Pati flow of children with congenital heart disease in Queensland has been the source of mu debate and several enquiries over the past two decades. Divisive debate and failure resolve this issue has been detrimental to the progress of paediatric cardiac services in t State, as parties on each side of the debate have not had time or resources to forcil argue and progress the needs of the service, independent of the decision as to where t service should be provided. Professor Phelan drafted recommendations on Paediat Cardiac Services in Queensland in 2002, but these have not been made available discussion by the Health Department.

It must be recognised that it is not possible to manage transition from foetus to adult w congenital heart disease in a State the size of Queensland within a single institution. Tl is why the concept of a State-wide service is central to the ongoing provision a development of high quality care for affected children throughout the state.

Broadly, there are 3 groups of children who will require care in this service.

1. Significant congenital or acquired heart disease requiring treatment in tertia cardiac centre.
2. Less severe cardiac disease, often secondary to other general paediat disease, managed in general paediatric inpatient environment.

3. Minor congenital heart disease managed in outpatient, outreach or telehea setting.

In planning management of these patient flows into the future it is instructive to descri current patient flows for each group.

Significant Congenital Heart Disease:

80% of infants with significant congenital heart disease are diagnosed in the first wee of life in foetal, neonatal or paediatric units. Infant, often critically ill, is transferred fr paediatric unit to TPCH, where treatment is instituted. Any further cardiac inpati treatment is at TPCH, with outpatient follow-up provided to varying standards throughc the state. Associated general paediatric illnesses are managed at the Children's hospita At this time there is no facility for formal transition to an adult congenital service Queensland. What limited services that exist are based at TPCH.

Less Severe Cardiac Disease:

Managed on a consultative basis in Children's hospitals and regional hospitals. Becat of inadequate cardiac resources not all patients are seen in a timely manner, and r infrequently, unwell children are transferred to TPCH for 'inpatient' cardiac assessme The lack of a 'cardiology culture' in the major children's hospitals flows through junior medical staff, nursing staff, and ultimately impacts on patient care and outcomes this setting.

Minor Cardiac Disease:

In man hours this constitutes the bulk of work for the paediatric cardiologist, a increasingly this service is being provided in a decentralised manner away from t tertiary cardiac centre. There is enormous scope to increase the quality of this servi with outreach clinics and telehealth.

The location of the tertiary cardiac service is only relevant to the first two groups patients. With the current model of patient flow the break in continuity of care occi between the time of diagnosis (usually a paediatric facility) and the time of treatm (usually TPCH). The transition from adolescent to adult care is likely to occur in the o institution at TPCH. The critics of this model would suggest:

1. Critically ill infants are being moved unnecessarily between two hospitals.
2. Infants at TPCH have suboptimal access to non-cardiac paediatric resources
3. The adult focused hospital does not demonstrate adequate commitment tc child centred environment.
4. Patients at the children's hospitals have inadequate access to paediat cardiac services.

The alternative flow model would place tertiary paediatric cardiac services in Children's hospital. With this model diagnosis and care of the paediatric cardiac pati would occur within the one institution, with full access to all ancillary paediatric servic The break in continuity of care would occur in the transition from adolescent care to t care of an adult congenital heart service. (likely to be TPCH). **The paediati community of Queensland strongly favours provision of paediatric cardiac servi in a Children's Hospital.** The critics of this model would suggest:

1. The transition from adolescent to adult is difficult and is best facilitated witl the one organisation.
2. Surgery for all congenital heart disease (neonatal, infant, child, adult) shou be in one centre.

For the benefit of the service this issue requires urgent and final resolution. To devel any effective strategic plan the providers must know where the tertiary paediatric cardi service will be located in 2010-2020. The decision must be final and all interested part must be involved in the process which arrives at the appropriate determination. Tl would include: Queensland Health, Paediatric Cardiology service providers, providers general Paediatric care, interested Adult Cardiologists, relevant College representati\ because of training and accreditation issues, and representatives from patient and par groups.

TIMELINE FOR STRATEGIC PLAN

2004-2005

1. Recognise Paediatric Cardiac Services as a State-wide service with the manager structure, financial resources and mandate to provide high quality care to children w congenital heart disease.
2. Appoint a Director of this service. This is to be a 2 year tenured position.
3. An independent review of paediatric cardiac services to determine the location of t tertiary paediatric cardiac service by 2010. This decision to be finalised by end of 20 calendar year.
4. Ensure service agreement for paediatric intensive care services between RCH, MC and TPCH is ratified.
5. Planning to commence for a paediatric cardiac service, which demonstrates commitment to a child centred environment. The implication of this is that services ; removed from the adult environment, either by developing a physically separated servi at TPCH, or relocating to a Children's hospital. The services to be collocated in clc proximity to create the Paediatric Cardiac Department are:

- 15 bed paediatric ward
- 5 bed high dependency unit
- 10 bed intensive care unit (planned development of LVAD/ECMO service)
- room appropriate for counselling distressed families
- public and private outpatient clinics, including pacemaker clinic
- telehealth service
- echocardiography clinic(at least 2 ultrasound machines – TOE, 3-D)
- ECG, Holter and home telemetry service
- conference room with appropriate audiovisual display
- office space for medical staff, allied health and nursing staff.
- paediatric cardiac data management system such as **'Cardiobase'** which w interface with the hospital information system.

Services which may be physically removed from this Paediatric Cardiac Centre are:

- Paediatric cardiac theatre
- Paediatric bi-plane catheter and electrophysiology laboratories

- Exercise and Tilt-test facilities
- MRI
- Nuclear medicine
- Appropriate parental accommodation (eg. Ronald Mc Donald House)

6. Appoint a fifth paediatric cardiologist with specialised skills in electrophysiology
7. Appoint a third paediatric cardiac surgeon
8. Establish paediatric LVAD/ECMO service
9. Develop an integrated model between TPCH, RCH and MCH for delivery of paediat anaesthetic paediatric services. To establish 1:4 call this will require the appointment o further 1.6 FTE to TPCH.
10. Increase nursing workforce in paediatric ward to 28 FTE
11. Increase staffing in paediatric allied health services.

- Social Work	1 FTE
- Physiotherapy	1 FTE
- Speech Pathology	0.5 FTE
- Occupational Therapy	0.5 FTE
- Dietician	0.5 FTE

12. Develop a local clinical governance structure which can efficiently assess a approve the introduction of new techniques.
13. Accept full-fee paying and limited charitable overseas patients for surgery a interventional procedures
14. Dr. Galbraith develops a strategic plan for Adult Congenital Heart Disease

2005-2006

1. Having determined location of tertiary cardiac service, establish funding for servi and begin design and construction phase.
2. Appoint 6th paediatric cardiologist. Candidates with specialised skills echocardiography or MRI would be sought. This appointment should result in significant upgrade of support service to the 2 children's hospitals and outreach clini This will result in increased integration of services across the state.
3. Consider the development of paediatric cardiac public health programs.
   - foundations of ischaemic heart disease in childhood
   - rheumatic heart disease
4. Extend the role of telehealth.
   - cardiac echo transmission facilities to all major provincial centres
   - nursing liaison and education with staff and families in all provincial cent with telehealth facilities.
5. Construction of new paediatric bi-plane catheter laboratory, with features suitable all required paediatric interventions.
6. Assess the need for Paediatric cardiac transplantation services in Queensland, a progress the business case through Queensland Health.

2006-2007

1. The service will be located in the new Paediatric Cardiac Centre which has a ch centred environment.
2. The position of Head of the Paediatric Cardiology Service will be advertis internationally. The service should be an established quality service and the success applicant will require a strong background in paediatric cardiac research a administration. This will be a 5 year tenured position, which has the option of a sin renewal only. The successful applicant will however be guaranteed, lifelong appointm within the organisation if he/she wished. With 7 appointed paediatric cardiologists, th should be resources available to develop an effective research program.
3. Continued development of outreach clinics and telehealth services. Each cardiolog should be able to devote his time and resources to a single provincial centre.
4. Establish Paediatric Cardiac public health programs

2007-2008

1. Establish paediatric cardiac transplantation service in Queensland. The eig paediatric cardiologist will have specific training in this field.

2008-2010

Progress development of service to achieve all goals set in strategic plan.

FINANCIAL PLANNING

Paediatric Cardiology services are costly and labour intensive to deliver. No form costing of the current service is available, although anecdotally we believe that t estimated current annual budget for the TPCH service is $8 million. The required upgra to a high quality State-Wide service will require a significant financial outlay from t Health Department, both in terms of funding for capital works, and recurring costs t essential increased staffing levels. Such funds are unlikely to be available in the regio budget, and will require submissions to the Director General.

The development of an appropriate financial structure, in line with the administrative a managerial structure will be essential. This service will be required to interact with otl services within the tertiary hospital environment, but given the scope of the servi funding independent of the regional health structure in Queensland would be m appropriate. Models for this exist in Paediatric renal services. This would ensure tl revenue retention occurs within the service and this creates incentives to devel strategies for a cost-effective service and strategies for revenue generation in addition available public funds. The service will be responsible for funding new therapies, developing the business case to obtain increased funding for these interventions.

Estimates would suggest that up to 30% of the paediatric population of Queensland h
private health insurance. The paediatric service is not capturing this funding at pres
and increased efforts must be made to ensure that this pattern does not continue. T
Queensland Health Department has also sanctioned strategies to privatise outpati
clinics and bulk-bill day procedures such as cardiac catheters and electrophysiolo
studies. While such strategies may be considered cost-shifting, if other organisations a
embracing these policies to generate increased funding, we are obliged to consider th
strategies carefully.

Ideally, new appointments should be as full-time staff with right of private practi
Appropriate staff numbers with a combined public/private mode of health care delive
will provide a satisfying work environment, which will attract high quality practition
and ensure staff retention. Excess private funds generated in this model will be retain
by the service and can be utilised for the benefit of the service and service providers.

Patient Key

Two paediatric surgical cases:

PT 1: Richard Langton
PT 2: Jacob Norton

In 1st letter to Premier (16/12/2003) the 3 patients mentioned:

PT 3: Athol Thompson – Hervey Bay Hospital, transfer asked for on 14/11/2003 – delayed and patient died in Hervey Bay 17/11/2003.

PT 4: Norman Ingram – Lismore. – placed on Cat 1 waiting list 30/9/2003 and booke for angiography 27/11/2003 – died 28/10/2003.

PT 5: William Sindong 54 year old – Implantable Cardiac Defibrillator waiting list death.

