

The Dissector

Journal of the Perioperative Nurses College
of the New Zealand Nurses Organisation

March 2021, Volume 48, Number 4

CLINICAL

Transcatheter Aortic Valve Implantation



EDUCATION Support for Operating Theatre Assistants

PROFESSIONAL Flexible Perioperative Workforce

LITERATURE REVIEW Local anaesthesia & pain management post thoracotomy

VOLUNTEER SERVICE ABROAD Teaching nursing students in Cameroon

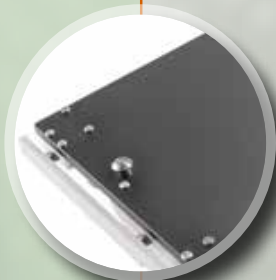
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The Dissector

The official Journal of the Perioperative Nurses College of the New Zealand Nurses Organisation (PNC^{NZNO}).

March 2021, Volume 48, Number 4

www.nzno.org.nz/groups/colleges/perioperative_nurses_college

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No time for complacency

Tēnā koutou katoa. Welcome to the first issue of *The Dissector* for 2021. As I step into the role of Chief Editor, I have been reminded of the important foundational work that my predecessors accomplished.

The first issue of *The Dissector* was published in September 1974. Pam Marley, in her editorial of the ground-breaking new journal, told us that unless we developed a new way of training theatre nurses we were "...going to find ourselves on the outside looking in... at the non-nursing personnel who have been recruited, trained and introduced to fill the gap".

Nearly 47 years later, Perioperative and Medical Imaging Nurses continue to be essential to safe patient care. Along the way we have developed new ways of working and these specialty areas are more vibrant and exciting than ever. However, now is not the time to become complacent. We certainly have more challenges ahead as our workforce ages and the health needs of New Zealanders increase. We must grow and develop the next generation of nurses if we are to continue to be a valuable workforce in these complex environments.

With this in mind, we are planning a series of articles related to the 'flexible workforce' projects that are being implemented nationwide. Leigh Anderson, Nurse Director for Perioperative Services and PNC Chair from 2008–2013, gives an overview of what the flexible workforce project is and why it is necessary. If your district health board (DHB), hospital or department are implementing a flexible way of working, we'd love to include this in future issues.



Nurse authors

In this issue of *The Dissector* we have three articles from nurses at Christchurch DHB, two with a clinical focus and one on an in-house training programme. Murray Hart, Clinical Nurse Specialist Cardiology/TAVI Coordinator from Christchurch Hospital, writes about Transcatheter Aortic Valve Implantation (TAVI), a revolutionary percutaneous treatment option for patients who have symptomatic severe aortic stenosis. Murray's article explains the work-up pathway, how the procedure is performed in the Cardiac Cath Lab and care of the patient post-procedure. He also discusses potential complications.

Physiological process of pain

Olivia Talyancich, an OR RN, offers a valuable reminder on the physiological process of pain following a surgical procedure. She then looks specifically at the literature around the use of local anaesthetic following thoracic surgery as part of multimodal care.

Liane Dixon, also from Christchurch Hospital operating theatres, describes the implementation of an education programme for Operating Theatre Assistants, designed to meet the needs of their perioperative department.

On an international note, Harriet Zych reflects on her experience teaching a recovery room course to 29 students at Mbingo Baptist Hospital in north-western Cameroon.

Pandemic planning

As we start another year amid probably the most significant global healthcare event in recent history, it is appropriate that the June issue of *The Dissector* has a planned focus on how we prepared for Covid-19. Articles will be looking at innovative ways that Perioperative and Medical Imaging Nurse teams 'pivoted' to survive the changing landscape.

If you or your department had an innovative plan to meet needs for safe management for staff and/or patients during the pandemic, we'd love to hear from you. Please email the Editor or contact a local Editorial Committee member with your proposed topics and we can provide guidance.

The writing guidelines for *The Dissector* are on the Perioperative Nurses College website. Alternatively, an Editorial Committee member can email them to you.

Noho ora mai.

Bron Taylor, Chief Editor

The DISSECTOR



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47th annual conference shaping up well



Welcome to 2021! It is hard to believe that we are already well into the New Year. With 2020 behind us I would encourage everyone to look at 2021 as an opportunity for new beginnings and personal growth.

In New Zealand we can look to the koru symbol that inspires us to find strength and peace whilst remembering where we came from. The mission of the

Perioperative Nurses College of the New Zealand Nurses Organisation (PNC ^{NZNO}) is to “promote and support the safe and optimal care of all patients undergoing operative and other invasive procedures”. The primary means of ensuring we achieve this mission is to promote high standards of care with education and professional support.

Education

The PNC ^{NZNO} aims to provide its members with access to further education that supports their professional practice. Most recently we have secured access to Laser Safety Officer Scholarships with Bravura. I would encourage members to contact their regional representatives and apply for these opportunities. We have been provided with one scholarship per PNC Region every year, so this is a wonderful opportunity for PNC members.

Professional Support

We have completed guidelines to support the safe and comprehensive orientation of nursing staff new to perioperative environments (operating theatre, post anaesthetic care unit (PACU), interventional radiology). This document has been completed with the support and much appreciated advice of the senior nursing management and nursing education team at ADHB. I believe this co-operation between the PNC and workplaces is the key to our future success. We need to ensure that our work and guidelines are appropriate and of practical use to our members. This

piece of work is currently going through the approval process of the NZNO and I hope to have this accessible on our website as soon as the process is complete.

PNC Conference

Education comes in many forms. The organising committee for the 47th annual PNC Conference has prepared a wonderful programme for Christchurch in October. One of the topics they are looking at is innovation and managing effectively with what we have available – rather than what we are used to having.

We are all experiencing challenges in access to consumables and it will be great to share our experiences and how other areas have managed to work with these challenges.

Our annual conference is about more than education, we have all missed out on networking and nursing collegiality in 2020. I would encourage everyone to attend the 2021 PNC Conference and address this important part of nursing culture.

Call for Abstracts

The Christchurch team invites nurse speakers to present. The call for abstracts is now open. Abstracts to present at our conference are due on **May 10, 2021**. One of the most important components of a nursing conference are nurse delivered presentations. Criteria for abstracts are available on the Conference website: www.perioperativeconference2021.co.nz

Remember, if you are chosen to present then you are eligible for many of the scholarships and awards that the PNC offers. Your Manager and Educators are also much more likely to support your attendance at conference if you have made the effort to prepare and deliver a presentation.

On-line registrations will open in May so get in early for your “early bird” specials. Keep an eye on the website or the Facebook page for details.

Website: <http://perioperativeconference2020.co.nz/>

Facebook: <https://www.facebook.com/pnc2020>

Juliet Asbery, Chair, Perioperative Nurses College



*The auditorium at St Margarets' College, venue for the 47th annual PNC Conference.
(Photo: Gillian Martin)*



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Bravura Education LSO Education Scholarships available to PNC members

In March 2020 Bravura Education commenced sponsorship of a Laser Safety Officer (LSO) scholarship for each region of the Perioperative Nurses College (PNC).

In 2020 there were four regional winners of these Bravura Education scholarships:

Adrianne Pearce - Auckland-Northland;
Val Devery - Central North Island;
Patricia Artates-Olmo - Canterbury-West Coast;
Kristy Pauling - Otago.

This year Bravura Education is once again offering close to \$3000 in scholarships for Perioperative Nurses College of the New Zealand Nurses Organisation (PNC ^{NZNO}) members to complete a laser safety officer (LSO) training course (surgical and operating suite).

The Bravura scholarships are open to all members of the PNC and for 2021 there are nine scholarships available.



Palmerston North Hospital's Laser Safety Officer Val Devery was delighted with her Bravura Education scholarship in 2020 and found the course enhanced her care of patients. Here she is at work with a 120 Watt Holmium-Yag Laser.

