In the Matter of
BUNDABERG HOSPITAL COMMISSION OF INQUIRY
pursuant to the *Commissions of Inquiry Act 1950*

Statement of evidence of

Assoc Professor Con Aroney, MBBS, MD (Qld), FRACP, FCSANZ

1 I am an Interventional and Consultant Cardiologist, Associate Professor of Medicine of the University of Queensland, Qld Chairman of the Cardiac Society of Australia and New Zealand, a Member and former Chairman of the Clinical Issues Committee - National Heart Foundation of Australia, Chairman of the writing committee (NHF/CSANZ) for national guidelines on treatment of the acute coronary syndrome (1999-), and a former Director of the Coronary Care Unit Prince Charles Hospital (1991-2005).

2 My CV is attached hereto and marked **CA 1.**

Outline of evidence

3 My evidence outlines:

- the total failure of both local hospital and Qld Health bureaucracy to respond to a burgeoning crisis in cardiac care in 2001-03 including the lack of response (excepting improper responses, as detailed herein) by the Prince Charles Hospital, Central Zone and Qld Health bureaucracies to repeated complaints about restrictions on services leading to deaths;

- the effects on Qld regional hospitals (including Bundaberg) and patients, particularly related to delays and deaths in transferring ill patients to tertiary city hospitals due to tertiary bed access block;
- the events which led to two enquiries into cardiac deaths (Feb 2004 – Qld Health internal enquiry; Sept-Oct 2004 – "Mahar" report);
- the significant level of bullying and intimidation in 2003 and 2004 in order to suppress knowledge and information about the severe deficiencies in patient care, including multiple deaths and heart attacks in patients waiting for procedures or because of delayed access to hospital beds in tertiary cardiac facilities;
- Qld Health department's action to reduce patient care activity at the Prince Charles Hospital (PCH) as due to either "punishment" for my bringing these deficiencies to light or to negligent mismanagement.

Chronology

4 For ease of reference, I have prepared a chronology of events detailed in this statement:-

2001-2003: Increasing demands on all cardiac services throughout Queensland; particular deficiencies in managing acute coronary syndrome (heart attack and unstable angina). Doubling in transfers from regional/rural hospitals from 2002 to 2003. This occurred on the background of Queensland having the highest coronary mortality in

Australia and the lowest public percutaneous coronary intervention rate. Multiple requests for increased activity made through line management.

Early 2003: 1st cut in activity at PCH (a reduction of 300 cardiac surgical cases, 500 angiograms and 96 angioplasty/stents) with shifting of activity to Princess Alexandra Hospital (PAH). Staff meeting at PCH with Mr Bergin (Central Zone Director) to discuss cuts: 12 presentations all warning of increased deaths as a result of the cuts.

May 2003: Community Cabinet Meeting Aspley - I met unannounced with the Health Minister Edmonds, DG Stable, Bergin, Podbury – direct warning that cuts in activity at PCH would increase deaths.

June 2003: Cardiac Meeting with DG & Qld Health bureaucracy – increased activity requested.

November 2003: 2nd cut in activity at PCH announced for January 1 with removal of ad hoc angioplasty, canceling all elective coronary stenting and percutaneous ASD closure, major restrictions on cardiac defibrillators. Enforced prolonged holiday closure of cath lab and outpatients. These cuts would make management impossible. Official submission 24/11/2003 from PCH cardiology to Q Health to stop these cutbacks goes unheeded.

16 December 2003: I write to Premier Beattie to directly disclose burgeoning crisis and ask for cutbacks to be removed. No rescinding of cutbacks.

5 January 2004: Cardiology staff meeting at PCH ask that I (as Chair of Qld Branch CSANZ) release details of crisis and recent deaths to the media. Press release to Courier Mail – published 6/1/2004

8 January 2004: Meeting requested by Dr Scott and Mr Bergin (Qld Health) – bullying. I reported bullying in media release 9/1/2004

25 January 2004: Second letter to Premier alerting him to 3 more deaths, a blow-out in the defibrillator waiting list, a crisis at Royal Brisbane Hospital cardiology unit and asking for urgent action .

Jan-July 2004: Restrictions on ASD closure are relaxed, and we are asked to operate on all patients waiting before the end of the financial year – we perform over 20 cases over the next 5 months. (Although this was beneficial, patients do not die waiting for ASD closure). Restrictions on stenting are also relaxed after State Election promises increased cardiac activity – catheter lab activity increases for 6 months.

15 February 2004: Special CSANZ meeting with Buckland and Scott. Further bullying. They asked for a submission on cardiac services.

Feb-March 2004: Internal Health Department Inquiry into three cardiac deaths – the inquiry findings were never released.

Feb-December 2004: Transfer of cases continued during the year from PCH catheter waiting list to PAH list, despite severe under-servicing and severe bed access block at PAH, which could only further exacerbate the under-servicing of the Southern zone.

29 July 2004: 36 page Cardiac Society submission (**CA 2**) to Qld Health detailing profound deficiencies in patient servicing, the consequences thereof, and requesting increased activity.

September 2004: 3rd cumulative cutback to PCH. Severe reduction in catheter lab activity from 70-90 cases per week to a capping of 57 cases per week.

September 2004 – January 2005: capped reduction in activity leads to a further crisis in provision of care to central zone patients. At least ten avoidable deaths identified. I made further media disclosures regarding

this new crisis. Loss of experienced PCH Catheter Laboratory nurses because of low activity.

September 2004: Hospital Manager implies to staff that the hospital was being penalised because of my disclosures. Hospital manager advises that overseas doctors are available to take our positions if required.

September 2004: 2nd Inquiry (Leo Mahar – Adelaide; and Andrew Johnson – Qld Health) is asked to examine two (only) of the recent deaths.

October 2004: Letter to Premier Beattie and Health Minister Nuttall requesting a meeting; meeting with Premier's Policy Advisor. I meet with him but the Hospital management refuse him permission to visit the Cardiac Catheter Laboratory and speak to staff.

September – March 2005: Media bullying by Scott, Buckland. Scott denies on ABC television that there is a capping of 57 cases per week – although the statistic is published in the district newsletter 3 days later. The Health Minister criticises me in the media and elsewhere.

Late January- May 2005: Capped catheter laboratory removed so that activity may increase to achieve pre-Budget funding targets. However,

after the severity of the previous restrictions and downsizing, staff levels are depleted and the specialized nursing workforce has dispersed. No response to my request for release of "Mahar Report".

March 2005: I tender my resignation from PCH, but offer to voluntarily assist with difficult operative procedures which I had pioneered in Queensland. Offer effectively rejected by QH.

Two weeks later: "Mahar" Report released 2 weeks later and vindicates the issues we have raised.

April-June 2005: Failure of Qld Health to accept our recommendations (CA 2) for establishment of new interventional cardiac programs, by allowing the Gold Coast Hospital to begin potentially dangerous interventions without proper planning, credentialing of operators or infrastructure.

General circumstances as background in cardiac care

5 Coronary heart disease is the leading cause of death in Queensland (24% of all deaths) and this state has the highest coronary mortality of all states except the Northern Territory. From 2001 to 2003, there was a burgeoning crisis in cardiac care throughout Queensland. Cardiologists

had made repeated warnings to line management in most cardiac tertiary hospitals, over a 2-3 year period, about the lack of response to increasing demand, particularly for coronary angiography and intervention for acute coronary syndrome (heart attack and unstable angina). There were documented increasing waiting times for transfer of acutely ill patients from regional hospitals, leading to unnecessary heart attacks and deaths.

6 A memorandum from Dr Michael Cleary (8/1/2004 – **CA3**) stated "Effective immediately: .....Patients referred from within the Central Zone, but from outside the Brisbane north area, are only to be accepted if they can be managed within our existing capacity". Why were central zone patients made a lower priority than Brisbane North patients when central zone patients are an accepted responsibility of the PCH? I note from the transcript on day 2 of this Commission, that patient P11 was unable to be transferred from Bundaberg to the Prince Charles Hospital (PCH) because of lack of a bed, and transfer to Princess Alexandra Hospital (PAH) was planned, but he subsequently died. Immediate acceptance by PCH (the accepted drainage hospital for the Central region), should have been possible; the delay in seeking treatment elsewhere may have contributed to his death. Delays due to bed "access block" have caused many other deaths in 2003 up to the present day – see below.

7 Numerous complaints made by cardiologists at PCH in 2002-2004 were made (and were required to be made) through the Acting Director of Cardiology, who then presented these problems to the hospital executive. In 2002-2003, PCH executive administrators, Deb Podbury (Hospital Manager) and Michael Cleary (Director Medical Services) were usually too busy to meet staff, would only speak to cardiologists briefly in staff meetings and virtually never visited the wards or operating theatres unless they were escorting a politician. The Director of the PCH cardiac catheter laboratory and I had made an appointment to meet Dr Cleary to discuss the crisis in 2004, and we were kept waiting for 2 hours before we were told that he was too busy to meet with us. We could ill afford to waste time such as this, when we had long waiting lists of sick patients.

