Venous thromboembolism – Developing the Clinical Practice Guideline

Background
Venous thromboembolism (VTE) is an important healthcare problem resulting in significant morbidity, mortality and resource expenditure. It is the most common cause of preventable in-hospital death and hence thromboprophylaxis is the number one strategy to improve patient safety in hospitals.

The Virchow triad as first formulated (venous stasis, vessel wall injury, hypercoagulable state) is still the primary mechanism for the development of venous thrombosis. In practical terms, the development of venous thrombosis is best understood as the activation of coagulation in areas of reduced blood flow. This explains why the most successful prophylactic regimens are anticoagulation and minimizing venous stasis.

Thromboprophylaxis is based on solid principles and scientific evidence. Routine use of thromboprophylaxis reduces adverse patient outcomes and at the same time, reduces overall costs. Numerous RCTs and meta-analyses demonstrate little or no increase in clinically significant bleeding with routine pharmacological methods of thromboprophylaxis (heparin, low-molecular weight heparins and vitamin K antagonists).

The implementation of evidence based prophylaxis strategies will provide benefit to our patients and should protect caregivers and the hospital from legal liability.

Developing the CPG
This CPG was developed by staff representing Gynaecology (medical and nursing), Oncology, Anaesthetics, Pharmacy and Haematology.

We utilized the available evidence based recommendations including those of the American College of Chest Physicians (ACCP), the National Institute for Health and Clinical Excellence (NICE), and the Scottish Intercollegiate Guidelines Network.

The CPG recommends that a thromboprophylaxis care plan is made for all gynaecology surgery patients by performing a risk assessment and following the CPG recommendations. A risk assessment is performed taking into account the patients personal risks and the procedural risks.

Personal risks include the patient’s age, BMI and presence of risk factors such as personal history of venous thromboembolism, presence of a thrombophilic marker, cardiovascular risk factors, the use of oral contraceptives or HRT, the presence of cancer or chemotherapy, smoking, prolonged recent travel and other medical conditions.

STOP THE CLOT
Although death from pulmonary embolism following gynaecological surgery is rare, it is underestimated and mostly preventable. 2000 people die in Australia every year from post-operative pulmonary embolism and morbidity can be significant. A DVT greatly prolongs recovery, needs long use of anticoagulants and jeopardises subsequent use of oral contraceptives and HRT.

All this has been known for a long time. We use post-operative thromboprophylaxis in patients considered high risk but this is where it starts to get wobbly. Formal risk assessments are often not made nor documented; there is variation in what clinicians consider high risk. In a clinical audit of thromboprophylaxis practice in major gynaecology surgery at the Women’s, Robin Montgomery and Salwan Al-Salihi found that only one in three received anticoagulants. (See page 2) Bodies such as the NHMRC and the National Institute of Clinical Studies and the Victorian Quality Council feel there is room for evidence based improvement.

Independently, we at the Women’s felt the same. We use post-operative thromboprophylaxis in patients considered high risk but this is where it starts to get wobbly. Formal risk assessments are often not made nor documented; there is variation in what clinicians consider high risk. In a clinical audit of thromboprophylaxis practice in major gynaecology surgery at the Women’s, Robin Montgomery and Salwan Al-Salihi found that only one in three received anticoagulants. (See page 2) Bodies such as the NHMRC and the National Institute of Clinical Studies and the Victorian Quality Council feel there is room for evidence based improvement.

...continued next page

...continued next page
A review of VTE prophylaxis in gynecology patients undergoing surgery at the Women's

This clinical audit was first initiated by Robin Montgomery, the Quality and Safety Fellow attached to the unit during last year, 2006. He developed the questions to extract the necessary information from the database. With the help of Ms. Therese Caine the data was collated for 168 consecutive patients who underwent major gynaecological surgery at the Royal Women’s Hospital during the study period. A number of different operations were reviewed done by the 3 different teams at the hospital. It looked at how many of these patients received thromboprophylaxis during and after their procedures. Another variable measured was to see how many of those patients did end up having a VTE incident post operatively.

The results showed that in the 168 patients involved in this study, 38 of them belonged to the Gynaecology 1 team (22.6%), 75 (44.6%) to Gynaecology 2, 43 (25.5%) to Gynaecology 3, only one patient belonged to oncology team and 11 patients (6%) to others. In terms of what surgery they had, the group was divided to abdominal and vaginal hysterectomies, major laparoscopic surgery of all types and others who had combined procedures. In regards to the use of thromboprophylaxis, we found that only 55 patients of the grand total received pharmacological thromboprophylaxis (32.7%). The rest received none (67.3%).