In 2nd letter to Premier (25/1/2004) the 3 patients mentioned:

PT 6: May Milnes – Cat 1 patient placed on waiting list 9/12/2003 – died 12/1/2004

PT 7: Leslie Furness – Cat 2 patient placed on waiting list 21/7/2003 – died November 2003 (death not known by hospital till 16/1/2004)

PT 8: Ronald Brown – considered Cat 1 by Dr Denman – died 13/1/2004 39 days after being placed on waiting list for implantable cardiac defibrillator.

In text of submission:

PT 9: Amanda Rosenberry (UR 223605) – Kilcoy interhospital transfer – transfer aske 23/2/2004 – patient died in Kilcoy 27/2/2004

PT 10: John Siebuhr (UR 528164) – placed on Cat 2 waiting list 14/7/2003 – died 12/10/2003 (hospital didn't realize he was dead till 4/2/2004)

PT 11: Reamos Quinne (UR 530899) – placed on Cat 2 waiting list 9/12/2003 – died 9/4/2004

PT 12: Edward Milham: (UR 273940) – placed on Cat 1 list 25/8/2004 – died 13/9/20C

PT 13: Iris Gaskell (UR 538315) – Rockhampton interhospital transfer requested 16/7/2004 – died in Rockhampton 19/7/2004

PT 14: Allan Kittila (UR 535029) – Sunshine Coast interhospital transfer requested 27/2/2004 – died on Sunshine Coast 1/3/2004

PT 15: Bruce Campbell (UR 537248) – Bundaberg interhospital transfer requested 7/5/2004 – died in Bundaberg 10/5/2004

PT 16: Lance Domin (UR 536489) – Caboolture – urgent interhospital transfer request 11/2/2004 – no beds that day - died in Caboolture 12/2/2004

PT 17: Norman Wildin (UR 123436) – coronary angiogram PCH 11/3/2004 – stay in hospital for semi-urgent bypass surgery – died at PCH 16/3/2004

PT 18: Andrew Stanley 44 years – died on Cardiac Defibrillator waiting list – this case was made public by his own family – referral from Royal Brisbane Hospital – placed on implantable cardiac defibrillator waiting list 11/6/2004 – died 20/8/2004 (Investigated in "Mahar Report")

PT 19: Bruce Adams (UR 540266) – coronary angiogram PCH 18/8/2004 – stay in hospital for semi-urgent bypass surgery – died overnight at PCH 24-5/8/2004 (Investigated in "Mahar Report")

<u>PCH Cardiac Defibrillator Waiting List Deaths (who waited > 30 days) in patients after "Mahar" Report was instituted</u>

PT 20: HK (UR 057815) placed on list 5/8/2004, died 14/10/2004
- waited 70 days

PT 21: CS (UR 369272) 47 yr old, placed on list 31/8/2004, died 2/12/2004
- waited 93 days

PT 22: JS placed on list 11/11/2004, died 27/3/05, waited 136 days

MEMORANDUM

Queensland Government
Queensland Health

The Prince Charles Hospital
Health Service District
Rode Road, Chermside Q 4032

To:	Program Medical Director, Cardiology Program Program Nursing Director, Cardiology Program Program Business Manager, Cardiology Program		
Copies To:	Cheryl Burns, Executive Director Nursing Services Jon Roberts, Executive Director Finance & Information		
From:	Dr Michael Cleary A/District Manager	**Tel No**	3350 8224
Date:	8 January 2004	**Fax No.:**	3350 8825
		File Ref:	M03-126 05.01.5 MC:jg

Subject: **Catheter Laboratory**

Thank you for meeting with myself, Cheryl Burns and Jon Roberts to discuss the activity levels in Cardiology.

I note that the Catheter Laboratory activity and the associated interventions have increased significantly. This includes an increase in stenting activity whereby the Program is 86 stents over its predicted activity. I note that 37 stents were carried forward from the 2002/2003 financial year.

I also note that the Program has undertaken 15 ASD closures year to date. The budgeted activity year to date was 15 ASD closures.

Effective immediately:

1. Ms Cheryl Burns (Executive Sponsor) and Mr J Roberts (Executive Director Finance & Information) will meet with the Program weekly to review activity.

2. Patients being referred from the Southern Zone are not to be accepted at TPCH unless approved by the Executive Director Medical Services/Medical Superintendent on call. This excludes patients being referred from the Mater Hospitals' Complex.

3. Patients being referred from the Northern Zone are to be managed through our agreed processes.

4. Patients being referred from within the Cental Zone, but from outside the Brisbane north area, are only to be accepted if they can be managed within our existing capacity. Patients may on occasion need to be referred to other Metropolitan hospitals. The activity will be discussed and agreed at the meeting outlined in Item 1.

5. All patients requiring ASD closures are to be approved by the Executive Director Medical Services.

6. An urgent brief is required outlining the changes in revascularisation procedures/treatments.

Michael Cleary (Dr)
Acting District Manager

CA 4

Queensland Government
Queensland Health

SUBMISSION TO THE
A/GENERAL MANAGER HEALTH SERVICES

DATE:	24 November, 2003		
PREPARED BY:	Dr Andrew Galbraith, Program Medical Director, Cardiology, TPCHHSD	**Contact No:**	3350 5566
	Tony Shields, Acting Program Nursing Director, Cardiology, TPCHHSD		3350 5884
	Hayley Middleton, Program Business Manager, Cardiology, TPCHHSD		3350 8913
CLEARED BY:	Jon Roberts, Executive Director Finance and Information, TPCHHSD	**Contact No:**	3350 8418
	Cheryl Burns, Executive Director Nursing Services and Sponsor for Cardiology		3350 8214
	Dr Michael Cleary, Acting District Manager, TPCHHSD		3350 8224
SUBMITTED THROUGH:	Dan Bergin, Central Zone Manager	**Contact No:**	3234 0825
DEADLINE:	URGENT	**File Ref:**	CPMT03-001

SUBJECT: Emergency and Unplanned Activity Demand for patients presenting with Acute Coronary Syndrome and existing resource availability for treatment

APPROVED/ NOT APPROVED

COMMENTS

Dr John Scott
A/General Manager Health Services
/ /

PURPOSE:

To inform Queensland Health and confirm Zonal support of demand management strategies being put into place to provide treatment to adult patients presenting with Acute Coronary Syndrome to Queensland Public Hospitals and subsequent referral options to The Prince Charles Hospital Catheter Laboratory.

To seek additional funding within Central Zone to address the increasing ratio of emergency/ unplanned activity that is compromising capacity to undertake elective revascularisational procedures at The Prince Charles Hospital.

BACKGROUND:

Despite a decline in Cardiovascular deaths, mortality reduction has not been achieved equally amongst the population. Gains continue to be linked to higher socioeconomic groups who are more likely to be managed in the private HealthCare system. Thus the major burden in terms of funding and demand remain on the public health system.

Queensland's tyranny of distance results in mortality increasing with distance from large population centres. Queensland Health Information Centre confirms that mortality rates are statistically higher in remote areas (25%) and socioeconomically disadvantaged areas (10%).

The challenge facing Catheter Laboratories is managing the increasing demand, both metropolitan and rural/remote. Increased demand for access by regional public hospitals to transfer at-risk patients to tertiary centres has occurred as clinical management shifts to adopt and reflect Acute Coronary Syndrome Guidelines. These guidelines are aligned to both European and American clinical management.

Unplanned Demand

The Inter-hospital transfer rates for non-surgical cardiac DRGs has exponentially grown over the last 2 years. Inter-hospital transfers now accounts for over 50% of the PCI activity at TPCH. The current budget is set for an average of 13 PCI's per week. Over the preceding 12 months there has been a significant increase in the number of Inter-hospital transfers requiring interventional activity from 33% of PCI activity in 2002 to 50.5% in 2003. In terms of absolute numbers, this has grown from 46 patients in the September 2002 Quarter to 93 in the September 2003 Quarter. The full year growth in PCI activity from Inter-hospital transfers is projected at an additional 188 patients.

Elective Demand

Categorisation used for Elective patients is similar to that used for elective surgery.

Current Elective Waiting List

[illegible]	Waiting Time < Cat Requirement	Flow to PCI	Long Waits	Flow to PCI
Angio Cat 1 (30 days)	155	34	67	15
Angio Cat 2 (90 days)	[illegible]	[illegible]	[illegible]	[illegible]
Angio Cat 3 (365 days)	5	1		
PCI [illegible]	16	16	8	[illegible]
PCI	12	12	8	8
Total	[illegible]	[illegible]	119	39

This data is not reported with the elective surgery data.

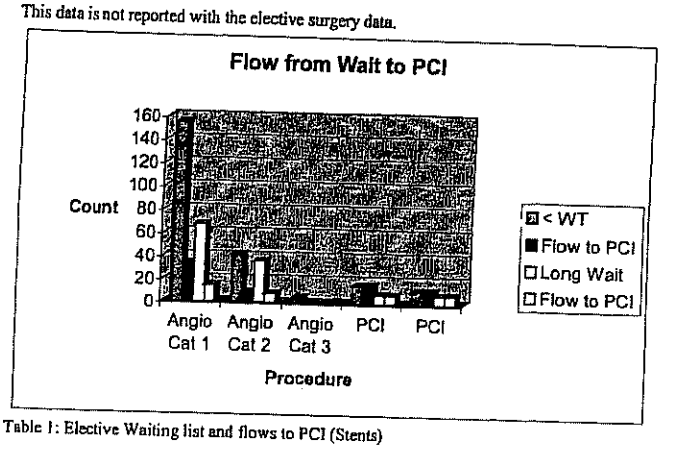


Table 1: Elective Waiting list and flows to PCI (Stents)

Improving Treatment Options

Patients presenting to Emergency Departments throughout Queensland with the following indications constitute the demand for access to the TPCH Catheter laboratory:

- Myocardial infarct
- Unstable angina
- At risk patient groups:
  - Pain or ischaemia refractory to medical therapy
  - ECG changes (depression or inversion)
  - Positive serum markers, eg Troponin levels
  - Associated heart failure or haemodynamic instability
  - High risk on stress testing
  - Recent MI or revascularisation

All patients are risk stratified through the TIMI score to prioritise patients in terms of clinical need to determine appropriate timeframes for transfers.

High Risk Patients

Early invasive revascularisation is recommended for high-risk patients with an ACS to reduce the six-month relative risk of death, infarct or re-hospitalisation for ACS. These patients are the most at risk of having a subsequent coronary event and therefore have the most to gain from early treatment.