To apply, contact your regional representative of the PNC. Alternatively, email our National Secretary at pnc.sec@xtra.co.nz

Applicants will be considered at the scheduled National Committee meetings and winners notified within a week of that meeting.

The Bravura LSO course is suitable for nurses working in a perioperative environment who use lasers (gynaecology, urology, otorhinolaryngology, plastic surgery, cardiology, neurology, orthopaedics and ophthalmology).

The Bravura Education LSO course covers the operational characteristics of lasers, laser hazards and the principles and procedures for safe laser use and meets eight hours of continuing professional development (CPD) when applied according to relevant Nursing Council guidelines.

You can study at your own pace, in your own time and take as long as necessary to complete it.

Assessment is a two-hour, online, open book exam.

For more details about the course visit the Laser Safety Officer (LSO) training course (surgical and operating suite) page of the Bravura Education website (www.bravura.edu.au).

Feedback

"The Bravura laser safety course offers good study opportunities that enables one to have a comprehensive understanding of the principles and safe usage of laser which can then be applied in the operating theatre environment," says Patricia Artates-Olmo, Canterbury West Coast PNC Region Scholarship Winner in 2020.

"The printable lecture notes are very handy when you are doing the exams at the end of the course; these can then also be used as a guide or reference in the future, which is great," Patricia adds.

Val Devery, Operating Theatre Urology and O&G and Laser Safety Officer, Palmerston North Hospital found "the online education site easy to use and the course content relevant. Completion of the course augmented my ability to oversee all safety aspects of laser use and so improve the safety, efficiency and quality of care for patients in our facility."

The Bravura LSO course offers an opportunity for our members to develop their own education and professional development. I strongly encourage applicants to take advantage of this wonderful, practical and useful opportunity.

Juliet Asbery, Chair, PNC National Committee

'The Dissector' Needs You!

Are you a reader, a writer or a talker?

Or all three of the above? You are just what the Editorial Committee of *The Dissector* is looking for!

As you know, *The Dissector* is published quarterly, providing an avenue for members to share their clinical expertise, research, quality projects and case studies, and is an ideal platform for nurses to develop their writing skills.

The role of the Editorial Committee is to assist the Chief Editor to plan content and to carry out first edits on work submitted. The time commitment is not onerous; there are generally three face-face / ZOOM meetings per year and two at National Conference. All costs to attend meetings are covered by the National Committee, including attendance at National Conference.

Term of office is for two years.

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submit your application letter and a copy of your CV to the PNC secretary on pnc.sec@xtra.co.nz and include a copy to *The Dissector* Chief Editor at dissector.editor@gmail.com

If you want more information about the role, please contact Bron Taylor on dissector.editor@gmail.com who will further convince you it is just what you always wanted to do next with your life and career.



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'Dissector' authors honoured

Every year at the annual general meeting of the Perioperative Nurses College of the New Zealand Nurses Organisation (PNC^{NZNO}), a series of awards is made to Perioperative Nurses in a number of fields.

Due to the SARS-CoV-2 viral pandemic, there was no AGM in 2020 so no awards were presented.

However, that did not stop judging taking place for the Best Article Award and the MEDSPEC Award for the Best Article from a First Time Writer. These are awards for the best articles published in *The Dissector* each year.

For 2020, Christchurch Clinical Nurse Specialist Rebecca Porton-Whitworth won the Best Article award for her very moving exposition: '*Christchurch Mosque Massacre: the aftermath. A Perioperative Reflection.*' This was published in the March 2020 issue (Volume 47, Number 2) of *The Dissector*.

With regard to the MEDSPEC Award for the Best Article from a First Time Writer, none of the articles submitted met the judging criteria.

After consultation with Michael Esdaile of Advantage Publishing, it was agreed the \$500 award could be transferred to a Best Article Runner-Up award due to the considerable number of articles that met that criteria.

Consequently, Myra Wilson won the amended MEDSPEC award for her article '*Making a difference in Perioperative Nursing: making gains and moving ahead.*' This was published in the December 2019 issue (Volume 47, Number 3).

The judging of these awards took some time as there were no less than 10 authors and 11 articles that met the criteria.

Aside from Rebecca and Myra, the other authors with articles that meet the judging criteria were Stacey Duncan, Sandy Gallagher, Tim Hills, Victoria Rous, Gillian Martin, Juliet Asbery, June Callan and Lorna Davies.

At the time, retiring Chief Editor Shona Matthews said the very high quality of the articles submitted for publication in *The Dissector* that met all the criteria was most heartening and was a considerable change from the situation a decade ago when many articles required a lot of work from the Editorial Committee.



Shona Matthews (left) retiring Chief Editor of *The Dissector* with Rebecca Porton-Whitworth. (Photo: Michael Esdaile)

Perioperative Trauma Care Courses in August

Auckland City Hospital's Trauma Service is hosting four trauma care courses over three days in August.

The courses include practical sessions on surgical and anaesthetic techniques and because of these, numbers are limited.

They are:

- the Definitive Surgical Trauma Care (DSTC) course;
- the Definitive Anaesthetic Trauma Care (DATC) course;
- the Definitive Perioperative Nurses Trauma Care Course (DPNTC), and
- the Definitive Anaesthetic Assistants Trauma Care Course (DAATC).

The courses will be held on August 16, 17 and 18.

The DPNTC & DAATC courses will be held in conjunction with the DSTC / DATC courses.



The courses are aimed at Perioperative Nurses who have a minimum of two years recent clinical experience in a relevant perioperative setting, allowing them to develop their knowledge and skills in a multidisciplinary environment.

The courses include sessions combined with surgeons and anaesthetists, with some separate sessions for nurses. These trauma care courses are intended to equip Perioperative Nurses with the skills necessary to make them effective contributors to a team dealing with major trauma and to create strong communicators who can share their knowledge within their local environment.

The courses are part of a diverse and challenging experience. Included are presentations on principles of damage control and decision making in trauma from expert faculty members, interactive exploration of real cases, and high level surgical skills providing an opportunity to apply learning.

The interdisciplinary nature of the courses reflects the essential role Perioperative Nurses play as part of a surgical team dealing with major trauma.

Registration for all three days is \$825 and covers lectures, refreshments, lunch, dinner on first evening, manuals and practical sessions.

For more information or to register visit: <https://dstc.com.au/>

For further enquires contact:

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Āhua Tohu Pōkangia - Perioperative Services

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Abbott backs heart valve study day

Abbott Medical is sponsoring a National Heart Valve Study Day in Auckland on May 26. Topics included in the Study Day include:

- Heart anatomy – wet lab;
- Minimally Invasive Valve Surgery;
- Cardiopulmonary By-pass;
- Patient care pre- & post- valve surgery.

The venue for the National Heart Valve Study Day is the Level 9 Lecture Theatre & Clinical Education Centre, Auckland City Hospital and spaces are limited.

Attendees are reminded that the car parks and roads around Auckland City Hospital and Starship Children's Hospital can get very busy, so consider using public transport. If you are unable to use public transport, consider asking a friend or family member to drop you off.

The National Heart Valve Study Day will run from 8.00am to 4.00pm on Wednesday, May 26. Lunch and tea will be provided.

Auckland DHB is hosting the study day and there is no cost for internal applicants. For non-DHB staff, the registration fee is \$300. Numbers are limited to 60.

To register, contact Chen Zhou, Nurse Educator, OR Level 4 Cardiac Theatres, Auckland City Hospital. Phone: 021 943 080; Email: QianhuiZ@adhb.govt.nz

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2021 Perioperative Nurses Conference: Christchurch

As reported in the December 2020 issue of *The Dissector*, after two earlier attempts, Christchurch will finally host the annual Perioperative Nurses College Conference, from October 7-9.