All patients were encouraged to ambulate early as a form of mechanical thromboprophylaxis after their surgery.

Among those given Low Molecular Weight Heparin (LMWH), 5% received it in the first 6 hours post operatively, 89% was given within 6-12 hours and the rest (5%) was given thereafter. 41% of patients who received the LMWH had it for 3 days post op, 56% had it for 4-7 days and the rest (2%) had it for longer than 7 days. We found that there was no case of VTE recorded on any of the 168 patients involved in this study.

This review represents the current practice of VTE prophylaxis in use for our gynecology surgical patients. It sets a benchmark for future studies. Following the introduction of the RWH clinical practice guideline for thromboprophylaxis, a future study will look at how practice might improve after the implementation of these guidelines.

Formal risk assessment for patients undergoing surgery and subsequently tailoring the VTE prophylaxis according to their risk was not done in this period prior to the introduction of the CPG. Among these risks are the age, BMI and length of surgery as well as the effect of having the oral combined contraception and HRT around the time of the operation.

I do believe the value of this clinical practice guideline is that it will alert us to and help us manage the risks. These steps can prevent ominous clinical outcomes. After all that’s what safe medicine is all about.

Salwan Alsalihi
Fellow, Quality and Safety
Implementation of the Venous Thromboembolism Prevention Guidelines

In developing an implementation plan for the Women's, we were fortunate that a national program was planned at the same time. From 2005 to 2008 the NHMRC/National Institute of Clinical Studies (NICS) have developed a national Venous Thromboembolism (VTE) prevention program which is aimed at improving the use of VTE prevention measures hospital-wide and improving the assessment and management of VTE risk.

Forty hospitals nationwide initially participated; the Women's being a specialist hospital was not part of this collaboration. NICS later offered the Women's the opportunity to benefit from the implementation strategies and resources that were developed.

In May 2007, NICS conducted a workshop designed to share the experiences of participating hospitals, provide evidence to support the guidelines and the 'Stop the Clot' guide was launched. The 64 participants brainstormed the barriers to implementation of VTE prevention guidelines and sustainability of processes.

A summary of the identified barriers to implementation of the VTE prevention guidelines were noted as: lack of leadership/ownership of the process, lack of available time and human resources, agreement between clinicians and compliance with guidelines, resistance to change and the high turnover of medical staff (requiring regular orientation sessions).

Sustaining the process addressed similar issues as noted. Executive support and sponsorship was suggested as opposed to an individual person driving the process change. Relevant stakeholders should be involved in a multidisciplinary project team. An evidence-based clinical guideline should be developed according to individual patient/client population. The method of VTE risk assessments should be simple to enable the process to be embedded in the culture of patient care within the organisation. Staff and consumers should be educated regarding the risks (pre and post operative), signs and symptoms and prophylaxis of VTE. Data should be collected and displayed via audit and feedback systems.

The NICS ‘Stop the Clot’ Guide was launched during the workshop. The guide included 7 steps aimed to assist hospitals to integrate VTE prevention guidelines into routine practice.

A CD ROM provided sample documents: project plans; audit guide, form and database; evidence-based guidelines plus consumer brochure (available in 12 languages on-line) and poster. All of the information is available on-line via the NICS web site / Programs / Stop the Clot Resources (http://www.nhmrc.gov.au/nics/asp/index.asp). NICS has recommended information and material to be used / adapted by hospitals as required to assist implementation of their guidelines and processes.

The Royal Women's Hospital has convened a multidisciplinary VTE Prevention Project to plan the implementation of the clinical practice guideline (CPG). Joint responsibility for the project will be provided by Clinical Governance Unit and Women's Services. Liz Chatham (Director of Women's Services and member of The Royal Women's Hospital Executive) is the Executive Sponsor and Chair for this project/process.

During the first meeting the multidisciplinary team discussed the draft CPG, audiences were identified, barriers to implementation of the CPG were identified and general issues regarding developing simple processes for ensuring compliance with the CPG were addressed.

A draft project plan which included a communication plan was presented.

The team aim to initially meet fortnightly then monthly to progress the implementation of the venous thromboembolism prevention CPG for women undergoing gynaecological surgery.

