Final Project Report:

New South Wales arm of the
Discharge Management of Acute
Coronary Syndromes Project
June 2008- December 2009

A Multi-Centre Drug Use Evaluation in Hospitals

NSW TAG Project Team:
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About NSW TAG

NSW Therapeutic Advisory Group (NSW TAG) is an independent, not-for-profit organisation promoting quality use of medicines (QUM) in NSW public hospitals, funded by Health System Quality, Performance and Innovation Division, NSW Department of Health. The NSW TAG membership represents Drug and Therapeutics Committees (DTCs) across the spectrum of public hospitals in NSW, from tertiary referral centres to rural and remote institutions. Part of NSW TAG’s core business is to provide advice and share information on safety and quality issues relating to medicines to the NSW TAG network, the NSW Department of Health and other QUM organisations.
Executive Summary

Background
The DMACS project aimed to address evidence to practice gaps identified in the management of patients with Acute Coronary Syndromes (ACS)\(^1\).

Aims
To improve management of acute coronary syndromes (ACS) at the point of discharge, across the continuum of care.
To optimise:
- prescription of cardiovascular medications following an ACS event
- provision of education on lifestyle modifications to patients following an ACS event.
- communication between hospitals and (i) patients and/or carers and (ii) community healthcare providers regarding post discharge management of patients following an ACS event.

Methods
The National Heart Foundation (NHF) and Cardiac Society of Australia and New Zealand (CSANZ) guideline\(^2\) was identified as the national standard for the management of patients with ACS. Compliance with best practice recommendations could be evaluated and an attempt made to standardise practice and improve patient outcomes.

NSW hospitals were recruited to participate on a voluntary basis. Invitations were sent to all NSW TAG and TAG Net members in April 2007. For each hospital expressing interest, endorsement and support was required from higher management (Chief Executive Officer and the Drug and Therapeutics Committee). The Human Research and Ethics Committee at St Vincent’s Hospital was able to approve all hospitals in NSW wanting to undertake the quality improvement project although site specific assessments were required by each area health service (private hospitals not included). A project team was formed which consisted of at least one hospital project co-ordinator. The co-ordinator was key in liaising with and reporting to NSW TAG and the hospital team.

Four key messages were devised, based on the Management of Acute Coronary Syndromes guideline\(^2\) and in consultation with an expert reference committee:

DMACS KEY MESSAGES
- Initiate long term-management plan for ACS patients
- Consider guideline-recommended medications for all ACS patients
- Identify risk factors and refer all ACS patients to secondary prevention programs
- Communicate management plan to the patient, carers & the community health care providers.
Training in academic detailing, through a two day workshop was offered to two project personnel from each hospital. The above key messages were delivered by these personnel through the academic detailing sessions conducted at their site.

A suite of intervention tools were developed by the national project team and provided to clinicians through hospital project teams. Intervention tools included:

- DMACS discharge checklist
- DMACS Discharge Summary Template
- Bookmark- with recommendations for prescribers
- Academic detailing cards- to be left as a “gift” after an academic detailing session
- Powerpoint slides for group presentations
- e-DUE Audit Program- to store data for each audit
- Chest Pain Action Plan- for patient use

A baseline audit was undertaken to gain an understanding of current practice within each hospital. Once gaps in practice were ascertained, an educational intervention began which included feedback to clinicians on results from the baseline audit. A post-intervention audit followed, the results of which will inform other areas requiring intervention.

Major Findings
Fourteen hospitals expressed their interest in the project, however two hospitals withdrew prior to completion of the baseline audit due to insufficient resources and an unexpected low rate of patients being discharged with an acute coronary syndromes diagnosis. All twelve remaining hospitals completed the project.

233 patients were recruited in the baseline audit. Results showed uncertainty in the provision of education to patients, in particular with respect to their discharge medications and smoking cessation counselling provided to current smokers. There were also inconsistencies in the information believed to be documented to, and that received by, general practitioner (GP). Similarly, where prescription of medication (as advised by the guideline) were recommended (ie antiplatelet agents, ace inhibitors/angiotensin II receptor antagonists, statins and beta-blockers), inadequate documentation supported the decision not to prescribe.

Academic detailing and group education sessions provided during the intervention were documented in a log kept by hospital project teams. 646 hospital staff and students in NSW were provided education about the DMACS project and baseline findings in one of the group sessions delivered by a project team member, while 112 doctors, 92 nurses and 53 pharmacists participated in one-on-one academic detailing sessions.

A total of 326 patients were recruited to participate in the post-intervention (follow-up) audit.
Marked improvement could be seen in the number of patients with documentation supporting the education they’d received about their medications 55% v 69% (p=0.001), and smoking cessation 50% v 86% (p<0.001). This trend could also be seen the number of patients being referred to cardiac rehabilitation according to documented evidence 56% v 73% (p<0.001).

Information, in the form of an acute coronary syndrome management plan was provided to more patients {87% v 95% (p=0.003)} but little change could be seen in the information provided by the hospital to the patient’s GP {85% v 73% (p=0.005)}.

Prescription of all four guideline-recommended medications also improved from baseline to follow-up audits {52% v 61% (p=0.026)}

Conclusion
New South Wales hospitals have achieved modest improvement for the discharge management of patients with acute coronary syndromes. A rigorous educational intervention which included academic detailing as one of many strategies to improve discharge management of ACS patients has increased the prescription of all four classes of guideline-recommended medications, overall referral to cardiac rehabilitation, discharge medication and smoking cessation counselling and communication to patients and carers.

Results suggest that improvement, particularly communication to GPs will require further efforts from hospital project teams.
Background

The DMACS project is the third national quality use of medicines initiative supported by the National Prescribing Service (NPS) through the ‘Hospital QUM Program’. The DMACS project provided an opportunity to address evidence to practice gaps identified in the management of patients with Acute Coronary Syndromes (ACS).

Evidence to practice gaps targeted in the DMACS project include:

- Eligible patients not receiving guideline recommended cardiovascular medications for secondary prevention of cardiac disease
- Lack of education to patients on risk reduction through lifestyle modifications
- Poor timeliness and or quality of communication between hospitals, patients and their relevant community based healthcare providers

The National Heart Foundation (NHF) and Cardiac Society of Australia and New Zealand (CSANZ) guideline\(^2\) was identified as the national standard for the management of patients with ACS. Compliance with best practice recommendations could be evaluated and an attempt made to standardise practice and improve patient outcomes.
Aims

The overall aim of DMACS is to improve management of acute coronary syndromes (ACS) at the point of discharge, across the continuum of care. This was approached through the following aims:

**Aim 1: To optimise the prescription of cardiovascular medications following an ACS event**

*Specifically*
- To optimise prescription of recommended cardiovascular medications, including aspirin, clopidogrel, beta blockers, angiotensin-converting enzyme inhibitors or angiotensin II receptor antagonists, statins and nitrates, to all patients at discharge.

**Aim 2: To optimise provision of education on lifestyle modifications to patients following an ACS event.**

*Specifically*
- Prior to discharge:
  - to promote referral of patients to and attendance at cardiac rehabilitation
  - to promote provision of advice on smoking cessation to patients who smoke.

**Aim 3: To optimise communication between hospitals and (i) patients and/or carers and (ii) community healthcare providers regarding post discharge management of patients following an ACS event.**

*Specifically*
- To promote education of patients at discharge regarding prescribed medications, including the benefits of long term continuation of medications as advised
- To provide a template ACS management plan (includes medication plan, chest pain plan and risk factors) to all participating hospitals for distribution to (i) patients and/or carers and to (ii) general practitioners and other healthcare providers as appropriate.
Key Messages

1. Initiate long term-management plan for ACS patients

2. Consider guideline-recommended medications for all ACS patients

3. Identify risk factors and refer all ACS patients to secondary prevention programs

4. Communicate management plan to the patient, carers & the community health care providers
Project timeline:
Figure 1 shows the major events that occurred in planning and recruiting hospitals, prior to commencement of the project at hospital level. Figure 2 outlines the timeline of activities undertaken in hospital sites during the project.

**Figure 1. Prior to project commencement**

<table>
<thead>
<tr>
<th>Event</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Apr</td>
<td>May</td>
</tr>
<tr>
<td>NSW TAG topic consultation begins</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Topic decision completed</td>
<td></td>
<td></td>
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<tr>
<td>Snapshot Survey</td>
<td></td>
<td></td>
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<tr>
<td>Development of project materials</td>
<td></td>
<td></td>
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<tr>
<td>Expression of Interest</td>
<td></td>
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</tbody>
</table>
Figure 2. Project activities at participating sites

<table>
<thead>
<tr>
<th>Activity</th>
<th>2008</th>
<th></th>
<th>2009</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Jun</td>
<td>Jul</td>
<td>Aug</td>
<td>Sept</td>
</tr>
<tr>
<td>Patient recruitment begins</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline IMRR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline GP Survey</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Baseline Patient Telephone</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Survey</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Academic Detailing Workshops</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intervention</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Follow-up IMRR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Follow-up GP Survey</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Follow-up Patient Telephone</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Survey</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project completion</td>
<td></td>
<td></td>
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Methodology

Consultation
Consultation with the NSW TAG membership began in April 2007. Members were asked to identify topics that could be addressed in the NPS Multi-Centre Drug Use Evaluation (DUE) program. Topics identified by the membership included the management of agitation in the elderly, prevention and treatment of nausea and vomiting, appropriate use of antibiotics/surgical prophylaxis, management of heart failure/acute coronary syndromes and management of diabetic complications. Members were asked to then prioritise these topics in terms of local importance. Management of diabetic complications and the appropriate use of antibiotics/surgical prophylaxis were identified to be of greatest importance.

In June of 2007, the national project team met in a face-to-face meeting to further discuss priorities for each participating state (NSW, Queensland, Victoria, South Australia and Tasmania). At the meeting’s conclusion, priorities of national interest were established. Topics included antibiotics in surgical prophylaxis and the management of acute coronary syndromes.

NSW TAG subsequently sought further consultation from the membership to assist in selecting the final topic. The preference from NSW was antibiotics in surgical prophylaxis, however it was decided in July 2007 that the national project team would undertake the management of acute coronary syndromes for the next DUE, as part of the national hospital QUM program.

Snapshot Survey
A snapshot of current prescribing practice in the management of ACS at discharge was conducted in July/August 2007. The NSW TAG QUM Indicator 5.1 was used to describe use of antiplatelets, statins and beta-blockers for ACS patients at the point of discharge. A total of 15 hospitals participated in the snapshot, providing data on 433 patients. A summary of the findings are listed in the table below.

<table>
<thead>
<tr>
<th>Drug</th>
<th>% of pts prescribed each drug</th>
<th>Range (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antiplatelet</td>
<td>96</td>
<td>77 – 100</td>
</tr>
<tr>
<td>Statin</td>
<td>78</td>
<td>43 – 97</td>
</tr>
<tr>
<td>Beta-blocker</td>
<td>67</td>
<td>50 – 93</td>
</tr>
<tr>
<td>All three</td>
<td>57</td>
<td>37 – 80</td>
</tr>
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See Appendix 1 for the full results of the NSW TAG snapshot survey.
**Design & setting**
This project used the quality improvement methodology Drug Use Evaluation (DUE – Figure 3). This methodology uses four steps: data collection, data evaluation, feedback of evaluated data and action (or intervention). A post-intervention (follow-up) audit is used to monitor and measure improvements in practice.

![DUE Cycle Diagram](image)

Figure 3. DUE cycle (Reproduced from the Society of Hospital Pharmacists of Australia Standards of Practice for Drug Usage Evaluation in Australian Hospitals)

A national expert reference committee was formed in late October 2007. This committee oversaw work undertaken by the national project team, such as development of project aims and objectives and the production of project resources. The committee consisted of experts in a variety of fields and also included a consumer. Members are listed below.

**DMACS National Expert Advisory Committee**
- A/Professor Constantine N Aroney (Cardiologist)
- A/Professor David Brieger (Cardiologist)
- A/Professor Derek P B Chew (Cardiologist)
- Mr Richard McClusky (Consumer)
- Professor Patricia Davidson (Nurse)
- Dr Frederick deLooze (General practitioner)

Associate Professor Brieger was the key opinion leader and reference for queries from the NSW arm of the project.

**Hospital Recruitment**
An invitation to participate in the DMACS project was sent to all NSW TAG members and to NSW private hospitals through the Australian Private Hospitals Association on February 12th, 2008. Expressions of interest were received by a total of 14 hospitals. All fourteen hospitals were recruited to participate in the NSW arm of DMACS.

Two hospitals later withdrew from the project. Royal North Shore Hospital withdrew in May 2008 due to lack of resources available to undertake project activities. Blacktown Hospital withdrew in September 2008 due to insufficient patient numbers to undertake the baseline audit.
Recruited hospitals were provided with a DMACS project manual, developed by the national project team. The manual outlined the project methodology and provided a guide to data collection and data entry.

**Patient Selection**
Patients identified were screened for their eligibility to enroll in the project against predetermined inclusion and exclusion criteria. See Appendix 2.

**Ethics Review**
NSW TAG submitted the DMACS project to the St. Vincent's Hospital Human Research Ethics Committee for review as a multi-centre study on the 21st of April 2008. Note that this was not required for the two private institutions. Expedited ethical approval was granted for DMACS on 29th April 2008 as it was considered a minimal risk multi-centre project.

As part of the NSW Health multi-centre ethical review process, each participating public hospital was required to complete a site-specific assessment form via their local research governance office. This proved to be a significant barrier for some hospitals and resulted in a delay in the commencement of the project for the majority of hospitals.

**Audit Tools**
Recommendations from the NHF and CSANZ guideline were identified as ‘best practice’ and were reviewed for recommendations relating to the discharge management of ACS patients. A literature review was also conducted to confirm the project aims, objectives and measures.

The national project team, in consultation with the expert reference committee, agreed upon the development of three data collection (audit) tools for use in this project (see Appendix 3):

- Inpatient Medical Record Review (IMRR);
- General Practitioner (GP) Survey
- Patient Telephone Survey.

These tools addressed aspects of patient care within the hospital and into the community, with a chance to follow the patient in the longer term after their event.

The IMRR was conducted retrospectively and assessed documented evidence of care provided in relation to the management of patients with ACS. Information was obtained by reviewing individual patient medical records including the patient notes, discharge summary and discharge prescription.

The GP Survey was sent to all participating patients’ GPs (via fax or mail) approximately two weeks after patient discharge. This survey assessed timeliness of the discharge summary, the provision of an ACS management plan within the summary and the GPs perception of the quality of the information received.
A Patient Telephone Survey was conducted approximately three months after the patient’s discharge from hospital. This survey assessed medication use and adherence, referral and attendance at cardiac rehabilitation/secondary prevention programs (including reasons for non-attendance) and smoking status of the patient.