8 The Director of the PCH catheter laboratory was threatened with dismissal by the hospital manager Ms Deb Podbury in late 2003. Ms Podbury had put a moratorium on the use of drug-eluting stents at PCH, but the Catheter Lab Director considered it was clinically indicated to implant such a stent in a private patient (which would have been fully funded by the patient's own health insurance). She then threatened to dismiss him, and his position was only saved at the last moment by a large petition of staff members, as we realized that his loss would have been catastrophic to the provision of cardiac services. (He is now Director of the entire cardiology program at PCH).

9 Blocks to appropriate clinical management and intimidation of Queensland's most experienced paediatric cardiac surgeon were common and are illustrated by two clinical cases:

- A critically ill child (Pt 1) was undergoing complex congenital cardiac surgery, and an urgent request was made by the senior paediatric cardiac surgeon, Dr Peter Pohlner (during surgery) for the availability of a ventricular assist device (VAD) if the child was not able to be weaned off cardiopulmonary bypass. The request was denied by the hospital manager and medical superintendent (Podbury and Cleary) and it took the intervention of the paediatric cardiologist during the afternoon and evening, and the warning that if the child died it would be their responsibility, before the bureaucrats reversed their decision, late in the evening. In the end, the VAD was not required and the child survived.
- A child (Pt 2) who required high-risk aortic valve surgery (Ross Procedure) with very poor left ventricular function was considered by the cardiac surgeon, Dr Pohlner that a VAD may be required after surgery, and should be available. This was refused by the hospital bureaucracy (Podbury and Cleary). After acrimonious discussion, the surgeon placed the patient on the list anyway, and made plans to have the VAD available. Ms Podbury threatened Dr Pohlner with a "code of conduct" violation and dismissal.

Notwithstanding, Dr Pohlner made plans to proceed. The administration reluctantly agreed to a VAD being available, but then further delayed surgery by insisting that a second VAD be made available from interstate, in case the first VAD malfunctioned. The surgery proceeded successfully, and the VAD was not required. The surgeon considered that surgery was unnecessarily delayed for 2 weeks in a critically ill child, and felt in both cases, the bureaucracy had been intimidatory, put up major obstacles to appropriate clinical management and displayed administrative incompetence. In both these cases the clinicians put their patient's lives ahead of their own welfare. Dr Pohlner is the most experienced specialist paediatric cardiac surgeon in Queensland (one of only two) – and loss of his services would have been catastrophic to paediatric care in this state.

10 In 2003, Ms Podbury altered the management structure of the PCH cardiac program from the leadership of a practicing cardiologist or cardiac surgeon to a "triumvirate" of doctor, administrative nurse and business manager. The Management of the service became paralysed by business managers and administration whose primary concern was to ensure the budget cuts were instituted. In other words, it replaced clinical care and patient priority with administrative imperatives. The triumvirate made management difficult and slow, and imposed capped activities and bed closures. It also cut activity, by offering redundancy packages to staff,

leading to the dissolution of the anti-smoking clinic, and a severe reduction to funding of cardiac rehabilitation in general, and took steps to ensure that once dissolved, those positions could never be reinstituted.

11 In short, prior to the first round of cuts in 2003, cardiac care in Qld was already in crisis, due to

- no provision for massive increase in demand
- "access block" being imposed to restricting responsibility for regional patients
- budget shifting to other public hospitals to preserve managers' budgetary compliance, to the detriment of patients
- clinical decisions on treatments being interfered with by management veto, to the detriment of patients
- takeover of control from clinicians and vesting authority (including it seems for medical decisions) in the hands of non-clinicians
- removal of clinically-proven programs and services by management
- threats of reprisals against clinicians for insisting upon life-saving procedures.

The first round of cuts- 2003

12 Despite severe deficiencies in services, and multiple deaths and heart attacks due to delays and bed block, plans were made in 2003 to reduce cardiac services at the PCH, including a reduction in 300 open heart

operations, 500 angiograms and 90 angioplasty/stent procedures per year. This was planned despite a known huge increase in demand in inter-hospital transfers, from 46 patients in Sept 2002 Quarter to 93 patients in Sept 2003 Quarter, which led to major imbalance between demand and capacity for cardiac services. At a large PCH staff meeting with about 60 doctors in 2003, Dan Bergin (Qld Health) was given 12 presentations by staff members on the deleterious effects of these cutbacks on the hospital and the community. I told Mr. Bergin at that meeting that increased demand meant that activity needed to be ***increased*** urgently, and that his planned cutbacks would lead to multiple more deaths and heart attacks in the northern Brisbane and Central coast regions. I told him that the Cardiac Society would hold him to be accountable for these deaths. Mr. Bergin reacted angrily to my statement and stated that the Cardiac Society should not have been present at this staff meeting (he did not recognise me as director of the PCH Coronary Care Unit as we had never met). The Chairman of the meeting then informed him I was director of the PCH Coronary Care Unit. After hearing all the arguments that had been unanimous in their condemnation of the planned cutbacks, Mr. Bergin concluded the meeting by stating categorically that the decision for cutbacks would not be changed and the reason given was the funds were required to fund increased activity at the PAH. He refused to reconsider a decision which we had informed him would directly cost patients' lives. The cutbacks went ahead.

13 Severe frustration and our inability to get our message to the Health Minister led me to meeting directly and unannounced with the Minister (Wendy Edmond), Director General (Rob Stable), Central Regional Director (Dan Bergin) and PCH District Manager (Deb Podbury) at a community cabinet meeting in Brisbane in May 2003, where I explained the crisis in cardiac care. I told them of the increased demand which had not been met with increased service, and told them of mounting deaths at regional hospitals due to bed access block at all Brisbane tertiary hospitals, and mounting death rates on coronary angiography and defibrillator waiting lists which needed urgent funding. I told them that the planned cutbacks at PCH would lead to more patients dying, and that the severe under-servicing required increased funding – not cutbacks and transfer of funds. The Minister promised that these issues would be examined, but no action was taken regarding these issues, and I received no official response.

14 A further meeting was held with the Director General and regional directors on Queensland Day June 2003, when presentation by cardiologists detailed Queensland's high coronary morbidity and mortality rates, Queensland Health's inadequate response to increased demand of acute coronary syndromes and the urgent need for funding more beds and activity. Ms Podbury walked out of the meeting when a photograph of

closed cardiac beds at PCH was shown. A senior health bureaucrat from NSW supported our recommendation for increased cardiac activity, and stated that NSW had accepted that increased funding was clearly required and this had been forthcoming in that state.

15 Cutbacks and bed closures at PCH during the last 6 months of 2003 resulted in unprecedented bed access block and increasing numbers of unnecessary heart attacks and deaths, and led to mounting frustration amongst cardiac and nursing staff. Following fruitless representations to the hospital manager and medical superintendent, an urgent submission (**CA4**) was made by the PCH cardiology department (acting director Dr Galbraith, Mr. Shields and Ms Middleton) to Dr John Scott (QHealth) on 24/11/2003 in a last bid effort to stop further planned cutbacks which we had repeatedly advised would accelerate the number of deaths. This submission included the following issues:

- "the cardiac catheterization intervention rate has been regulated at TPCH in an attempt to contain activity within available funding for the district"
- Public intervention rates: Qld 351.5/million; Australia 565.3/million
- PCH cardiologists are traveling and performing procedures in Townsville (because of a crisis in care at that centre)
- Elective waiting lists have grown; mortality on waiting list of 1.5%
- Proposed ban to be placed on ad-hoc angioplasty: "a retrograde step in the model of care"

- Recommendation for an increase in 188 (angiogram) procedures per annum for the increased transfers and a further 38 (angiogram) procedures per annum for long wait elective patients. (this equates to at least 19 extra cases per week).
- Recommendation "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."

Further (2nd round of cuts)

16 During December 2003, there was also an enforced closure of catheter lab activity at PCH, for all except emergency cases, and staff were advised to take holidays at this time: this was a cost control measure. The cardiologists had argued strongly against this closure, as it was pure cost-cutting and would blow-out cath lab Category 1 and 2 patient waiting lists even further. Closure of the cardiac outpatients (already with 5-7 month waiting times) was also enforced at this time, which we had also argued against (the heart failure unit felt that patient care would be severely compromised and more lives would be placed at risk), and this closure also occurred.

First letter to the Premier and its aftermath

17 After we had received no withdrawal of these many "life-threatening" cutbacks in early December 2003, I wrote to the Premier and Health Minister on 16/12/03 (**CA5**).

18 I made the following points to the Premier:

- 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.
- 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.

19 I also apprised him of three recent avoidable cardiac deaths (Pts 3-5).

20 After my letters to the Health Department and Premier did not lead to any withdrawal of the cutbacks, a meeting of all the cardiologists at PCH on the 5th January 2004, discussed the prospects of the life-threatening cutbacks which were about to begin, and in desperation they asked that I, as the Chair of the Qld Branch of the CSANZ release details of the cutbacks and recent deaths to the media.

21 The Public Sector Ethics Act (1994) and Code of Conduct (Qld Health 2000) include:

- Employees should also ensure that any conflict between their personal interest and official duties is resolved in favour of the public interest
- Employees should disclose fraud, corruption and maladministration of which they are aware
- Employees should exercise diligence, care and attention and for high standards of administration and health care.