Whilst the current average ratio of patient:stent is resourced at 1:1.38 – there is significant risk in this ratio increasing over time as the complexity of patients grows and scope of the procedures expand. Given the significant financial implications of changes within this ratio, it will require monitoring and planning in terms of numbers of stents and numbers of patients resourced.

Timing of Therapy is shifting – evidenced- based medicine and medicine-based evidence

The Cardiac Catheterisation Laboratory has experienced increased demand over the preceding years and the change in ratio between elective and emergency / unplanned transfers is now placing significant pressures on the service to continue to function within current resource allocations. Demand management strategies have revolved around capacity within the elective waiting lists to absorb the increased demand from inter-hospital activity. However, the elective lists now include a number of patients outside the best-practice waiting time to access service. There is also increased waiting times for inter-hospital transfers and these are being managed based on clinical priority.

The CHJ Cardiac Collaborative activities focus has had an emphasis on the secondary prevention activities to deliver improved outcomes. There is anecdotal evidence that needs to be further reviewed, that would suggest a significant decrease in the practise of lysing in regional public health facilities. This would reflect improved awareness of the ACS guidelines and a desire to improve patients' outcome, reduce disability of patients by fast-tracking access to revascular.sation.

Technology Impacts – the issue around substitution

The scope of revascularisation within the Catheter Laboratory environment does have some impact on the number of procedures undertaken surgically. This change in scope of procedures within a laboratory environment will continue to escalate as new technology (viz drug eluting stents) becomes available. The impact of substitution needs to be assessed in conjunction with revascularisation demand projections based on the ageing population and underlying burden of disease in Australia.

Unplanned Admissions

The ratio of unplanned admissions impacts on service delivery planning and has an impact on the efficient utilisation of resources. Elective patients are often not scheduled given the risks of outlier patient bed management from inter-hospital transfers waiting in regional hospitals. There are inherent difficulties in planning for what is in its very nature – an unplanned event.

To address this, the Catheter Laboratory is building a model to predict the daily number of admissions in the short to medium term. An important aspect of this model will be to quantify daily risk that the actual number of admissions will be within this prediction. Development of this model has identified a likely further impact on capacity for local elective activities.

ISSUES:

- The cardiac catheterisation intervention rate has been regulated at TPCH in an attempt to contain activity within available funding for the District.
- The level of intervention for a public patient in Queensland verses the rest of Australia is 351.5/million (Qld) population compared to 565.3/ million (Aust.) population (data from the 2001/2002 National Hospital Cost Data Collection). This confirms that public intervention rates in Queensland are significantly below the Australian average. (Refer to Table 2)

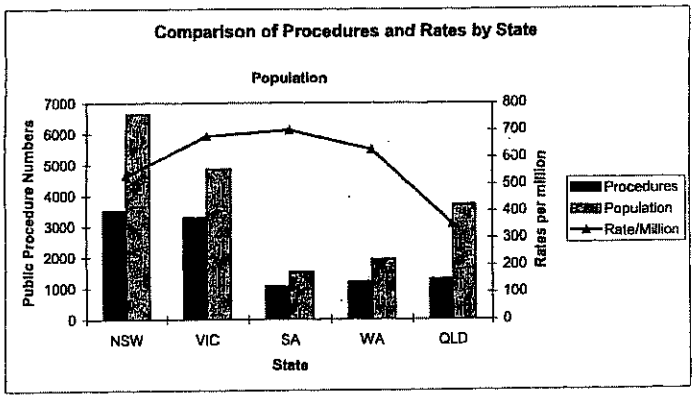


Table 2: Queensland has the lowest rate per million for major states.

- There has been a significant increase in the number of Urgent Inter-hospital Transfer's to TPCH. (Refer to Table 3)

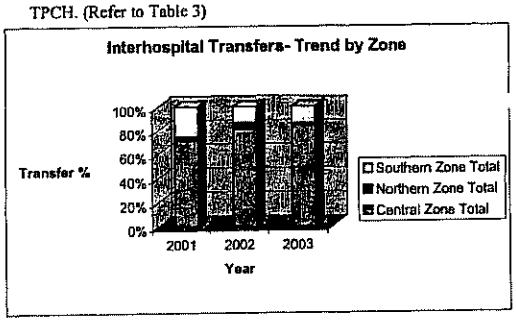


Table 3: Inter-hospital Transfers

- Intervention rates at RBWH appear to be static and therefore have not contributed to the increased demand at TPCH.
- Patients from the Southern Zone are actively redirected to the PAH. There are currently no Southern Zone patients on the Inter-hospital transfer list at TPCH. This is supported by an analysis of all cardiac related DRG's for the last 3 years
- Patients from the Northern Zone are actively redirected to Townsville. Reduction in actual numbers at TPCH has been offset by the commencement of TPCH Cardiologists travelling to Townsville monthly to undertake procedures at that centre. There is an agreement in place to recover marginal costs associated with PCI activity for the Northern Zone.

- The potential for diagnostic procedures to progress to percutaneous revascularisation is approximately 22 - 25%. Meeting these elective requirements is difficult to accommodate within the current resources.

- The District is progressing integration between RB&WHHSD and TPCHHSD Cardiac Services. There is preliminary commitment to developing a single coordination for both Catheter Laboratories. The first phase of this includes exploring how single point coordination and logistics can be operationalised in terms of emergency and requests for inter-hospital and urgent unplanned admissions. This model is in alignment with strategies being employed in Metropolitan Sydney and Melbourne with coordination across Cardiac services to address emergency and unplanned urgent cases. The Working group across TPCH and RB&WHHSD will be reviewing and exploring this model as progress is made toward integration.

BENEFITS AND COSTS:

Management of Acute Coronary Syndrome is hospital based and resource intensive. The centralisation within Metropolitan areas of public cardiac catheter laboratories supports improved outcomes through volume, but also adds to demand in trying to respond to planned and unplanned activity from many referring sources and populations with varying community and social determinants and risk factors.

The *Health 2020* documents identify the need for more locally accessible and community based services in terms of access to health services. It also identifies that Acute Hospitals will become more specialised with higher volumes of complex care. There is significant work already underway in terms of health promotion and secondary prevention for managing cardiovascular disease. There remains a need for decision and appropriate investment regarding the model of care for management of acute coronary syndrome within public hospitals.

Strategies identified in the Queensland Health Outcomes Plan - Cardiovascular Health: Coronary Heart Disease 2000-2004 for Clinical management identify the following key areas relative to Acute tertiary services targeted to improve service response to Queenslanders.

- The adoption of evidence based practice for the clinical management of acute myocardial infarction (AMI), unstable angina and post cardiac surgery patients by service providers.
- A coordinated response by emergency services to acute coronary events.
- Early identification and resuscitation of people who suffer from AMI.

Costs of care are shifting and will now be front-loaded within initial acute presentation for Acute Coronary Syndrome. The District request a Health Technology Assessment be undertaken regarding the health outcomes and economics of investing in initial acute presentation and treatment for Acute Coronary Syndrome and identification of the flow on savings that would support the significant growth required for Queenslanders to access this therapy.

Based on the current demand for urgent care directly resulting from Inter-hospital Transfers, the District estimates the need to perform an additional 188 procedures per annum to address the current demand for Urgent Inter-hospital Transfer's and a further 38 procedures per annum to address the long wait elective cases.

There is limited capacity to further reduce elective activity without further impact on the waiting list and waiting times for the population to access further treatment.

patients should not be exposed to multiple procedures which in most cases this can be achieved in the primary episode of care.

The marginal cost implications of this level of activity are estimated to be approximately $600,000 – $700,000.

The capacity of the District to manage within current resources for Cardiology has previously been flagged as a budget risk. This concern has now been confirmed.

CONSULTATION:

TPCH
Jon Roberts, Executive Director Finance and Information Services
Dr Sue Phillips, Acting Executive Director Medical Services
Cardiology Program Management
Dr Darren Walters, Clinical Director Catheter Laboratory Services
Margaret Dahl, Clinical Nurse Manager, Catheter Laboratory Services

ATTACHMENTS:

1. National Acute Coronary Syndrome Guidelines
2. District Manager Memo regarding Catheter Laboratory Activity
3. Cardiology Protocol for Inter-hospital Transfers of Cardiology patients
4. Proposed tools for Registrars to assist in understanding Zonal patient flows for Catheter activity
5. Presentation from Dr Walters "Changing Management of Acute Coronary Syndrome"
6. Health Outcome Plan (Note Page 8: ACS clinical management strategies)

RECOMMENDATION(S):

1. That Queensland Health Zonal Management review the issues relating to the resourcing difficulties being experienced in managing demand resulting from increasing Inter-hospital Transfers for acute coronary syndrome patients presenting at Queensland Public Hospitals.
2. That Central Zone review the resourcing applied to the demand for emergency and unplanned revascularisational activity within Central Zone and increase resource allocation by $650,000 to address the projected demand for unplanned and urgent transfers during 2003/2004 and assist to reduce the resulting long wait patients for elective procedures.
3. Central Zone support planning and resourcing relating to the development and implementation of a coordinated emergency revascularisational cardiology service across Brisbane North Catheter laboratories (TPCH and RB&WHHSD) in line with the strategy in Queensland Health Outcomes Plan - Cardiovascular Health: Coronary Heart Disease 2000-2004.
4. That Northern Zone continue to reimburse TPCH for Northern Zone activity based on agreed patient acceptance and transfer protocols and marginal cost recovery mechanisms.
5. A statewide plan based on a Health Technology Assessment for acute revascularisation (including cardiac surgery) as recommended in the Queensland Health Outcomes Plan - Cardiovascular Health: Coronary Heart Disease 2000-2004 is developed and funded to support the cardiovascular burden of disease for Queenslanders.
6. That Southern Zone Management unit supports these demand management strategies and Southern Zone Catheter Laboratories provide access to emergency and unplanned revascularisational cardiology for Southern Zone patients.

16/12/03
Constantine N. Aroney, MD, FRACP,
Assoc Professor of Medicine.
Suite 18, Level 3,
Holy Spirit Northside Hospital,
Rode Rd, Chermside, 4032.
Tel: 3861-5522

The Honourable Peter Beattie,
Premier of Queensland.

Dear Premier,

We are writing to you to apprise you of the very serious and deteriorating state of public cardiac services in Queensland. Cardiovascular disease is th number one health priority for the nation, with one in three Australian lives influenced by cardiovascular morbidity or mortality. Queensland Health ha presided over the lowest rate of life-saving coronary interventions in Australia. Similarly, it has failed to recognise Australian guidelines published in 2000 and not responded to increased demand so that Queensland public hospitals have inadequate resources to follow Australia best practice guidelines. There is no co-ordinated state-wide plan for managing heart disease, the largest single killer of Queenslanders, with the former state advisory committee not being reconstituted for several years. The Cardiac Society and Heart Foundation ask for an urgent review and upgrading of the provision of public cardiac services in Queensland.