Data collection tools (IMRR, GP Survey and Patient Telephone Survey) were initially created in paper form and piloted across a number of states. The pilot survey assessed the utility of the data collection forms including the layout, language used and ability to identify the required data. Minor changes were made to the forms as a result of the pilot.

Based on feedback from the acute post-operative pain project (APOP) (the previous quality improvement project for hospitals), the national project team agreed on the need to form an e-DUE subcommittee. This subcommittee was to act as a liaison between the national project group and the decision support team at NPS. The subcommittee met for the first time in December 2007 and agreed to their terms of reference and communication strategy. Members of the e-DUE subcommittee included: Angela Wai (NPS project lead), Pauline Hipwell (NPS decision support), Anna Tompson (TAS project officer) and David Maxwell (NSW project officer).

The subcommittee met on a weekly basis, via teleconference, to oversee the development of the electronic database, including the conversion of the paper-based data collection tools into an electronic format and the development of an automated feedback report based on the key measures of the project. The process of data entry was also piloted in a small number of hospitals, prior to release of the final e-DUE program.

**Data management**

All data were de-identified on hospital premises prior to transmission to external sites. Each hospital was provided with a unique identifier and patients were assigned a patient specific code that was used when submitting data for the purpose of external evaluation and reporting.

Data, collected via the three audit tools, were entered into the e-DUE program. Hospital project teams had the ability to enter information directly into the database where they chose, thus eliminating the need to use paper versions of the tools. Where paper-based data collection tools were used, the collection tool was stored in a locked filing cabinet after data had been entered. Data entered into the computer database were secured by password.

Upon completion of data entry into the e-DUE program for each patient, a feedback summary report could be produced within the tool. This summary could be produced immediately and reported on key measures. This feature provided hospital project teams with the opportunity to monitor changes more closely as the project progressed.

Key measures for improvement included in the automated feedback report:

- prescription of all four classes of guideline recommended cardiovascular
medications

- referral to cardiac rehabilitation/secondary prevention programs
- ACS management plan communicated to the patient/carer and GP.

De-identified data entered into the e-DUE program was submitted to NPS for analysis at the end of each audit. NPS produced three feedback reports for each audit period, representative of each of the audit tools used. De-identified results were provided to individual sites, displayed against aggregated state and national results.

**Data Collection**
Baseline data collection was scheduled to commence on June 1st 2008. This was not realised by the majority of NSW hospitals due to the time required to complete the site-specific ethical review. Patient recruitment was only able to commence after approval had been obtained from the relevant research governance office. Only two public hospitals had obtained this approval and commenced patient recruitment by the end of June. The two private institutions were able to commence patient recruitment in June. All hospitals had commenced patient recruitment by the end of July.

To maximise the impact of educational activities, the intervention period of DMACS was extended to capture the rotation of medical staff at the beginning of 2009. This extension also allowed educational activities to occur after the Christmas and New Year holiday period during which general hospital activity may be reduced. Patient recruitment for the follow-up audit commenced in April 2009.

**Strategies for Intervention/Change**
A multi-faceted approach was used for the DMACS intervention which included a suite of tools to accompany the roll-out of formal, targeted education to clinicians.

Point-of-prescribing prompts such as the DMACS bookmark and ACS discharge checklist were implemented to guide prescribers in their documentation of the patient’s stay and future management.

Complementary PowerPoint presentations were provided to hospital project teams, four presentations were provided in total. The first three presentations were representative of each of the baseline feedback reports provided by NPS and included results for key measures on hospital, state and national levels. The fourth presentation combined all three audit tools and compared results for key measures in baseline and post-intervention (follow-up) audits, at all levels. Hospital project teams used these presentations to deliver results and feedback to staff at grand rounds and other organised forums.

In order to obtain the greatest effect with academic detailing sessions, hospital project teams targeted opinion leaders and other key staff managing ACS patients within the hospital. Each individual detailed was left with a detailing card as a “gift” that served as a reminder of the DMACS key messages.
Other intervention tools included a wallet sized chest-pain action plan, given to patients to ensure they know- “What to do” in the event of further chest pain and a discharge summary template for use in hospitals.

**Academic Detailing**

Academic detailing, or one-on-one education sessions formed a significant part of the education intervention for DMACS.

Training for this type of educational intervention involved a two day workshop, co-hosted by NSW TAG and NPS. NSW held two academic detailing workshops in November 2008 and all NSW hospitals nominated two representatives to attend one of these workshops. (See Appendix 4 for Participant List).

Associate Professor David Brieger provided the therapeutic briefing. This presentation was recorded during the second workshop and was included on the NPS DMACS website as an on-line resource for project teams.

A group of health professionals, who were otherwise uninvolved with the project, were invited to participate in the workshop program. Participation involved role plays and/or panel discussions with those learning the skill of academic detailing. The guests provided consistently positive feedback on the DMACS initiative and the activities they had contributed to during the workshops.

Academic detailing sessions and group sessions delivered by trained project personnel during the education intervention were documented in DMACS intervention activity logs and have been included as part of the results section of this document.

The academic detailing workshop evaluation summary from NSW participants has been included as Appendix 4.
Project Evaluation

Table 2 compares the time and methods required for data collection and patient recruitment in NSW hospitals in baseline and follow-up audits.

### Table 2. NSW Data Collection Evaluation Summary

<table>
<thead>
<tr>
<th>Period of recruitment:</th>
<th>Baseline</th>
<th>Follow-up</th>
<th>Total Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum (days)</td>
<td>185</td>
<td>150</td>
<td>167.5</td>
</tr>
<tr>
<td>Minimum (days)</td>
<td>12</td>
<td>48</td>
<td>30</td>
</tr>
<tr>
<td>Average</td>
<td>45.1</td>
<td>68.53</td>
<td>56.8</td>
</tr>
<tr>
<td>Recruitment officer:</td>
<td>Nurse</td>
<td>Nurse</td>
<td>N/A</td>
</tr>
<tr>
<td>(for the majority of NSW hospitals, by profession)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patients refusing to enrol:</td>
<td>Average/hospital</td>
<td>3</td>
<td>1.2</td>
</tr>
<tr>
<td>Total for NSW</td>
<td>27</td>
<td>11</td>
<td>19</td>
</tr>
<tr>
<td>Data Collection Method (majority):</td>
<td>Paper and e-DUE</td>
<td>Paper and e-DUE</td>
<td>N/A</td>
</tr>
<tr>
<td>Average time/ Patient (minutes) in NSW for:</td>
<td>IMRR completion</td>
<td>12.5</td>
<td>12.7</td>
</tr>
<tr>
<td>e-DUE entry</td>
<td>4.6</td>
<td>3.7</td>
<td>4.1</td>
</tr>
<tr>
<td>Predominant problem found when reviewing notes:</td>
<td>Inadequate documentation</td>
<td>Inadequate documentation</td>
<td>N/A</td>
</tr>
<tr>
<td>Ease of use of e-DUE average rating: (Rating: 1 (extremely easy) - 5 (extremely difficult))</td>
<td>1.5</td>
<td>1.7</td>
<td>1.6</td>
</tr>
<tr>
<td>Number of patients unable to be contacted for follow-up survey</td>
<td>Average/hospital</td>
<td>2.4</td>
<td>2.3</td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td>28</td>
<td>28.5</td>
</tr>
</tbody>
</table>
Comments from NSW hospital teams about the e-DUE tool:
- Simple once educated about how to use it. Unable to post electronic results directly to NPS- manual simple to read to determine how to send data
- Local IT administrator had to send report to NPS
- Easier the second time around

General comments from NSW hospital teams:
- Found getting GPs response very frustrating
- Quite a few GP surveys were not returned- one returned six months later!
- This has been a really worthwhile project- it has strengthened the lines of communication between our hospital, pharmacists, cardiologists and GPs.

Communication Strategy

Teleconferences
NSW TAG conducted monthly teleconferences with hospital project leads. These meetings were used to inform project teams of updates and progress during the project and provided a forum for the exchange of ideas. Discussion highlights and action points were circulated to all project team leads after each teleconference.

Throughout the educational intervention, NSW TAG encouraged and facilitated a DUE “Tool Exchange”, whereby hospitals submitted (via e-mail) tools developed at a local level. Tools were then circulated to all participating NSW hospitals, to enable further consideration and adaptation at the different sites.

Newsletters
Monthly newsletters were used to highlight relevant aspects of the project and serve as a formal means of communication to local project teams between teleconferences. They were also circulated to the wider NSW TAG membership for information on project activities. (Appendix 5)

DMACS Webpage
The NSW TAG DMACS webpage http://www.ciap.health.nsw.gov.au/nswtag/dmacs.html has been maintained as a mechanism to inform the wider community of the progress made in NSW DMACS hospitals and serve as a place dedicated to promotion of the project. The webpage provided updates on activities and important information and messages to participating hospitals. The monthly newsletters were also published here.

Engagement with National Bodies
In February 2008, NSW TAG was asked to review resources to be distributed as part of the National Heart Foundation (NHF) campaign, “Championing Hearts 2008-2012.” The campaign encompassed various strategies including “The Warning Signs of Heart Attack”. Resources for review included information for health professionals when counselling patients after a heart attack, a “Heart attack Warning Signs” brochure and a “What to do when you have angina” brochure.
NSW TAG also collaborated with the NSW Division of the NHF, to put forward a proposal for the distribution of the NHF resources (described above) to NSW DMACS hospitals. DMACS hospitals were to receive these resources (and possibly others) free of charge for the latter half 2009. This proposal was discussed with hospital project leads and accepted at the NSW TAG DMACS teleconference held in June.

Reach and usefulness of these resources was of interest to the NHF and to assist, state based project co-ordinators created an additional three questions which were added to the patient telephone survey. These questions were reviewed and accepted by the St Vincent’s Hospital HREC.

E-mail Discussions
A moderated e-mail discussion service was offered to all NSW hospital project teams, aimed to address questions that emerged from daily participation in the project. Questions were circulated to all DMACS teams via NSW TAG. Teams were given the opportunity to provide a response within a week, after which time the responses were collated and sent to the enquiring team. One e-mail discussion was conducted during the project and has been included in Appendix 5.

Publications and Conference Presentations
In 2009, NSW TAG has presented national baseline data to international delegates at the 7th Australasian Conference on Safety and Quality in Health Care. NSW TAG also presented a paper on DMACS at the 35th Society for Hospital Pharmacists Australia National Conference in Perth. Two NSW DMACS hospital project leads also co-jointly presented at this conference, which was co-authored by NSW TAG.

Conference abstracts have been provided in Appendix 6.

The following paper was submitted to the Internal Medicine Journal, in December 2009: A. Wai, LK. Pulver, K. Oliver, A. Thompson. Multisite, quality improvement initiative to optimise discharge management of acute coronary syndromes.
Results

12 sites from NSW participated in this multi-centre quality improvement project, conducted between June 2008 and December 2009.

Participating NSW hospitals:

- Bankstown Hospital
- Bowral Hospital
- Campbelltown Hospital
- Dubbo Base Hospital
- Greater Southern Group*
- Kareena Private Hospital
- Lake Macquarie Private Hospital
- Manly Hospital
- Orange Base Hospital
- St Vincent’s Hospital
- Wagga Wagga Base Hospital
- Wollongong Hospital
*Goulburn, Bega and Cooma Hospitals

Baseline data collection

A time extension for the identification of patients in the baseline data collection phase was granted based on the delay in commencing recruitment of patients, due to the time required to complete the site-specific assessment as part of the state-wide ethics review process and the unexpected low number of patients being discharged with a diagnosis of ACS. Project leads from NSW hospitals reported an unusually high number of patients being transferred to other hospitals for interventional management (e.g. stenting), which was not predicted when the original proposal of recruiting a total 50 discharged ACS patients per site was agreed to. All hospitals had commenced patient recruitment by the end of July.

Patients for possible inclusion in the project were identified by one of four ways on entry in to hospital:

- Ward lists
- New admissions lists
- Emergency department lists
- IT department where a list of new patients admitted could be generated daily

Inpatient Medical Record Review (IMRR): Review of documented evidence of best practice

All twelve NSW sites completed the baseline and follow-up audits. Data for one hospital were excluded from the final baseline state and national results due to difficulties experienced in submitting data. In NSW, 233 patients were recruited for inclusion in the baseline audit. The post-intervention audit included 326 patients.
Demographics for each of the patient cohorts are described in Table 3 below. Breakdown of ACS discharge diagnoses are described in Figures 4 and 5.

**General Practitioner (GP) Survey: Sent to GPs 10-14 days post patient discharge**
Of the 233 surveys sent to GPs at baseline, 106 (46%) returned the survey. The post-intervention (follow-up) audit included information received from 146 GPs, 45% of the possible total.

**Patient Telephone Survey: Conducted approximately 90 days post-discharge**
NSW hospital project teams contacted 210 of the 233 patients included in the baseline IMRR. The post-intervention audit, included responses from 268 of the 326 patients enrolled in the IMRR. The additional three questions added to the patient telephone survey to determine usability of the chest pain action plan were asked by 11/12 sites.

<table>
<thead>
<tr>
<th>Table 3. Patient Demographics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Baseline</strong> (N=233)</td>
</tr>
<tr>
<td>----</td>
</tr>
<tr>
<td>Median age (years)</td>
</tr>
<tr>
<td>Female (%)</td>
</tr>
<tr>
<td>Median length of stay (days)</td>
</tr>
<tr>
<td>Diabetes (%)</td>
</tr>
<tr>
<td>Current smoker (%)</td>
</tr>
<tr>
<td>Previous ACS event (%)</td>
</tr>
</tbody>
</table>

**Discharge diagnosis breakdown:**

**Figure 4. Baseline audit**

**Figure 5. Follow-up audit**
The following DMACS results for NSW are reported according to the specified aims of the project. Where statistical analysis has been carried out, p-values have been reported in brackets beneath the follow-up result.

**Aim 1: To optimise the prescription of cardiovascular medications following an ACS event**

- CSANZ and NHF guidelines recommend the use of a combination of antiplatelet agents (aspirin &/or clopidogrel), ACE inhibitor &/or angiotensin II-receptor antagonist a beta blocker & statin.

- Tables 4, 5 and 6 describe comparisons between the baseline and follow-up audits for the prescription of cardiovascular medications in each of the three surveys. Results for the IMRR and GP Survey have been adjusted for contraindication, lack of indication and patient refusal.