22 In my view, public disclosure of the unnecessary causation of deaths by ill-informed and intransigent budget control was in the circumstances fully justified and even required by the Act and the Code of Conduct. After repeated attempts to be heard through line management, through letters to the Premier, through direct face to face waylaying of the Minister, and

senior QH bureaucrats, the need to stem this rising rate of unnecessary deaths was without doubt the higher public interest. As Chair of the Qld Branch of the CSANZ, I therefore issued a press release on January 5 2004 to the Courier Mail.

23 On January 8, 2004, I was contacted by Qld Health bureaucrat Dr John Scott by telephone who requested an urgent meeting to discuss the problems I had raised (in my press release), and I immediately accepted his request, anticipating that progress might at last be made. I met with Dr Scott and Mr. Dan Bergin from Qld Health on the evening of Jan 8, and I invited another cardiologist Dr Andrew Galbraith to also attend. The meeting began with what would be best described as a vicious verbal assault which was I felt was clearly intended to reprimand and intimidate me from ever raising these issues again. Dr Scott even stated to me "You come after us with more shots, and we'll come after you". Dr Scott refused to comment on my statement that cutbacks would lead to increased deaths and rejected my suggestion of developing an expert cardiac committee to directly advise the department. Herewith are excerpts of minutes of the meeting (**CA6**) which were made after the meeting by myself and Dr Galbraith.

Excerpts of the 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)

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 to 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.

CA: "The planned reduction in cardiac services at PCH will lead to increased deaths in the Central Region." JS did not comment.

24 Dr Scott's comments on treating acute coronary syndromes are totally incorrect and it is clear that he had not read or was aware of the national guidelines (NHF/CSANZ) on treating unstable angina: [CN Aroney, AN Boyden, MV Jelinek, P Thompson, AM Tonkin, H White. Management of unstable angina guidelines – 2000. Med J Aust 2000; 173(supplement): S65-S88.] Most up-to-date general practitioners are aware of these guidelines. That one of the most senior medical bureaucrats in

Queensland Health could be making major decisions regarding treatment of acute coronary syndrome, one of the major health issues in Queensland, without having the faintest idea about modern management, is a good indication of the cause of the crisis in care which had developed under his supervision.

25 I decided to make a public press release on January 9 regarding this episode of bullying.

26 At a press conference that day, Dr Scott denied he had bullied me. Mr Bergin was asked if he could confirm that I had been bullied, and Mr Bergin stated he was in the bathroom during this part of the meeting: the truth is that Mr Bergin was in the meeting for its entire duration.

Second letter to the Premier and its aftermath

27 On 25/1/04, I wrote again to the Premier (**CA7**), informing him of an ongoing crisis in care and listing three further unnecessary deaths (Pts 6-8). I also informed him of a funding crisis at the Royal Brisbane Hospital (RBH) cardiac department. Comments had been made that the cardiac unit at RBH would not be sustainable without increased funding.

28 On 15th February 2004, an urgent meeting of the CSANZ was called at the request of Qld Health. The participants included almost all the senior

cardiologists who worked in the public hospitals in SE Queensland: namely

Associate Professor Con Aroney - Chair

Dr John Atherton – Secretary

Dr Darren Walters, Dr Steve Coverdale, Dr Russell Denman, Dr Deborah Meyers, Dr Andrew Galbraith, Dr Richard Seymour, Dr David Cross, Dr James Cameron, Dr Will Parsonage, Dr Darryl Burstow, Dr Roger Wilkinson, Dr Jennifer Cooke, Dr Steve Coverdale, Dr George Javorsky, Dr Julie Mundy, Dr John Hill, Dr Paul Garrahy, Dr Stephen Cox, Dr Terry Mau, Dr Sudhir Wahi, Dr Paul West, Dr Richard Lim, Dr Lisa Walters, Prof Malcolm West

Dr Steve Buckland, A/Director-General, Queensland Health

Dr John Scott, A/General Manager, Health Services, Queensland Health

29 I thanked everyone for attending on a Sunday, made introductory comments about cardiac care in Queensland, and introduced the first speaker.

30 Dr Buckland's first comments at the meeting were to interject and interrupt very early during the first speaker, a senior cardiologist, whilst he was giving details on the inadequacy of public services for managing the acute coronary syndrome. Dr Buckland spoke in a very loud and aggressive manner and used a profanity and everyone at the meeting was

immediately taken aback. Dr Buckland stated that the presented information was irrelevant and "Prince Charles Centric". The senior cardiologist and director of the PCH Cardiac Catheter Lab, responded that he considered this information was very relevant to the management of ACS treatment throughout Queensland, and then continued with his presentation. The outburst intimidated subsequent speakers and in my view was designed to discourage an open discussion of the problems being presented. The meeting had seven presentations from all major hospitals and services and all speakers reiterated severe deficiencies in all services. The other presentations which followed included: the regional perspective of difficulties in transfer and bed access block; electrophysiology and defibrillators; pediatric cardiology; and presentations from each of the tertiary hospitals. Bed access block from regional centres (eg Bundaberg) to tertiary hospitals was seen as a key under-resourced issue in cardiac care.

31 The final conclusions of the meeting which were carried unanimously by all cardiologists were that Queensland had the worst coronary outcomes in the nation, and that there was severe underservicing of all cardiac services which required urgent upgrades (**CA8**). There was considerable discussion about the lack of publication of waiting lists for coronary angiograms and cardiac defibrillators, which we considered should be transparent as by far the most cardiac deaths occur on these lists rather

than the open cardiac surgical lists. Scott and Buckland would not accept that these should be published. They asked that the CSANZ provide a submission on Cardiac Services in Queensland.

QH first inquiry

32 In February-March 2004, Qld Health conducted an internal enquiry into three of the deaths which I had listed in my letter to the Premier (**CA5**), and called witnesses to discuss these deaths. As far as I know the results of this enquiry were never released, despite our repeated requests. I feared that the internal enquiry would whitewash the deaths as the investigators were both Qld Health bureaucrats, but a report of the investigation has not been released to this day.

33 In late January 2004, acting manager Dr Michael Cleary asked that arrangements should begin for transfer of cases from the PCH waiting list to the PAH waiting list, which was said to be very short without a wait for urgent cases. This was surprising, as at an acrimonious meeting on the Gold Coast which I was invited to in 2003, many cardiologists spoke of severe underservicing and consistent bed access block to the PAH. It was well known that the number of inter-hospital transfers from Southern Zone hospitals to PAH was very small, compared to the number of Central Zone transfers to PCH and RBWH

34 Data from Dr Coverdale in Nambour (**CA9**), shows that patients transferred from regional hospitals had a high incidence of severe coronary disease, requiring treatment. This and the low rate of inter-hospital transfer imply that Southern Zone and Northern Zone patients were particularly poorly serviced and that preventable heart attack and death rates from these regional areas must be very high. Clinicians from the Southern or Northern Zones had been unwilling or afraid to raise these issues publicly. It is in this context of severe under-servicing by the PAH that Health Department bureaucrats had decided to transfer PCH patients to the PAH list. These transfers continued for most of 2004, presumably leading to even more severe under-servicing of Southern Zone patients.

35 On 29th July 2004, the Qld Branch of the CSANZ provided a 36 page submission (**CA-2**) to Qld Health on Cardiac Services, as requested by Qld Health in February 2004. The submission emphasized the crisis in adult and paediatric care in all areas, particularly in acute coronary syndrome management and cardiac defibrillators, where most deaths had occurred, and asked for an increase in activity.

36 Acting nursing director of the cardiology program, Janelle Taylor, wrote an urgent memorandum (**CA10**) on 4/8/2004 to the PCH bureaucracy "to apprise you of the situation resulting from the high number of patients waiting in regional hospitals as priority cases for cardiac

investigation/intervention." This type of crisis has been commonplace in 2003-2005.

37 The following is an example of one of many deaths due to regional hospital access block to a tertiary hospital: Patient (Pt 9) from Kilcoy, high risk ACS - PCH contacted for interhospital transfer – inadequate acute beds in CCU – one bed in CCU is closed (unfunded) – many other patients waiting in other regional hospitals - patient died in Kilcoy five days later (NHF/CSANZ guidelines – transfer should be performed within 48 hours).

38 Early transfer and treatment are extremely effective in preventing death and myocardial infarction, and patients are frequently managed with angiography and simultaneous angioplasty and stenting and discharged within 1-2 days. Failure to act promptly can lead to major myocardial infarction and life-long disability from cardiac failure or death. Effects of deaths in rural/regional hospitals include:

- Family devastation - blame rural/regional hospital
- Demoralised staff in rural/regional hospital
- Guilt/demoralised "accepting" hospital staff
- Low standards accepted and become commonplace.