This will be the 47th annual conference for the College. Its first — described as a 'seminar' — was held in Wellington in October 1974.

The last PNC Conference held in Christchurch was in November 2000, and the theme for that was '*The Challenges in the New Millennium*'. The Christchurch conference organisers certainly had more than their share of challenges in the next 20 years. First, the devastating Christchurch earthquakes wrecked the venue for the planned 2011 PNC Conference, resulting in that conference being cancelled. The Christchurch team was all ready to go again in 2020 — then the SARS-CoV-2 virus hit, forcing the conference to be delayed a year.

"After a few unforeseen events, third time's a charm!" says Conference Convenor Vanessa Bacaltos.

"The Canterbury-West Coast/Nelson-Marlborough Region of the Perioperative Nurses College warmly invites you to join us in Christchurch from October 7-9 at St Margaret's College," Vanessa adds.

"Our theme is "*Vision 20/21*" and is focused on moving forward in both personal growth and knowledge. This annual event is a time to gather together in fellowship after the challenges we faced in 2020."

Keynote Speakers The organising committee has some exciting

keynote speakers signed but the Christchurch team still has space in its programme for nurse speakers to present.

Joining Dr Lucy Hone, Korrin Barrett and Helen Harcombe is Anah Aikman who will speak on '*Creating cultural transformation the way we lead matters*'.

Anah inspires us to live our values, lean into our voice and drive our leadership legacy with purpose, passion and peaceful intent.

Caring deeply for you on your journey of self-discovery, well-being and transformation, Anah holds space for you to explore, grow, focus, centre and role model in a values-based approach to health and wellness.

Dinner "Our conference dinner at Wigram Airforce Museum will be a flashback to the great times of your 21st (birthday) and all the fun, elegance, fashion that time embraced. We look forward to sharing our developing city, the new shopping areas and art displays," says Convenor Bacaltos.

Venue Planning for the conference is well advanced, with St Margaret's College as the venue and dynamic Master of Ceremonies Pio Terei gearing up.

Alongside the PNC Conference Organising Committee, Joanne Reddock of The Conference Team is taking care of administrative and commercial details. She may be contacted by telephone: 03 359 2600, or email: joanne@conferenceteam.co.nz

PACU nurses for TMEC in Dunedin

In addition to theatre managers and educators, senior post anaesthetic care unit (PACU) nurses have been offered the opportunity to join the 2021 Theatre Managers and Educators Conference (TMEC) in Dunedin.

Not only that, but two additional speakers have joined the already impressive line-up of presenters in Dunedin from May 5-7.

New Zealand born and trained biomedical researcher Tony Manning is returning home after 30 years in the USA and will present '*Leading Healthcare innovation: lessons from a career in the Biotechnology Industry*'.

The other addition is Tim Morrison, who will present '*Flexibility of Thoughts and Attitude*'.

Tim has recently proved his own flexibility, changing his name to Timoti Te Moke so that when he graduates, he will be Doctor Te Moke.

Tim believes he is unique in that he is the only person in this country, and quite possibly the world, born into a community which society believed could only ever become statistics.

"Consequently, I grew to become the quintessential product of every negative social determinant," Tim says. "However, I overcame all of these barriers to be accepted to study at Otago University School of Medicine where I am currently in my fourth year of study, at the Wellington campus and hospital."

Tim was a paramedic prior to studying medicine.

'What's coming? – Flexibility' is the theme for TMEC 2021.

Presenters As detailed in the December issue of *The Dissector*, Professor Des Gorman, will present '*Health workforce - are we flexible?*'; University of Otago's Michael Baker will present '*Covid19*'; independent scholar Brian Easton, will present '*Why is it necessary to reorganise the health sector yet again?*'; Dr Cordelia Thomas, Associate Health and Disability Commissioner, will present '*The HDC in action*'; Patu Sigley will present '*Community nursing in the north*'; Kerry Davis will present '*The challenge Covid-19 brought to education — innovative things that worked*'; Kevin Henshall's topics are '*Major incident — are we ready?*' and '*What does the future hold, looking into the crystal ball*'; David

Koksba will present '*Simulation progress*'; and Sandhya Ramrakha will speak to '*How early life experiences frame the future – Findings from the long-running Dunedin Study*'.

In addition, Anis Parker, Robyn Bissett, Sue Frost and Pam Nichols will take part in a panel discussion entitled '*Looking Back to Go Forward*'.

Registration Conference registration is now open. Early Bird Registration (register before April 1) is \$480, a saving of \$70.

The dinner will be held at Larnach's Castle (New Zealand's only REAL castle) with entertainment from Frankie Stevens.

The medical supply industry is again generously supporting this event, and they look forward to being able network with all delegates.

For more information about this event including the agenda and speaker bios see the website: www.theatremanagerseducators.nz

The 2021 TMEC Conference is being run by Destination Conference Managers. Tel: 027 215 9807 or email: pat@dcms.co.nz

The Dissector online

Perioperative Nurses undertaking research will be interested to know that back issues of *The Dissector* are available online via the following international databases:

Gale: Academic OneFile – 2011 onwards

Gale: Nursing Resource Center – 2011 onwards

Gale: Nursing and Allied Health Collection – 2011 onwards

Gale: Health Reference Center Academic – 2011 onwards

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Proquest: Nursing and Allied Health – 2013 onwards

It is a measure of the journal's standing within the international Perioperative Nursing field that these international sites sought out *The Dissector* for content.

NZNO members can also access *The Dissector* electronically in the Academic OneFile database via the NZNO website.

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References: 1. Politiek K. et.al. Systematic review of cost-of-illness studies in hand eczema. Contact Dermatitis 2016.



Call for Abstracts for PNC Annual Awards

Every year at the annual conference of the Perioperative Nurses College of the New Zealand Nurses Organisation (PNC ^{NZNO}), there has traditionally been a Free Paper session at which Perioperative Nurses may present a short 10 - 15-minute paper on a topic of their choice.

Since 2010, after the Cardiology and Radiology Interventional and Special Procedures (CRISP) Nurses NZ changed their name to Medical Imaging Nurses New Zealand (MINNZ) and joined the Perioperative Nurses College, there has been a Free Paper session for them too.

The best presentation in the medical imaging sessions won the annual Debbie Booth Memorial Travel Award, inaugurated in 1987 following the donation of a silver rose bowl by Debbie Booth's parents to honour their daughter's memory.

Debbie Booth was one of the founder members of the Cardiology and Radiology Interventional and Special Procedures (CRISP) Nurses NZ, which held its first annual meeting in 1985. The other members were Linda Robert (co-founding director of Obex Medical), June Carpenter and Jenny Smith.

CRISP was a national body set up to help bring nurses working in the Cardiac Catheter Lab and Interventional Radiology field together and facilitate sharing of information and experience.

Debbie presented a paper on Stone Removal at the inaugural meeting but tragically, a month later, on October 27, 1985, she died.

Two years later the first Debbie Booth Memorial Travel Award was presented at the CRISP Conference and has continued to be presented annually.

From the outset, the award has been sponsored by Obex Medical.

This year the Free Paper session will be held on Thursday, October 7 in the auditorium at St Margaret's College, the Conference venue in Christchurch.

The winner receives a \$1500 grant from Obex Medical Ltd, with the runner-up receiving a \$500 award from Boston Scientific.

Any Perioperative Nurse who would like to present a paper in either of these sessions should check the PNC website for details. Abstracts close on **June 12**.

Christina Ackland Award

Christina Ackland spent most of her more than 40 years of working life as a Perioperative Nurse, specialising in plastic surgery at Hutt Hospital where she helped rebuild shattered bodies. She was a long-term supporter and contributor to the Perioperative Nurses College and served on the committee that organised the first Theatre Nurses meeting in Wellington in 1973 (then called a 'Seminar'), the forerunner of today's annual conference.