### Table 4. Medications prescribed according to the IMRR

<table>
<thead>
<tr>
<th></th>
<th>Baseline (%) (N=233)</th>
<th>Follow-up (%) (N=326)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antiplatelet agents</td>
<td>98</td>
<td>98 (not significant)</td>
</tr>
<tr>
<td>ACE inhibitor and/or angiotensin II-receptor antagonist</td>
<td>72</td>
<td>76 (not significant)</td>
</tr>
<tr>
<td>ACE inhibitor</td>
<td>54</td>
<td>60 (not significant)</td>
</tr>
<tr>
<td>Beta blocker</td>
<td>76</td>
<td>83 (p=0.029)</td>
</tr>
<tr>
<td>Statin</td>
<td>89</td>
<td>93 (not significant)</td>
</tr>
<tr>
<td>Guideline-recommended ACS medications considered for prescription (4 classes)</td>
<td>52</td>
<td>61 (p=0.026)</td>
</tr>
<tr>
<td>Short-acting nitrate</td>
<td>25</td>
<td>49 (p&lt;0.001)</td>
</tr>
</tbody>
</table>
### Table 5. Medications prescribed according to GPs responding to the GP Survey

<table>
<thead>
<tr>
<th></th>
<th>Baseline(%) (N=106)</th>
<th>Follow-up(%) (N=146)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antiplatelet agents</td>
<td>100</td>
<td>93</td>
</tr>
<tr>
<td>ACE inhibitor and/or angiotensin II-receptor antagonist</td>
<td>82</td>
<td>72</td>
</tr>
<tr>
<td><strong>ACE inhibitor</strong></td>
<td>63</td>
<td>52</td>
</tr>
<tr>
<td>Beta blocker</td>
<td>75</td>
<td>82</td>
</tr>
<tr>
<td>Statin</td>
<td>94</td>
<td>90</td>
</tr>
<tr>
<td>Guideline-recommended ACS medications considered for prescription (4 classes)</td>
<td>59</td>
<td>52</td>
</tr>
<tr>
<td>Short-acting nitrate</td>
<td>41</td>
<td>39</td>
</tr>
</tbody>
</table>

### Table 6. Medications prescribed according to Patients responding to the Patient Telephone Survey

<table>
<thead>
<tr>
<th></th>
<th>Baseline(%) (N=210)</th>
<th>Follow-up (N=268)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antiplatelet agents*</td>
<td>97</td>
<td>94</td>
</tr>
<tr>
<td>ACE inhibitor and/or angiotensin II-receptor antagonist</td>
<td>70</td>
<td>71</td>
</tr>
<tr>
<td><strong>ACE inhibitor</strong></td>
<td>50</td>
<td>47</td>
</tr>
<tr>
<td>Beta blocker</td>
<td>68</td>
<td>66</td>
</tr>
<tr>
<td>Statin</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>Guideline-recommended ACS medications considered for prescription (4 classes)</td>
<td>46</td>
<td>45 (not significant)</td>
</tr>
<tr>
<td>Short-acting nitrate</td>
<td>27</td>
<td>41 (p=0.001)</td>
</tr>
</tbody>
</table>

*Includes aspirin and/or clopidogrel plus those on warfarin
Aim 2: To optimise provision of education on lifestyle modifications to patients following an ACS event.

- Education on lifestyle modification includes promotion and referral of patients to cardiac rehabilitation programs whilst in hospital and importantly, attendance at cardiac rehabilitation sessions after a referral.
- Tables 7, 8 and 9 compare baseline and follow-up results according to information received in the respective survey.

**Table 7. Referral to cardiac rehabilitation/secondary prevention programs according to IMRR**

<table>
<thead>
<tr>
<th></th>
<th>Baseline(%) (N=233)</th>
<th>Follow-up(%) (N=326)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referral to cardiac rehab (total)</td>
<td>56</td>
<td>73 (p&lt;0.001)</td>
</tr>
<tr>
<td><strong>Referral by discharge diagnosis:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STEMI</td>
<td>64</td>
<td>90 (p=0.001)</td>
</tr>
<tr>
<td>Non-STEMI</td>
<td>62</td>
<td>79 (p=0.004)</td>
</tr>
<tr>
<td>Unstable Angina</td>
<td>41</td>
<td>55 (not significant)</td>
</tr>
<tr>
<td>Unspecified ACS</td>
<td>48</td>
<td>63 (not significant)</td>
</tr>
</tbody>
</table>

**Table 8. Referral to cardiac rehabilitation (CR)/secondary prevention programs according to the GP survey.**

<table>
<thead>
<tr>
<th></th>
<th>Baseline(%) (N=106)</th>
<th>Follow-up(%) (N=146)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referral to CR or secondary prevention program reported by GPs</td>
<td>52</td>
<td>49</td>
</tr>
<tr>
<td>Of these:</td>
<td>86</td>
<td>81</td>
</tr>
<tr>
<td>% referred by hospital</td>
<td>14</td>
<td>19</td>
</tr>
<tr>
<td>% referred by GP</td>
<td>(not significant)</td>
<td></td>
</tr>
<tr>
<td>GPs report of their patient being referred to a program who had attended or were intending to go</td>
<td>79</td>
<td>77</td>
</tr>
</tbody>
</table>
Table 9. Referral advice according to patients participating in the Patient Telephone Survey.

<table>
<thead>
<tr>
<th></th>
<th>Baseline(%) (N=210)</th>
<th>Follow-up(%) (N=268)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient-reported advice to attend</td>
<td>65</td>
<td>78</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(p=0.003)</td>
</tr>
</tbody>
</table>

Of those who were advised to attend:

- Patients reporting completion | 31 | 29 |

- Education for the purposes of this project also included the provision of smoking cessation advice to patients who were smokers at the time of their admission.

Table 10. Documentation of education given to current smokers according to the IMRR

<table>
<thead>
<tr>
<th></th>
<th>Baseline(%) (N=233)</th>
<th>Follow-up(%) (N=326)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current smokers</td>
<td>21</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(not significant)</td>
</tr>
<tr>
<td>Smoking cessation counseling provided to current smokers</td>
<td>50</td>
<td>86</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(p&lt;0.001)</td>
</tr>
</tbody>
</table>

Table 11. Patient Telephone Survey

<table>
<thead>
<tr>
<th></th>
<th>Baseline(%) (N=210)</th>
<th>Follow-up(%) (N=268)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients who reported being smokers at the time of admission*</td>
<td>24</td>
<td>21</td>
</tr>
<tr>
<td>Patients who smoked at admission who continued to smoke at 90 days</td>
<td>45</td>
<td>51</td>
</tr>
</tbody>
</table>

*as a percentage of patients who answered this question
Aim 3: To optimise communication between hospitals and (i) patients and/or carers and (ii) community healthcare providers regarding post discharge management of patients following an ACS event.

- Counseling on the importance of the new medications patients are prescribed after an event and the benefits of adhering to the new regimen was a key objective of the project.

Table 12. Documented evidence of patients receiving discharge medication counseling, according to the IMRR

<table>
<thead>
<tr>
<th>Discharge medication counseling</th>
<th>Baseline(%) (N=233)</th>
<th>Follow-up(%) (N=326)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>55</td>
<td>69</td>
</tr>
<tr>
<td></td>
<td>(p=0.001)</td>
<td></td>
</tr>
</tbody>
</table>

- An ACS management plan which includes a medication plan, chest pain plan and patient risk factors was deemed the most appropriate means of optimizing communication between clinicians and patients/carers.

Table 13. ACS management plan inclusions according to the IMRR.

<table>
<thead>
<tr>
<th>Patients with documented ACS management plan:</th>
<th>Baseline(%) (N=233)</th>
<th>Follow-up(%) (N=326)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>78</td>
<td>85</td>
</tr>
<tr>
<td></td>
<td>(p=0.029)</td>
<td></td>
</tr>
</tbody>
</table>

Management plans that included:

- a list of current medications: 93 (not significant)
- a chest pain action plan: 37 (p<0.001)
- risk factor modification: 37 (p<0.001)

ACS management plan was communicated to:

- GP: 85 (p=0.005)
- Patient/carer: 87 (p=0.003)
Table 14. Content of discharge information as reported in the GP survey.

<table>
<thead>
<tr>
<th></th>
<th>Baseline(%) (N=106)</th>
<th>Follow-up(%) (N=146)</th>
</tr>
</thead>
<tbody>
<tr>
<td>An ongoing management plan</td>
<td>81</td>
<td>85</td>
</tr>
<tr>
<td>Evidence of a chest pain action plan</td>
<td>41</td>
<td>49</td>
</tr>
<tr>
<td>A list of prescribed medication</td>
<td>86</td>
<td>94</td>
</tr>
<tr>
<td>Laboratory results that require review and/or follow-up</td>
<td>55</td>
<td>64</td>
</tr>
<tr>
<td>Details of ongoing risk factor management</td>
<td>42</td>
<td>51</td>
</tr>
<tr>
<td>Details of smoking cessation strategy (where applicable)*</td>
<td>8</td>
<td>34</td>
</tr>
</tbody>
</table>

Intervention
All twelve sites participated in the educational intervention. Post-intervention data collection used the same audit tools as for baseline. An alteration was made to the Patient Telephone Survey with the addition of 3 extra questions (See Appendix 3). The extra questions were designed to ascertain the usefulness and uptake of the chest pain action plan which had been adapted from a resource created by the National Heart Foundation (NHF). NSW TAG worked closely with the Clinical Issues Manager within the NSW branch of the NHF to institute these changes to the survey and raise awareness of other NHF resources. One hospital did not distribute these cards due to concerns expressed by local opinion leaders over their appropriateness for patients who have undergone certain interventional procedures. These additional questions were not asked of patients discharged from this site. The uptake of these cards was reported to the NHF Clinical Issues Manager on the 13th of January 2010.

Table 15 and 16 below summarise the number of academic detailing sessions and group sessions undertaken in the intervention phase of the project. One hospital was unable to undertake group session activities due to lack of resources at the time of intervention. In NSW, 112 doctors, 92 nurses and 53 pharmacists participated in academic detailing sessions, whilst 198 doctors, 320 nurses and 57 pharmacists attended a group session where feedback was provided around baseline results and key messages.
## Table 15. Academic Detailing

<table>
<thead>
<tr>
<th>Hospital code</th>
<th>Intern/RMO</th>
<th>Registrar</th>
<th>Cardiologist/Physician</th>
<th>General Practitioner</th>
<th>Other Medical Practitioner</th>
<th>Nurse Unit Manager</th>
<th>CNC / Specialist/ Educator</th>
<th>RN</th>
<th>EN</th>
<th>Director of Pharmacy</th>
<th>Clinical Pharmacist</th>
<th>Other</th>
<th>TOTAL</th>
<th>Average duration (mins)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>3</td>
<td>17</td>
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<td>27</td>
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<tr>
<td>Total</td>
<td>39</td>
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<td>30</td>
<td>7</td>
<td>2</td>
<td>13</td>
<td>22</td>
<td>51</td>
<td>6</td>
<td>47</td>
<td>4</td>
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<td>261</td>
<td>14.6</td>
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</table>
### Table 16. Group sessions

<table>
<thead>
<tr>
<th>Hospital Code</th>
<th>Session Number</th>
<th>Intern/RMO</th>
<th>Registrar</th>
<th>Cardiologist/Physician</th>
<th>Other Medical Practitioner</th>
<th>Nurse Unit Manager</th>
<th>CNC / Specialist/ Educator</th>
<th>RN</th>
<th>EN</th>
<th>Director of Pharmacy</th>
<th>Clinical Pharmacist</th>
<th>Students</th>
<th>Other</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
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<td>2</td>
<td>3</td>
<td>5</td>
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**Discussion**

**Enablers**

*Intervention tools*

All tools provided for use as part of the intervention were well received by hospital project teams. Of particular note, the complementary PowerPoint presentation, pre-populated with hospital, state and national data from each of the feedback reports provided a consistent means of delivering key messages and method of reporting to clinicians. The use of standardised tools across the state ensured the spread of consistent messages regarding the management of ACS patients.

*e-DUE data entry tool*

Data entry was simple and uniform. Forcing functions within the data entry tool ensured that the final datasets were complete and minimised the need for clarification or exclusion of records prior to analysis.

**Ethics review process**

Obtaining ethics approval for quality improvement projects within NSW has been somewhat simplified by recent appointment of lead Committees able to review and endorse submissions for multi-centre research activities. The DMACS project was approved as a minimal risk multi-centre project within 8 days of the submission being received by the Committee.

**Inter-hospital collaboration**

NSW hospitals participated in regular teleconferences throughout the duration of the project. The teleconferences provided an opportunity for hospitals to discuss local project activity, to highlight success and also identify current barriers and issues regarding ACS management. Project teams were able to learn from the successes and provide support to other hospitals by discussing possible solutions to barriers. These regular meetings also provided an opportunity for NSW TAG to communicate with the project teams regarding project timelines, milestones and activity from the other states.

**Funding**

The funding provided by NPS enabled hospitals to purchase equipment to assist with delivering group education sessions and to provide external education to staff. Many hospitals also used this resource as payment of wages for project personnel.

**Collaboration between state-based co-ordinators**

The collaboration and sharing of information between state-based co-ordinators assisted in the overall coordination of national project activity. This was achieved through regular teleconferences hosted by the NPS.
**Patient Survey**

The post-discharge patient survey provided clinicians with the opportunity to gain an understanding of the effect the initial coronary event, hospital admission/management and education has had at the individual patient level. For many hospitals this type of activity is not conducted on a regular basis. Many patients appreciated the follow-up contact from hospitals which demonstrated ongoing care post discharge.

**Collaboration with other groups/bodies**

The National Heart Foundation (NHF) has been instrumental in many aspects of this project. The NHF endorsed the ACS Management Guideline and also provided a template on which the national project team could base the wallet-sized chest pain action plan. At a state level, dissemination of new resources developed by the NHF through the DMACS hospitals has not only provided the hospitals with additional, unexpected resources for the latter half of 2009, but has increased the awareness and uptake of these resources for the NHF.

**Barriers**

**Ethics review process**

As part of the multi-centre ethics review model, all participating public hospitals were required to complete a site specific assessment to confirm local support and resources for the proposed project/study. The time required to complete this assessment was significantly longer than had been allowed for within the project plan, resulting in the postponement in the commencement of baseline patient recruitment.

**Recruitment**

The project exclusion criteria, precluding patients that were transferred to other hospitals for further treatment, limited the final number of patients recruited during the project. Although participating hospitals indicated that they were likely to reach the target of 50 ACS patients over a three month period, this was not realised in a number sites due to an unexpected number of patient transfers during the recruitment periods. Low patient numbers resulted in a lack of sensitivity and specificity of local data, with some project teams relying on state and national results and trends.

Patient numbers were also reduced in some sites due limited staff availability. In the instance where the task of patient recruitment and consent was allocated to a single person, competing tasks and priorities may have reduced the time available to undertake these project activities.