3rd round of cuts

39 It was in the face of this crisis that the Number 3 cutbacks were then enacted in September 2004. These cutbacks were imposed as a deliberate target against the Hospital for our persistence in raising the alarm. The cardiologists at Prince Charles Hospital were shocked, when at a staff meeting on 24/9/2004 the PCH manager, now Ms Gloria Wallace (as Ms Podbury had moved to PAH) announced that cardiac catheter laboratory activity would be further reduced from the 70-90 (average 80) cases per week to 57 cases per week, including a 50% reduction in paediatric cases (from 8 to 4). We had asked for an increase in 19 cases per week in December 2003, because of the well documented increase in demand and waiting lists (**CA4**). During this acrimonious meeting of all cardiology staff, I told the manager that she was condemning more patients to death while waiting for coronary angiography. I stated that this reduction was totally unacceptable and unconscionable. She said that the decision had been made and the cutbacks had to be performed by the staff, or Qld Health would step in and do it directly. She also stated that if necessary, she had a list of foreign doctors who were prepared to take our positions. I stated that foreign graduates were not a long-term solution as many left the public system to join the private system, and that instead of employing foreign graduates, Australian training registrars should have a career path to join the staff after they completed training. As a response to the statement that PCH was being bullied, Ms Wallace stated that

Queensland health bureaucracy had a poor perception of the cardiology programme at PCH, and we had to be more ***"politically savvy"***.

40 A senior cardiac surgeon (now Director of Cardiac Surgery) who came to the meeting, was told by Ms Wallace that this was a meeting of cardiologists and he had not been invited. The surgeon stated that he felt it was important for him to be present. Ms Wallace reluctantly agreed, but told him he was not permitted to speak at the meeting.

41 A memorandum detailing the extremely deleterious effects of the cutback to 57 cases per week had been submitted to the District Manager on 28/9/04 (**CA11**). It included

- confirmation of the cutback which had been publicly denied:

  "Recent activity levels have been between 75 and 90 cases per week. This will represent a significant reduction. The schedule has now been revised to suit 57 cases per week.

  Cases that have not been commenced by 5pm will be cancelled and will need to be rebooked"

- severe criticism of the requirement to obtain medical superintendent approval for all cases above the agreed activity level:

  "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 decisions. The implication that cases occurring outside of hours labeled as urgent and not actually urgent is stringently denied and defended. If there were specific incidents where this had occurred then I think those allegations need to be substantiated."

- Risks identified that may result from the directed requirements (page 5 of **CA11**)

42 The results of a statistical evaluation (**CA12**) of the effect of cutbacks on cardiac cath lab waiting lists which had been commissioned by the Cath Lab Director from Dr H. Bartlett, PhD, School of Mathematics, QUT and submitted on 3/6/2004 were also provided.

43 This showed that a cutback of only 16 patients per fortnight over the previous two years would have the effect of increase the waiting list from 540 to 920. It is clear then that the proposed cutback from 80 to 57 patients per week (or 46 patients per fortnight) would lead to a major crisis in waiting lists, with a number well in excess of a thousand likely to develop very quickly. Patient care (ie life expectancy) would be severely compromised. This confirms my belief that Qld Health was either deliberately trying to precipitate a crisis by enforcing these cutbacks or were guilty of culpable negligence as managers.

44 Rather than increasing activity as we had requested in our lengthy submission in July, the Health department had imposed draconian cuts on activity. I considered Qld Health's response to be totally unethical and it was made known to cardiologists in the department, that Qld Health was punishing the Prince Charles Hospital, because of my public stance in publicising the numbers of deaths which had occurred. Dr Scott had implied this when talking to a group of staff cardiologists. The cutbacks at PCH led to a dramatic fall in cardiac catheter lab activity occurred from September 2004 till January 2005, severely exacerbating bed access block further. During this period, the Catheter Lab lost a significant number of highly trained scrub nurses, which will take many months of intensive training to recoup. [As budget allocation for catheter lab funding is determined by the number of cases performed, the activity was suddenly uncapped in late January, and activity has been very high since then (including costly overtime and hiring agency nurses) to catch up with the earlier period of reduced activity.]

45 With the drastic cutbacks, I decided in September-October 2004 to disclose publicly in radio interviews that many more deaths had occurred on cardiac waiting lists in the period since the first enquiry into deaths in February. These included six deaths due to bed access block, four patients on cardiology waiting lists and three patients awaiting surgery at

PCH - I believed at least 11 of these deaths were avoidable (Pts 9-19) if treatment had been prompt and according to national guidelines. I was cognizant of similar numbers of deaths occurring on waiting lists or due to bed access block to both the Princess Alexandra Hospital and the Royal Brisbane Hospital, but that the clinicians at those hospitals were unwilling to go public.

Punishment by QH

46 Following my press release and subsequent media interest, I was labeled as dishonest on radio and television by Dr Scott. I stated on ABC Stateline (15/10/2004) that cardiac catheter laboratory activity was planned to be reduced to 57 per week, and when Dr Scott was asked on this program if this was true he stated "No" (**CA13**). This number of 57 was published the following week in the District newsletter (**CA14**), and again confirmed in a recently released FOI hospital memorandum (**CA11**). Also from Stateline:

"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. (This information had been presented to Dr Scott by Dr Coverdale in February 2004 – **CA9**, as well as in the CSANZ submission **[CA-2]** sent to Dr Scott in July 2004).

47 I was also repeatedly attacked in the media and elsewhere by the Health Minister, Gordon Nuttall.

2nd QH inquiry (Mahar inquiry)

48 Subsequently, these further deaths forced the Health Department to call a more independent inquiry, by Dr Leo Mahar (Adelaide) and Dr Andrew Johnson (Qld Health). At the time Andrew Johnson himself had been the center of criticism for inadequate cardiac services and wait list management at Townsville Hospital over the preceding 3 years. For this enquiry, QH selected only two deaths (of the more than 10 which had occurred) for examination. The first death investigated (Pt 18) was a 44 year old patient who died 70 days after being placed on a waiting list for a life-saving cardiac defibrillator. The second death investigated (Pt 19) was a 74 year old patient whose transfer after a heart attack was delayed by bed access block for 7 days from Nambour hospital and died in PCH while waiting a further 6 days for semi-urgent bypass surgery. With regards to the defibrillator death and waiting list, the following was reported in the Courier Mail on Friday 22/10/04, before the results of the inquiry were released:

"Dr Buckland said "one of the problems now emerging was how guidelines for newer procedures were being applied. They are being applied liberally at the Prince Charles Hospital, and applied differently, but appropriately, at Princess Alexandra Hospital" he said. The comments indicated a possible

crackdown at Prince Charles, where the waiting list, for example, for cardiac defibrillators is about 48 compared with only four at Princess Alexandra."

49 I considered this "media bullying" and a thinly veiled attack on the two dedicated cardiologists at PCH (Denman and Walters) who perform these life-saving procedures, as well as a vindictive attack on the hospital itself. Prof Wayne Stafford of St Andrew's Heart Institute and chairman of the Electrophysiology and Pacing Working Group of the CSANZ, felt strongly enough wrote a letter to the editor of the CML (26/10/2004), in support of PCH activity level. He stated:

"Attributing the long waiting list for the devices to inappropriate interpretation of the guidelines is inaccurate and unhelpful in finding solutions to these difficult questions. Patients and referring doctors can be assured that the guidelines applied at Prince Charles Hospital are those used in other Brisbane, interstate and international cardiac institutions, and are based on best available medical evidence."

Dr Buckland did not deny or withdraw his incorrect and intimidatory statement.

50 In October 2004, the crisis in the cardiology outpatient department at PCH worsened, with a 5 month waiting time for new patients and a 7 month delay for follow-up patients (**CA15**). ***The waiting lists are longer today.*** These delays are very dangerous for cardiac patients awaiting evaluation; ***death statistics were not kept of patients waiting on outpatient lists, but were not infrequent.*** Follow-up patient care, also, is almost impossible when there is a 7 month delay for reassessment, and must

also contribute to morbidity and mortality. Our CSANZ submission to Qld Health in July 2004 had identified that according to international guidelines, the Queensland public hospital system required 75 full-time equivalent cardiologists rather than the 25 which were employed at that time. On 28/10/2004, I again wrote to the Premier and the Health Minister, requesting a meeting to discuss all these issues and was again refused. The Cardiac Society were never permitted to speak with either the Health Minister (excepting for my unannounced meeting at the Community Cabinet meeting in 2003) or the Premier despite 3 letters and our submission during 2003-2004.

51 In February 2005, I wrote to the PCH Manager asking for her to release the results of both enquiries (Jan 2004 and Sept 2004), as I heard that the "Mahar" report had been completed months before and a Courier Mail report had stated that the Health Minister Gordon Nuttall had "raised doubts about releasing it to the Stanley family, citing "confidentiality issues, particularly with the inclusion of details of the elderly patient's treatment". I had had no response to my request for release of the documents at the time of my resignation from the hospital in April 2005.

52 The results of the "Mahar" inquiry were released two weeks after my resignation. The report confirmed the main issues we had raised over the past two years:

- "The delay to insertion of the AICD was longer than the period considered desirable by witnesses, who maintained that the patient should have had the device inserted within 30 days of the decision that such treatment was warranted."
- "Queensland Health was not able to routinely achieve best practice in this regard as tertiary hospitals were unable to accept their patients for care in a timely fashion due to either bed unavailability or capped activity in cardiac catheter laboratories"
- "If the State is to provide for the acute needs of patients in this disease category with best practice care, there will be a requirement to lift activity in catheter laboratories and improve access to coronary care unit beds in tertiary facilities."