Earlier in the year, the chairman of the Queensland branch of the Cardiac Society, at a meeting at Prince Charles Hospital, raised the issue of inadequate resourcing of the tertiary hospitals, and patients dying on cardiology waiting lists with the Central Zone Director, Dan Bergin. In addition, this same chairman spoke personally with the Health Minister (at the Parliament in the community in Aspley earlier this year) pointing out inadequate resourcing leading to deaths and the urgent need to upgrade public cardiac services so that the Australian guidelines for optimal management of heart attack and unstable angina could be applied. Queensland Health has not replied to the Cardiac Society or the National Heart Foundation regarding these serious issues. Many more problems with regard to your government's handling of heart disease have arisen in the pa

few years and have led to a crisis in the provision of cardiac care in Queensland. Herewith are some key examples:

1. Inadequate response to increased demand arising from new guidelines in managing heart attack and unstable angina (acut coronary syndrome). The new Australian guidelines for managing the acute coronary syndrome were published over three years ago (Appendix 1). These called for increased invasive management with early coronary angiography and stent-angioplasty to reduce death and heart attack. Early angiography and intervention reduces death and heart attack b 22-26% (Appendix 1). Other states have had an increased capacity for coronary angiography. Queensland has the lowest rate of public coronary intervention rates of all the major state (351.5/million (Queensland) population compared to 565.3/million (Aust) population. Why are Queenslanders so seriously disadvantaged with regard to life-saving cardiac treatment? (See Appendix 2 for full details). There is a widening gulf of rates of provision of high level cardiac services in public versus private patients. Between 2000 and 2002, the number of hospital separations for stent-angioplasty increased by 1351 patients in Australia, but decreased by 36 patients in Queensland. This contraction in Queensland overal has occurred despite increasing numbers of private stent-angioplasty procedures in Queensland (including the opening new private catheter labs), confirming that a significant reduction in life-saving revascularization procedures of public patients has occurred in Queensland since 2000. While the Queensland rate has contracted, the other states of Australia have acted responsibly and appropriately increased their rates intervention! Cardiac Society members have reported that many patients have died or had heart attacks while waiting to have a coronary angiogram (see below).

   There has been a doubling in demand for inter-hospital transfe of patients with the acute coronary syndrome (eg to Prince Charles Hospital, from 46 patients in Sept 2002 Quarter to 93 patients in Sept 2003 Quarter. Failure in quickly transferring these patients to a tertiary facility for invasive management ha led to patient deaths or recurrent heart attacks. For example,

most recently, a patient died in Hervey Bay Hospital, in November 2003 whilst awaiting transfer to Prince Charles Hospital for coronary angiography (name can be supplied). Blocks to inter-hospital transfer are very frequent and include:

- inadequate coronary care beds
- inadequate lists/staff for coronary angiography

2. Despite these increasing demands, there has been a concerted effort to reduce cardiology services, in the knowledge that this will result in adverse outcomes for Queenslanders. For example, at Prince Charles Hospital, the largest provider of cardiac services in Queensland:

- Cardiologists have been directed that they cannot proceed with immediate treatment of severe coronary lesions (stent angioplasty) except in emergencies, but must rebook patients for a second procedure, which may be three or months later.
- Cardiac booking staff have been directed not to schedule elective stent angioplasty cases from 1st January 2004, and Queensland patients have been placed in a holding pattern for an indefinite period until funds become available. The system collapsing and these restrictions are not acceptable to hospital staff. The restrictions have been placed "in an attempt to contain activity within available funding for the district" (Appendix 2). These changes are against best-practice, put patients at risk of death or heart attack, delay effective treatment, may require a second hospital admission and lead to increased costs! They are also in direct violation of the Queensland Health 20-20 document and the Health Outcomes Plan – Cardiovascular Health: Coronary Heart Disease 2000-2004.
- Plans are being made to reduce coronary angiography, stent-angioplasty and cardiac surgery numbers for Central Zone patients, despite increases in demand in all zones as outlined above and in appendix 1. There is a risk of death of approximately 1.5% on the Prince Charles Hospital waiting list (Appendix 2). Inadequate resourcing of Princess Alexandra Hospital is apparently to be funded by this reduction in service to Central Zone patients, who are themselves seriously under serviced. Princess Alexandra Hospital is currently unable to

cope with demand from Southern Zone patients, including Northern New South Wales, with many urgent in-patient transfers waiting for a week or more for transfer. A Category patient from Lismore, unable to access the Princess Alexandra Hospital, died after waiting 27 days on the Prince Charles Hospital list (name available if required). The Cardiac Society and Heart foundation whole-heartedly support an increase in funding to the Southern Zone, including coronary angiography at the Gold Coast Hospital. We however, deplore a reduction in resources to a seriously under-resourced Central Zone and Prince Charles Hospital. If the planned reduction in coronary angiography, stenting and cardiac surgery at Prince Charles Hospital proceeds, it will lead to a further increase in deaths and unnecessary heart attacks in the Central Zone.

- Cardiologists have been directed not to perform any percutaneous closure of atrial septal defects on children or adults (keyhole surgery for closing holes in the heart) until the next financial year, although specific patients may be considered on "a case-by-case basis". Six of these patients have already waited more than 12 months. In all, 11 Queensland children and 15 adults with serious heart defects are being denied timely access to curative treatment, which may result in otherwise avoidable permanent cardiac arrhythmias or stroke. In addition, the risk of these procedures will increase if regular cases are not performed and skills maintained.

3. Major restrictions are placed on the implantation of life-saving cardiac defibrillators. Currently in excess of 40 Category 1 patients are awaiting surgery for automatic implantable cardiac defibrillators at Prince Charles Hospital. The mortality on the waiting list for these implants approaches 10%, and only last week a patient on the waiting list died suddenly at home (name available if required).

4. <u>Dangerously long waiting lists for cardiology outpatients</u>. For example at Prince Charles Hospital, the state's largest provider of cardiac services, waiting time to see a cardiologist at outpatients is up to five months. Similar waiting times are present at the Princess Alexandra and Royal Brisbane Hospitals. Cardiac Society members have reported that many

patients have died or had heart attacks while waiting to see a cardiologist in public hospital outpatient facilities. At Prince Charles Hospital, recent resignations of senior cardiologists have not been replaced leaving hundreds of patients added to already overburdened lists. Despite this, enforced prolonged "holiday" closure of cardiac outpatients (for a month!) have been applied to reduce costs, further extending outpatient waiting lists and putting patients at significant risk.

5. Crisis in North Queensland.
   - Townsville Hospital is currently unable to perform stent-angioplasty cases, while the only current operator is away o holiday from 12/12/03 till 14/1/04. There is no currently nc cover for emergency cases, which means that North Queensland patients are at major risk. Prince Charles Hospital has been asked to cover semi-urgent and emergency cases, however, adequate funding is not provided, and any increased activity has to be funded unde our usual historical activity i.e. at expense of patients in ou own Zone. We can supply a list of the names of 27 patients at Townsville Hospital, who on 10/12/03 were awaiting stent-angioplasty, but for whom inadequate funding and resources have been provided to perform these at Prince Charles Hospital. Despite all these additional demands, as stated above, the numbers of stent-angioplasty cases at Prince Charles is to be reduced! During the rest of the year the single part-time operator at Townsville Hospital is unable to cope with demand.
   - Cardiology services in Cairns are in a critical state, with resignation en-masse of cardiologists from the public hospital in August 2003; and currently only very limited services are available.

6. Paediatric Cardiology. At Prince Charles Hospital, whic is the sole Queensland site for paediatric heart surgery and cardiac catheterization, there is an inadequate and non-sustainable paediatric intensive-care roster, meaning that overworked staff members are used for cover. Inadequate human resources in this area have created an at-risk situation. addition, paediatric cardiac anaesthetic cover is inadequate,

with very limited Christmas holiday cover for paediatric cardi catheterisation, causing cancellation of entire paediatric cardia lists. (See Appendix 3 for further details).

7. Heart Failure. Heart failure constitutes a major and ver costly public health burden, and accounts for the largest and most expensive diagnostic group in Queensland hospitals. In Queensland alone in the year 2000, heart failure as a combine primary and secondary diagnosis accounted for 248,849 days hospitalization. In the context of a growing and aging population the costs of caring for patients with congestive hea failure is projected to increase dramatically by 2020. On the basis of this evidence and in an effort to reduce the cost of hospitalisations both New South Wales and Victoria have developed statewide strategies to deal with the epidemic of congestive heart failure. At the present time no such strategy has been produced in Queensland. This is despite the fact that the Smart State: Health 2020 document acknowledges that "there will be increasing prevalence of chronic conditions which will require greater ongoing care in the community" an that there will be a need for increasing " self-management of diseases by individuals supported by dynamic multi-disciplinary teams". We see it essential to develop a Queensland state multi-disciplinary strategy for the integrated care of patients with congestive heart failure.

8. State Advisory Committee. The previous coalition governmen had instituted a committee of senior cardiologists, surgeons, nurses and health administrators to advise on a statewide strategy for planning cardiac services. This committee was allowed to wither and disappear under your administration, such that senior cardiology opinion regarding planning for hea disease management, Australia's Number One Health priority, is totally lacking. Reconstitution of this committee and an urgent review of state cardiac services are essential.

Premier, we can recall your sympathetic ear to our concerns when you were Health Minister yourself. Queensland cardiologis are unanimous in their condemnation of the maladministration an chronic insufficient funding leading to the inadequate state of

public cardiology services in this state. Cardiovascular disease is the number one health priority for the nation, but clearly has a lo priority in Queensland. Our discussions with all major public cardiac services in this state has revealed that they are severely under-resourced, of low morale, suffering resignations, or at the point of collapse. The same levels of frustration and inability to deliver quality care are present in regional or rural hospitals, whi have to accept that their dangerously ill patients cannot be quickl transferred to the city for life-saving treatment.

The Cardiac Society of Australia and New Zealand and the Heart Foundation seek an urgent state-wide review and intervention to rescue public cardiac services in this state. Members of the Cardi Society would be pleased to assist in this review. We are hoping that your personal intervention might provide a solution for this significant and burgeoning problem.

Kind Regards,
Yours sincerely,

Assoc Prof Constantine Aroney,
Chairman, Queensland Branch,
Cardiac Society of Australia and New Zealand,
and Chairman, Clinical Issues Committee,
National Heart Foundation of Australia.