**Local project teams**

All sites were encouraged to establish a project team to assist in rolling out the DMACS project. Two people from each hospital were nominated to attend the two day workshop in Academic Detailing in November 2008. Although the number of people trained had been increased from previous projects, due to circumstances beyond individual control, formal education sessions were limited in some hospitals. One hospital was not able to deliver any group sessions to clinicians during the intervention period, due to competing tasks and priorities.
Lack of consensus with guideline recommendations
Current ACS guidelines promote provision of nitrates to all ACS patients, including patients that had had interventional surgery (stents or CABGs). Cardiologists in many sites were resistant to this recommendation as plaque instability may be the source of acute chest pain post intervention and patients with persistent pain should return to hospital without delay.

e-DUE Audit Tool
Many hospital based project teams were not able to submit their data via the internet for aggregation and evaluation. Problems arose with local firewalls and limited user rights with respect to internet access and use of local computer drives. Submission of data sometimes required involvement of NPS programmers, the state-based project co-ordinator, the hospital project lead and the relative IT department.

GP Feedback
GPs were not directly involved the DMACS project and this may have reduced the likelihood of GPs completing the DMACS surveys. Project teams reported having to send faxes numerous times in an attempt to encourage a response.
Conclusion

New South Wales hospitals have achieved modest improvement for the discharge management of patients with acute coronary syndromes.

Marked improvement could be seen in the number of patients with documentation supporting the education received regarding their medications 55% v 69% (p=0.001), and smoking cessation 50% v 86% (p<0.001). This trend could also be seen the number of patients being referred to cardiac rehabilitation according to documented evidence 56% v 73% (p<0.001).

Information, in the form of an acute coronary syndrome management plan was provided to more patients (87% v 95% (p=0.003)) but little change could be seen in the information provided by the hospital to the patient’s GP {85% v 73% (p=0.005)}.

Prescription of all four guideline-recommended medications also improved from baseline to follow-up audits {52% v 61% (p=0.026)}. (Please refer to tables in the results section for further detail.)

A rigorous educational intervention which included academic detailing as one of many strategies to improve discharge management of ACS patients has increased the prescription of all four classes of guideline-recommended medications, overall referral to cardiac rehabilitation, discharge medication and smoking cessation counselling and communication to patients and carers.

Results suggest that improvement, particularly communication to GPs will require further efforts from hospital project teams.
Recommendations

Management of Acute Coronary Syndromes

- The results of the DMACS project should be shared with the NHF, ANZCS and other relevant organisations involved with the management of ACS patients.

- Feedback should be provided to the ACS clinical-guideline writing group regarding the lack of consensus on the recommendation of nitrates being prescribed to all ACS patients identified during the DMACS project.

Project Methodology

- Initial site visits by the state-based project co-ordinators should be incorporated into future projects. These visits would provide an opportunity to establish links between local project teams and the state co-ordinator, as well as an opportunity for state coordinators to confirm with the project lead requirements and resources needed during the course of the project.

- Opportunities to embed changes into local practice should be considered during the planning of future initiatives. Participating sites should also be encouraged to consider possible systems changes that could be implemented to ensure sustained improvements in patient care.

- The e-DUE program used to enter and evaluate local data throughout the project should be made available as a stand-alone tool. This stand-alone tool would encourage DMACS sites to continue to audit ACS management in the future and allow non-participating hospitals to access the audit tool and relevant resources. Ideally the release of the tool should occur at the completion of project activity and be accompanied by a formal promotional campaign.

- Wall-posters developed by participating hospitals were reported to be effective in influencing clinicians at the point of prescribing (e.g. placed in the doctor’s office and other strategic positions around the hospital). Future initiatives should include the use of these prompts, and be developed at a national level to ensure a consistent approach across all sites.

- To ensure social marketing techniques, such as academic detailing, are utilised effectively and efficiently in future initiatives, a “time-out” principle should be applied at participating sites. Dedicated time is needed for the detailer and the staff members being visited as part of the educational intervention.

Opportunities for Partnerships

- Collaboration with the National Heart Foundation has aided amicable outcomes from work undertaken in this project. Partnerships with relevant national professional bodies at state and national levels should be identified and established in future quality improvement activities.
Appendix 1 - Snapshot Survey Results

Aim:
To describe current prescribing practice in the management of acute coronary syndrome (ACS) at the point of discharge in NSW public hospitals.

Methods:
NSW TAG and TAGNet hospitals were invited to participate in a snapshot medical record audit, using the draft ACS indicator from the 'Indicators for Quality Use of Medicines in Australian Hospitals'.

Participating hospitals were requested to identify 30 patients using the ICD-codes I20 - I25 for ischaemic heart diseases. Hospitals were then asked to review the medical records and or electronic discharge summaries to complete the above indicator and record the results on a de-identified patient data collect sheet. Patients must have been discharged from the hospital between July 2006 and June 2007 to be included.

Hospitals submitted their data sheets to NSW TAG, by fax or email, and results were summarised by hospital as well as an aggregated summary. Summary results are presented below. The snapshot results were also compared to similar published Australian data.

Results:
A total of 15 hospitals participated, comprising 10 principal referral hospitals, 2 large major city hospitals and three medium major city and regional hospitals. A total of 433 patients were included in the snapshot. NB: One institution identified only 13 eligible patients during the specified time period.

Summary data

<table>
<thead>
<tr>
<th>Drug</th>
<th>Av</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antiplatelet</td>
<td>95%</td>
<td>(77-100)</td>
</tr>
<tr>
<td>Statin</td>
<td>78%</td>
<td>(43-97)</td>
</tr>
<tr>
<td>B-blocker</td>
<td>67%</td>
<td>(50-93)</td>
</tr>
<tr>
<td>All three</td>
<td>57%</td>
<td>(37-80)</td>
</tr>
</tbody>
</table>

Comparison to other published Australian studies

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Antiplatelet</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>95%</td>
</tr>
<tr>
<td>Aspirin</td>
<td>89% / 90%</td>
<td>90%</td>
<td>97%</td>
<td>90%</td>
<td>-</td>
</tr>
<tr>
<td>Clopidogrel</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>66%</td>
<td>-</td>
</tr>
<tr>
<td>Statin</td>
<td>68% / 77%</td>
<td>83%</td>
<td>82%</td>
<td>88%</td>
<td>78%</td>
</tr>
<tr>
<td>b-blocker</td>
<td>76% / 77%</td>
<td>83%</td>
<td>85%</td>
<td>75%</td>
<td>67%</td>
</tr>
<tr>
<td>ACE-I</td>
<td>60% / 70%</td>
<td>66%</td>
<td>82%</td>
<td>73%</td>
<td>-</td>
</tr>
<tr>
<td>All three</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>57%</td>
</tr>
<tr>
<td>All five</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>39%</td>
</tr>
</tbody>
</table>

^before and after intervention report, sig increase in ACE-I and statin use (p<0.05)
*only included pts eligible for the above therapies
Appendix 2 - DMACS Inclusion and Exclusion Criteria

Inclusion Criteria

- Adult (>18 years old)
- Hospital inpatients being discharge to home, to an aged care facility or to a rehabilitation hospital (but not transferred to another acute care hospital) with a discharge diagnosis of ACS. Diagnoses may therefore include STEMI, NSTEMI, unstable angina and unspecified ACS.

Exclusion Criteria

- Paediatric patients (< 18 years old)
- Patients not admitted to hospital as an inpatient (ie. ACS patients admitted to and discharged directly from the emergency department)
- Patients being transferred to another acute care hospital (eg tertiary centre) for ongoing medical care.
## Appendix 3 - Audit Tools

### DISCHARGE MANAGEMENT OF ACS (DMACS) PROJECT
Inpatient Medical Record Review

1. **PATIENT DEMOGRAPHICS**
   - Patient Study Number: ______________
   - Gender: Male / Female
   - Postcode: ______________
   - Date of birth: __/__/____
   - Date of Admission: __/__/____
   - Date of Discharge: __/__/____
   - Is this patient of Aboriginal and/or Torres Strait Islander origin? Yes / No
   - Is this a non-English speaking patient? Yes / No

2. **ADMISSION HISTORY**
   - Were any of the following documented in the patient’s admission notes? (circle one option for each of the following)
     - Obesity: Yes / No
     - Dyslipidaemia: Yes / No
     - Hypertension: Yes / No
     - Diabetes: Yes / No
     - Previous ACS event: Yes / No
     - Previous percutaneous coronary intervention (PCI): Yes / No
     - Previous coronary artery bypass graft (CABG): Yes / No
     - Congestive cardiac failure (CCF or CHF): Yes / No
     - Renal impairment: Yes / No
   - Smoking status: Never / Current / Former / Unknown
   - ACS medications at admission: (you may circle more than one option – except if NIT)
     - Aspirin / Clopidogrel / ACEI* / ARB* / Beta-blocker / Statin / Short acting nitrate / Nil

3. **INTERVENTION (during this admission)** (circle one option for each of the following)
   - Percutaneous coronary intervention (PCI): Yes / No
     - If Yes, Stent type: Bare metal / Drug eluting / Both / Unknown
   - Cardiac surgery: Yes / No
     - If Yes, Procedure: Bypass graft’s / Other ______________

4. **DISCHARGE** (circle one option for each of the following)
   - Discharge Diagnosis: STEMI / NSTEMI / Unstable angina / Unspecified ACS
   - Discharged by: Cardiology (medical) / Cardiac Surgery / Other: ______________
   - Discharged to: Home / Hostel / Nursing home / Rehabilitation hospital / Other: ______________
   - Was there documented evidence of patient being provided with the following?
     - Discharge medication counselling? Yes / No
     - Smoking cessation counselling? Yes / No / NA
     - Referral to cardiac rehabilitation / secondary prevention program? Yes / No
     - Was any ACS management plan documented? Yes / No
       - 4.7.1 Please circle ‘yes’ if the documented ACS management plan contained any of the following information:
         - A list of current medicines Yes / No
         - Chest pain action plan Yes / No
         - Risk factor modification Yes / No
       - 4.7.2 Was the documented ACS management plan communicated to the:
         - Patient Yes / No
         - GP Yes / No

*ACE inhibitor = Angiotensin Converting Enzyme Inhibitor, ARB = Angiotensin Receptor Blocker
### Appendix 3 - Audit Tools Continued

**Medications at Discharge**

Did the patient receive any of the following discharge medication(s) or prescription(s) for ongoing ACS management? Circle Yes or No for each of the drugs/drug classes below. If No, circle the reason why it was not provided/prescribed at discharge. Finally, if the drug was contraindicated please fill in the applicable documented reason for contraindication.

<table>
<thead>
<tr>
<th>Medication</th>
<th>Yes / No</th>
<th>Reason for contraindication</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aspirin</strong></td>
<td>Yes / No</td>
<td>If No: not indicated / on warfarin / pt refused / contraindicated / not documented</td>
</tr>
<tr>
<td><strong>Clopidogrel</strong></td>
<td>Yes / No</td>
<td>If No: not indicated / on warfarin / pt refused / contraindicated / not documented</td>
</tr>
<tr>
<td><strong>ACE inhibitor</strong></td>
<td>Yes / No</td>
<td>If No: not indicated / pt refused / contraindicated / not documented</td>
</tr>
<tr>
<td><strong>ARB</strong></td>
<td>Yes / No</td>
<td>If No: not indicated / pt refused / contraindicated / not documented</td>
</tr>
<tr>
<td><strong>Beta-blocker</strong></td>
<td>Yes / No</td>
<td>If No: not indicated / pt refused / contraindicated / not documented</td>
</tr>
<tr>
<td><strong>Statin</strong></td>
<td>Yes / No</td>
<td>If No: not indicated / pt refused / contraindicated / not documented</td>
</tr>
<tr>
<td><strong>Short-acting nitrate</strong></td>
<td>Yes / No</td>
<td>If No: not indicated / pt refused / contraindicated / not documented</td>
</tr>
</tbody>
</table>

**DOCUMENTED REASON FOR CONTRAINICATION:**

- Allergy / intolerance
- Bleeding or clot disorder
- Hx of GI bleed or active peptic ulcer
- Unknown

**Details (generic and/or trade name):**

---

**COMMENTS:** (For local use only – not for entry into the DMACS database)

---

**Patient Evaluation:** Contact date: / /  

**GP Evaluation:** Sent: / /
Appendix 3 - Audit Tools Continued

Discharge Management of Acute Coronary Syndromes Project
General Practitioner Survey

<Date faxed>

Dear Dr <GP’s name>,
Re: <patient’s name>

<Patient’s name> has recently been discharged from <hospital name> and has consented to participate in the project, Discharge Management of Acute Coronary Syndromes, a National Prescribing Service Quality Improvement Initiative®. This project aims to improve the continuity of care for patients admitted with Acute Coronary Syndromes (ACS). We would like to gain your opinion regarding the level of communication you received about <patient’s name>’s ongoing management of ACS. We would appreciate you taking a few minutes to complete this survey and fax it back to <hospital contact, hospital name and fax number>. Your responses will be used by <hospital name> to improve discharge communication to GPs.

1. Have you received a discharge summary/letter for this patient since they were discharged from <hospital name> on <enter date of discharge>?
   
   □ Yes – go to question 2
   □ No – go to question 5

2. How many days following hospital discharge did you receive his/her discharge summary/letter?
   
   ...... days

3. Which of the following did the discharge summary/letter contain (circle responses for each option):

   | A proposed ongoing management plan (including e.g. dose titration, intended duration of therapy) | Yes | No |
   | Evidence this patient has a current chest pain plan (including e.g. short-acting nitrate use, emergency procedures) | Yes | No |
   | A list of prescribed medications | Yes | No |
   | Lab results that require review and/or follow-up (as appropriate) | Yes | No |
   | Detail regarding ongoing risk factor(s) management (including e.g. high blood pressure and cholesterol, diabetes, nutrition) | Yes | No |
   | Specifically, detail regarding a smoking cessation strategy | Yes | No | N/A |

4. How would you rate the quality of information you received from the hospital/consultant regarding this patient’s ongoing care?