New Cardiac Catheter Laboratory Gold Coast Hospital

53 Qld Health's only significant recent response to the crisis in cardiac care in Queensland was the establishment of a cardiac catheter laboratory at the Gold Coast Hospital in 2005, where access block to the PAH had been critical. The planning process involved in the establishment of the laboratory is however seriously flawed and may be leading to poor patient outcomes. I had been informed by a hospital bureaucrat and senior staff cardiologists from the Gold Coast Hospital in 2004 that its catheter laboratory would open soon and angioplasty would commence immediately. I stated that the Cardiac Society's recommendation was that

coronary angioplasty at the hospital should be delayed at a minimum till the hospital had first established a clear record of safety in diagnostic coronary angiography, and that an audit of at least 6-12 months' performance should take place before angioplasty was contemplated. I also suggested that the infrastructure required to perform coronary angioplasty (see our detailed submission **CA-2**) was considerable and included highly-trained interventional nursing staff, experienced interventional cardiologists and high volumes, and suggested that quality interventionalists would be difficult to recruit quickly as we had major difficulties in attracting appropriately trained interventional staff cardiologists to PCH in Brisbane. The establishment of an interventional rather than a diagnostic program would require a sufficient number of experienced operators for appropriate staffing and acceptable outcomes, particularly since in-hospital surgical backup would not be available. I believed that this would be very difficult, and I raised the option of using the laboratory for diagnostic angiograms only, and transferring cases for angioplasty to the PAH (**CA-2**: Hub and Spoke subsection).

54 In the event, my recommendations to establish the waiting period and the clinical audit were not followed. ***The first angioplasty recently performed at the Gold Coast Hospital led to the death of that patient.*** None of the three interventionalists enrolled to operate at the Gold Coast Hospital are very experienced, two have been inactive or had very low

activity for years, and at least one is overseas-trained. As such, all should be appropriately credentialed (preferably after observation of technique), by senior interventional cardiologists from Brisbane or interstate, and not by hospital bureaucrats, before commencing procedures. This credentialing should also be performed on interventional cardiologists appointed to other regional centres (eg Cairns, Townsville) where cardiology staff numbers are low and supervision may be poor. A second option would be for the GCH interventionalists to travel and perform interventions at the PAH under supervision, for a year or more, till their experience increased (This model was used when PAH interventionalists traveled to PCH for some years before beginning the program at PAH). The transfer of patients from the GCH to PAH for angioplasty, however may be difficult because of bed access block. The lack of forethought regarding the appropriateness of an interventional versus a diagnostic facility, appropriate infrastructure and need for experienced operators and the immediate move to high risk procedures is very disturbing and indicative of poor Qld Health planning devoid of expert input, and a political imperative to rushing in rather than ensuring high standards of patient care. Qld Health had failed to consult the peak academic cardiac body (CSANZ) in making these decisions, and ignored the principles of quality care in establishing interventional cardiology units that we had outlined in the submission (**CA-2**) which Qld Health had requested in 2004.

Resignation

55 In April 2005, I decided that I had to tender my resignation as senior staff cardiologist and Director of the Coronary Care Unit of the Prince Charles Hospital since 1991. I felt overwhelmed by the intransigence of QH in its denial of the facts, and in particular, its responsibility for the crisis. Its cavalier attitude to unnecessary deaths and other patient care requirements was something I could not apparently do anything about. The cardiac defibrillator waiting list, which was 48 at the time of the "Mahar" report, had grown to 80 patients, and a further 3 (Pts 20-22) patients had died on this list after waiting more than 30 days. Deaths were also continuing due to bed access block. I felt that the Health Department and government needed to directly fund the issues raised in the "Mahar" Report, and that their stated intention of establishing more cardiac committees without increasing activity was totally inadequate. I also felt that their continued failure to consult the CSANZ on important issues and their dismissal of our advice provided in our detailed submission meant that progress appeared unlikely.

56 Further, I could not work with the bullying, intimidation and threat of reprisals which continued to permeate the culture of the hospital management and QH. I felt I was jeopardizing the patients of PCH whom I felt would continue to be victimized by QH's determination to silence me.

In addition I felt personally unsafe in my employment by Qld Health after being threatened by Dr Scott the previous year. Another doctor had told me in January 2005 that he had left the Queensland public hospital system after he had been threatened and bullied into resigning or action would be taken against him; and he told me that I should watch my back. I was also aggrieved at repeated attacks against me by the Health Department and the Health Minister in the media, even after the "Mahar" Report had vindicated my allegations.

57 Finally, I realized that I was wasting my time by continually battling bureaucracy, when I should be seeing and treating patients, performing research and teaching medical students and young doctors. It was with great regret that I left a wonderful team of world class doctors, nurses and scientists at Prince Charles Hospital, with whom I had enjoyed the most satisfying years of my cardiology career.

58 After resigning, I made an offer to continue performing, on a voluntary basis, the three cardiac operating procedures which I had pioneered in Queensland. It was intended to benefit both patients and other clinicians at least until such time as those clinicians became more accustomed to the procedure. PCH management effectively refused my offer, treating it as a request for privileges rather than an offer of voluntary service.

Ongoing unnecessary deaths

59 I had decided I could not continue supporting and working in a system where deaths and angiography and defibrillator waiting lists were continuing to spiral and where the truth was still being suppressed, even after two inquiries. These two waiting lists have never been published and are not included in Qld Health data on waiting lists, and yet most deaths occur on these lists. North and Central Zone Queensland regional hospitals have amongst the highest death rates from acute myocardial infarction ("heart attack") in the country **(CA16)**. Queensland Health's own data shows that the state death rate from myocardial infarction is 12.5% (Qld has the highest CHD mortality of all states except the NT), with inordinately high death rates in Cairns (26.9%), Hervey Bay (20.2%), Mackay (20.1%), Rockhampton (18.9%), and Maryborough (18.7%). Most of these excess deaths would be avoidable if prompt transfer to tertiary hospitals were possible (see **CA-2** subsection - hub and spoke management of ACS). Dr Cleary's instructions to put Central Zone patients on a lesser priority than North Brisbane patients (**CA3**) and of therefore discouraging transfer of ill patients to PCH from its accepted area of drainage, is only further exacerbating these high death rates.

60 I estimate that ongoing weekly deaths or heart attacks in Queensland regional or city hospitals or on Queensland cardiac waiting lists (including outpatient delays, bed access delay from regional hospitals such as

Bundaberg, inadequate application of guidelines, coronary angiography, cardiac surgical and defibrillator waiting lists) are at least:

Central region and PCH/RBH: 1-3 per week

Southern Region and PAH, GCH: 3-5 per week (based on much lower transfer and coronary and defibrillator activity levels for the Southern region)

Northern Region and Townsville Hospital: 2-3 per week

61 I believe this number of currently between 300-550 avoidable heart attacks or deaths per year in Queensland is a conservative estimate. A recent paper (I Scott, AB Duke, IC Darwin et al. Med J Aust 2005; 182: 325-330) suggests that the death rate may be much higher. It showed that 40% of Queensland public hospital acute coronary syndrome patients are missing out completely on potentially life-saving coronary angiography when it is clearly indicated. It also showed a very low rate of cardiac rehabilitation (only 24% of eligible patients) which has also been shown to significantly reduce mortality. I am unable to continue working in a system which accepts and hides these problems, bullies individuals who raise concerns and values hospital budgets above that of patient lives. I have lost all confidence in the Prince Charles Hospital and Central Zone administration and Queensland Health Department bureaucracy.

(Signed)

Con Aroney

Dated

Recommendations:

- Improved response of hospital management and the Health Department to significant or life-threatening clinical issues – without issues being blocked by many administrative layers.
    - Direct communication of College/Medical Society Heads with the Health Minister – the AMA has regular meetings with heads of societies and colleges.
    - Director General and other senior health bureaucrats are unwilling to take advice from the clinical experts, are too reliant on their own severely outdated views of clinical treatment or take advice from non-expert sources and require education about modern medical management particularly in rapidly progressive disciplines such as cardiology.

- The Health Minister is reliant too heavily on his own senior bureaucrats and regional directors who know very little about vital areas such as the modern treatment of heart attack, Queensland's largest killer.
- Hospital and Zonal administrators see budgetary constraints as more important than patient's lives
- Clinical experts enrolled in development of new units, strategic planning and credentialing of new cardiac operators (interventionalists or surgeons)
- Cardiac operators must participate in regular peer-based morbidity and mortality review
- Involve local community leaders in decision making
- Removal of the multiple layers of bureaucracy
    - Abolition of zonal structure
    - Consideration of return to Hospital Boards
    - Clinician led management of service provision

- Removal of culture of intimidation from all layers of health administration.
    - Code of conduct threats
    - Whistleblower protection inadequate
    - Staff unable to complain about inadequate patient care and delays
    - Treatment of VMOs and Staff Specialists must be improved

- All cardiac waiting lists must be publicised
    - Most deaths occur on lists for coronary angiography and defibrillators
    - Outpatient delays should be published (eg 5-7 months at PCH) so that patients and GPs can decide on alternative referral options. Deaths of patients waiting for outpatient appointments should be recorded and audited.

- Health funding inadequate
    - Public cardiologist numbers - need to be trebled
    - Capped activity
    - Bed closures, inadequate acute beds for regional transfers of high risk cardiac patients
    - Waiting times: outpatients, angiography, defibrillators
    - If no funding – Government should be honest and impose rationing as in NZ and USA.