Katrina Morrison
Quality Improvement Coordinator

References
Workshop No. 3, National Institute of Clinical Studies (NICS) Venous Thromboembolism Prevention Program, 16 May 2007
The Dysplasia service at the Women’s offers assessment, treatment and review for women with abnormalities detected on Pap smear and those women symptomatic of cervical pathology. Dysplasia describes changes in the cells which are benign but can represent a premalignancy in some women. This service is managed co-operatively with the clinical staff of the Oncology Unit who are supported by consultant gynaecologists. The dysplasia unit operates an integrated service delivering all outpatient, inpatient and day procedure care which supports women to maintain ongoing review of their condition. Underpinning this clinical service is a dedicated clerical service responsible for referrals, scheduling of appointments, clinic reception, organizing test result reviews and patient tracking reports.

The dysplasia service is facing increased pressures within a changing environment and it has become evident that we must find more efficient ways to be able to deliver our service.

A review of the dysplasia service was established in January 2007 involving key members of the dysplasia team representing medical, nursing and clerical staff and supported by a project worker. The scope of the review has included:

- to identify best practice in the delivery of our service
- describe the processes and systems we currently use and their compliance with best practice
- Identify gaps in service provision and develop tools to aid service delivery
- Establish appropriate allocation of responsibility for patient care and the maintenance of patient administrative processes
- To assess resource needs
- Establish a process for ongoing review and quality assurance

The review is ongoing but a number of outcomes have been achieved so far. The dysplasia service has revised the referral guidelines to reflect the NHMRC 2005 “Screening to prevent Cervical Cancer: Guidelines for the management of asymptomatic women with screen detected abnormalities”

Katy Weare
Cancer Services Manager

**Dysplasia Clinic – Internal Referral Guidelines (in line with NHMRC Guidelines)**

Referral to the Dysplasia Clinic will only be accepted when:

- The patient meets the referral requirements (listed further down this document) and this is documented in the referral
- The most recent pap test result is included in the referral
- All patient details are completed, including GP details and need for interpreter and language required

A referral will not be accepted without the above completed information. Incomplete referrals will be returned, unbooked, to the referrer.

Referrals can be sent via the internal mail or faxed (ext 2591). Patients must not be sent to the clerical office located in medical records to make appointments. Patients will be contacted with their appointment once referral information has been received and the referral triaged.

Additional information that is useful to be included on the referral is:

- Any other relevant gynaecology history
- Knowledge of abnormal bleeding e.g. post coital bleeding
- Other relevant health history e.g. immuno-suppressant medication, tissue transplants

**The following patients can be referred to the Dysplasia Clinic**

Women with a Pap test report of:

- Possible high-grade squamous cell lesion
- HSIL
- HSIL with additional features suggestive of an invasive component
- ASCC
- Adenocarcinoma of endometrial origin
- Endocervical AIS
- Possible high-grade glandular lesions
- Atypical glandular or endocervical cells of undetermined significance
- LSIL in a woman aged 30+ and without a history of negative smears in the preceding two to three years
- High-grade changes (definite or possible) on a twelve-month repeat Pap test after index test results of LSIL
- Changes suggestive of LSIL (possible or definite) on a second Pap test at a 12-month interval
- A woman who has had two LSIL/possible LSIL reports (at least twelve months apart) within a three-year time frame, regardless of intervening normal cytology reports
- An immuno-suppressed woman who has a screen-detected abnormality (even if the lesion is low-grade)
- A symptomatic post menopausal woman
- A woman with symptoms of post coital bleeding

*A woman with a result of LSIL who does not fit the above criteria but for whatever reason, be it physical or psychological, is deemed to require assessment at the Dysplasia clinic, be it by the woman herself or her referring doctor, will be accepted.*
Australia’s Health Ministers agreed on 23 April 2004 that in order to reduce harm to patients from medication errors, all public hospitals would use a common medication chart by June 2006.

The NIMC was developed by health care professional representatives from across Australia. The chart was piloted by 31 sites across Australia, including seven sites from Victoria. All pilot sites made further recommendations to enhance the safety features of the NIMC and these have been incorporated into the final version. The RWH began its implementation project in May 2006 and introduced the charts in July 2006.