Tina Ackland initially also headed the 2012 PNC Conference Committee before she died of acute myeloid leukemia in April 2012. At the 2012 PNC Conference in Wellington a minutes' silence was held in remembrance and the Board of Gillies McIndoe Foundation established the Tina Ackland Memorial Research Nurse position to promote Research by the Nursing Profession.

In addition, Downs Distributors sponsored a new annual award, known as the Tina Ackland Award, to recognise outstanding service to the College. Shirleyann Gray, then Downs' Sales & Marketing Manager, recalls how she had worked very closely with Tina and Mr Swee Tan, the Plastics and reconstructive surgeon at Hutt Hospital, "bringing them innovative surgical products to enable them to change people's lives."

Together with Ann Watkin, Downs Managing Director at the time, Shirleyann felt Tina deserved recognition because of her dedication.

First recipient of the Award was then National Secretary-Treasurer Berice Beach. Tina Ackland's husband Bill and daughter Jane were in attendance for the presentation of that first award, made by Shirleyann Gray.

Every year since 2012, this award has been made to a PNC member who has provided outstanding service to the College.

The Call for Nominations for this award, still sponsored by Downs Distributors, is open until **June 12**.

National Committee positions

At the annual general meeting of the Perioperative Nurses College of the New Zealand Nurses Organisation on Saturday, October 9 in Christchurch, two positions on the PNC National Committee need to be filled.

They are Vice Chairperson and National Committee Secretary. The call for applications for these positions closes on June 12.

In addition, any Remits to be presented to the AGM, and any subjects of discussion, must also be in the National Secretary's hands by June 12.

Abstracts/Nominations/Applications should be sent to the National Secretary: pnc.sec@xtra.co.nz



The Christina Ackland Award was first presented in 2012 at the PNC Conference in Wellington. Shirleyann Gray (left) of Downs Distributors made the presentation, together with Tina's husband Bill and daughter Jane.

National Trauma Symposium

The 2021 National Trauma Symposium will be held in Wellington on July 1. The venue is Museum of New Zealand Te Papa and the theme is 'Towards Excellence.'

The programme will include scientific presentation and debate of the highest level and will attract a wide variety of trauma practitioners from across New Zealand. It represents an excellent forum for discussion and learning.

The National Trauma Symposium 2021 convenors are Professor Ian Civil, Clinical Director, National Trauma Network and Siobhan Isles, Programme Director, National Trauma Network Convenors, NTS 2021.

For more information and to register visit the conference website: www.traumasymposium.nz.

The Professional Conference Organiser (PCO) is Donna Clapham, Workz4U Conference Management, tele phone: 021 325 133; email: conferences@w4u.co.nz

PNC Education Committee now Professional Practice Committee

Initially established as the Professional Education Committee of the Perioperative Nurses College, this committee has undergone a transformation to become the Professional Practice Committee as it looks at all aspects of professional practice, not just education.

The renamed committee collaborated with the National Committee of PNC on the Knowledge and Skills Framework and the Career Progression document which can be accessed from the PNC website: www.nzno.org.nz/groups/colleges_sections/colleges/perioperative_nurses_college/resources

Recent projects undertaken by the Professional Practice Committee (PPC) have been the writing of generic orientation documents for Operating Rooms, Post Anaesthetic Care Units (PACU) and Medical Imaging, which should be on the website soon. The committee is currently undertaking a review of the Standards and Document Library for PNC. Again, all these documents are on the PNC website.

During 2020 the PPC collaborated with the National Committee in the preparation of the interim position statement that was presented at AGM on the knowledge and skills considered to be pre-requisite requirements for entry into a formal orientation programme within Post Anaesthetic Care Unit (PACU); Operating Room (OR) and Medical Imaging Nursing (MINZ).

The PPC generally meets three times per year, and also convenes a meeting at national Conference, but during 2020 these became ZOOM meetings which occurred more frequently, but were of shorter duration.

Due to work commitments, there have been some resignations from the PPC so there is a need two new members to join the team. If you are interested in writing guidelines, reviewing and updating standards, giving support to the PNC Regions and members on all aspects of Perioperative Nursing, consider joining the Professional Practice Committee.

"Please get in touch, we, and all PNC members need your knowledge and experience, no matter what your perioperative role is," says PPC convenor Gillian Martin.

If you want to chat more about what this committee does, please email Gillian Martin, PPC convenor: gmartin@adhb.govt.nz

If you wish to submit a letter as your Expression of Interest to join the PPC, please email: pnc.sec@xtra.co.nz

"We look forward to hearing from you," adds PPC convenor Gillian Martin.

What PNC membership is all about

"I have been a PNC member for many years now. I look forward to getting my 'Dissector' through the mail. There is always something of interest to read, news, new product advertising and events. I try to get to conference – such a great educational and networking opportunity"

This is the voice of dozens of members of the Perioperative Nurses College of the New Zealand Nurses Organisation (PNC ^{NZNO}). We hear it all the time.

But there is far more to being a member than being an eager recipient of what we have to offer.

There are many benefits to being a member of any organisation, be it a professional one such as the PNC ^{NZNO}, or a social one such as a craft or sports group.

Education, perks, networking and recognition benefit all, but there is even more to it than that. You, the members are the force behind the PNC; you are the heart of the organisation. We, the committee members, are here to assist and work for you, but we also need your input. You may not feel you have the time, knowledge or ability to put your name forward to join a Regional or National Committee, but there are other ways you can "give back" to your fellow members.

Membership of any organisation is a two-way process of both receiving and giving. When it comes to a profession as widespread as nursing, even the relatively small sector of nursing that is classed as Perioperative Nursing is far-reaching. No one can be an expert in all roles in the perioperative continuum, which is where you, the members, are so important. For example, when the Professional Practice Committee reviews, or is writing a document or standard, they need knowledge and experience from all areas. Unfortunately, as there are only four committee members, that is not always possible. This is when we call on experienced knowledgeable members to give their input. There is no requirement to attend meetings: emails or phone conversations may be all that is required.

You may not feel able to stand up at conferences and present to your peers, but how about writing an article for *The Dissector*? This doesn't need to be research or highly academic, it could be a case study or result of an audit or evaluation you have participated in or managed. There are many ways to contribute.

While reading this latest issue, think about what you could do to "pay forward" to your friends, colleagues and peers.

"We must never forget that the individual makes the association – what the association is depends upon each of its members"

Nightingale, F (1888). Florence Nightingale to Her Nurses. Macmillan & Co Ltd London. ■



Education support FOR OTAs

Perioperative Department, Christchurch Hospital

By Liane Dixon – BN RN, PGDip (Nursing)

Introduction

For many decades, operating theatre (OT) departments have utilised the assistance of allied workers such as orderlies, healthcare assistants and now Operating Theatre Assistants (OTAs).

The Perioperative Department at Christchurch Hospital has a large cohort of OTAs who perform an important part of the work within the department.

An OTA works specifically within the perioperative department and does not move from ward to ward depending on hospital staffing; their training is very specific to the department.

The OTA role provides assistance within the department with the oversight of the nursing teams. They perform roles such as assisting with the transfer of patients in theatre or helping to position the patient, preparing set-ups for upcoming cases, cleaning in theatre or being a runner for an emergency, to name but a few roles. Through the passage of time, the value of equipping the OTA with a formal qualification pertinent to this specific area has been realised due to the unique role they provide.

Background

In 2017 the management team investigated the options available for the OTAs to be trained in specific areas within their work environment. This training was to help equip staff with an understanding of processes in health and the dynamics within the healthcare sector.

Every OTA has core training within the orientation when they commence, but the Careerforce qualification enhances their knowledge set, allowing them to demonstrate how they complete this in their daily work.