Dr Ken Hossack,
President-Elect,
Cardiac Society of Australia and New Zealand.

Appendices to Letter to Premier Beattie

Appendix 1

New Australian Guidelines for Unstable Angina

CN Aroney, AN Boyden, MV Jelinek, P Thompson, AM Tonkin, H White. Manageme of unstable angina guidelines – 2000. Med J Aust 2000; 173(supplement): S65-S88.

Addenda: http://www.heartfoundation.com.au/index.cfm?page=35

Reduction in death and myocardial infarction with early intervention.

FRISC II Study – Intervention reduced death and myocardial infarction by 22% at 6 months. (Lancet 1999; 354:708-15).

TACTICS Study - Intervention reduced death and myocardial infarction by 26% at 6 months. (N Engl J Med 2001; 344:1879-87).

Appendix 2 = CA 4

Appendix 3
Paediatric Cardiac Services.

Historically, paediatric cardiac services have been significantly underfunded in Queensland, but with the excellent efforts of a few individuals good outcomes have bee achieved for the children of Queensland. This service is being further threatened by ongoing mismanagement of resources and cost-cutting.

A recent review of paediatric and congenital cardiac services (The PCCS Revie November 2002) established baseline requirements for the provision of such services England. In Queensland we fall well below these basic service provision requirements, we do when compared to the southern states of New South Wales and Victoria. This dc not take into account the geographic disadvantages of a large state with a sm population. It should also be recognised that we are the only service provider for the st of Queensland and we have an obligation to provide a high quality and safe service : our patients and for staff peace of mind.

The following are issues which have been identified. Multiple and serial efforts ha been made to progress these deficiencies without success:

1. Four paediatric cardiologists provide a service to the entire state of Queenslar This is well below the English recommendation of 1 paediatric cardiologist p 500,000 population.
2. Major issues were identified in the management of paediatric cardiac intensi care 2 years ago and sustainable solutions offered. These were ignored. Since tl time there has been a progressive deterioration in the cover, such that the on c arrangements are clearly not sustainable and place patients and staff at risk. ' date surgical mortality has not been affected, but the current situation is r acceptable. Advertisements have been placed for these positions, but it s remains unclear that the health department is committed to the current propos solution.
3. Paediatric cardiac anaesthetic services remain limited and this has impacted provision of services, particularly in the cardiac catheter laboratory where li have been cancelled. To our knowledge there is still no on-call emergency ros for this service despite multiple approaches to various levels of administration.
4. We were recently informed that we were unable to provide recognis transcatheter therapies to patients with congenital heart disease. We can now o1 do interventional procedures in public patients on a case by case basis af discussions with our administation. It is not acceptable that we can no lon close atrial septal defects and patent ductus ateriosus or stent narrowed blo vessels. This not only compromises patient care, but very importantly erodes t skills of the involved clinicians.

These are the most pressing current issues, but represent only a small proportion of t ongoing difficulties that dedicated staff face in the provision of an excellent high qual service.

As part of an urgent state-wide review of cardiac services it is imperative that a hi priority be given to reviewing services for the provision of care to children w congenital heart disease.

Meeting 5.15pm Jan 8th 2004: Lvl 3, Holy Spirit Northside Medical Centre.

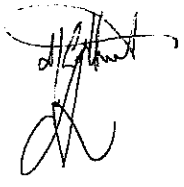
Dr Constantine Aroney (Cardiac Society)
Dr Andrew Galbraith (Invited by Cardiac Society, and Cardiac Society Member)
Dr John Scott (Queensland Health)
Mr Dan Bergin (Queensland Health)

CA: "Thankyou for coming to hear our concerns"
JS: "Your letter to the Premier was offensive to Queensland Health and personally offensive to me" "You made a lot of cheap shots"
CA "I don't consider unnecessary deaths as cheap shots – you might"

JS - "We're going to investigate the 3 deaths you mentioned"
CA - "Investigate the deaths, but remember the Cardiac Society is an advocate for our patients, and we will continue to monitor all deaths and report them."

JS - "You come after us with more shots; and we'll come after you"

JS - Stated that there was increased funding in cardiac risk prevention strategies, planned cath lab at Gold Coast Hospital, increased surgery at PAH.
AG: Stated that the committee formed to facilitate an increase in referrals to PAH to increase the size of the cardiac surgical unit, had not taken into account a new cath lab at the Gold Coast Hospital. That forward planning was deficient.
JS: Agreed that forward that the addition of referrals from the Gold Coast Hospital had not been factored into the equation.
Would not put a moratorium on reducing angiography, angioplasty or surgery numbers at PCH.
Stated that a cardiac surgeon he spoke too, felt differently about managing high risk acute coronary syndromes, and that surgeons should manage these patients and treat them with surgery and not stents.
CA: Stated that he was totally incorrect. Pointed out the lack of communication between expert cardiologists and Qld Health, and recommended the reformation of an expert advisory committee.
JS: Would not agree to formation of an expert committee to assist in cardiac services. Stated that previous committees had disagreed on too many issues.
AG: We have shown 30% reduction in readmissions with community nurses trained in managing heart failure patients. We need a statewide strategy for managing cardiac failure.
JS: We agree with increasing community nursing strategies in heart failure.
CA: "The planned reduction in cardiac services at PCH will lead to increased deaths in the Central Region." JS did not comment.



CA 7

25/1/04
Constantine N. Aroney,
Associate Professor of Medicine,
Chairman, Qld Branch,
Cardiac Society of Australia & NZ
Suite 18, Level 3,
Holy Spirit Northside Hospital,
Rode Rd, Chermside, 4032.

The Honorable Peter Beattie,
Premier of Queensland.

Dear Premier,

The only official response to my letter from you, from the acting Premier Mr Mackenroth, does not address the main issues I raised and persists in confirming the transfer of cardiac activity fr the Prince Charles to the Princess Alexandra Hospital. This is despite the fact that the demand a PCH has never been higher and there are over 300 patients waiting for angiography there. Ther are also over 200 patients waiting for angiography at PAH, and moving PCH patients there will further delay the treatment of patients at PAH! This is not acceptable. I insist that Queensland Health makes us aware of how many people are dying on cardiac waiting lists at PAH and Townsville Hospitals – these hospitals are too afraid to give us these details. We know from Q Health's own statistics that the death rate of people having a heart attack at Cairns Base Hospit is over twice the state average (26.9% of dying vs. 12.5% statewide).

Since my earlier letter to you, we have become aware that another three patients have died on cardiac waiting lists at PCH – two were awaiting coronary angiograms and one awaiting an AI implant. The names of these patients are available from the Cardiac Cath Lab at PCH. One wa Category 1 patient who died later than the recommended 30 day limit. One was a category 2 patient who died later than the recommended 90 day limit. One was awaiting AICD implantatic and died after the recommended 30 day limit. We currently have 40 out of 49 AICD implants who are outside the recommended 30 day limit! All these patients are at grave risk!! These deaths are a severe ongoing problem, and I am yet to receive an apology from the Health Department who declared that my revealing these deaths were "cheap shots" and public allegations were made that I may have lied. Are these further three deaths also "cheap shots"? have written to Dr Scott (letter enclosed) and told him that the Cardiac Society holds Queenslar Health accountable for these deaths. It is also clear that the number of deaths will increase if activity at PCH is restricted. I have also asked that the department make a public admission tha there is a problem with deaths on waiting lists and that I was not lying to you.

In addition, the cardiac unit at RBH is in grave peril of collapse unless further funding is provided. A business case for funding there was made over 2 years ago, and yet nothing was offered to them in your election promises. They face resignation of key personnel unless these issues are properly addressed.
The extra $5million dollars per year you have promised will not address these problems adequately. Rather than "moving the deck chairs on the Titanic" cardiac services require a larg increase in funding to all major hospitals, not just a few.

Yours sincerely,
CN Aroney, MD, FRACP.

CA 8

Conclusions of Special CSANZ Qld Meeting of 15th February 2004.

It was unanimously agreed by all Cardiac Society members that:

1. Queensland had the worst coronary heart disease outcomes of all the major states.
The Highest CHD mortality of all states except NT
Hospital AMI death rates were inordinately high in Northern and Central Qld centres which have no staff cardiologists

2. There is severe tertiary public cardiac under-sevicing in Queensland:
Unmet demand for angiography, PTCA/Stents, AICD, RFA
Unmet demand for treating the acute coronary syndrome
Unmet demand for paediatric cardiology
Unmet demand for heart failure services
Crisis in Nth Queensland

3. All tertiary cardiac units in Queensland require major upgrades.

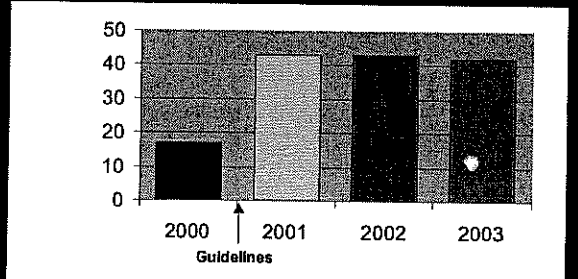
4. There is major deficiency in the public cardiology workforce which requires urge recruitment and proactive discussions with advanced cardiac trainees.
Only 1/3 the appropriate number of public cardiologists in Queensland as regarded by international benchmarks
The benchmark 35 cardiologists per million people means that instead of the current 25 full time equivalent public cardiologists, 75 are needed.

5. Lack of transparency of Cardiology Waiting Lists and Bed Access Block
Waiting lists for cardiac outpatients, coronary angiography, angioplasty/stenting, AICD EP studies and RF ablations must be fully transparent and published regularly on the Qhealth web site
Patients on cardiac waiting lists must be appropriately categorized according to international standards transparent, and independently audited
Delays in transfer of urgent cases to tertiary centres: should be made available on a regular basis

Final Discussion
There was disagreement regarding the publication of deaths on waiting lists, with Aron stating that most deaths occurring after the categorised waiting times were likely to be cardiac in origin. Drs Scott and Buckland disagreed.
Dr Buckland asked what the international standard was for people on waiting lists.
A/Prof Aroney stated that Dr Walters has tabled the most recent and largest paper looki at queues for coronary angiography which showed that adverse rate commence and escalate after 2 weeks; the paper recommended that patients with chest pain syndromes should have angiography within 2 weeks; which is well within the 4 week category one waiting time which had been used
Dr Buckland said a benchmark is needed.
A/Prof Aroney said that information in relation to waiting lists and deaths beyond the categorised waiting times should appear on the QH public intranet website.