CURRICULUM VITAE

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Rode Rd, Chermside, 4032.
Tel:
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Date of Birth:

Place of Birth: Brisbane, Australia.

Marital Status:

Education:
1969-1973: Church of England Grammar School, Brisbane.
1979: MBBS (Q'ld) with distinctions in medicine and surgery.
1985: ECFMG (USA).
1986: FRACP.
1991: MD (Q'ld).

Memberships:
1979: President, University of Queensland Medical Society.
1986: Fellow, Royal Australasian College of Physicians.
1987: Affiliate Member, American College of Cardiology.
1987: Member, Paul Dudley White Society, Boston, USA.
1989: Member, Brisbane Angioplasty Group.
1990: Member, Cardiac Society of Australia and New Zealand.
2005: Foundation Fellow, Cardiac Society of Australia and New Zealand

National Committees:

1995-6: Chairman, Interventional Working Group, Cardiac Society of Australia and New Zealand.
1996-03: Member, National PTCA Database Committee, National Heart Foundation.
1996-7: Member, Quality of Care and Health Outcome Committee of the NHMRC (Management of Unstable Angina).
1996-: Member, Scientific Committee, Cardiac Society of Aust and NZ
1996-00: Member, Relatives Values Study Committee, Cardiac Society of Aust and NZ.
1997-00: Member, Consensus Group on Procedural Items - Relative Value Study of the MBS.
1998: Member, Cardiac Disease Working Group of the National Health Priority Committee, Commonwealth Health Dept.
1999-01: Chairman, Interventional Working Group, Cardiac Society of Australia and NZ.
1999-01: Deputy Chairman, Medical Issues Committee, National Heart Foundation of Australia.
2001-4: Chairman, Clinical Issues Committee, National Heart Foundation of Australia.
1999-: Chairman, Writing Committee, NHF/CSANZ Australian Guidelines on management of acute coronary syndrome.
1999-04: Chairman, Organizing Committee, 2004 CSANZ National Scientific Meeting.

Awards:

1976: National AMSA-AMA Award (student research grant for publ #1)
1985: National Finalist of Advanced Trainees Research Presentations of the Royal Australian College of Physicians.
1986: Cardiac Society Travel Award for Queensland to the American Heart Association Meeting, Dallas, Texas, USA.
1987-8: National Heart Foundation of Australia Overseas Clinical Fellowship.
1998: Research Grant: The Prince Charles Hospital Foundation.
2000: Research Grant: The Prince Charles Hospital Foundation.

Residencies:

Year	Position	Location
1980	Resident	Royal Brisbane Hospital
1981	Resident	Royal Brisbane Hospital
1982	Resident	Royal Brisbane Hospital
1983	Medical Registrar	Royal Hobart Hospital
1984	Cardiology Registrar	Royal Hobart Hospital
1985	Cardiology Registrar	Royal Brisbane Hospital
1986 - June 1987	Cardiology Registrar	Prince Charles Hospital

Fellowships:

July 1987 - July 1989:
Clinical and Research Fellow, Harvard Medical School and Massachusetts General Hospital, Boston, MA, USA.

Local Committees:

1989 -	Medical advisory committee - Q'ld branch, National Heart Foundation.
1993-95	Advisory committee of Rotary District 9600 Centre for Cardiovascular Research, Griffith University.
1994-6	Postgraduate medical education committee - PCH.
1994 -	Coronary Care Unit Management Team - PCH.
1994-02	Cardiac Rehabilitation Management Team - PCH.
1994-6	Casemix Committee - PCH.
1997-02	Cardiac Divisional Management Committee - PCH
1996-9	Research and Ethics Committee - PCH.
1997-9	Cardiac Health Outcomes Reference Group (associated with Brisbane North Division of General Practice)
1990-2	Secretary, Queensland Branch, Cardiac Society of Australia and NZ.
1997-04	Chairman, Queensland Branch, Cardiac Society of Australia and NZ.
2004-	Qld Health Reference Group, National Heart Foundation

Hopital and University Positions:

July 1989 - July 1990: Locum Cardiologist, The Prince Charles Hospital.
July 1990 - February 1991: Locum Director of Cardiology, Royal Brisbane Hospital.
1991-8: Senior Lecturer, Department of Medicine, University of Qld.
1998- Associate Professor, Department of Medicine, University of Qld.
February 1991 - 2005
Senior Staff Cardiologist and Clinical Director Coronary Care Unit,
The Prince Charles Hospital, Chermside, Brisbane (half-time 2001 - 2005).
2001- Director of Cardiac Services, Holy Spirit Northside Hospital, Chermside, Brisbane.

Publications:

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54. JHN Bett, AM Tonkin, PL Thompson, CN Aroney. Failure of current public educational campaigns to impact on the initial response of patients with possible heart attack. Int Med J 2005; 279-82.

55. MJ Ray, DL Walters, JHN Bett, J Cameron, P Wood, CN Aroney. Platelet-monocyte aggregates predict troponin rise after percutaneous coronary intervention and are inhibited by abciximab. Int J Cardiology 2005; 101: 249-55.

Book Chapters

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

Abstracts:

1. CN Aroney, MR Nicholson, JE Shevland. 2-D echocardiographic features of cardiac compression by mediastinal pancreatic pseudocyst. Aust Soc for Ultrasound in Medicine, Adelaide, 1984.

2. CN Aroney, HE Butler, M Staley, MR Nicholson. Hypokalemia in patients receiving fixed-combination diuretics. Cardiac Soc of Aust and NZ, Adelaide, 1986.

3. CN Aroney, JHN Bett, J Egerton-Vernan, C Boyle, L Dryberg. The influence of IV nitroprusside, oral hydrallazine and metoprolol on infarct expansion in acute anterior transmural myocardial infarction. Asian-Pacific Congress in Cardiology, Auckland, NZ, 1987.

4. CN Aroney, JHN Bett, J Whiting, C Boyle. Identification of vegetations with echocardiography in septicaemic patients. Asian-Pacific Congress in Cardiology, Auckland, NZ, 1987.

5. CN Aroney, MA Fifer, CA Boucher. Left ventricular contractile function in mitral regurgitation: Rheumatic heart disease compared with mitral valve prolapse. Am Fed Clin Res, Washington, DC, 1988.

6. MJ Semigran, CN Aroney, HC Herrmann, GW Dec, CA Boucher, MA Fifer. Relative effects of inferior vena caval occlusion and nitroprusside infusion on left ventricular loading conditions in man. Am Fed Clin Res, Washington, DC, 1988.

7. TP Rocco, V Dilsizian, CN Aroney, HW Strauss, R Zusman, CA Boucher. Abnormal left ventricular volume response predicts exercise performance in hypertension. Am Coll Cardiol, Atlanta, Georgia, March 1988.

8. CN Aroney, MJ Semigran, GW Dec, CA Boucher, MA Fifer. Calcium channel blockade does not improve left ventricular diastolic function in patients with severe heart failure. Am Heart Assoc, Washington DC, Nov 1988.

9. CN Aroney, MJ Semigran, GW Dec, CA Boucher, MA Fifer. Negative inotropic effect of nicardipine in patients with heart failure: Demonstration by left ventricular end-systolic pressure-volume analysis. Am Coll Cardiol, Anaheim, California, March 1989.

10. MJ Semigran, CN Aroney, GW Dec, HC Herrmann, CA Boucher, MA Fifer. Lack of inotropic effect of atrial natriuretic factor in humans with heart failure: Demonstration by left-ventricular end-systolic pressure-volume analysis. Am Coll Cardiol, Anaheim, California, March 1989.

11. MJ Semigran, CN Aroney, GW Dec, HC Herrmann, CA Boucher, MA Fifer. Effect of atrial natriuretic factor on left ventricular diastolic function in humans with heart failure. Am Coll Cardiol, Anaheim, California, March 1989.

12. MJ Semigran, MA Fifer, HC Herrmann, CN Aroney, GW Dec. Coronary artery disease predicts early mortality in patients with severe heart failure treated with enoximone. Am Fed Clin Res, 1989.

13. MJ Semigran, CN Aroney, GW Dec, HC Herrmann, CA Boucher, MA Fifer. Atrial natriuretic factor is a vasodilator with no direct myocardial effect. Am Coll Cardiol, New Orleans, Louisiana, March 1990.

14. M Masterson, J Hayes, V Singh, R Pascoe, M Davison, C Aroney, A Murphy. Electrocardiographic analysis: Man versus machine. Cardiac Soc of Aust and NZ, Hobart, May 1990.

15. M Masterson, V Singh, J Hayes, R Pascoe, C Aroney, A Murphy. Automated ECG analysis: Clinical comparison of three interpretive devices. Cardiac Soc of Aust and NZ, Hobart, May 1990.

16. CN Aroney, DJ Burstow. Percutaneous mitral valvuloplasty: Age predicts response to dilatation. Cardiac Soc of Aust and NZ, Perth, August 1991.

17. C Aroney, N Bett, J Cameron, P Garraghy, G Holt, K Hossack, A Murphy, J O'Keefe, Q'ld PTCA Group. Relationships between the characteristics of lesions, peak inflation pressure and angiographic success or local complications of coronary angioplasty. Cardiac Soc of Aust and NZ, Perth, August 1991.