The decision was made to work with Careerforce to undertake the New Zealand Certificate in Health & Wellbeing (Level 3) New Zealand Qualifications Authority (NZQA) training programme. The vision was to further equip the OTA when working alongside the nursing staff complementing the theatre team.

Funding for the course initially came from the OT department. Management aided the OTAs to complete the course by paying for the qualification as well as supplying a proportion of time to complete their

Abstract: The management team within the Operating Theatre Department at Christchurch Hospital has embraced education for staff who are Operating Theatre Assistants to support staff and achieve better patient outcomes.

Keywords: Education, Operating Theatre Assistants, allied workers, unit standards, credits.

study at work. A total of 16 papers totalling 79 credits were selected. They incorporated subjects such as communication, advocacy, health safety and security, anatomy and pressure injuries/pressure care.

Although only 70 credits are



Janine Duff, one of the recent graduates of the OTA training scheme at the Christchurch Hospital Perioperative Department.

required to complete the certificate, it was agreed the unit standards selected met the vision that management had for the future of the OTA. It was also agreed this programme gave a comprehensive overview within the health setting. Each unit standard comprises written work and clinical assessment to demonstrate competency within the clinical setting, which is within the scope of an OTA.

Training Process

A nurse educator (NE) has been dedicated to support the OTA to complete this qualification. The NE is an NZQA assessor who assesses written and clinical work. There are also specifically trained registered nurses (RNs) who have completed a course with Careerforce, who assess clinical work during the OTAs' study.

The commencement of the study year begins once approval for the applicant is obtained from the perioperative manager. Time is rostered away from the clinical area by the Clinical Nurse Manager (CNM) of the OTAs.

OTA participants start their study in a group setting, allowing them all to meet and work together to form a support network. Participants are led through the process of the first couple of unit standards to assist them to embrace the adult learning process. Once each participant is underway, they work independently from each other to ensure their own work is complete, with the support of the NE.

The participants can choose which order they want to complete the unit standards, with guidance from the NE. They have one year to complete the certificate. In order to meet this target, the NE negotiates with participants and the CNM to roster time out to complete work. As some unit standards comprise of clinical assessment, this has to be completed within the working day. An RN or NE is trained to provide the assessment.

At the end of the study year the department holds a graduation ceremony to celebrate the success of the participants. This is celebrated by the management team along with all staff who can attend. Graduates receive a Certificate and a Careerforce pin and pen from the perioperative manager. A photo is taken to record the graduation. This is kept with the department.

To ensure the needs of the department and staff are being met, we gain feedback from the unit standards completed by the participants. The relevance is assessed on an annual basis. Any feedback of a unit standard is relayed to Careerforce, the course provider.

The value in this new qualification has been demonstrated through conversations with the OTAs and staff in the clinical setting, who say they have more awareness of the patient they are helping with. The Perioperative Department at Christchurch Hospital has been fortunate to take up an opportunity from the Ministry of Education that has supported this aspect of adult education. The cost has been met by the department in 2020 and is proposed to continue for 2021.


Conclusion

As we see nursing strive to foster continued education and critical thinking, it is encouraging to see the vision of Christchurch Hospital's Perioperative Department impart an element of this to the OTA team. Within the department we can see the strength of support delivered which will continue to foster an even stronger relationship with the OTAs and nursing teams.

About the Author: *Liane Dixon is a registered nurse with a Post Graduate Diploma in Health Sciences Nursing (with distinction) and over 20 years' post graduate experience in a variety of areas. Liane's operating theatre experience has mainly been in the private sector. She has been working in the public sector as Nurse Educator (Operating Theatre) since 2018.*


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Flexible Perioper

The need for Anaesthetic Assistants

The first in a series on the Flexible Workforce, providing an overview and background on why this new way of working is on the horizon. There are many ways the workforce might flex: in this article LEIGH ANDERSON focuses on why there is a need for nurses to return to providing assistance to the anaesthetist as an anaesthetic nurse...

Background

In 2019, Central Region's Technical Advisory Services Limited (TAS) compiled a Workforce Assessment Report on the DHB Anaesthetic Assistant Workforce.

The report, commissioned by the Workforce Strategy Group, provided an overview of the Anaesthetic Assistant workforce based on qualitative information from staff involved in the delivery or management of Anaesthetic Assistant services and analysis of workforce data.

The report was developed in consultation with the District Health Board (DHB), Directors of Allied Health and DHB Directors of Nursing. Information was also provided by the Medical Sciences Council of New Zealand (MSC), the Nursing Council of New Zealand, the New Zealand Anaesthetic Technicians Society, the Perioperative Nurses College of the New Zealand Nurses Organisation (PNC ^{NZO}) and the Auckland University of Technology (AUT).

Overall, the rating from the assessment process considered the Anaesthetic Assistant workforce to be an 'At Risk Occupation – Intervention Required' with feedback from some participants considering the rating was approaching 'Occupation Under Pressure – Intervention Imperative' (TAS, 2019).

From next year (2022) it is suggested that there will be no further intakes into the Diploma of Applied Science (Anaesthetic Technology). However, Auckland University of Technology (AUT) has said it will support the transition from the diploma to a degree programme (NZATS, n.d.). This will likely have a significant impact on the Anaesthetic Technician (AT) workforce, which had already been recognised as at risk.

Workforce Assessment Key Findings

Some of the key findings from the workforce assessment report included:

- Demand for anaesthetics is increasing: with an ageing and growing population, more and increasingly complex procedures and technology and increasingly anaesthetics are being delivered outside of operating rooms (ORs).
- ORs are often working at full capacity, with a high demand for both acute and elective surgery.
- There was uncertainty regarding the future of AT training, with AUT as the single training provider not confirming a proposed degree programme, due to the unclear mandate.
- There is a high reliance on recruitment from the United Kingdom to fill the gap created by insufficient Anaesthetic Assistants trained in New Zealand, with ATs listed on the Immediate Skill Shortage List.
- Registered Nurse Anaesthetic Assistants (RNAAs) are employed in nine DHBs. With varying employment practices amongst DHBs around

their role in the anaesthetic team, there is no workforce plan around how this group might be most effectively utilised and the training they require to fulfil this role and demonstrate their competence

- The AT workforce is the largest Anaesthetic Assistant workforce (508 including trainees) with much smaller numbers of RNAAs (24) employed in DHBs. The age profile of RNAAs indicates that half of these are likely to exit the workforce over the next ten years.
- The current AT scope was identified as a reason for leaving by some operating department practitioners from the United Kingdom (UK), as they wanted more variety and to practice within the wider scope of their UK training
- Following their consultation in 2018 on the scope of ATs, the MSC confirmed the "assistant to the anaesthetist" role would continue to be a core function for the majority of ATs. Currently, there are two approved expanded practice activities, being the insertion of Peripherally Inserted Central Catheters (PICC lines) and working in a Post Anaesthesia Patient Care Unit (PACU).
- There was an opportunity for interprofessional collaboration to focus on the common competencies required for this combined workforce, to ensure patient safety and meet standards of practice rather than on the differentiated scopes of practice (TAS, 2019).

Workforce Assessment Recommendations

Some of the recommendations from the workforce assessment report included:

- All DHBs recruit and train ATs to increase the supply of New Zealand trained ATs to ensure sustainability of the workforce for current and future demand.
- DHBs establish training opportunities to increase the workforce which includes both ATs and RNAAs; with both required to meet nationally agreed competencies in accordance with the Statement on the Assistant to the Anaesthetist (PS08) published by the Australian and New Zealand College of Anaesthetists.
- DHBs establish partnerships with other DHBs and private training hospitals to enable training experience and supervision not available in all DHBs.
- Review employment practices that preclude the employment of RNAAs, and/or requires them to be employed as an AT trainee, with remuneration on the Anaesthetic Technician scale while training or when qualified, which results in a reduction in salary.
- DHBs identify opportunities for Anaesthetic Technicians to undertake expanded practice roles within their scope of practice which adds value to DHBs service provision, to support role development and retention (TAS, 2019).