   Poor 2 3 4 Excellent

   □ □ □ □ □
Appendix 3 - Audit Tools Continued

Please explain if you wish:

5. Have you seen this patient since discharge?
   □ Yes – go to question 6
   □ No – go to question 7

6. At the time of this consultation, which of the following medications was this patient taking (circle as appropriate):

<table>
<thead>
<tr>
<th>Medication</th>
<th>Yes</th>
<th>No</th>
<th>Not appropriate/contraindicated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspirin</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clopidogrel</td>
<td></td>
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<tr>
<td>ACE inhibitor (e.g. ramipril, perindopril)</td>
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<tr>
<td>Angiotensin-II receptor blocker (e.g. irbesartan)</td>
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<tr>
<td>Beta blocker (e.g. atenolol, metoprolol)</td>
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</tr>
<tr>
<td>Statin (e.g. simvastatin)</td>
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<tr>
<td>Short-acting nitrate (sublingual glyceryl trinitrate)</td>
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</tbody>
</table>

7. Has this patient been referred for cardiac rehabilitation or a secondary prevention program?
   □ Yes, by hospital
   □ Yes, by me
   □ No – go to question 9

8. Has this patient attended or do they plan to attend cardiac rehabilitation or a secondary prevention program?
   □ Yes
   □ No
   □ Unsure

9. Is your practice currently participating in the Australian Primary Care Collaborative?
   □ Yes
   □ No

Thankyou,

Please fax back to us at your earliest convenience on <fax number.>

*The project is funded and supported by the National Prescribing Service (NPS) Ltd in consultation with state-based Therapeutic Advisory Groups/Drug Usage Evaluation Groups, in Victoria, New South Wales, Tasmania, South Australia and Queensland. The NPS is an independent, non-profit organisation for quality use of medicines, funded by the Commonwealth Government.
Appendix 3 - Audit Tools Continued

NPS DMACS Project
Patient Telephone Survey

Patient Study Number: __________ Date of Telephone Survey: __ / __ / __
Time taken to complete: _________ mins Completed by: PATIENT / CARER

Hello <patient name>, my name is <insert surveyor’s name> and I am ringing from/on behalf of <hospital name>. (I met you when you were in hospital on <insert date>). At the time, I/we asked you if you would be happy to be involved in a follow-up survey about three months after you left hospital. (Check if remember, if not, remind about study and ask if consent still stands. If yes, ask if consent still stands).

Thank you for agreeing to participate in this survey, it should take approximately 5-10 minutes to complete. We are interested in finding out about some of your experiences since you were discharged from <insert local name> hospital on <insert date> and how you are going now with managing your heart condition. So, for each of the following questions, please answer in relation to the time since this admission. To begin with, would you mind going and collecting your medicines / medication list and bringing them to the phone?

1. Now you have all your medicines there, could you please tell me what you are currently taking?

<table>
<thead>
<tr>
<th>Current medication</th>
<th>Discharge Medication* (✓)</th>
<th>Not for use during telephone survey: Drug classification for entry into e-DUE Tool (refer to classification guideline)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

*Tick if matches with a discharge medication
Appendix 3 - Audit Tools Continued

2. Please complete the following statement - In the past month, I took my medicines as the doctor advised...
   - All of the time – go to question 4
   - Most of the time – go to question 3
   - Some of the time – go to question 3
   - None of the time – go to question 3
   - Didn’t answer – go to question 4

3. What was the main reason that made it difficult to take the medications all of the time (tick one)?
   (Do not read answer options out)
   - Remembering
   - The medication made me feel sick (side effects)
   - Had difficulty getting the prescriptions filled
   - The medications were too expensive
   - Didn’t answer
   - Other

4. Were you advised to attend cardiac rehabilitation or education sessions on managing your heart condition?
   - Yes – go to question 5
   - No – go to question 7

5. If yes, have you finished?
   - Yes – go to question 7
   - No – ongoing/scheduled – go to question 7
   - No – go to question 6
   - Didn’t answer – go to question 7

6. What made it difficult to attend cardiac rehabilitation sessions (tick all that apply)?
   (Do not read answer options out)
   - Not interested / Not suitable for me / Not necessary for me
   - Feeling unwell
   - Distance
   - Access to transport
   - Cost associated with attending
   - Time / work commitments
   - Previously attended
   - No sessions scheduled
   - Concerns about exercise component
   - Readmitted to hospital
   - Didn’t answer
   - Other (please specify below)
Appendix 3 - Audit Tools Continued

7. Were you a smoker at the time of your admission to hospital on <date of admission>?
   ○ Yes
   ○ No
   ○ Didn’t answer – go to question 10

8. Are you a smoker now?
   ○ Yes – go to question 9
   ○ No – go to question 10
   ○ Didn’t answer – go to question 10

9. Are you trying to stop smoking?
   ○ Yes – using a program
   ○ Yes – not using a program
   ○ No
   ○ Didn’t answer

Details:

10. Have you been readmitted to hospital because of your heart condition since <discharge date>?
    ○ Yes
    ○ No
    ○ Didn’t answer

Details:

11. When you left hospital, did you receive a fold-out card called "Angina and heart attack warning signs - What to do" produced by the Heart Foundation?
    ○ Yes
    ○ No – survey now complete
    ○ Unsure – survey now complete
    ○ Didn’t answer – survey now complete
12. If yes, do you keep the card with you (e.g. in your wallet or handbag) so that you can refer to it if necessary?
   ○ Yes
   ○ No
   ○ Didn’t answer

13. If you have had angina/chest pain since leaving hospital, did you follow the advice in this card?
   ○ Yes
   ○ No
   ○ Not applicable/didn’t answer

Thank you for your time, we appreciate your help. Do you have any other comments or questions?

__________________________________________

__________________________________________

__________________________________________
## Appendix 4 - Academic Detailing Workshop

### Workshop Participants

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Participants</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bankstown Hospital</td>
<td>Nicole Morrison</td>
<td>RN CCU</td>
</tr>
<tr>
<td></td>
<td>Marika Seremetkoska</td>
<td>CNE</td>
</tr>
<tr>
<td>Bowral District Hospital</td>
<td>Sue Brown</td>
<td>RN ICU/CCU</td>
</tr>
<tr>
<td></td>
<td>Diane Jacobs</td>
<td>Pharmacist</td>
</tr>
<tr>
<td>Campbelltown Hospital</td>
<td>Karen Warren</td>
<td>Pharmacist</td>
</tr>
<tr>
<td></td>
<td>Christine Montafia</td>
<td>RN</td>
</tr>
<tr>
<td>Dubbo Base Hospital</td>
<td>Kerry Bunt</td>
<td>RN</td>
</tr>
<tr>
<td></td>
<td>Kate Symonds</td>
<td>Pharmacist</td>
</tr>
<tr>
<td>Goulburn/Bega /Cooma Hospitals</td>
<td>Alice McKellar</td>
<td>Pharmacist</td>
</tr>
<tr>
<td></td>
<td>Sarah Smith</td>
<td>Pharmacist</td>
</tr>
<tr>
<td>Kareena Private Hospital</td>
<td>Anita Keal</td>
<td>CNS</td>
</tr>
<tr>
<td></td>
<td>Vanessa Morton</td>
<td>CNS</td>
</tr>
<tr>
<td>Lake Macquarie Private Hospital</td>
<td>Olivia Watson</td>
<td>CNS CCU</td>
</tr>
<tr>
<td></td>
<td>Robyn Twaddell</td>
<td>RN CCU</td>
</tr>
<tr>
<td>Manly Hospital</td>
<td>Leonie Sadler</td>
<td>CNC Cardiac rehab</td>
</tr>
<tr>
<td></td>
<td>Niamh O’Neill</td>
<td>Pharmacist</td>
</tr>
<tr>
<td>Orange Base Hospital</td>
<td>Estelle Ryan</td>
<td>CNE</td>
</tr>
<tr>
<td></td>
<td>Maryanne Burgess</td>
<td>RN - Rehab</td>
</tr>
<tr>
<td>St Vincents Hospital</td>
<td>Russell Levy</td>
<td>Pharmacist</td>
</tr>
<tr>
<td></td>
<td>Dr Tina Adorini</td>
<td>Cardiology Reg</td>
</tr>
<tr>
<td>Wagga Wagga Base Hospital</td>
<td>Kate Woods</td>
<td>Pharmacist</td>
</tr>
<tr>
<td></td>
<td>Angela Mullaney</td>
<td>Pharmacist</td>
</tr>
<tr>
<td>Wollongong Hospital</td>
<td>Marc Aquilina</td>
<td>CNC CCU</td>
</tr>
<tr>
<td></td>
<td>Marian Townsend</td>
<td>Pharmacist CCU</td>
</tr>
</tbody>
</table>
Appendix 4 - Academic Detailing Workshop

Evaluation summary from NSW participants
Thank you for participating in the Academic detailing workshop. We would be grateful for your feedback about the workshop and any recommendations you may have for future workshops. We appreciate your open and honest feedback.

23 of the 24 NSW participants completed an evaluation form.

Please mark the box ☒ that most closely reflects your response to each of the following statements.

<table>
<thead>
<tr>
<th>PART 1</th>
<th>About the workshop</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The pre-reading materials were useful</td>
<td>5</td>
<td>14</td>
<td>4</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>The workshop learning objectives stated at the outset were met</td>
<td>8</td>
<td>14</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>The speaker at the briefing session presented the evidence behind the key messages and provided useful guidance on questions arising at the session</td>
<td>12</td>
<td>9</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>The panel provided useful insights into the needs of health professionals and possible benefits and barriers to the DMACS key messages</td>
<td>9</td>
<td>12</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>The content of the workshop met my expectations</td>
<td>10</td>
<td>10</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>The role plays were helpful for developing my academic detailing skills</td>
<td>14</td>
<td>9</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>The amount of time allocated to each session was:</td>
<td>4</td>
<td>Too much</td>
<td>19</td>
<td>About right</td>
<td>Too little</td>
</tr>
</tbody>
</table>

Comments
- need regular breaks in the two hour session
- much appreciated expert input
- valuable written resources of information provided for future reference
- a lot of repetitive info on slides, role plays enjoyable and more beneficial for me
- I felt some of the information was a bit repetitive
- Pre reading essential and having a cardiologist talk at beginning of day was good.
### PART 2

**As a result of the workshop …**

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>I have a clear understanding of the evidence-base for effective academic detailing in behaviour change</td>
<td>12</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>I have increased skills to undertake academic detailing in the hospital setting</td>
<td>10</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>I have increased confidence to undertake academic detailing in the hospital setting</td>
<td>8</td>
<td>14</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>I am more likely to promote academic detailing in the hospital setting if there was an opportunity</td>
<td>9</td>
<td>13</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>I have increased knowledge about the evidence for the DMACS key messages</td>
<td>11</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>I am aware of my strengths and areas for improvement in my academic detailing style</td>
<td>8</td>
<td>15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments**

- I need to develop my own confidence and skills in this process. After 2 days I am still very much a beginner
- Will need to practice a few more times before being really confident
- Constant ongoing support from facilitators
- It is transferable to my daily working routine and relatively coincides to teaching
- I think the entire process will be transferable to other settings and situations

### PART 3

**There are several components to a successful academic detailing and as a result of participating in the workshop I feel more confident about …**

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>Establishing trust and credibility with health professionals</td>
<td>6</td>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Identifying health professional’s needs</td>
<td>5</td>
<td>15</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Discussing DMACS key messages with health professionals</td>
<td>6</td>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Overcoming objections and handling challenging responses during an</td>
<td>2</td>
<td>13</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>academic detailing visit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19 Closing the communication loop during an academic detailing visit</td>
<td>5</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 Conducting a complete visit</td>
<td>5</td>
<td>17</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*My role in DMACS is to undertake academic detailing*  
Yes **21**  
No **2**  

*Please indicate how many ‘visits’ you plan at this stage to conduct?*  
- 1 person did not answer

<table>
<thead>
<tr>
<th>0</th>
<th>1-5</th>
<th>6-10</th>
<th>11-20</th>
<th>&gt;20</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7</td>
<td>7</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

**21 List two key points that have you learnt from this workshop?**

- What is academic detailing x5
- How I can visit x2
- How to present clinical information in a professional manner
- My approach and to understand needs of whom I am visiting
- Confidence/new skills
- The undertakings of the DMACS team
- Skills in academic detailing
- Need to practice, be familiar with material
- Importance of listening and communication skills
- Awareness of other needs of person I am visiting
- Establishing trust and credibility x2
- Developing skills to determine professionals needs
- To be prepared with script prior to the meeting
- Importance of rehab
- Aspiring vs clopidogrel
- More about key messages
- Importance of face to face education
- Proper planning prevents poor planning
- Using open questions
- How to establish credibility
- Confidence, more about DMACS
- Increased knowledge of evidence based management for ACS
22. What is one of the ways in which you will change your practice as a result of this workshop?

- Initiate one-on-one visits
- How I will interact with other health professionals
- My approach and aims
- Talk to medical staff, pharmacy and nursing staff about recommendations
- This workshop has helped me in many ways – I talk lots to patients and it has given me more knowledge to assess people’s understanding
- I intend to review the discharge (nursing) plan and include more information in relation to medications for GPs
- Using evidence-based practice
- Do academic detailing with JRMOs to improve ongoing management of ACSx2
- Need to concentrate on key messages relevant to health professionals
- How I approach and teach staff
- Managing challenging responses
- Prepare more fully
- Speak to physicians more confidently
- Medilists for all ACS pts. Attempt to increase involvement in cardiac rehab talk
- Increase cardiac rehab
- Increase info to GPs and patients
- More focussed on all 4 initiatives – team work with DMACS project
- Before I speak to a doctor I will think through in my head what I will say
- More open communication
- Use the methodology covering all steps and actually practice academic detailing which I haven’t done before

23. What changes, if any, would you recommend to improve the workshop?

- Very tiring by the end – a lot to take in
- Small breaks in long sessions to wake up
- Slides have too much information
- I enjoyed the workshops – lots of information to take in. I was a bit daunted with the last exercise but glad I did it.
- More detail on the second-half of the project
- I though it was excellent
- For those travelling long distances with commitments finishing by 1630
More detail for role playing
Put more pressure on getting involvement from other hospitals because they receive many peripheral transfers for coronary angiogram
Decrease repetition of slides
Practice more role plays
Maybe demonstrations by the organisers in front of us
Not so much repetition in content

24 Please provide any other comments here.

Good.
Long days, more breaks to improve concentration
Thanks!
Very well presented. Special thanks to Angela for her encouragement
Efforts very much appreciated for past and future ongoing support
Thank you for an insightful and pleasant experience. All these skills will aide in improving our professional approach to our work environment
Thank you for encouraging the role plays in a non-threatening environment
Great learning – self learning and about the current project.
Feedback from the four visitors very good
The first session was very useful
I thought the workshop was very tight, very well planned and well executed. No major recommendations for change.
**Appendix 5 - Communications**

**NSW TAG DMACS Newsletter**

*Discharge Management of Acute Coronary Syndromes*

### Getting started

DMACS, a national quality use of medicines initiative, is now underway. In NSW there are 15 hospitals, including tertiary, metropolitan, rural and private participating in the project.

To date NSW project activity has included the recruitment and sign-off of hospitals, ethical review by as a multi-site research initiative and completion of the site-specific assessment (SSA) by participating NSW public hospitals. The SSA process is still being completed by some hospitals. Once the SSA has been approved by the Research Governance Officer/Executive Officer, official project activity can commence.

### Resources for baseline

All participating hospitals should have received two DMACS folders and two generic/trade name drug cards. Please use the folders to file any hard copy project materials.

The DMACS website ([www.nps.org.au/dmacs](http://www.nps.org.au/dmacs)) contains the data collection forms, project methodology, patient log sheets and data collection log sheets that you will need to during the baseline data collection phase. A username and password is required to access the website.