Dr Buckland: We are not going to allow opportunistic beatups. We do not put figures for the sake of putting them up.
A/Prof Aroney: Don't you think the public should be aware of the number of deaths which occur while waiting longer than their waiting list category?: It would be appropriate for this information to be available to the public.
Dr Scott: We need to agree on what categorisation of patients should be achieved befor we go ahead on this. What is your aim in making this information public? I would see death rates as unnecessarily alarmist.
Dr Walters: Why shouldn't information on waiting lists be published? I tried to show angiography waiting lists.
Dr Buckland: Standardisation and categorisation should be considered.
Dr Walters: We need to get evidence and get agreement.
A/Professor Aroney: Categories are difficult. At least publish waiting lists. Will you give an undertaking that these can be published?
Dr Scott: If you published cardiology waiting lists, let us look at them all. Get methadone treatment, and other area waiting lists as well, but we may look at it.

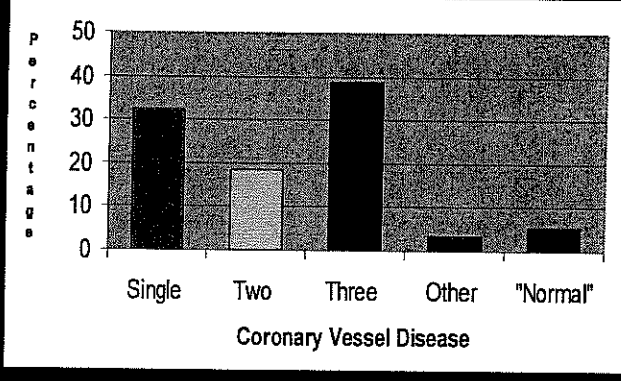
GUIDELINES DO CHANGE PRACTICE



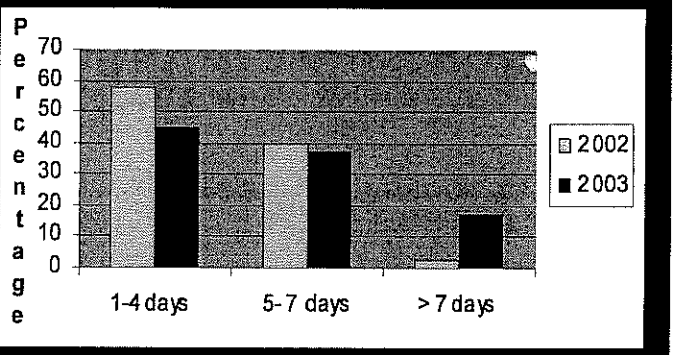
Nambour General Hospital
Total number of patients undergoing inter-hospital transfer for Angiography, 1st 3 months of 2000, 2001, 2002, 2003

ANGIOGRAPHY FINDINGS

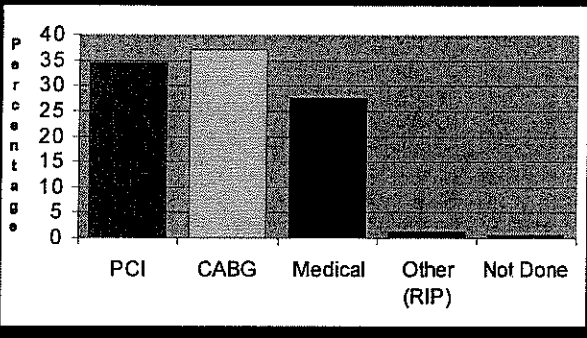
Inter-hospital Transfers
2000-2001-2002-2003



Admission to day of Angio



Management following Angiography
2000-2001-2002-2003



CA 10

Queensland Government
Queensland Health

MEMORANDUM

To: Cheryl Burns Executive Sponsor Cardiology Program

Copies to: Dr Andrew Galbraith

From: Janelle Taylor Acting Nursing Director
Cardiology Program

Subject: Cardiac Catheter Laboratory Activity

As an acting member of the Cardiology program management team I believe that it is my role to apprise you of the situation resulting from the high numbers of patients waiting in regional hospitals as priority cases for cardiac investigation/intervention. Over the past month I have observed a particular situation many times but none more so than today and I believe it is worthy of your notice.

Dr Darren Walters was due to be on leave from today and henceforth had no bookings for cardiac procedures for the next ten days due to his heavy involvement in the organising of the August meeting of Cardiac Society of Australia and New Zealand. It became clear to us as today progressed that the increasing number of patients waiting in regional hospitals as priority cases for cardiac investigation/intervention was getting to levels that needed addressing. CCL activity is being reduced over the next 10 days and there was potential for some 9 patients to be held in regional health facilities for 10 days or more until full CCL activity recommenced.

The NUM of CCL, the D/NUM, the Medical Director of Cardiology and myself tried to sort out some way of dealing with this situation. The RBH was contacted and unable to assist us in any significant way. When Dr Walters was apprised of the situation he voluntarily gave up his leave to do 7 of the cases tomorrow afternoon.

I have seen Dr Walters repeatedly pick up a disproportionate workload many times over the past month in an effort to ensure patient safety and service is continued. As such I believe he is to be commended for his commitment to the Cardiology program and as such deserves our collective thanks.

Janelle Taylor
A/Nursing Director
Cardiology Program

04/08/04

Queensland Government
Queensland Health

MEMORANDUM

The Prince Charles Hospital &
Health Service District
Rode Road, Chermside Q 4032

To:	Ms Gloria Wallace District Manager The Prince Charles Hospital		
Copies To:		Tel No:	(07) 3350 8165
From:	Dr Darren Walters Director Cardiac Catheterization Lab Deputy Director Cardiology Program The Prince Charles Hospital Rode Road, Chermside Q 4032	Fax No:	(07) 3350 8715
Date:	28 /9/04	File Ref:	DW/SL

Subject: RESPONSE TO MEETING WITH CARDIOLOGY PROGRAM DATED 14.9.2004

Dear Ms Wallace

As a result our your request to meet with Sue Boucaut, Manager Cardiology Program Management Team I have provided the following response.
Can I point out that I do think is very difficult to meet the criteria you have requested and balance the demands of patients and staff.
I also believe that there could be a risk for significant adverse outcomes for patients.

The Catheter Laboratory is being asked to target:

1) **Actively manage to targets and publish booking schedule which demonstrates this weekly. The booking schedule should identify spots for acute and elective mix including inter-hospital transfers.**

   Response: An activities schedule is being provided with the booking schedule which demonstrates this weekly. The booking schedule identifies both acute and elective admissions including inter-hospital transfers.

2) **Cardiology Program Management Team to sign off weekly booking schedule.**

   Response: This is a responsibility of the Program Management Team.

3) **Revise the booking schedule to suit 57 cases per week in the cath laboratories where they are not required for targeted volumes. The schedule should:**

   - **accommodate ward rounds 8.00 - 9.30 to allow discharges to be undertaken**
   - **accommodate registrar training [illegible] Journal Clubs within specific work hours**
   - **identify start and finish times for catheter laboratory sessions eg not starting before 9am and last case completed by 6pm**

X Response: Recent activity levels have been between 75 and 90 cases per week. This will represent significant reduction. The schedule has been revised to suit 57 cases per week. The catheter lab will run between 9 am and 5 pm to allow ward rounds to take place and accommodate registrar-training requirements. Start and finish times have been identified for catheter lab sessions. Any cases that

have not been commenced by 5 pm will be cancelled and will need to be rebooked. Paediatric cases in consultation will need to remain at 730 am and 8 am start times. Those labs with then finish at 4 00pm and 4 30 pm respectively. Please see Appendix 1.

4) **Waiting lists to be provided to the Program Management Team weekly for monitoring.**

Response: Waiting lists have been provided on [illegible] of the HBCIS program. There is an Information Technology deficit. The inter-hospital transfer [illegible] patients are not properly captured on the current HBCIS wait list system and can distort the [illegible] with respect to wait times.

5) **An approval process is established for scheduling of cases above the agreed activity level.**

Response: It has been made clear that scheduling of routine cases above agreed activity level is not to occur.
The medical management of patients will continue [illegible] against National Guidelines for standards of care in alignment with those practice guidelines outlined by The CSANZ and the NHF.

Perhaps it is best if the Executive described the approval process that they wish to establish for scheduling cases above the agreed activity level or [illegible] decision as to the nature of inclusion or exclusion criteria for patient care. This [illegible] an organizational or statutory decision. We will seek to [illegible] patients according to the medical and ethical standards of the profession and reflected in the Strategic Directions [illegible] the District and State Health Service.

Medical emergencies that require [illegible] lab interventions would include acute ST elevation infarcts, rescue angioplasty following failed lysis, patients who are clinically unstable and refractory to medical therapy, patients who require urgent intervention or surgery, patients who require temporary pacing facilities or insertion of a balloon pump and emergent paediatric cases as defined by the treating consultant.

In the cases in which the clinician deems that [illegible] may result in a major adverse outcome for the patient then this should be considered [illegible].

I do not believe that it would be acceptable for this process to now require medical superintendent approval. The clinical responsibility and expertise rest on the clinician who is on call and the accountability would have to be devolved to that level as there is no one above them who is qualified to make calls on those [illegible] implication that cases occurring outside of hours labelled as urgent and are not actually [illegible] denied [illegible] were specific incidents where this has occurred then I think those allegations need [illegible]

6) **All rosters to be revised in accordance with the new schedule and the Nursing Director is to sign off nursing roster for entry to ESP**

Response: This will not necessitate changes to medical staff rostering. Nursing staff rostering has been referred to Marg Dahl and scientific staff rostering to [illegible] and radiographer staff rostering really needs to be managed by Mark Butterworth. I understand [illegible] models have been developed.

7) **Draft guidelines for back referral to PAH to be developed by clinicians for discussion with PAH.**

Response: Patients who are exempt from referral back to the [illegible] one would include those in the Heart Failure & Transplant Unit, patients who require the [illegible] congenital service, patients who are under the care of the Thoracic Medical services and patients who require certain specialised services not performed elsewhere, eg valvuloplasty.

Aligned with the physicians who provide a private [illegible] referred to clinicians should be able to be managed and treated as appropriate [illegible] consistent with your agreements related to Private Practice. Restriction of trade should not occur and the Medical agreements between the State and Commonwealth allows patients to attend the service of their choice.

Patients who elect to see specialists at TPCH of their own volition should also be allowed to be treated. Again this would be under the Healthcare agreement that allows patients to seek care at any site at which they desire.