18. KT McKenna, PT McEniery, CN Aroney, JHN Bett, J Cameron, G Holt, AL Murphy, F Maas. Early results and quality of life after percutaneous transluminal coronary angioplasty. Cardiac Soc of Aust and NZ, Perth, August 1991.

19. LM Carey, J Cameron, CN Aroney, JHN Bett, PJ Garrahy, GW Holt, N Mahanonda, PT McEniery. Experience with the Gianturco-Roubin stent for abrupt closure complicating percutaneous transluminal coronary angioplasty. Cardiac Soc of Aust and NZ, Melbourne, August 1992.

20. N Mahanonda, J Cameron, C Aroney, M Gardner, JHN Bett. A comparison of outcome after angioplasty or surgery for lesions of the left anterior descending coronary artery. Cardiac Soc of Aust and NZ, Melbourne, August 1992.

21. MJ Semigran, CN Aroney, GW Dec, MA Fifer. Abnormalities in diastolic function progress over time in cardiac transplant recipients. Am Heart Assoc, New Orleans, Louisiana, 1992.

22. J Cameron, N Mahanonda, C Aroney, J Hayes, P McEniery, M Gardner, JHN Bett. Comparison of outcome of PTCA and coronary surgery for lesions of the left anterior descending coronary artery. Am College of Cardiology, Anaheim, California, 1993.

23. DB Cross, GM Scalia, CN Aroney, JJ Atherton, JHN Bett, JT Rivers, PJO Stride, GW Holt. Antianginal effects of captopril in hypertensive patients. Am College of Cardiology, Anaheim, California, 1993.

24. J Bou-Samra, DJ Burstow, RD Pascoe, CN Aroney. Percutaneous mitral valvuloplasty: Predictors of response to dilatation. Cardiac Soc of Aust and NZ, Christchurch, August, 1993.

25. DB Cross, GM Scalia, CN Aroney, JJ Atherton, JHN Bett, JT Rivers, PJO Stride, JA Karrasch, GW Holt. Antianginal effects of captopril in hypertensive patients. Cardiac Soc of Aust and NZ, Christchurch, August, 1993.

26. J Cameron, N Mahanonda, C Aroney, J Hayes, P McEniery, M Gardner, N Bett. Comparison of quality of life assessment post PTCA and CABG for lesions of the left anterior descending artery. Cardiac Soc of Aust and NZ, Christchurch, August, 1993.

27. JE Donnelly, DJ Burstow, CN Aroney, JHN Bett, J Cameron, PJ Garrahy, BR Harkness, GW Holt, AS Mullasari, PT McEniery. Cardiac Soc of Aust and NZ, Adelaide, 1994.

28. NM Caplice, C Aroney, JHN Bett, J Cameron, P McEniery, MJ West. PDGF release into the coronary circulation following coronary angioplasty in humans. Cardiac Soc of Aust and NZ, Adelaide, 1994.

29. AS Mullasari, CN Aroney, J Cameron, P Garrahy, G Holt, P McEniery, JHN Bett. Angiographic and procedural predictors of dissection after percutaneous coronary angioplasty. Cardiac Soc of Aust and NZ, Adelaide, 1994.

30. JHN Bett, J Cameron, N Mahanonda, CN Aroney, JR Hayes, MAH Gardner, P McEniery. Survival and symtom status after angioplasty or surgery for lesions of the left anterior descending coronary artery. European Congress of Cardiology, Berlin, 1994.

31. M Lynch, NV Hoffmann, CN Aroney. Thrombolytic therapy and proteinuria. American Heart Association, Dallas, 1994.

32. AS Mullasari, PT McEniery, CN Aroney, J Cameron, JHN Bett. Elective intracoronary stent implantation without ultrasound guidance or subsequent warfarin. Soc for Cardiac Angiography and Interventions, Orlando, 1995.

33. N Mahanonda, J Cameron, CN Aroney, JR Hayes, MAH Gardner, P McEniery, JHN Bett. Outcome five years after angioplasty or surgery for lesions of the left anterior descending artery. Journal of Heart Failure. 1995; 2:1109.

34. Aroney CN. Mitral balloon valvotomy is effective in the elderly. Cardiac Soc of Aust and NZ, Canberra, 1995.

35. Caplice NM, Aroney CN, Bett JHN, Hoffmann N, West MJ. PDGF release into the coronary circulation following coronary angioplasty in humans. (Winner of the Ralph Reader Prize). Cardiac Soc of Aust and NZ, Canberra, 1995.

36. Higgins HC, McKenna KT, McEniery PT, Aroney CN, Cameron J, Garrahy P, Dooris M, Bett JHN. Return to work after percutaneous transluminal coronary angioplasty (PTCA): Preliminary Results. Cardiac Soc of Aust and NZ, Brisbane, 1996.

37. Tooth L, McKenna K, McEniery P, Aroney C, Cameron J, Hossack K, Holt G, Bett JHN. Educational and demographic factors predicting improved cardiac and risk factor knowledge after percutaneous transluminal coronary angioplasty (PTCA). Cardiac Soc of Aust and NZ, Brisbane, 1996.

38. Aroney CN. Improving the results of coronary angioplasty. The heart and blood vessels in health and disease. Lindeman Island. August 7-9, 1996.

39. GMA Scalia, PS Watson, AJ Galbraith, JHN Bett, CN Aroney. Study of CoEnzyme Q randomized for the treatment of congestive heart failure (SCORCH). Cardiac Soc of Aust and NZ, Hobart, 1997.

40. GR Wright-Smith, JHN Bett, P Carroll, P Naidoo, CN Aroney. Value of a bedside assay of Troponin T in patients with chest pain and a normal ECG. Cardiac Soc of Aust and NZ, Hobart, 1997.

41. C Chotinaiwattarakul, AD Cannon, CN Aroney, PT McEniery, PJ Garrahy, M Dooris, J Cameron, JHN Bett. Early experience with the second generation Gianturco-Roubin stent. Cardiac Soc of Aust and NZ, Hobart, 1997.

42. Aroney C, Burns C, Love K. Measures of quality and effectiveness in cardiac care. IXth Casmix Conference in Australia. Brisbane. September 7-10, 1997.

43. Aroney CN, Watson PS, Scalia GM, Galbraith AJ, Bett JHN. Study of coenzyme Q randomized for the treatment of congestive heart failure (SCORCH). Am Heart Assoc, Orlando, Florida, USA, November, 1997.

44. Payne J, Hall G, Capra S, Aroney C, Atkinson K, Hourigan A. Changing food patterns in patients with heart disease - empowering as well as enlightening. Australian Cardiac Rehabilitation Association Conference. Perth, August 1998,

45. Cleary S Adlam L, Mason C, Abbott E, Winkler J, Aroney C, Cameron J, McEniery P, Bett JHN. Examination of groin complications of transluminal coronary angioplasty patients treated with low molecular weight heparin. Cardiac Soc of Australia and NZ, Perth, 1998.

46. Higgins HC, McKenna KT, McEniery PT, Aroney CN, Cameron J, Dooris M, Garrahy P, Holt G, Bett JHN. Cardiac rehabilitation outcomes following intracoronary stenting and/or PTCA. Cardiac Soc of Australia and NZ, Perth, 1998.

47. Payne J, Hall G, Capra S, Aroney C, Atkinson K, Hourigan A. Changing food patterns in patients with heart disease - empowering as well as enlightening. Aust Cardiac Rehabititation Conference. Perth, August 1998.

48. Walters D, Radford DJ, Aroney CN,. Myocardial bridging in hypertrophic cardiomyopathy: In-stent restenosis following coronary stenting. Royal Australasian College of Physicians, Perth, May 1999.

49. Payne J, Aroney C. International Health Outcomes Conference, Canberra, July 1999.

50. Aroney CN, Bett JHN. Platelet inhibition with abciximab therapy - Preliminary results using a rapid platelet function assay. Cardiac Soc of Australia and NZ, Wellington, August 1999.

51. Aroney CN, Tesar PT, Love K, Bett JHN. Comparison of functional health status before and after cardiac interventions in the Australia and the USA. Cardiac Soc of Australia and NZ, Wellington, August 1999.

52. Payne J, Aroney C. Pacific Partners in Nutrition Conference. Auckland, September 1999.

53. Aroney CN. Warfarin therapy need not be interrupted for coronary interventions using radial artery access. Cardiac Soc of Australia and NZ, Melbourne, August 2000.

54. Riha A, Potter J, Slaughter R, Aroney C. Troponin in Pulmonary Embolism Study. Cardiac Soc of Australia and NZ, Melbourne, August 2000.

55. Scalia G, Lange A, Burstow D, Aroney C. 3D echocardiography in ASD closure. Cardiac Soc of Australia and NZ, Melbourne, August 2000.

56. Scalia G, Lange A, Polka P, Donnelly J, Burstow D, Aroney C. Clinical utility of 3D echocardiography in the assessment of atrial septal defect anatomy for Amplatzer device closure. XXII Congress of the European Soc of Cardiology, Amsterdam, August, 2000.