**Key objectives for RWH**

Our aim was to

1. Reduce the number of prescribing errors per medication chart
2. Reduce the number of administration errors per medication chart
3. Improve recording of allergy status
4. Improve charting of medications on admission

**Methodology**

Specific process utilized included - Steering group, fortnightly meetings, consultation, newsletters, extensive education, pocket sized handbook for clinicians, concurrent audits via electronic survey

**Key Improvements**

1. We introduced one principal set of medication management guidelines. These guidelines replaced a range of policies and procedures. During this process we also updated the Self Medication procedure for inpatients
2. Introduced a new adult inpatient medication chart badged for RWH, with a plan to introduce a new chart for babies at a later stage. We are in line with the national direction
3. Identified the need for a 24 hr ambulatory services medication chart for use in Emergency Department and Ambulatory Services. Chart developed and in use
4. Developed a Diabetes Medication (Insulin) Chart, but progress stopped now because limited educator time available
5. Established a process to undertake web based surveys in “Survey Monkey”, utilizing the medication champions in their workplace rather than undertaking paper based retrospective survey involving the lengthy process of chart retrieval from HIM
6. Sustained legibility of the chart, the dosages etc. This has been assessed as > 90%
7. Nurses recording of the actual dose when a dosage range is ordered has shown great improvement

**Key issues identified**

1. There has been a reluctance to duplicate on the medication chart, data recorded elsewhere in medical record eg prescriber undertaking medication reconciliation on front of medication chart when they have already documented medication taken at home. Pharmacists often complete the reconciliation. The literature indicates significant patient safety reasons for the prescriber to document this reconciliation prior to prescribing
2. Recording of height and weight on the medication chart is minimal. In some service areas, height and weight are not significant for management and are therefore not recorded
3. New charts are not commenced when a specific section of the chart is full. The prescriber often writes the prescription in a spare section rather than the appropriate section. This is especially so for long stays > 7 days, and PRN medications. There are obvious safety issues here, in that patients may not get the correct medication at the correct time
4. The allergy/alert section is often not completed. There may be a “tick” but no details
5. Generic prescribing is not always done. This is especially so for combined products
6. There was a significant initiative to get the prescriber to record the administration times for regular medications, according to a set of times agreed by nurse unit managers and consistent with current practice. The safety message has been that if the prescriber records TDS in the prescription and then writes
the 3 times on the chart, this will reduce errors. It was not possible to collect data on this retrospectively. Pharmacists, however, report that prescribers are not recording administration times.

Recommendations made to the Q+S Committee

1. Refer recommendations and future oversight of the medication chart to the Medication Safety Committee – This has occurred.

2. Develop a medication chart audit schedule and system to ensure regular and comprehensive chart audits. This is suggested to be at a minimum of 6 monthly of at least 30-40 charts per service area – This has occurred and first audit is reported below.

3. Involve medication champions, staff development and prescribers in this review process – This recommendation is under consideration.

4. Undertake regular and consistent clinician education in relation to the safety features of the medication chart. This education could be provided by both staff development and pharmacists – This recommendation is under consideration.

Contact
Therese Caine, Clinical Governance or Jo Heard, Clinical Staff Development.

Results of Audit conducted in April 2007 and compared with November 2006

<table>
<thead>
<tr>
<th>Variable</th>
<th>April 2007</th>
<th>Nov 2006</th>
<th>Change</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>April 2007</td>
<td>Nov 2006</td>
<td>Change</td>
<td>Action</td>
</tr>
<tr>
<td>ID label attached</td>
<td>100%</td>
<td>80%</td>
<td>Positive 20%</td>
<td>Target reached</td>
</tr>
<tr>
<td>Pt name printed below each label</td>
<td>26.9%</td>
<td>9.1%</td>
<td>Negative 17.8%</td>
<td>TEAM education required</td>
</tr>
<tr>
<td>Medications prior to admission recorded?</td>
<td>15.4%</td>
<td>30.9%</td>
<td>Negative improvement</td>
<td>TEAM education required</td>
</tr>
<tr>
<td>Allergy/alert section signed off</td>
<td>86%</td>
<td>76%</td>
<td>Negative 10%</td>
<td>TEAM education required</td>
</tr>
<tr>
<td>Adr alert stickers where adr indicated</td>
<td>55%</td>
<td>16%</td>
<td>Negative 39%</td>
<td>TEAM education required</td>
</tr>
<tr>
<td>Adr reaction details documented</td>
<td>55%</td>
<td>58%</td>
<td>No change 3%</td>
<td>TEAM education required</td>
</tr>
<tr>
<td>Alert sheet in record completed</td>
<td>55%</td>
<td>42%</td>
<td>Improvement 13%</td>
<td>TEAM education required</td>
</tr>
<tr>
<td>Telephone orders signed off by prescriber</td>
<td>50%</td>
<td>36%</td>
<td>Improvement 14%</td>
<td>Educate prescribers</td>
</tr>
<tr>
<td>Indication for pm meds documented</td>
<td>19%</td>
<td>36%</td>
<td>Negative 17%</td>
<td>Educate prescribers</td>
</tr>
<tr>
<td>Maximum dose in 24hrs for pm meds is indicated on chart</td>
<td>17%</td>
<td>29%</td>
<td>Negative 12%</td>
<td>Educate prescribers</td>
</tr>
<tr>
<td>Prescriber’s name printed on chart</td>
<td>50% of time</td>
<td>83% of time</td>
<td>Negative 33%</td>
<td>Educate prescribers</td>
</tr>
<tr>
<td>Pharmacist has reviewed chart</td>
<td>28%</td>
<td>73%</td>
<td>Negative 45%</td>
<td>Pharmacy review</td>
</tr>
</tbody>
</table>