### Coding

All data for the DMACS project will be de-identified prior to submission to the National Prescribing Service for the purpose of state and national analysis. Each participating hospital has been issued with a two-letter code to be used during the project. Please contact the NSW TAG office if you have not been allocated your hospital code. Patients will also be assigned a patient study number as part of the de-identification process.

### Funding

All DMACS hospitals have been allocated a total of $10,000 to assist in project related activities, provided by the National Prescribing Service. DMACS funds can be accessed via the NSW TAG office, through presentation of invoices and/or proof of purchase. Please note that the funds should be used to cover costs associated with attending the DMACS workshops (see below) in November.

### Workshops

Two workshops will be held in Sydney in November this year. Each hospital will be able to send up to two participants and is a compulsory part of the DMACS initiative.

- **Venue:** Medina on Crown
  359 Crown St
  Surry Hills
- **Workshop 1:** November 10th and 11th
- **Workshop 2:** November 13th and 14th

Further details regarding the workshops will be circulated in the next newsletter.

### Important dates in 2008

- **June - November**
  Baseline data collection
- **July**
  Release of electronic data entry tool
- **September 30th**
  Submission of inpatient data
- **November 30th**
  Submission of patient and GP survey data
- **November 10th – 14th**
  Workshops in Sydney
# Appendix 5 - Communications continued

## NSW TAG DMACS Newsletter

Discharge Management of Acute Coronary Syndromes

<table>
<thead>
<tr>
<th>Volume 2</th>
<th>August 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline data collection</td>
<td>e-DUE data collection tool</td>
</tr>
<tr>
<td>Funding</td>
<td>Workshops</td>
</tr>
</tbody>
</table>

### Baseline data collection

Identification of patients in the baseline data collection phase of DMACS is well underway for a number of hospitals in NSW. There have also been reports of GPs promptly returning completed GP surveys which is great news.

### e-DUE data collection tool

The electronic data collection tool is now available to download from the DMACS website (www.nps.org.au/dmacs). A user guide (word document) is also available and should be downloaded prior to accessing the electronic tool. The user guide contains information on how to download the program, how to enter patients, saving your data, submitting your data and generating summary feedback reports. NPS will also be providing state and national feedback reports as the project progresses, dependent of the submission of data by all participating hospitals.

### Funding

As highlighted in the July newsletter all DMACS hospitals have been allocated a total of $10,000 to assist in project related activities, provided by the National Prescribing Service. All hospital project coordinators were emailed the relevant paper work, including the NSWTAG DMACS claim form, to be used when making any funding claims. Please contact the NSW TAG office if you did not receive these documents.

### General Practitioners

There have been a few enquiries regarding the need to contact General Practitioners as part of the project. There is no formal educational outreach or intervention directed at GPs through DMACS. However, GPs do have the opportunity to provide feedback regarding communication from the hospital through the GP survey. To raise the profile of DMACS, NPS has written to all Divisions of General Practice informing them of the project and has included an article in the latest Divisions newsletter.

### Workshops

Two DMACS workshops will be held in Sydney in November this year for all participating NSW hospitals. The purpose of the workshop is to train project staff in the “academic detailing” or “educational visiting”, an evidence-based technique that can be used to influence behaviour.

Academic detailing is one of the strategies to be used in the educational intervention in DMACS. It is recommended that you start considering who would be the most appropriate staff (up to two) to attend the workshop from your hospital.

The workshop details are outlined below:

**Venue:** Medina on Crown 359 Crown St Surry Hills

**Workshop 1:** November 10\textsuperscript{th} and 11\textsuperscript{th}

**Workshop 2:** November 13\textsuperscript{th} and 14\textsuperscript{th}

### Important dates in 2008

**June - November**

Baseline data collection

**July**

Release of electronic data entry tool

**September 30\textsuperscript{th}**

Submission of inpatient data

**November 30\textsuperscript{th}**

Submission of patient and GP survey data

**November 10\textsuperscript{th} – 14\textsuperscript{th}**

Workshops in Sydney

### NSW Therapeutic Advisory Group

**Contact:**

David Maxwell

**Email:** nswtag@stvincents.com.au

**Ph:** 8382 2352

**Fax:** 8382 3529
Appendix 5 - Communications continued

Baseline data collection
DMACS teams are reminded to provide weekly updates (each Friday) to NSW TAG on the progress of patient recruitment during the baseline data collection phase.

e-DUE data collection tool
As a reminder the electronic data collection tool is now available to download from the DMACS website (www.nps.org.au/dmacs). Please contact the NSW TAG office if you have any issues during the installation process.

DMACS Workshops
The DMACS workshops are fast approaching. Each participating hospital has the opportunity to send up to two representatives to the workshops. Could each team email the NSW TAG office to indicate their preferred workshop, 1 or 2, as outlined below. Preferences will be taken into account when finalising the workshop participation list.

Venue: Medina on Crown
359 Crown St
Surry Hills

Workshop 1: November 10th and 11th

Workshop 2: November 13th and 14th.

There are no registration costs associated with attending the workshops. However any costs associated with travel, accommodation etc will need to be covered by the funds provided by the NPS. Please contact the NSW TAG office if you have any queries regarding this.

For participants that will need to stay overnight, the workshop venue, Medina on Crown, is offering a corporate rate for all workshop participants. There are other accommodation options close by. Please contact the NSW TAG office for more information.

Educational Intervention
The educational intervention will provide an opportunity for project teams to promote the key elements of evidence-based best practice relating to the management of patients with ACS at the point of discharge. Key elements include use of evidence-based medicines, patient education, provision of a chest pain management plan and referral to a tailored cardiac rehabilitation/educational program.

In addition to academic detailing project teams will be able to feedback results of the baseline review, to identify areas of care provision that are being done well and areas that may require improvement.

It is suggested that these feedback sessions be included within exist medical officer education streams, nursing in-service programs and pharmacy continuing education meetings. Grand rounds is another possible setting to present the DMACS project.

Please start planning the best way for the feedback sessions to be rolled out in your hospital.

Important dates in 2008

June - November
Baseline data collection

July
Release of electronic data entry tool

September 30th
Submission of inpatient data

November 30th
Submission of patient and GP survey data

November 10th – 14th
Workshops in Sydney
Appendix 5 - Communications continued

### Baseline data collection
Baseline data collection is now due. A number of hospitals in NSW have submitted their inpatient medical record data to NPS. As a reminder an outline of how to submit your data is included in the eDUE data collection users guide, which is available on the DMACS website.

The 3 month patient telephone surveys should also be underway. All DMACS patients discharged from hospital in June should have completed the survey. Reports from hospital project coordinators indicate that patients are very happy to be contacted and share how they are managing after their ACS event.

As a reminder the timelines for baseline data collection were revised based on the feedback from participating hospitals. The revised timelines have been circulated with this newsletter.

### DMACS workshops
The DMACS workshops are only one month away. Details regarding hospital participation are below:

**Venue:** Medina on Crown  
359 Crown St  
Surry Hills

**Workshop 1:** November 10<sup>th</sup> and 11<sup>th</sup>  
Goulburn/Bega/Cooma  
Lake Macquarie Private Hospital  
Manly Hospital  
Orange Base Hospital  
Wagga Wagga Base Hospital  
Wollongong Hospital

**Workshop 2:** November 13<sup>th</sup> and 14<sup>th</sup>.  
Bankstown Hospital  
Bowral District Hospital  
Campbelltown Hospital  
Dubbo Base Hospital  
Kareena Private Hospital  
St Vincent's Hospital

### Important reading
Before attending the workshop, participants should familiarize themselves with the following:
1. National Heart Foundation of Australia Cardiac Society of Australia and New Zealand Guidelines for the management of acute coronary syndromes 2006 (MJA 2006)
2. Background information regarding academic detailing (page 11 of the DMACS Manual for Hospitals)
3. Results of the inpatient medical record review for your hospital. Click on the summary report tab in the eDUE data collection tool to generate this report.

### Attending the workshops
If you are travelling from outside Sydney please confirm and book your travel arrangements as soon as possible.

If you require accommodation please confirm and book as soon as possible. Medina on Crown has rooms available at a discounted rate. Contact the NSW TAG office for alternative hotels in the area.

Please email NSW TAG the names and positions of the workshop participants from your hospital by October 10<sup>th</sup>.

### To do list:
- Submit your baseline inpatient medical record review data
- Confirm the two participants from your hospital attending the DMACS workshops
- Confirm and book travel and accommodation if required
- Ensure that workshop participants are aware of the pre-reading required for the workshops
Appendix 5 - Communications continued

<table>
<thead>
<tr>
<th>NSW TAG DMACS Newslette</th>
<th>NSW TAG DMACS Newsletter</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NSW TAG DMACS Final Report</strong></td>
<td></td>
</tr>
<tr>
<td><strong>NSW TAG DMACS Newsletter</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Discharge Management of Acute Coronary Syndromes</strong></td>
<td></td>
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<tr>
<td><strong>Volume 5</strong></td>
<td></td>
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<tr>
<td><strong>November 2008</strong></td>
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<td><strong>DMACS workshops</strong></td>
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<tr>
<td><strong>Baseline data results</strong></td>
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<tr>
<td><strong>Feedback reports</strong></td>
<td></td>
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<tr>
<td><strong>Feedback presentations</strong></td>
<td></td>
</tr>
<tr>
<td><strong>To do list:</strong></td>
<td></td>
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</tbody>
</table>

**DMACS Workshops**

The NSW DMACS workshops are only one week away. Each NSW hospital will be sending two representatives to the workshop. Participants are reminded to familiarize themselves with the pre-reading materials. The state and national project teams are looking forward to meeting everyone at the workshops.

**Baseline data results**

The baseline inpatient medical record review has been completed by all DMACS hospitals across Australia. A total of 233 patients were included in the NSW baseline cohort and 1545 patients in the national cohort.

There was a higher than expected number of hospital transfers within the NSW arm of the project, resulting in a reduced number of eligible patients during the baseline patient recruitment period. However, the 233 patients included in the NSW dataset will provide useful information regarding the current discharge management of ACS patients in NSW hospitals.

The baseline GP survey data are now due. Thank you to those hospitals who have already submitted these data. For those who have yet to submit please ensure the excel spreadsheet is sent to NSW TAG for QA purposes prior to submitting to NPS.

**Feedback reports**

Each participating hospital has access to an automated feedback report through the eDUE data collection tool. Please see page 35 of the DMACS e-DUE Data Collection Tool User Guide for more information.

In addition a more detailed feedback report has been prepared by the National Prescribing Service, reporting on current practice as the local, state and national level. These will be emailed to each hospital project coordinator in the first week of November.

It is recommended that local project teams look at these reports and identify areas of practice that is currently being done well and also areas that could be improved.

**Feedback presentations**

To facilitate the sharing of the results with staff at participating hospitals a generic template PowerPoint presentation will be provided with the above feedback reports. The PowerPoint presentation will be site specific, containing selected results from the feedback report in tables and graphs. The presentation can be tailored for use by each of the hospital project teams.

It is envisaged that this presentation will be used as part of group educations sessions, continuing education sessions and hospital grand rounds.

**To do list:**

- Submit the baseline GP survey data
- Ensure that workshop participants have undertaken the requested pre-reading
- Continue the 3-month patient telephone surveys
- Generate the automated feedback reports in the eDUE data collection tool based on your local data
- Look out for the Inpatient Medical Record Review feedback report and PowerPoint presentation to be provided by NSW TAG in the first week of November
Appendix 5 - Communications continued

NSW TAG project officer
Ms Kate Oliver will be commencing at the NSW TAG office on December 2nd in the role of the Quality Use of Medicines Project Officer. Kate’s main responsibility will be to manage the DMACS project. Kate’s contact details are listed in the bottom left corner of this newsletter. Please join me in welcoming Kate to the project.

NSW DMACS workshops
Thank you again to all the workshop participants. The two workshops were a great success and provided an opportunity for project teams to meet others participating in DMACS.

Workshop participants are reminded to review their DVDs as a self learning exercise and to continue practicing their academic detailing skills with friends and colleagues. Detailing cards to be used during the educational intervention will be posted to all participating hospitals later this month.

Baseline data collection logs
As part of the DMACS project, NPS are keen to learn from hospitals the time taken to identify patients and collect data during the baseline phase. A DMACS data collection log is available from the DMACS website. It would be appreciated if all hospitals could fill out this form after the telephone surveys have been completed and return the form to the NSW TAG office.

Patient follow-up surveys
The 3-month patient follow-up telephone surveys should be nearing completion. As per the revised timeline schedule circulated in August the final date for contacting patients has been extended to December 24th. The excel data file should be then sent to the NSW TAG office for review by the 7th of January 2009. NPS will circulate the final patient survey feedback report in early February.

Educational intervention
The DMACS education intervention is due to commence at the beginning of 2009. A number of tools have been prepared for use by the hospital project teams.

The following materials will be posted to each participating hospital in December:
- Academic detailing cards
- Wallet sized chest pain plans
- Book mark reminders for staff.

In addition a number of electronic resources are also available:
- Feedback reports
- PowerPoint presentation
- Discharge summary template*
- Discharge management checklist*

*These resources are available to download from the DMACS website and are designed to be tailored for use at the individual hospital level.

Website: www.nps.org.au/dmacs
(user name and pass word required)

To do list:
- Continue the patient surveys until December 24th
- Complete the data collection log and return it to the NSW TAG office
- Workshop participants continue to practice their ‘visits’ and familiarize themselves with the ACS literature
- Prepare an academic detailing plan, outlining who you intend to visit
- Look out for the educational materials that will be posted the project lead in your hospital.
Appendix 5 - Communications continued

**NSW TAG DMACS Newsletter**

**Discharge Management of Acute Coronary Syndromes**

<table>
<thead>
<tr>
<th>Volume 7</th>
<th>January 2009</th>
</tr>
</thead>
</table>
| **Welcome back!** | Welcome to 2009 and the educational intervention phase of DMACS! Over the next three months academic detailers will be targeting and visiting key players involved with ACS patient care, providing a platform for discussion, education, and impetus to evolve and develop areas of practice which may have been identified as areas for improvement after receipt of baseline results. Please remember to document all interventions on the Intervention Activity Log which can be downloaded from the web site and if needed, the suggested discharge summary and checklist for guidance in formulating new documents as part of the intervention.

Academic detailing packs were sent out to project leads at participating hospitals last month. Packs contained academic detailing cards, bookmarks and certificates of participation for those who attended the detailing workshops in November. Further supplies of both the bookmarks and detailing cards may be acquired by contacting NSW TAG.

**Feedback Presentations - GP Survey**

Powerpoint presentations of results from the GP survey were sent out in mid December to project leads at each participating site. Results compare three data sets from national, state and hospital. Please feel free to alter the presentation to tailor to your audience and needs.