There are a group of patients who have had an enduring clinical relationship with the hospital for many years in whom the transfer of care agreed would be clinically inappropriate. Some old patients may be able to be referred back to PAH. These would include those patients who are willing to undertake their care at PAH and in whom the clinicians at the PAH are happy to accept their care. Specifically these could be patients whose original treating physician no longer works at the hospital and to patients who have not been seen at this hospital for a period [redacted] than ten years. This is based on the ruling that medical histories are relevant and are required [redacted] minimum of this period. The time frame is fairly arbitrary in patients who have [redacted] histories many would be better-managed at this institution to ensure continuity [redacted] of all relevant consultants.

8) **The booking system to be reviewed to ensure that it is well managed and transparent.**

Response: In the attachments I have provided [redacted] which elective angiography is to be booked and by which inter-hospital transfers are [redacted]. Please see attachment. Of course it is our contention that the booking system is well managed and transparent. The implication of this statement suggests that this is otherwise the case. If there is a [redacted] that the booking system is not well managed or transparent then I think specific [redacted] to be substantiated. Please see Appendix 2.

X

Andrew Galbraith has resigned [redacted]. The [redacted] as a result of this process has become unsuited to the [redacted] care to patients [redacted]

Damian WALTERS
Director Cardiac Catheterisation Laboratory
Deputy Director Cardiology Program

attach.

THIS MATTER HAS BEEN DELETED UNDER S 44(i) OF THE FOI ACT

Risks Identified That May Result From The Directed Requirements

Patient Outcome Impacts :

Wait time will blow out within 4 weeks above accepted wait time for category.:
Potential for Deaths on wait list to increase.
No Cat 2 booked will continue to accumulate days wait
Potential for these patients to be admitted as acute.
Paediatric Case waits will increase over accepted category wait times.
Patient complaints re wait time.

Impacts For Staff Members:

Potential for operators not to reach the expected case
Right of private practice restricted.
Training opportunity of fellows will be compromised.
Training of staff will be compromised ie Cardiac Scientists and Nursing staff due to lower numbers.
Staff abuse from frustrated patients to booking officers.
Continual focus on CCL
morale issues.

Organisational Impacts:

Damage to reputation of
Potential to have skilled
Reduction of surgical
Loss of expertise
Reduced Staff morale
Reduced ability to Attract new staff.
Failure of the district and

Investigation of patient waiting list for cardiac investigations unit

Introduction

I have examined the data provided by the cardiac investigations unit (CIU) regarding their patient waiting lists, and have conducted some initial investigations into overall lengths and average waiting times of these lists, including the likely effects of changes to availability of services within the unit. [The data provided by the CIU covers arrival and completion dates for all operations completed between 1/1/03 and 5/4/04, and arrival dates for all patients remaining on the list at the latter date.]

In this investigation I have separated the data into numbers of patients added to the waiting list each fortnight ("arrivals") and the numbers of patients removed (operations completed) each fortnight, and have determined the numbers of patients on the list at the end of each fortnight. As well as doing this for the overall waiting list, these tasks have also been done for each of the waiting categories (1 & 4; 2 & 5; 3 & 6). The resulting information has been plotted to examine the behaviour of these features for the overall waiting list and for the lists within each category.

Based on these results, I have also done some calculations to simulate the effects of proposed changes to the availability of services within the CIU, namely the removal of one cardiology laboratory from service on either one day per fortnight or one day per week.

Initial results

From the plots of waiting list arrivals, it seems that the arrival process is quite irregular, in the sense that the variation in numbers arriving per fortnight appears to be much larger than would be expected from random arrivals with a constant long-term average arrival rate. Apart from one unusually high value (299 arriving in the fortnight ended 7/3/03), the numbers of arrivals ranges between around 140 and 210 per fortnight (with a few lower values, probably due to seasonal factors, eg. end-of-year public holidays).

At the level of the individual categories, the irregularity is even more marked, with category 2+5 in particular having wide variations between numbers arriving in different fortnights.

Numbers of completions (operations performed) are also somewhat irregular. Apart from a few lower numbers (most coinciding with public holidays), total numbers generally ranged between about 150 and 230 patients per fortnight. Ideally, the number of completions might be expected to be fairly steady, with a scheduled capacity (based on the rosters provided to me) of 170–190 completions per fortnight, but it appears that matters are not this simple.

Over the 15 month period of the data set, the number of patients on the waiting list nearly halved from 542 to about 272 patients. In average terms, this represents a net excess of completions over arrivals of 9–10 patients each fortnight; however, the number of patients on the waiting list actually increased to just over 800 in mid-May 2003 and then hovered around 800 for several months before dropping significantly in the final two months of the data set (February–March 2004). [Discussions with CIU staff indicate that a concerted effort was made over this period to reduce the waiting list; this information is consistent with the observation that completion rates were consistently above average through most of this period.]

Simulating effects of proposed changes

In this part of the investigation, the tables and graphs of waiting list lengths over the period of the data set have been adjusted to allow for the effects of the proposed reductions in laboratory usage; specifically, the observed completion rates have been reduced by 4 and 10 patients per fortnight.

The resulting graphs indicate that the first of these scenarios would have resulted in an overall reduction of only 24 patients over the 15 month period, while the second would have resulted in a net increase of 242 patients over this time. In the first scenario, the number of patients on the waiting list hovers between 600 and 700 for most of the period, and only returns to the initial levels because of the concerted efforts observed in the final two months. In the second case, the number of patients on

the waiting list increases fairly steadily, peaking at around 920 before dropping somewhat over the final few months.

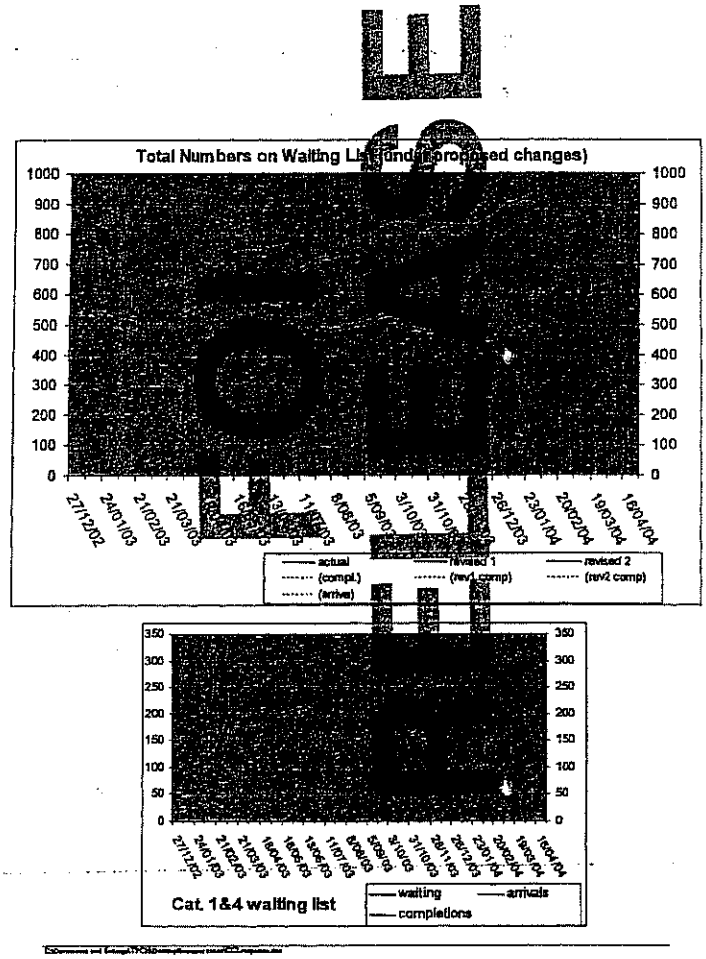
In both cases, the differences in fortnightly completion rates (compared to the observed rates) appear fairly insignificant individually, but compound over the period of the data set to generate a clearly noticeable effect.

Future work

The analysis undertaken on this data is to be extended to include estimation of mortality rates (as a function of waiting time) for each waiting category, as these are understood to increase non-linearly with waiting time. This extension should then allow an estimate to be made of the expected effect of extended waiting times on patient mortality levels within elective CHS services.

HJG Bartlett PhD BE BSc
Statistical Consultant,
School of Mathematical Sciences,
Queensland University of Technology.
Thursday 3/6/04.

Appendix : Graphs Of Wait List Times



Heart Response

Broadcast: 15/10/2004

DR JOHN SCOTT, QLD HEALTH: Thanks.

KIRRIN MCKECHNIE: Dr Con Aroney is predicting a crisis in cardiac care. He says by international standards Queensland has only one third of the number of cardiologist that it should have, is that true?

DR JOHN SCOTT: We don't believe that it's true to the level that he's describing it. We certainly would be prepared to accept that we have issues to address with staffing but really that's and issue for Australia generally. So we don't see that we are behind any other states in Australia.

KIRRIN MCKECHNIE: How behind are you though in international standards?

DR JOHN SCOTT: I suppose we would say that we are behind but we really feel that the services that we are delivering at the moment are not putting any Queensland lives in jeopardy.

KIRRIN MCKECHNIE: Well the cardiac society says there are only the equivalent of 25 full time public cardiologists in Queensland and there should actually be 75. Is Queensland health actually reducing the number of cardiology procedures then at Prince Charles Hospital?

DR JOHN SCOTT: No, I think that, and this is the disappointing aspect of this debate is that we seem to be accused of cost cutting of reducing services and I can't see why we would want to do that. In fact what we're doing is looking to increase services across Queensland and of course what that means is that services and resources are going to hospitals other than Prince Charles and perhaps that's part of the reason why we're having this debate.

KIRRIN MCKECHNIE: Have you reduced the number of services cardiology procedures at the Prince Charles Hospital from 80 to 57?

DR JOHN SCOTT: No, what we've done is we've said lets go ahead and enhance services and that was happening in fact we've put something in the order of $5 million extra dollars into cardiac services in Queensland this year. And that $5 million will be there each year from here on. But what has happened is there has been an increase in services above what that increase budget will allow situation and we've asked the cardiologists to review the situation with a view to at least staying within the resources that are available to us but we have not in anyway respects reduced services.

KIRRIN MCKECHNIE: Dr Aroney says, well he's given us some examples of patients having heart attacks in regional areas and instead of waiting the recommended 48 hours to get help in a big city hospital that there are many other cases waiting over a week. Is that right?