The flexible workforce challenge

These recommendations provide DHBs with a launch pad to provide exciting opportunities for Perioperative Nurses. What is great for patients is also great for nurses. Getting back to anaesthetic nursing is a step in the

ative Workforce:

right direction so that we can sustain the provision of care without delays and cancellations. However, we need to be mindful that this change may not be perceived as positive for all players. As we fulfil a gap in this area, so too are the Anaesthetic Technicians moving to assist and fill gaps within nursing — scrub, circulate and post anaesthetic care unit (PACU).

The notion of a flexible workforce in the wider sense, forces us into an uncomfortable position where we rethink the value of nurses within the perioperative workspace. We should, however, welcome this as an opportunity to further articulate what nurses do and why the skills and knowledge that we have are so important in the provision of safe patient care. We cannot exclude other professional groups who might share (or gain) the same skills and knowledge as we have. Just as nursing has gained skills in areas that have been traditionally held by others, we need to be ready to protect what is unique to us and share some of what we do when there is a shared skill, knowledge and ability.

I look forward, in the following editions to reading the ideas, decisions and solutions that have been implemented through New Zealand.

References

Central Region's Technical Advisory Services Limited (TAS) (2019). *Workforce Assessment Report: DHB Anaesthetic Assistant Workforce 2019*. Retrieved

Let's debate this:

- What are your thoughts?
- What are you doing in your area?
- Are you fully staffed or are you moving towards a flexible workforce?
- What changes have been made to encourage nurses into the OR/ PACU specialty where you work?

Send your feedback to the Chief Editor of *The Dissector*: dissector.editor@gmail.com

from <https://tas.health.nz/assets/Workforce/Anaesthetic-Assistant-Workforce-Assessment-Report-March-2019.pdf>

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About the Author Leigh Anderson RN, MN (Hons) is the Nurse Director for Āhua Tohu Pōkangia/Perioperative Services at Auckland DHB. Leigh is a past Chair of Perioperative Nurses College of NZNO and Board member of the International Federation of Perioperative Nurses.

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Transcatheter Aortic Valve Implantation (TAVI)

By Murray Hart, RGON, Post Graduate Diploma in Health Science, Diploma in Advanced Critical Care Nursing (DACCN), Graduate Certificate in Nursing Practice (Cardiac Nursing), Certificate in Adult Teaching (CAT)

Introduction

Aortic stenosis is the most common heart valve disease and the prevalence of it is increasing due to an ageing population (Otto & Prendergast, 2014). The underlying pathophysiology of aortic stenosis is degeneration and calcification of the aortic valve. This leads to restriction of blood flow due to a narrowed aortic valve opening. Typically, this presents itself with symptoms of shortness of breath and reduced exercise tolerance.

With progression of aortic stenosis disease, the symptoms of angina, syncope or heart failure may develop and there is a risk of sudden cardiac death. Once a patient becomes symptomatic for severe aortic stenosis, there is a 50 per cent mortality rate within a two-year period without treatment (Otto & Prendergast, 2014).

The gold standard for treatment of symptomatic severe aortic stenosis has for many years been surgical aortic valve replacement. However, for patients over the age of 75 years, the morbidity and mortality associated with surgery increases significantly (Adams *et al.*, 2019).

Historically, some elderly patients have had surgery declined due to the associated surgical risk. Transcatheter aortic valve implantation (TAVI) offers a less invasive treatment option with reduced risk especially for those patients in the high-risk or inoperable risk group (Otto & Prendergast, 2014). The first human implantation of an aortic valve via the transcatheter route was in 2002. With technological advancements in valve design and evolution of practice over the years, TAVI has become minimally invasive with improved outcomes.

The TAVI procedure, potential complications, research and current pathway in Christchurch, New Zealand is described, along with a review of the evolution of practice and expanding implications for the procedure.

The TAVI procedure

Use of the transfemoral route enables the procedure to be carried out under conscious sedation in the Cardiac Cath Lab. In our centre we utilise an anaesthetist to manage conscious sedation; however in some centres, the TAVI procedure is done under local anaesthesia

Abstract: Transcatheter Aortic Valve Implantation (TAVI) is a revolutionary percutaneous treatment option for patients who have symptomatic severe aortic stenosis. It began as an aortic valve intervention offered to patients considered at high-risk for open surgery but as technology has evolved and results of randomised controlled trials have been published, TAVI can now be considered as a treatment option in intermediate and low risk surgical patients. This overview article explains the work-up pathway, how the procedure is performed in the Cardiac Cath Lab, and care of the patient post-procedure, including potential complications. As patient preference drives the popularity of this procedure, indications for the procedure have expanded. However longer-term research findings are still needed to answer the issue around valve longevity.

Keywords: Transcatheter Aortic Valve Implantation (TAVI), aortic stenosis, Perioperative Nursing,

without anaesthesia support.

In the majority of cases, the percutaneous approach can be used to access the femoral arteries without performing a surgical 'cut-down' procedure with a vascular surgeon. Alternative access routes for TAVI include transapical, transaortic, and trans-axillary routes. These require cardiac surgeon input and may be performed in a hybrid operating theatre if available (Ruparelia & Prendergast, 2015).

The valve is compressed onto a balloon catheter and introduced into a catheter delivery system. It is advanced into position under X-ray fluoroscopy guidance. Once optimal positioning is confirmed, the valve is

deployed during a short period of rapid ventricular pacing of 180 beats/minute via a wire positioned in the left ventricle. This rapid ventricular pacing causes loss of cardiac output and blood pressure for a brief period and reduces the possibility of the valve moving during inflation and deployment (O'Leary, 2016).

Echocardiogram (ECHO) imaging is used immediately after valve deployment to assess for the presence of any immediate complications and the degree of any paravalvular leak. Once the position and function of the valve is confirmed, attention is turned to haemostasis of the arterial access sites. The femoral artery sites are closed with a vascular suture (Proglide) and/or a vascular collagen plug (Angioseal). With haemostasis secured, the post-procedure pathway allows the patient to mobilise 4-6 hours post procedure.

TAVI is proving to be a revolutionary treatment option that primarily offers the patient a less invasive treatment strategy with no surgical wounds, avoidance of intensive care, short length of hospitalisation (one to two nights post-procedure), and a two-week recovery time. Post-procedure, patients are advised to avoid strenuous exercise and not to drive for a two-week period. This short recovery period has major advantage, especially for elderly patients but also for those patients who are younger and have significant comorbidity that increase the risks associated with surgery.

Although the cost of the TAVI valve is considerably



TAVI Sapien 3 Aortic Valve



Christchurch Hospital Cardiac Cath Lab set-up for TAVI procedure.

more than the cost of an equivalent surgical valve prosthesis, studies have shown TAVI to be a cost-effective alternative to surgery (Adams *et al.*, 2019). An audit of our Christchurch programme showed that despite the higher cost of the valve, TAVI procedure did not seem to cost more than surgical aortic valve replacement, perhaps relating to a lower requirement for ICU (Smyth *et al.*, 2014). With evolution of the procedure, further cost effectiveness has been achieved by having no ICU stay, a short three to four-hour CCU stay, and a reduced length of hospital stay of one to two nights post procedure.

Potential complications

Complications of TAVI include stroke, cardiac conduction disorders, vascular injury, bleeding and haematoma, and acute kidney injury (O'Leary, 2016). There are some unique risks associated with TAVI compared to open surgery. Paravalvular leak occurs when the prosthetic valve does not fit properly against the native aortic valve due to excessive calcium or an undersized valve. Paravalvular regurgitation was a prevalent issue with earlier valve designs. However, TAVI valves now have design features which result in a better seal and have reduced paravalvular leak to minimal amounts.