Accreditation Report
– April 2007

The Accreditation survey was conducted on March 6-9, 2007. Feedback from the surveyors during the process and at the summation suggests that they were impressed with the quality of our services, staff and initiatives.

We have recently received from ACHS, details of our ratings and the report including recommendations. The rating summary that we have received indicates that RWHS received 21 higher level ratings compared to 3 extensive achievements in 2005. We have received 19 extensive achievements and 2 outstanding achievements.

The surveyors were particularly impressed by achievements and initiatives in relation to Population Health, Consumer Involvement and Research across our clinical services. Areas where we will need to make improvements include falls management systems, skin integrity systems, measurement of staff competency and staff training.

The surveyors have also recommended that we evaluate the effectiveness of the communication systems which are in place to create awareness amongst staff of quality improvement projects and initiatives which are occurring. The surveyors have mentioned that they spoke to staff who were not aware of being involved in improvement and clinical review processes in their work area. We need to more actively involve staff at all levels in understanding quality improvement and improvement activities. For example, JMOs / nurses / midwives are involved in quality activities by participating in the clinical review processes, attending the medication safety committee or the Gynaecology Clinical Review meetings at lunchtime. So stay tuned to some new initiatives in this area.

During the survey over 200 staff participated in Focus Groups and
many other staff met the surveyors as they toured the hospital. This involvement was a highlight, as it enabled the surveyors to see passion, energy and involvement across the organisation. Not all health services have this level of involvement of staff.

Feedback from staff about the survey preparation and process and what can be done to improve the system has indicated that:

- Most were satisfied or very satisfied with the process and with the preparation
- Most were satisfied or very satisfied about the accreditation tools
- Most felt that they understood quality and accreditation, however 21% were undecided about this
- Most were satisfied with the surveyors. However significant negative feedback was received about one surveyor and this feedback has been provided to ACHS
- There was one comment from 55 responses that said “the hospital only seems to improve things in the work area when accreditation is happening”

Getting ready for accreditation is a bit like getting ready for a big party. Routine housekeeping happens on an ongoing basis, but at big party time walls get cleaned and updated, cupboards get cleaned out, flowers are on display and best gear is worn. With adequate risk management, planning and preparation, the upheaval is kept to a minimum

Excellent suggestions have been made to improve the processes including

- More frequent communication about the accreditation processes and cycle
- Develop a culture of consistent, year round effort to achieve quality and continuous improvement
- Coordinator, Quality and Accreditation to have more frequent/ongoing contact with departments

- Establish a quality improvement register on Intranet to enable wide communication of initiatives and results
- Make system simple and accessible
- Involve more staff in education and action in relation to accreditation

Our next task in the EQuIP cycle will be to complete a desk top self assessment by March 31st, 2008 in relation to the mandatory criteria and then prepare for another 2 day visit in 2009, at which stage we will have been in the new facility for several months. Information is being prepared for managers and staff on how they can maintain steady momentum throughout the four year cycle.

Therese Caine
Coordinator, Quality and Accreditation

‘We have recently received from ACHS, details of our ratings and the report including recommendations. The rating summary that we have received indicates that RWH received 21 higher level ratings compared to 3 extensive achievements in 2005. We have received 19 extensive achievements and 2 outstanding achievements.