DR JOHN SCOTT: We don't believe it is and of course as I've said before we're looking to services to enhance services for north Queenslanders so they've got better facilities to be transferred to. We've recently done work and are continuing to do work on clinical co-ordination and on aero-medical retrievals. So we're looking to provide people with the ability to transfer from their small service that they might have to attend if they have problems to larger services and we're ensuring that those larger services are more appropriately placed to take those transfers.

KIRRIN MCKECHNIE: Well it seems that you have a stand off then between our leading cardiologists in this state and Queensland health. How do you hope to fix this problem?

DR JOHN SCOTT: I'd say we have a stand off between certainly me and our leading cardiologists if you wish to call Dr Aroney that. In time I hope that we can show the cardiac society and Dr Aroney that we are here for the long term.

Queensland Government

District Update

Staff news bulletin for The Prince Charles Hospital Health Service District

18 October 2004 – No. 8

District Manager's message...

Gloria Wallace
District Manager

This week marks the fiftieth anniversary of The Prince Charles Hospital. It is an appropriate time to pause and think about the enormous contributions made to the people of Queensland through the Hospital, its services and its staff, in that time.

One of the most striking reflections for me this week occurred when hanging the historical photos in the front entrance. To see in those photos, the youthful faces of so many people who have worked in our services for most of their lives and in many instances are still working at TPCH, was fascinating.

Fifty years is not such a long time, but it is amazing how much things have changed through that time. It is only when looking at the old photos that one remembers how rapidly health services have evolved; who would ever think, today, that the bed linen used to be washed and hung on hospital lines, to dry flapping in the breeze.

This really is a "must see" exhibition, particularly for anyone who has been around TPCH for many years.

I would like to congratulate the staff of The Prince Charles for the wonderful developments that have occurred here over the years. I would also like to give my sincere thanks to all of the staff/volunteers who have taken the time to participate in the organisation of our birthday celebrations, and encourage you to join in the events.

Events of the Week

The official opening of the 50th year celebrations by the Minister for Health is on Tuesday 19 October at 1.30pm. Due to the rain, the venue has been changed to the Conference Room, Education Centre, The Prince Charles Hospital. Lots of previous staff have been invited, so you never know who you might catch up with, at this event. Thank you to all of the volunteers/staff who worked on our Open Day on Sunday 17th October.

The historical photo display, the Nundah House art display and the research achievement posters will remain up all week, to give people an opportunity to view them. The art is for sale and prices are on the paintings' captions.

Pastoral Care Week activities, with a focus on multifaith diversity and the graduation of students from the Pastoral Care Course, will occur on Wednesday.

Thursday is 50s day and staff are asked to celebrate by wearing 50's clothing. There will be a Rock and roll dancing exhibition and winners of the "guess who" photos competition will be announced. Also on Thursday we will be giving away the spares of the multiple copy historical photos, so come along and rummage through and see if you can find your photo to take home.

On Friday, we would like to shout your lunch at the S.M.I. L.E. staff barbecue.

On Saturday 23rd October the 50th Anniversary Gala Ball is on at the Kedron Wavell Services Club.

On Sunday 24th October the Hospital Foundation will be hosting a Benefactor's Day Luncheon in the Breeze Café, to recognise donors and supporters of The Prince Charles Hospital Foundation.

Throughout the week there will be sales of TPCH 50th anniversary commemorative wine glasses and coffee mugs.

TPCH Redevelopment

There will be a meeting on Monday 18th October to finalise on the Master Plan for TPCH site. Once the Master Plan

is signed off locally, it will proceed to the Director-General for endorsement. We are now moving into the next stage of our development, which is about the actual design of the buildings. New user groups have been established for this phase.

Joyce Turner chaired a strategic conversation meeting last week which aimed to consider the impacts of the new hospital on the elective throughput of existing services, and identify strategies for protecting elective throughput. This was a useful meeting in that it commenced us on a journey of process re-design, ie. what processes do we need to change in preparation for the opening of the additional services to maximise the benefits to patients. Lots of good suggestions were made.

Subsequent to that meeting, my thoughts are that we need to now finalise the programs' service plans and detail a process improvement workplan for 2005. I have had a discussion with Dr Norman Swann (ABC Radio The Health Report) about facilitating this process, as Dr Swann has been working with Queensland Health Executive and is able to challenge our thinking about the ways in which health services are delivered now and into the future. This process will underpin also underpin model of care and workforce design developments for our new hospital.

Funding – Elective Surgery

We have received recent notification of the allocation to TPCH of an additional $4.5M in elective surgery funding for the current financial year. We are currently looking at how this is allocated within the programs, within the elective surgery funding rules (ie. this will allow us to fund additional ASD closures).

Heart Failure Nurse Practitioner

One of seven state-wide nurse practitioner role trials in the second round of nurse practitioner pilot development, will occur at TPCH. The Minister for Health last week signed off on the trials, to include a Heart Failure Nurse Practitioner role development at TPCH. An emergency medicine nurse practitioner role will be trialled in the Redcliffe District and it will be useful for us to look at this trial in preparation for the staff profiling for our new expanded Emergency Department.

I would like to acknowledge the submissions made by staff that were not successful, and particularly mention the Alcohol and Drug Nurse Practitioner submission from Biala. This was seen to be of a very high standard, indeed the role was seen to be so close to nurse practitioner functioning already, that it would require only minor additions once the enabling legislation has been passed, to confirm the role. Consequently, it was not seen that the pilot development of the role was necessary.

I am currently chairing the Nurse Practitioner Project Committee for Queensland Health. This committee is made up of nurses from various backgrounds, CNC representatives, representatives of other disciplines including allied health, two AMA representatives and one General Practice Divisional representative. Legislation will be prepared that will enable nurse practitioners to prescribe within a defined pharmacopeia, as well as order some pathology and radiological investigations.

Cardiology

Cardiology has received quite a lot of bad press in the past week or two. While this is unfortunate and is not good for TPCH's reputation, at the same time there has been some lovely media about TPCH's successes and staff, in association with the 50th anniversary.

I understand that clinical staff are passionate about services and I really think that it is futile to get into "blaming" mode about what has been publically stated. I have though, been approached by numerous members of staff who have expressed their distress about what they have heard. I think, in being open and honest in the management of the District, it is only fair that I set the record straight on some of the issues that have been misrepresented in the media. I therefore, simply, make the following points:

- Cardiology is funded for approximately 57 interventional procedures per week (excluding ASD closures and valvuloplasty);
- In some weeks, activity has been running to 80 procedures and there is subsequently a significant budget overrun in the program;
- Staff in the program are consequently coping with workloads that are not acceptable and the additional cases are putting bed pressure on other services;

- I have recently met with the Cardiology Program and asked that they look at allocation across the various procedures and that they prepare schedules that allow for elective and emergency slots within the 57 funded procedures;
- As yet, these schedules have not been implemented;
- It is anticipated that we will receive an additional $850,000 for angios and stents and $250,000 for additional ICDs in the current financial year and this has been counted into the proposed activity base;
- While there is a willingness to further fund cardiac activity in Queensland on the part of Queensland Health, we have been asked to first establish some common standards and waiting lists categorisations and to provide consistent information on demand back to Queensland Health from all Hospitals undertaking cardiac interventional procedures. TPCH was provided with $140,000 in the last financial year to commence this work, but to date the work has still not been done;
- TPCH has been in regular dialogue with Corporate Office about cardiological demand growth and it has been agreed to develop a Statewide Cardiac Services Plan, in response to our request to do this;
- In keeping with contemporary quality practise, TPCH has established a Morbidity and Mortality Committee to examine patient deaths. An investigation into two referred cardiological related deaths is being undertaken with the assistance of a senior cardiologist from Adelaide, who is a member of the National Board of the Cardiac Society. This is occurring with no cost to Queensland Health, other than the air fare of the doctor.
- In my view, what is being asked of us in terms of analysis and feedback to Queensland Health is very reasonable and is the only way forward if we are to be publically accountable for service management.

Count down...
– seven (7) weeks to accreditation survey.

CA 15

From: Susan Mackersey
To: Berge, Theresa; Galbraith, Andrew; Walsh, Jenny
Date: 2/10/04 2:50pm
Subject: OPD issues

66 referrals (excluding paediatric, electrophysiology and Emergency Room referrals) were recieved from mid January to 9th February (approx 3 weeks). Of these 24 were category 1; 31 cat. 2; and 11 cat.3.

This volume of cat.1& 2 pts creates a problem. All new cardiology appts are currently booked 5mths in advance and there are 28 new pt appts per week (not including Dr.'s. Galbraith, Denman, Adsett, Cameron, McEniery and Radford). These numbers indicate that if backlogs are cleared and leave is adequately covered the service should met the demands. Unfortuneately this situation seems to have arisen because of the inability to replace Dr's that have left.

There are also 29 new pt appt to be reallocated from Dr.Moss's clinic, which Dr.Graff is covering. The chart review appts from Cameron/Moss will need to be booked as reviews as Dr.Graff is unable to review charts as well as see pts in the clinic. Of the 136 chart reviews 49 have been rebooked and 87 are waiting to be rebooked for appts, the next available being in September.

Allocating review appts in general is a problem. All review appts in the cardiology clinics are fully booked approx. 7 months in advance which means any appts required before September will either need to be overbooked or patients will need to be displaced, or be rebooked outside the date range requested by the Dr.

In the short term advice on what to do with these 55 cat.1&2 would be appreciated, and longterm we are happy to work with you on any strategies that you feel may help remedy the situation.

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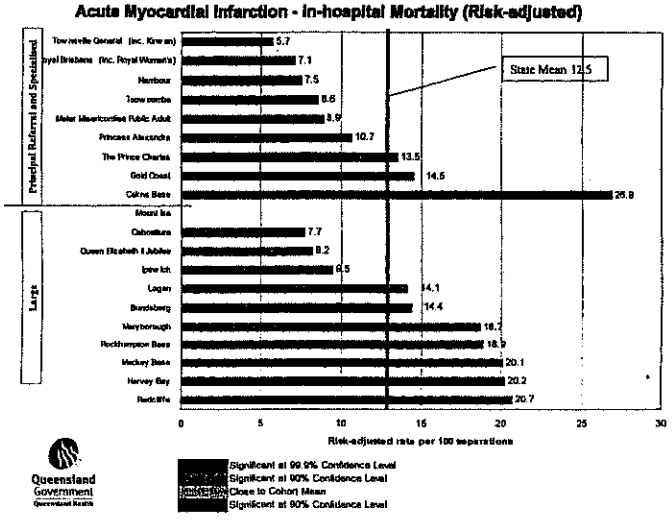
CC: Aroney, Constantine; Clinical Support Management Group

Variation in hospital outcomes



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