The cause of stroke is multi-factorial and is related to patient age, atherosclerosis and calcification of the aorta, calcification of the native aortic valve, and balloon dilatation during valve deployment. Embolization of atheroma from the aorta or calcium debris from the native aortic valve can embolize to cerebral vessels causing stroke. In Christchurch, as part of informed consent we quote a two per cent risk of stroke associated with TAVI procedure.

The need for pacemaker implantation following TAVI procedure is variable and determined by patient, procedural, and device factors (Gooley, Cameron, & Meredith, 2015). Male gender and pre-

existing conduction abnormalities such as right bundle branch block are independent risk factors.

The risk of injury to the conduction system is lower with balloon-expandable TAVI valves as opposed to a self-expanding valve deployment system. In our Christchurch programme, a balloon expandable TAVI Sapien 3 valve is used, and we quote a 3-4 per cent of pacemaker implantation associated with TAVI. Patients are monitored on telemetry overnight and in the absence of conduction disturbance this is removed the following morning prior to discharge.

Current TAVI valves require catheter delivery through large diameter sheaths that increase the potential for vascular complications including bleeding and haematoma. With the development of vascular closure devices, the femoral artery sites can be closed with minimal risk of bleeding and haematoma post-procedure. These vascular closure devices also allow early mobilisation post-procedure.

TAVI valves are made of bovine tissue and valve thrombosis is uncommon. Our current local practice is to prescribe Aspirin 100 mg daily, life-long following TAVI. In patients requiring anticoagulation for atrial fibrillation, an antiplatelet and anticoagulation dosing regime is individualized according to the risk of bleeding versus thromboembolism (Adams *et al.*, 2019).

Research

Early research comparing surgery with TAVI in a high surgical risk group of patients showed a similar rate of survival at one year, although there were important differences in periprocedural risks (Smith *et al.*, 2011).

Although TAVI was first researched in the inoperable and high surgical risk groups of patients, research trials have since been published comparing surgery with TAVI in patients who are deemed intermediate and low surgical risk. A landmark research trial comparing

TAVI is proving to be a revolutionary treatment option that primarily offers the patient a less invasive treatment strategy with no surgical wounds...

surgery with TAVI in an intermediate risk group of patients showed that TAVI was associated with low mortality, strokes, and aortic regurgitation at one-year follow-up (Thourani *et al.*, 2016).

In 2019, the PARTNER 3 Trial findings were published which compared outcomes in low-risk patients undergoing TAVI with those patients undergoing surgical aortic valve replacement. This demonstrated that rates of death, stroke and rehospitalisation were significantly less with TAVI compared to surgery at the one-year time point (Mack *et al.*, 2019).

Continued follow-up is needed to evaluate long-term performance and durability of the valve. However, the findings of TAVI being superior to open surgery short-term in the low-risk group of patients has huge implications and challenges for cardiac teams. Patients who previously would have been routinely referred for open surgery are now being considered for TAVI. The expectations and preference of patients for a less invasive treatment option is very evident in clinic discussion with patients.

As increased numbers of younger, low-risk patients are being offered TAVI as a treatment option, there are important issues to consider for the future. Long term results of valve durability are not available at this point, partly due to the advanced age and comorbidity of initial TAVI patients resulting in a declining number of patients still alive over time. A recently published research trial showed that the Sapien 3 TAVI valve demonstrated excellent durability by bench testing, to an equivalent of 25 years. Durability was similar to the comparator surgical valves tested (Sathananthan *et al.*, 2019).

The other issue that needs to be considered for younger patients is future coronary access for coronary artery stenting procedures known as Percutaneous Coronary Intervention (PCI). As coronary artery disease is common in this group of patients, the possibility of patients developing progression of coronary artery disease over time is relevant. The presence of a TAVI valve may make catheter access to the ostia of the coronary arteries difficult. In the future these challenges may prove to be even greater following TAVI-in-TAVI procedures (Adams, Roberts-Thomson, Patterson, Prendergast, & Redwood, 2020).

Current pathway

The current referral pathway is that all patients being considered for aortic valve intervention by either surgery or TAVI should be discussed at a weekly Cardiothoracic/Cardiology Surgical Meeting. If there is agreement that TAVI is an appropriate treatment option for the individual patient, then they will be referred to the TAVI Review Meeting "Heart Team Meeting". At this meeting all the work-up tests and investigations will be reviewed, including Computed Tomography (CT) scan, ECHO, bloods and spirometry results.

Recently we have transitioned away from performing spirometry routinely and it is only done if the patient history indicates that it is clinically relevant. Clinical red flags which have the potential to impact on risk associated with the procedure or post-procedure period are identified. If

These four weekly cycles remain unchanged since the start of our TAVI programme in 2011, despite an accelerating growth in volumes over the last nine years...

the patient is anatomically suitable for a TAVI approach, they will proceed to pre-admission where they are reviewed by a cardiac anaesthetist, Clinical Nurse Specialist/TAVI Coordinator, and TAVI cardiologist. This is an opportunity to provide patient/whanau education and give an overview of the patient pathway. Frailty and cognitive assessment are performed at this time to identify specific discharge planning needs and red flags. It is also an important opportunity to set patient and family expectations. An example of this is the expectation of discharge the day following procedure after multi-disciplinary review.

From time of discussion at the weekly Cardiothoracic/Cardiology Surgical Meeting to pre-admission currently averages a wait-time of four months. Then from time of formal acceptance for TAVI procedure to the date of scheduling is a further three to four months. The total length of wait-time from referral to TAVI procedure therefore can be up to eight months.

Our Cath Lab resourcing for elective TAVI procedures is currently one day per month when three cases are scheduled. These four weekly cycles remain unchanged since the start of our TAVI programme in 2011, despite an accelerating growth in volumes over the last nine years. Unfortunately, during this wait time some patients will deteriorate symptomatically and require hospital admission due to heart failure or syncopal episodes. Once an inpatient, TAVI may be facilitated as an urgent case; however scheduling is dependent on the availability of a cardiac anaesthetist. Patients may wait for a week or more for inpatient TAVI to be facilitated and deconditioning of elderly patients in an acute hospital environment can occur. This in turn has the potential to adversely impact on outcomes post-procedure.

Cath Labs which have TAVI programmes are under-resourced to manage the increased volume of patients. In our Christchurch programme, volumes of TAVI have increased from three in 2011, to a total of 65 in 2019. For the first eight months of 2020 the volume was 60. For our Christchurch TAVI programme the total number of patients in whom TAVI has been performed is currently 314.

Patients accepted for TAVI should have a life expectancy of greater than one year and expect to be able to gain improvement in quality of life (O'Leary, 2016). Patients are discussed at a multi-disciplinary Heart Team meeting which is made up of referring cardiologists, interventional cardiologists, ECHO cardiologists, cardiac physiologists, medical imaging technologists, charge nurse managers and a clinical nurse specialist. This reflects an international recommendation that each TAVI programme has a multidisciplinary heart team forum to discuss patients being considered for TAVI intervention (Holmes *et al.*, 2012).

The Cardiac Society of Australia and New Zealand and the Australia and New Zealand Society of Cardiac and Thoracic Surgeons publish recommendations for TAVI operator and programme requirements (Walters *et al.*, 2015). There is an emphasis on having a strong Heart Team focus to decision-making and monitoring outcomes through the creation of national databases.

Continued on page 24.

Once a patient becomes symptomatic for severe aortic stenosis, there is a 50 per cent mortality rate within a two year period, without treatment.