The surveyors were particularly impressed by achievements and initiatives in relation to Population Health, Consumer Involvement and Research, across our clinical services. Areas where we will need to make improvements include falls management systems, skin integrity systems, measurement of staff competency and staff training.’
Prescribing restrictions for anti-infectives at the Royal Women’s Hospital

The overuse of broad-spectrum anti-infectives can increase anti-infective resistance throughout hospitals and the community. Well publicised examples of resistance are the emergence of tuberculosis, sepsis due to methicillin-resistant staphylococcus aureus, and of vancomycin resistant enterococcus (Garau, J. 2006).

In respiratory tract infections, the emergence and spread of resistant organisms, particularly Streptococcus pneumoniae, continues to restrict the range of effective anti-infectives available (Garau, J. 2006). Various strategies for improving anti-infective utilization have been proposed as inadequate anti-infective treatment has been associated with increased hospital mortality rates, prolonged hospitalisation and an overall increase in healthcare costs (Barlow G., Nathwani D., 2005).

It is important to ensure that anti-infectives are prescribed in a way which minimises the risk of resistance. Appropriate prescribing ensures physicians use ‘narrow spectrum’ anti-infectives targeting only a few bacterial, fungal, or viral types whenever possible.

For this reason the Royal Women’s Hospital has restrictions on the use of the following anti-infectives:

- Aciclovir
- Amikacin
- Amphotericin
- Azithromycin
- Cefotaxime
- Ceftriaxone
- Ciprofloxacin
- Famciclovir
- Fluconazole
- Lamivudine-Zidovudine

- Meropenem
- Nevirapine
- Rifampicin
- Timentin (Ticarcillin-Clavulanate)
- Tobramycin
- Valaciclovir
- Vancomycin
- Zidovudine

Before prescribing these anti-infectives, clinicians need to discuss with Infectious Diseases Unit or refer to prescribing restrictions documented on the Clinical Practice Guidelines. The Infectious Diseases Department can be contacted directly via switchboard on 9344 2000.

It is important to understand that the intention of these restrictions is to ensure anti-infectives are used most appropriately.

This table lists how often restricted anti-infectives have been prescribed over the last year (01/05/06 – 31/05/07).

A more extensive list of restricted drugs can be found in the Royal Women’s Hospital Clinical Practice Guidelines located at: www.thewomens.org.au

References


Peter Truong
(Pre-registration Pharmacist)

<table>
<thead>
<tr>
<th>Anti-infectives</th>
<th>Number of occasions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aciclovir</td>
<td>30</td>
</tr>
<tr>
<td>Amikacin</td>
<td>0</td>
</tr>
<tr>
<td>Amphotericin</td>
<td>1</td>
</tr>
<tr>
<td>Azithromycin</td>
<td>147</td>
</tr>
<tr>
<td>Cefotaxime</td>
<td>27</td>
</tr>
<tr>
<td>Ceftriaxone</td>
<td>5</td>
</tr>
<tr>
<td>Ceftriaxone</td>
<td>34</td>
</tr>
<tr>
<td>Ciprofloxacin</td>
<td>10</td>
</tr>
<tr>
<td>Famciclovir</td>
<td>4</td>
</tr>
<tr>
<td>Fluconazole</td>
<td>312</td>
</tr>
<tr>
<td>Lamivudine-Zidovudine</td>
<td>9</td>
</tr>
<tr>
<td>Meropenem</td>
<td>34</td>
</tr>
<tr>
<td>Nevirapine</td>
<td>5</td>
</tr>
<tr>
<td>Rifampicin</td>
<td>1</td>
</tr>
<tr>
<td>Timentin (Ticarcillin-Clavulanate)</td>
<td>10</td>
</tr>
<tr>
<td>Tobramycin</td>
<td>0</td>
</tr>
<tr>
<td>Valaciclovir</td>
<td>13</td>
</tr>
<tr>
<td>Vancomycin</td>
<td>14</td>
</tr>
<tr>
<td>Zidovudine</td>
<td>10</td>
</tr>
</tbody>
</table>

For any further enquiries regarding Pharmacy news please contact rwh.pharmacy@rwh.org.au

Please let the associate editors have your views on the contents of this newsletter, or any other matters involving clinical practice which may be of interest to our readers.

Mary Draper, telephone (03) 9344 2722 or email mary.draper@rwh.org.au

Susan Braybrook, telephone (03) 9344 2606 or email susan.braybrook@rwh.org.au

The Clinical Governance Unit homepage www.rwh.org.au/quality_rwh

Claudia Cheng, claudia.cheng@rwh.org.au  Salwan Alsalihi, salwan.alsalihi@rwh.org.au