**90 day Patient follow-up surveys**

Excel spreadsheets containing data from the 90 day patient follow-up are to be submitted to NSW TAG by 7th of January, with reviewed data to be submitted to the NPS by 12th of January. Thank you to all those who have persisted in this sometimes frustrating follow-up process!

**Website Update:**

*Presentation by Associate Professor David Brier*

The presentation given by A/Prof Brier at the academic detailing workshop is now available for download in audio, video or multimedia format from the website. For those of you who did not attend the workshop, this talk provided a great overview to understanding the current recommendations for ACS management as advised by the National Heart Foundation and the Cardiac Society of Australia and New Zealand. This should be used as another valued resource for those undertaking the academic detailing sessions.

**Teleconferences in 2009**

Our first teleconference for the DMACS project will be held on the 21/1/09 at 3pm. This will be a chance to interact with other participants in the project to discuss results and provide momentum for the intervention phase. An agenda will be circulated via e-mail one week prior to the scheduled meeting date.

**Website:** [www.nps.org.au/dmacs](http://www.nps.org.au/dmacs)

(user name and pass word required)

**To do list:**

- Excel spreadsheet of data from the 90 day patient follow-up survey to be sent to NSW TAG office by the 7th of January
- Reviewed data to be submitted to NPS by 12th of January
- Academic detailing: plan, practice, and execution
- Fax Baseline Hospital data collection log and hospital profile log to NSW TAG
- Teleconference scheduled for 21/1/09 @ 3pm.
Appendix 5 - Communications continued

NSW TAG DMACS Newsletter
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Premier Teleconference
The first of the DMACS teleconferences was held last month in order to facilitate further communication and information sharing between participating hospitals in NSW. We here at TAG believe the session highlighted the need for cross over of ideas and were inspired by the enthusiasm of the participating hospitals. The types of documents useful for improving discharge management of ACS patients came to the forefront at this meeting. It would be appreciated if any local tools developed for DMACS be sent through to NSW TAG for sharing with other sites. Next teleconference to be held on 18/2/09 @2pm (Please note the time change).

Comparative Measures Document
In the next few weeks a document will be sent to participating sites, compiled by the state-based project officers and the NPS. This document has been produced in order to make general comparisons between some of the results received from the baseline data collection. All of these results exist in previous feedback Powerpoint presentations, and reports compiled by the NPS.

In other news...
*Clopidogrel has now been listed on the PBS as treatment for ACS in combination with aspirin to prevent further events. Please refer to the Pharmaceutical Benefits Schedule for more details.
*The most recent issue of the MJA has published a series of letters focusing on various aspects of ACS and its current management. Please refer to http://www.mja.com.au (username and password required)

Website: www.nps.org.au/dmacs
(user name and pass word required)

To do list:
- Academic detailing: plan, practice, and execution
- 6/2/09: Distribution of Patient Telephone Survey Reports and Powerpoint Presentations
- 18/2/09 @2pm: DMACS teleconference
- 6/4/09: IMRR follow-up begins.
- 24/4/09: Educational Intervention to finish
- Fax Baseline Hospital data collection log and hospital profile log to NSW TAG.

Educational Intervention Feedback
Distribution of Patient Survey Powerpoint presentations and Patient Survey Summary Reports are due to occur on 6/2/09. Please utilise these resources to facilitate feedback at your site.

Don’t forget! The academic detailing log is best used to document planned and current undertakings in the academic detailing process. Ideally, the “Profession” column in this spreadsheet should be annotated as either “Doctor”, “Nurse” or “Pharmacist” in order to filter in excel which will later facilitate population of information for the academic detailing log to be supplied to the NPS.

Timeline
As discussed at last month’s teleconference, the original project timelines have been revised in order to allow more time for recruitment during the IMRR follow-up phase. A cross over period now exists in April, where recruitment may begin and education can continue. The educational phase is due for completion by the end of April.
Appendix 5 - Communications continued

**NSW TAG DMACS Newsletter**

**New South Wales Therapeutic Advisory Group Inc.**

**Discharge Management of Acute Coronary Syndromes**

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**From one DMACS site to the other**
The NSWTAG DMACS webpage now has a hyperlink to the NPS DMACS website (username and password required) to facilitate transfer between sites. The TAG website also has additional information on the DMACS project which is maintained to keep the TAG members and public up to date with our developments.

**Wallet Sized Chest Pain Action Plans**
Distribution of the wallet-sized Chest Pain Action Plans will begin this month to aid the educational intervention phase. There is currently limited stock of these tools, however the National Heart Foundation will be producing their own version which will be available for purchase onward from April 2009. With the ongoing production of these cards, the education currently being undertaken for staff and various discharge management tools being developed on site, signs are encouraging for a lasting DMACS effect!

**Intervention Logs**
Time and consideration should now be allocated to documenting feedback and academic detailing sessions. This information should be listed on the intervention log provided by the NPS to be submitted to NSW TAG by the end of April.

**Data collection log- Baseline data & Hospital Profile**
With the end of the Educational Intervention fast approaching, the DMACS project is almost half way through to completion. To assist in learning more about the type of institutions participating in DMACS, NPS is requesting both the Data collection log- Baseline data and the Hospital Profile be completed by all sites. These forms can be accessed and downloaded from the NPS DMACS website and, once completed should be faxed to the NSW TAG office (see below for details).

Please note: a Data collection log- Follow-up data will also be required in the coming follow-up phase of DMACS.

**Additional Detailing Cards and Bookmarks**
Whilst so much activity and academic detailing is being undertaken within each hospital, it seems inevitable that more bookcards and detailing cards will be required. Please be aware that the TAG office has further supply of these resources which are readily available for those who require them!

**Comparative Measures**
The long awaited release of the document “Baseline Comparative Measures” was distributed in late February. Please take some time to review this information, which may serve as further feedback to your site.

**Website:** [www.nps.org.au/dmacs](http://www.nps.org.au/dmacs)  
(user name and pass word required)

**To do list:**
- *Academic detailing*: plan, practice, and execution
- Fax Data collection log- Baseline data and Hospital Profile to NSW TAG.
  - 18/3/09 @2pm: DMACS teleconference
  - 6/4/09: IMRR follow-up begins.
Appendix 5 - Communications continued

NSW TAG DMACS Newsletter
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Educational Intervention
Welcome to the final month of the educational intervention! Academic
detailers should have identified key health professionals within their site
and made progression with 'buy-in' in order to make the greatest impact in
the follow-up audit.

Intervention activity logs are to be completed by the end of this month
and faxed/posted to the NSW TAG office for submission to NPS. Group
sessions should be documented on the form, one column for each group
session with the number of health professionals (from each stream)
within the group identified. For the academic detailing one-on-one
sessions, please ensure you have written the total number of health
professionals detailed (within that stream) along with the average time
spent detailing them (eg. 3 cardiologists; average time: 15mins).

Entering data into the IMRR audit tool during follow-up
Please remember when entering data for the first patient into the IMRR audit
tool that the data collection type is changed to "followup". All subsequent
patients should automatically change within the tool to "followup" after the
data collection type is selected for the first patient.

Allocation of patient identification numbers for the "followup" audit
should ascend from 051-100. 051 should be allocated to the first patient
entered into the IMRR audit tool, regardless of the number of patients
recruited in the baseline IMRR.

NSW Therapeutic Advisory Group
Project Officer: Kate Oliver
Project Lead: David Maxwell
Email: tagproject@stvincent.com.au
Ph: 02 8382 2652
Fax: 02 8382 3529

Wallet Sized Chest Pain Action Plans!
All sites should have received their wallet sized chest pain action plans as
the last of the tools provided by NPS for use during the project.
The NPS has requested a supplementary print run of these wallet sized plans to occur later this
month which will facilitate a second distribution to participating hospitals.
The National Heart Foundation has created a version of these plans which
will be available for purchase early June 2009. Please note the time
change from late April previously stated.

Data Collection Log- Follow up Data
In addition to the Data Collection Log- Baseline Data on the NPS DMACS
website, there is now the Data Collection Log- Follow up Data available for download. Please fax this
document to NSW TAG office upon completion.

Website: www.nps.org.au/dmacs
(user name and pass word required)

To do list:
- Academic detailing: plan, practice, and execution- last few weeks!
- 6/4/09: IMRR follow-up may begin.
- 29/4/09@2pm: DMACS teleconference
- 30/4/09: Completion of educational intervention. Fax/post Intervention
activity logs to NSW TAG office.
(PO Box 766 Darlinghurst NSW 2010)
Fax Data Collection Log- Baseline
Data to NSW TAG office.
Appendix 5 - Communications continued

NSW TAG DMACS Newsletter
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Intervention Activity Logs
The last of the documents required to wrap up the educational phase are to be completed by the end of this week. Please submit your intervention activity logs to NSW TAG by Friday 8th of May, in order for collation and submission of the aggregate results to NPS. If you need to access a copy of the document, please find a pdf version on the DMACS website under the subheading “Evaluation”: “Intervention activity log”.

Further distribution of Chest Pain Action Plans
The initial release and uptake of the wallet sized chest pain action plans to participating hospitals around the country, has promoted a second print run by the National Heart Foundation. NSW TAG has recently received the second run of these cards, and is set to distribute them to participating sites in late May. Distribution of these cards will be the final resource funded by NPS for the intervention/ follow-up phase of the DMACS project. Please remember if these cards are of benefit, the National Heart Foundation will be releasing a similar card available for purchase in the upcoming months (June).

Academic Detailing caught on Camera
An academic detailing session recorded at Goulburn Base by NSW DMACS participant Alice McKellar (with Dr Wheelan) will be posted on the NPS website (within the e-learning page - login required). This session was recorded in order to teach and train academic detailers for future projects. Thank you Alice!

Intervention Activity Logs

National Heart Foundation -“Go Red for Women”
This year starting May 3rd the National Heart Foundation will be involved with the “Go Red for Women” campaign raising awareness of the number one killer of Australian women - heart disease. This week, the website has heart healthy tips: ways to incorporate exercise and reduce intake during the day, and information on ways to raise awareness to the lead up of Friday June 12th national Go Red for Women day.

Of Interest:
*New Zealand Cardiovascular Guidelines Handbook for prescribers in the community has now been released. This document encompasses cardiovascular risk assessment and diabetes screening, cardiovascular risk factor management.
*Nicotine Replacement Therapy May Be Effective in Smokers Unable to Attempt an Abrupt Quit

To do list:
-08/05/09 Fax/post Intervention activity logs to NSW TAG office. (PO Box 766 Darlinghurst NSW 2010)
-15/05/09 Fax Data Collection Log- Baseline Data and Hospital Profile to NSWTAG office
-Continue IMRR follow-up recruitment.
Appendix 5 - Communications continued

**NSW TAG DMACS Newsletter**

**Discharge Management of Acute Coronary Syndromes**

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**DMACS project at the NHF Conference**

The DMACS project baseline results were presented at the National Heart Foundation Conference last month by the national project lead, Angela Wai. In addition her presentation in the main program, Angela was requested by the NHF organisers to speak at a preliminary talk which was attended by approximately 80 people over breakfast! This talk was followed by the main presentation late in the afternoon. The presentation overall prompted a positive response and many further questions from those who attended.

**A JOB WELL DONE**

Thank you to all hospitals for submitting the Baseline Audit- Data Collection Log, Hospital Profile and Educational Intervention Activity Log in a timely manner. It should be noted that with your commitment, NSW TAG was able to deliver all documents to the NPS on time which met the expectations of the NPS and surprised all other state-based project co-ordinators (all of whom still had some hospitals left to submit documents). Thank you and well done!

**IMRR FOLLOW-UP DATA COLLECTION**

A reminder that data collection for the follow-up audit has been underway for two months- which leaves just a little less than two months for recruitment of patients remaining!- The final day for recruitment is 31st of July 2009.

**RECEIPT OF CHEST PAIN ACTION PLANS**

All chest pain action plans have now been distributed and should be arriving sometime during this week. Please look out for the package containing the final resource provided during the project.

**LIFE AFTER DMACS... WHERE TO NEXT??**

In recent weeks, NSW TAG has been in consultation with members on possible quality improvement projects in 2010. Recently NPS held a face to face meeting which included key members of DUE groups from around the country. At the conclusion of the meeting a shortlist of possible projects was decided;

1. Diabetes
   i)Insulin Safety
   ii)Prevention and management of complications
2. Polypharmacy in aged care
   (review of hypnotics at discharge)
3. Drug dosage adjustment in Renal Impairment
4. Proton Pump Inhibitors: promoting review to ensure better management of dosage, duration and potential complications.

NSW TAG would be interested if you had any thoughts or preferences in relation to these topics. Please send your feedback to tagproject@stvincents.com.au

**DMACS Website:**


*User name and pass word required*

**To do list:**

- Continue IMRR follow-up recruitment.
- 31/07/09: Final day of patient recruitment

- Complete Follow-up Audit- Data Collection Log (pdf may be downloaded from DMACS website)
Appendix 5 - Communications continued

NSW TAG DMACS Newsletter
Discharge Management of Acute Coronary Syndromes

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July 2009

DMACS goes Global
Whilst recruitment of patients continues for project teams within participating hospitals, the key messages of DMACS continue to be promoted across the globe. As advised in the teleconference mid last month, an oral paper will be presented at the upcoming Australasian Conference for Safety and Quality in Health Care in early September. In addition, we can now confirm that the project co-ordinator for Queensland, Lisa Pulver, will present an oral paper to European clinicians at the International Society for Quality in Health Care Conference (ISQUA) to be held in Dublin in October of this year.

IMRR Patient Recruitment
There is just under one month for recruitment of patients in the follow-up IMRR - the final date for patient recruitment is July 31st. In recent times, a few questions around the possibility of continuing education during this phase have come to the fore. Please continue to educate medical officers and other staff who have not been involved in the key messages of DMACS. Although these interventions will not be formally logged, education is vital in closing the gaps from evidence to practice.

Sustainability - Looking to the Future
The ability to create projects with sustainable effect is an important part of the NPS DUE program. At the completion of the previous quality improvement initiative on acute postoperative pain (APOP), a toolkit (based around the surveys and audit tools used during the project) was produced to allow the for continuation of the process of audit, feedback and education; monitoring of progress made at times convenient for clinicians. Please see http://www.nps.org.au/health_professionals/drug_use_evaluation_due_programs/due_kit_for_hospitals/app/1215. At the conclusion of this project, the national project team would like to produce a similar toolkit to enable sustainability within DMACS hospitals.