57. Payne J, Hall G, Capra S, Aroney C, Atkinson K, Hourigan A. Stages of change and health locus of control in dietary behaviour change. Sixth International Congress of Behavioural Medicine, Brisbane, November, 2000.

58. Strodl E, Kenardy J, Aroney C. Chest pain in eldely women. International Conference for Behavioural Medicine, Brisbane, 2000.

59. Aroney CN, Dunlevie H, Bett JHN. Accelerated assessment of chest pain in intermediate risk patients: Reclassification using the new guidelines. Cardiac Soc of Australia and NZ, Auckland, August 2001.

60. Harris AM, Burstow DJ, Aroney CN. Transcoronary ablation of septal hypertrophy – Preliminary acute results. Cardiac Soc of Australia and NZ, Auckland, August 2001.

61. Trivedi S, Aroney CN. Same day percutaneous coronary intervention. Why delay? Cardiac Soc of Australia and NZ, Auckland, August 2001.

62. Strodl E, Kenardy J, Aroney C. Psychological factors and angina. Australian Cardiac Rehabilitation Annual Scientific Meeting, Noosa, September 2001.

63. Bett JHN, Aroney C, Dunlevie H. Guidelines for management of patients presenting with chest pain and features of intermediate risk. World Congress of Cardiology, Sydney, May 2002.

64. Trivedi S, Aroney CN. Correlation between coronary angiographic anatomy and troponin I levels in patients with acute chest pain. World Congress of Cardiology, Sydney, May 2002.

65. Trivedi S, Aroney CN, Walters DL, Bett N. Measurement of myocardial fractional flow reserve using the Radi wire identifies coronary lesions warranting revascularistion. World Congress of Cardiology, Sydney, May 2002.

66. Ray MJ, Bett JHN, McEniery PT, Walters DL, Aroney CN. Point of care monitoring of platelet function after abciximab therapy is poorly correlated with flow-cytometric measurements of platelet activation. World Congress of Cardiology, Sydney, May 2002.

65. Davies J, Senes S, Aroney CN, Meredith IT, Bernstein L. Nineteen year (1980-1998) review of coronary angioplasty in Australia. World Congress of Cardiology, Sydney, May 2002.

67. Strodl E, Colquhoun D, Aroney C, Kennardy J. Autonomic nervous system arousal and the frequency of angina attacks. European Atherosclerosis Society Congress, Salzburg, 2002.

68. Strodl E, Aroney C, Colquhoun D, Kenardy J. Heart rate variability and the frequency of angina. European Atherosclerosis Society Congress, Salzburg, July 2002.

69. Strodl E, Kenardy J, Aroney C. Prediction of the new diagnosis of coronary heart disease in older women using psychosocial predictors. Stress and Anxiety Research (STAR) International Conference, Melbourne July 2002.

70. Strodl E, Kenardy J, Aroney C. Psychological factors and angina pectoris: The influence of moderators. International Congress of Applied Psychology, Singapore, July 2002

71. Strodl E, Kenardy J, Aroney C. Cognitive and Behaviour Therapy and cardiac rehabilitation. Australian Association for Cognitive and Behaviour Therapy - National Conference, Brisbane, July 2002

72. Ray M, Walters D, Bett N, McEniery P, Cameron J, Wood P, Aroney C. Point of care testing shows clinically relevant variation in the degree of inhibition of platelets by standard dose abciximab therapy during percutaneous coronary intervention. XIVth Congress of the International Society on Thrombosis and Haemostasis, Edinburgh, July 2003

73. Bett JHN, Tonkin AM, Thompson PJ, Aroney CN. Earlier treatment of heart attacks despite lack of effect of education campaigns on patient delay. Cardiac Soc of Australia and NZ, Adelaide, August 2003.

74. Bett JHN, Aroney CN, Dunlevie H. Use of a structured protocol for assessing patients with chest pain and intermediate risk of adverse events. Cardiac Soc of Australia and NZ, Adelaide, August 2003.

75. Walters DL, Aroney CN, Rahman, S, Hourigan LA, Scalia GS, Burstow DJ. Initial experience with intracardiac echocardiography in the cardiac interventional laboratory. Cardiac Soc of Australia and NZ, Adelaide, August 2003.

76. Walters DL, Ray MJ, Bett JHN, Wood P, Aroney CN. High dose Tirofiban with enoxaparin or unfractionated heparin in patients undergoing coronary stent placement reduces CD40 Ligand expression. Cardiac Soc of Australia and NZ, Brisbane, August 2004.

77. Walters DL, Aroney CN, Allan R, Breiger D, Brunker S, Coverdale S, Hare D, Rosenhain S. Quality of care of patients hospitalised with acute coronary syndromes. Cardiac Soc of Australia and NZ, Brisbane, August 2004.

78. Chen VHT, Fung PR, Carle AD, Nellet, Licastro R, Aroney CN. Cardiac risk factors and quality of life at 12 months following traditional cardiac rehabilitation – a prospective cohort controlled study. Cardiac Soc of Australia and NZ, Brisbane, August 2004.

79. Gunasekara AP, Walters DL, Aroney CN. Comparison of abciximab with "high-dose" tirofiban in patients undergoing percutaneous coronary intervention. Cardiac Soc of Australia and NZ, Brisbane, August 2004.

80. Bett JHN, Tonkin AM, Thompson PL, Aroney CN. Experience is not always a good teacher: Patients known to have heart disease may delay seeking health for symptoms of possible heart attack. Cardiac Soc of Australia and NZ, Brisbane, August 2004.

Invited Lectures:

1991: Invited lecture tour of Fiji:
"Update in Cardiology"
"Heart Failure: assessment and management"
"Mitral valve disease: new methods in treatment"

1992: Invited Speaker on "After the Infarct", at 1st Annual Heart Week Symposium of the NHF, May 1993.

1995: Invited Speaker on "Interventional Cardiology in the Elderly", at the Annual Scientific Meeting of the Australian Society for Geriatrics, June 1995.

1997: Invited Speaker on "Percutaneous Mitral Valvotomy - Treatment of choice for mitral stenosis?" Cardiac Society of Aust and NZ, Hobart, 1997.

1997: Invited Speaker on "Management of patients with previous coronary artery bypass surgery" Royal Australasian College of Physicians, Qld Branch, Noosa, October, 1997.

1998: Invited Speaker on "Coronary artery bypass surgery will be obsolete by the year 2000" Cardiac Society of Aust and NZ, Perth, 1998.

1999: Invited Speaker on "Treatment of Bifurcation Lesions - Coronary intervention at the crossroads" Cardiac Society of Aust and NZ, Wellington, NZ, August, 1999.

2000: Invited Speaker – Current Concepts Lecturer on "Cardiac troponins – Their role in clinical cardiology" Australian Association of Clinical Biochemistry. June 2000 (Sydney, Melbourne and Brisbane lectures)

2000: Invited Speaker on "Invasive management of the acute coronary syndrome" at the 2000 RACQ Annual Scientific Meeting, Coolum, 2000.

2000: Invited speaker on "Outpatient Coronary Interventions" at the Millenium Intervention Conference, Melbourne, 2000.

2001: Invited Speaker on "The new Australian Guidelines for the Management of Unstable Angina" at Contemporary Issues in Cardiology, Brisbane, January, 2001.

2001: Invited Speaker on "The diagnosis and management of the acute coronary syndromes" at Annual Cardiology Pfizer Cardiology Symposium, Surfers Paradise, January, 2001.

2001: Invited Speaker on "Innovations in Interventional Cardiology" at Challenges in Cardiology Brisbane, April 2001.

2001: Invited Speaker on "The new chest pain evaluation strategy" at Qld Clinical Weekend, 21- 22nd July 2001.

2002: Invited Speaker on "Transluminal ablation of Septal Hypertrophy" at the Interventional Cardiovascular Symposium, World Congress of Cardiology, Sydney, May 2002.

2002: Invited Speaker on "Management of the acute coronary syndromes", at the Cardiology Symposium 2002, Bristol Myers Squib, Surfers Paradise.

2003: Invited Speaker on "Drug eluting stents" at Challenges in Cardiology, Brisbane, June 2003.

2003: Invited speaker on "Clinical Practice Guidelines: Writing and Implementation"; "Drug Eluting Stents"; "Acute coronary syndrome: diagnosis and management" and "A-Z Study" at the Cardiac Society of Aust NZ, Adelaide, Adelaide, August, 2003.

2004: Invited Speaker on "Management of the acute coronary syndrome" at the Quality and Innovation in Cardiac Care 2004, Princess Alexandra Hospital, Brisbane.

2004: Invited Speaker on "The Acute Coronary Syndrome", "Advances in Non-Coronary Percutanous Interventions" at Tasmanian Cardiology Symposium Nov, 2004.

2004: Invited Speaker on "Fish Oils – Music for your heart", at Controversies in Cardiology, Surfers Paradise May, 2004.

2005: Invited Speaker on Metabolic Syndrome, at Controversies in Cardiology, Surfers Paradise May, 2005.

ACCEL Interviews: (American College of Cardiology Extended Learning - audiotape series)

September 1997: Balloon valvuloplasty – C Aroney.

December 1998: Coronary bypass surgery will be obsolete in the new millennium – C Aroney.