In order for a toolkit to be created that is useful and practical, NSW TAG is seeking your input on possible information which could be changed, added or deleted from the existing the summary report produced by the e-DUE audit tool. If you would like to contribute your ideas around possible changes, please send your feedback to tagproject@stvincents.com.au

Of Interest:
Pharmacy Daily has a brief report in their June 25th edition on the burden of heart attack in Australia http://www.pharmacydaily.com.au/get/attachment/71325a09-89b9-4ce8-9fa2-00c809a2ff38/6-25-2009-12-00-00-AM.aspx

DMACS Website:
www.nps.org.au/dmacs
(user name and password required)

To do list:
- Continue IMRR follow-up recruitment.
- 31/07/09: Final day of patient recruitment for IMRR
- 24/08/09-28/08/09: Submit IMRR data to NSW TAG
- 02/09/09: Final date for submission of cleaned (IMRR) data to NPS.
Appendix 5 - Communications continued

 NSW TAG DMACS Newsletter
 Discharge Management of Acute Coronary Syndromes

Data Collection Log- Follow-Up Data
A PDF document of the Data Collection Log- Follow-Up Data exists on the DMACS website. This document will need to be submitted at the end of the follow-up audit phase. Submission of this document is required by NPS to evaluate differences between the two audits (baseline and follow-up) undertaken in the project.

Funding for the Project
In order to prepare for the last few months of the project, NSW TAG will be sending out information around current funds remaining for each hospital. Please be aware that we will be accepting claims for funds up until the end of the project, in December 2009. Request for reimbursement of funds must include the DMACS claim form and original receipts and/or itemised invoices for wages in order for the request to be processed. Claims for wages can only be processed retrospectively, for work that has already been undertaken.

Submitting your Follow-Up Data
Now that data collection for the follow-up IMRR is complete, online submission of data to NPS will again be required. Please be aware that there will be some variation (from baseline) in the steps required to submit data for the follow-up. A “how-to” around submission of these data will be tabled for discussion at the upcoming teleconference in August.

NHF Resource Orientation
NHF representative Cate Ferry has confirmed her attendance at the next teleconference in mid August. A sample of each of the various resources will be supplied to individual sites prior to the meeting to facilitate orientation of the new materials. The bulk of the resources are expected to arrive late August.

DMACS Website:
www.nps.org.au/dmacs (user name and pass word required)

To do list:
-24/08/09-28/08/09: Submit IMRR data to NSW TAG
-Continue collection of GP Surveys and Patient Surveys
-02/09/09: Final date for submission of cleaned (IMRR) data to NPS.
-25/09/09 Final date for entry of GP Survey data into e-DUE audit tool
-28/09/09 Submit GP Survey data to NSW TAG
Appendix 5 - Communications continued

NSW TAG DMACS Newsletter
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October 2009

Data submission
Thank you to all project teams for the timely submission of IMRR data to NPS. The timely submission of very clean data has enabled the early distribution of the Follow-up IMRR Reports.

Follow-up IMRR Reports
Reports were sent to all project leads on Tuesday 29th of September. Please take the time to review these results and compare with those previously reported at baseline. There have been some fabulous improvements, exemplified in the results for NSW for which all project teams should be congratulated.

DMACS Claims for Funding
Claims for reimbursement of funds have been feeding through after the distribution of the letter detailing the claims for funding - sent to all project leads in August. The details specified and supporting documentation delivered with the claims have improved tremendously and are enabling a faster turn around time with fewer complications. Thank you.

Presentation of DMACS Baseline Results at AAQHC
In September Kate Oliver presented some of the key findings from the baseline results of DMACS to an international audience at the Australasian Association for Quality in Health Care Conference. The presentation was well received with questions and comments - particularly around education on risk factor modification advice and medications, along with referral to secondary programs.

DMACS Timelines
November 2nd
Evaluated GP Survey data for the follow-up phase of the project are due from NPS; NSW TAG to circulate to local project leads.

November 11th
Final submission of follow-up patient telephone surveys to NPS.

December
Feedback Presentation due to be delivered to local project teams for further feedback to clinicians.

Article of Interest:
A recent article published in the Medical Journal of Australia, Acute coronary syndromes: consensus recommendations for translating knowledge into action. MJA Vol 191 No. 6, 21 September 2009 was authored by some of the members of the project committee eg Assoc. Professor David Brieger and discusses how some aspects of ACS management are being tackled to help improve adherence to ACS guidelines and improve patient outcomes.

DMACS Website:
www.nps.org.au/dmacs
(user name and pass word required)

To do list:
- Continue collection of Follow-up Patient Telephone Surveys
- 9/11/09 Final date for submission of patient telephone survey data to NPS
- Return Data Collection Log- Follow-up Data to NSW TAG (see the DMACS website for the pdf version of this document)
Appendix 5 - Communications continued

Congratulations to the “Tale of Two Hospitals”!
Congratulations to Russell Levy of St Vincent’s Hospital and Niamh O’Neill of Manly Hospital for the delivery of their presentation at the 34th National Society of Hospital Pharmacists of Australia conference in Perth this month. Despite only having 10 minutes, their speech drew some fabulous comparisons between the two hospitals and the types of interventions used to tackle local gaps in practice. Delegates were prompted into further discussion and curiosity about the project. We could only have wished for more time!

Data Collection Log- Follow-up Data
As the last of the patient telephone survey data is submitted this month, one additional piece of information will be required prior to completion of the project. The Data Collection Log- Follow-up Data is required by NPS as a comparison to methods of data collection from the baseline audit. This log may be used to describe difficulties encountered in contacting patients for the Patient Telephone Survey. To access this form, please visit the DMACS website. Submission may be made either by fax or post to NSW TAG

Patient Telephone Surveys
Thanks must go to all project teams for submitting data for the Patient Telephone Survey on time to NPS! This will aid a quick turnaround and dissemination of reports to hospitals.

Invitations for the Wrap-up Meeting
The face-to-face wrap-up meeting will be held next year on the 12th of

February in the NPS board room. Invitations are to go out this week. RSVP by 4th of December- please! 😊

Release of the Antiplatelet Therapies: Current Issues-Targeted Literature Review
NSW TAG has this month released a document addressing current issues around treating patients with antiplatelet therapies. The document aims to bring together current evidence to address the following types of questions:
* What is the appropriate duration of clopidogrel therapy?
* What is the role of high dose vs. low dose aspirin?
* What is the evidence for warfarin + aspirin + clopidogrel combination therapy?
* How should patients on antiplatelet therapy be managed perioperatively?

Evidence is drawn from both national and international sources to provide the reader with evidence from a wide variety of authorities.


DMACS Website:
www.nps.org.au/dmacs
(user name and pass word required)

To do list:
- 18/12/09 Return Data Collection Log- Follow-up Data to NSW TAG (see the DMACS website for the pdf version of this document)
- 4/12/09 RSVP to wrap-up meeting in February
Appendix 5 - Communications continued

NSW Therapeutic Advisory Group

DMACS PROJECT

Group Discussion: Discharge Summary of ACS Management

Date: February 2009

Question:
We have recently received an enquiry from Lake Macquarie Private regarding discharge summaries and their management:

What methods do the other hospitals use to send the Nursing Discharge Summaries to the GPs?
We are particularly interested in the techniques employed by the private hospitals.
(We are aware that the public hospitals send a computer generated discharge summary but we don’t have this facility available.)

Responses:

Wagga Wagga Base:
We at Wagga Base haven’t gone across to electronic discharge summaries yet (coming later in the year apparently). Our present system is to mail out the LMO’s copy - ideally within 48 hours of discharge. If the patient is requested to visit the GP within say the first 72 hours post discharge we will also hand them a copy (in a sealed envelope addressed to LMO) in case the hospital’s copy hasn’t reached the surgery in time. Up until 4 months ago we were handing the LMO copy to the patient in virtually all cases, however feedback from the LMO’s was they were not receiving the summary - hence the change in practice.

Bowral Hospital:
If GPs have computerised ARGUS system at surgery discharge summaries are sent electronically, otherwise a hard copy of the summary is mailed out.

Bankstown Hospital:
Currently Bankstown have a specifically addressed envelop to the GP given to the patient (with see gp in 2 to 3 days on it) and when it is handed to the patient, we recommend they see their GP in 2 to 3 days.

In other instances the discharge summary is faxed, although not all GP’s have fax and not all patients have GP’s.

At Bankstown it is only the aged care units that can link up the electronic discharge summaries, it has not been rolled out to other specialities as yet.

Responses received as at 11th February 2009
Appendix 6 - Conference Abstracts

Abstract for 7th Australasian Conference of Safety and Quality in Health Care

DO NATIONAL ACUTE CORONARY SYNDROMES GUIDELINES CONTRIBUTE TO BETTER PATIENT CARE?: NATIONAL AUDIT DATA FROM THE DISCHARGE MANAGEMENT OF ACUTE CORONARY SYNDROMES (DMACS) INITIATIVE

Introduction:
Evidence-practice “gaps” exist in the discharge management of patients with Acute Coronary Syndromes (ACS). These gaps include: eligible patients not receiving all four guideline recommended cardiovascular medications, lack of education on risk reduction through lifestyle modifications and poor timeliness/quality of communication between hospitals, patients and their relevant health care providers. The Discharge Management of Acute Coronary Syndromes (DMACS) project is a quality improvement initiative funded and supported by the National Prescribing Service (NPS), focused on optimising these three key aspects of patient care at the point of discharge.

Method:
Patients with a discharge diagnosis of ACS were identified prospectively in a cross-sectional audit conducted between June and October 2008. Patient medical records were reviewed to identify evidence of the following: prescription of guideline recommended medications on discharge, provision of education on lifestyle modifications and a discharge management plan. A 14-day-post-discharge General Practitioner (GP) survey was conducted to assess timeliness and quality of information provided by the acute care facility along with aspects of patient care at the time of consultation. A 3-month follow-up patient telephone survey was conducted to assess gaps in communication and ascertain information on patient adherence and outcomes post discharge.

Results:
The baseline data collection included 1545 patients from 49 Australian hospitals. 83% of patients had components of an ACS management plan documented on discharge; 90% of these included a list of medications, 56% included a chest pain action plan and 54% included risk factor modification advice. Of the 1288 patients with an ACS management plan, documentation indicated that this information was communicated to 88% of patients and 74% of GPs. 57% of patients were prescribed all four guideline recommended medications at discharge. Of the 731 GPs who participated in the GP survey, 77% reported receiving a discharge summary, with 21% describing it as being of ‘excellent’ quality. The patient survey revealed that of the 1319 patients participating in the survey, 48% were taking all four medications recommended by Australian guidelines. 67% of respondents reported being referred to cardiac rehabilitation/education sessions, although 46% of those did not complete the program. Of the 22% of patients who reported being smokers at the time of admission, 50% continue to smoke.

Conclusion:
Baseline results confirm the known evidence-practice gaps and an educational intervention is currently being undertaken to address these areas. Data collection of revised practices is due to commence mid 2009.
Appendix 6 - Conference Abstracts Continued

Abstract for 35th Society of Hospital Pharmacists Australia National Conference

Do National Acute Coronary Syndromes Guidelines Contribute To Better Patient Care?: National Data from the Discharge Management of Acute Coronary Syndromes (DMACS) Initiative

Aim:
Evidence-practice “gaps” exist in the discharge management of patients with Acute Coronary Syndrome (ACS): patients not receiving guideline recommended therapies, lack of education on risk reduction and poor timeliness/quality of communication across the continuum. DMACS is a quality improvement initiative aimed to optimise these aspects of patient care, supported by the National Prescribing Service.

Methods:
A cross-sectional audit conducted over 5 months in late 2008, prospectively identified patients with ACS. Medical records were reviewed for evidence of: medications prescribed/counselling at discharge; provision of education on lifestyle modifications; and discharge management plans. A 14-day-post-discharge General Practitioner (GP) survey was conducted to assess timeliness and quality of information provided by the acute care facility, along with aspects of patient care at the time of consultation. A 3-month follow-up patient telephone survey assessed gaps in communication and ascertained patient adherence/outcomes post-discharge.

Results:
The baseline audit included 1545 patients from 49 Australian hospitals. Results of the audit revealed documented evidence for 64% of patients receiving discharge medication counselling and 83% of patients with components of an ACS management plan; 90% of these included a list of medications, 56% a chest pain action plan and 54% had risk factor modification advice. Of the 1288 patients with an ACS management plan, this was communicated to 88% of patients and 74% of GPs, 57% of patients were prescribed all four guideline recommended medications at discharge. The patient survey (n=1319) demonstrated that 48% of patients were taking all four guideline recommended medications, 67% reported being referred to cardiac rehabilitation/education sessions, 46% of these did not complete the program. Of the 22% of patients who smoked at the time of admission, 50% continued post-discharge.

Conclusion:
Baseline results confirm known evidence-practice gaps. An educational intervention has been rolled-out to address these gaps. Follow-up review of practice is now underway.

Appendix 6 - Conference Abstracts Continued

Abstract for 35th Society of Hospital Pharmacists of Australia National Conference

Discharge Management of Acute Coronary Syndromes (DMACS): A Comparison of Strategies for Implementing a NPS Initiative - ‘The Tale of Two Hospitals’

Authors: Russell Levy; Niamh O'Neill, Kate Oliver

Aim: To compare the strategies used by two diverse treatment centres in the implementation of a national health initiative.

Method: DMACS is a national quality improvement project initiated in January 2008 involving 49 hospitals, funded by National Prescribing Service (NPS). The project aims to improve clinical outcomes for patients with acute coronary syndromes (ACS) by increasing adherence to guideline recommended medications, implementing lifestyle modifications, increasing cardiac rehabilitation attendance and facilitating communication of management plans to community healthcare providers. Following data collection to establish current practice, an educational intervention was commenced. The techniques employed at Manly and St Vincent's Hospitals are compared.

Results: Manly Hospital is a large-major cities hospital located in northern Sydney with 200 beds. St Vincent’s Hospital is a principal referral institution in Sydney’s eastern suburbs with 379 beds. In addition to academic detailing and group education sessions, the common strategies employed at both institutions included development of ACS checklists for discharge as well as issuing medication lists and educational materials to patients. Manly Hospital developed electronic discharge summaries specifically targeting communication with general practitioners and patients were issued invitations to attend cardiac rehabilitation. St Vincent's Hospital augmented the interventional phase of the project with DMACS reminder posters and frequent in house presentations raising awareness of the project aims. Referrals to cardiac rehabilitation were also prioritised for all ACS patients at St Vincent’s Hospital.

Conclusion: While both hospitals utilised core material from NPS and support from NSW TAG, differences in hospital process and culture necessitated local approaches. Detailed analysis of baseline data from NPS and feedback with comparison to state and national trends enabled each of our sites to identify unique needs and tailor our interventions to successfully implement the project.
References


Acknowledgements

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We would also like to sincerely thank and acknowledge all the hospital project leads who have contributed many long hours and hard work to the achieve the improvements seen in the NSW arm of the DMACS project:

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