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In recent years there has been a growing awareness of the importance of frailty as a determinant of outcomes post-TAVI. In our TAVI programme, frailty and cognitive assessment are done routinely at pre-admission using standardised scales. If frailty and cognitive screening identifies a red flag, this will be discussed at the Heart Team Meeting and is considered as part of the decision-making process. The presence of frailty at an advanced age means that aortic valve intervention is less likely to improve quality of life or mortality. Serum albumin is an important marker of frailty and is measured routinely as part of TAVI work-up (Afilalo *et al.*, 2017). Appropriate patient selection is a recognised key factor in achieving optimal patient outcomes for TAVI programmes.

Evolution of Practice and Expanding Indications for TAVI

Patient outcomes have improved through a combination of TAVI cardiologists gaining experience, improved valve design, and the procedure becoming more minimally invasive. In the early years of TAVI, the pathway was modelled on the cardiac surgery experience and so all patients were done under general anaesthetic to enable transoesophageal guidance. Central venous lines, arterial lines, urinary catheters, and admission to intensive care were standard practice. A minimally invasive approach over recent years has now resulted in a pathway where patients are done under conscious sedation, with or without an anaesthetist. There are no central venous lines, no urinary catheters and Coronary Care Unit length of stay is three to four hours: most patients discharge the day following TAVI procedure. In some cases, we are now admitting the day of procedure for patients who live locally, so the whole valve implantation procedure is done with only one night in hospital.

The procedure of implanting a TAVI valve inside a degenerating surgical valve is referred to as valve-in-valve TAVI procedure. The rate of surgical aortic bioprosthesis valve dysfunction approaches 15-25 per cent at 15 years and 40 per cent at 20 years (Gooley, Cameron, Meredith, 2015). By the time a surgical valve degenerates, the patient will be in an older age group, often with greater comorbidity and increased frailty. This has led to the implantation of TAVI valves within a degenerating surgical prosthetic valve to avoid the morbidity associated with re-do cardiac surgery. TAVI valves have also been implanted inside mitral surgical prosthetic valves

with success. No long-term data is available on this yet.

TAVI valve implantation within an existing TAVI valve has also been reported, usually to treat acute procedural complications such as significant paravalvular leak or malposition of the valve. No research data on this or the long-term outcome of this exists yet.

Conclusion

The prevalence of severe aortic stenosis will continue to rise with an aging population. TAVI started as a revolutionary new technology for patients who previously would have been considered inoperable or high risk for surgery. It is now an established, researched, less invasive treatment option in clinical practice. Short term clinical outcomes are superior to surgery, and this is driving the popularity of this treatment option among patients, referring doctors, and TAVI cardiologists. Expanding indications for TAVI valve implantation have been used successfully in the short-term. Ongoing research trials will provide long term data concerning valve durability and clinical outcomes which will determine whether TAVI should be used routinely for treatment of lower risk, younger, and potentially even asymptomatic patients.

About the author: Murray Hart is a Clinical Nurse Specialist in cardiology at Christchurch Hospital. This role encompasses a coronary care unit, cardiology ward, and the Cardiac Cath Lab. In addition to his CNS role, Murray is the Coordinator for Transcatheter Aortic Valve Implantation (TAVI) procedures at Christchurch Hospital. His background experience within cardiology includes Cardiac Cath Lab, nurse educator, and cardiology research. He is passionate about teaching nurses and their professional development.



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Local anaesthesia & pain management post thoracotomy

By Olivia Talyancich BN

Introduction

Pain is a physiological response to any surgical procedure and both treatment and prevention strategies remain a challenge for medical professionals (Nirag *et al.*, 2017).

This article will describe the normal physiology of pain and the physiological consequences of local anaesthetic (LA) as an acute intervention. Methods of LA administration during thoracic surgery will be discussed using current literature. The implications of this intervention will also be considered with reflection on current nursing practice.

Definition of Pain

Pain has been described as an unpleasant emotional and sensory experience paired with actual or potential tissue damage. It is a subjective experience with no objective methods of measuring its severity. Therefore patients are the most accurate and reliable indicators of pain (Reardon, Anger & Szumita, 2015).

Acute pain is considered an essential biological protective mechanism as it signals the presence of injury or disease. It directs immediate attention to the situation and prompts reflexive withdrawal. Acute pain can significantly impede a patient's recovery by delaying healing and rehabilitation and increasing the likelihood of systemic complications and prolonged hospitalisation (Douglas & Schoenwald, 2013).

Pain management

Pain management is a fundamental aspect of nursing care. Nurses are responsible for the assessment and management of patients' pain. This requires an understanding of pain physiology and the mechanisms which cause it (Douglas & Schoenwald, 2013).

Nociception is the process involving the transfer of information from a noxious stimulus such as inflammation, injury or tissue damage to the central nervous system via a pain pathway (Steeds, 2016).

Nociceptors are free endings of afferent nerves which act as sensory receptors and are present in skin, subcutaneous tissue,

Abstract Following a surgical procedure, pain is a physiological response which requires medical and nursing intervention. The physiological process of pain is described, with a specific review of the literature around the use of local anaesthetic following thoracic surgery as part of multi-modal care.

Keywords: Pain physiology, nociceptors, local anaesthetic, thoracic surgery, Perioperative Nursing.

muscle, viscera and bone. They are activated through intense chemical, mechanical or thermal stimulation. Nociception involves four physiological processes; transduction, transmission, perception and modulation (Tortora & Dickson, 2012).

Physiological Process of Pain

The process of transduction begins when a noxious stimulus activates nociceptors which are then turned into a neuronal action potential. The noxious information is transduced by nociceptors into an electrical signal which is transmitted from the site of injury to the central nervous system along axons (Steeds, 2016). Tissue damage and inflammation cause cells to release inflammatory mediators such as prostaglandins, bradykinin, substance P, histamine and serotonin. These mediators stimulate the nociceptors to send impulses to the spinal cord (Douglas & Schoenwald, 2013).

Once the nociceptors have been stimulated, action potential is generated which transmits through the axon along the neuron. Action potential is achieved by the opening of ion channels. Sodium enters the cell membrane through a high voltage sodium channel, depolarising the membrane potential. On achievement of threshold potential, sodium channels on the axon open, causing depolarisation of the cell until the peak potential of the neurons is reached. At this stage, potassium channels open, allowing an efflux of potassium, resulting in the repolarisation of the neuron. When the action potential reaches the axon terminal, calcium enters the presynaptic terminal which causes synaptic transmission (Yam *et al.*, 2018).

Transmission of these action potentials occurs along two types of afferent neurons; A-delta and C fibres.

A-delta fibres have a thin myelinated sheath, large diameter and are fast conducting fibres. They transmit fast, localised sensations of sharp pain which occur straight after injury.

C-fibres are non-myelinated, have a smaller diameter and are slow conducting fibres. They transmit poorly localised, dull, aching pain that follows the sharp pain from Delta-A fibres (Douglas & Schoenwald, 2013).

Transmission continues along these primary afferent fibres to the dorsal horn of the spinal cord. Within the dorsal horn the transmission of primary neurons to second order neurons occur, due to the release of excitatory and inhibitory neurotransmitters such as glutamate, substance P and neurokinins (Reardon, Anger & Szumita, 2015). The second order neurons within the spinal cord travel via spinothalamic and spinoreticular ascending pathways to the brainstem and thalamus (Douglas & Schoenwald, 2013).

Pain perception

From the thalamus, third order neurons transmit impulses to different areas of the brain and perception occurs. Perception is the point in which a person is consciously aware of pain. The emotional aspect of pain perception originates from the hypothalamus and limbic system whereas interpretation and response to pain occurs in the frontal cortex (Lewis & Foley, 2011).

Modulation of pain is the process which inhibits the pain message. This can occur anywhere along the nociceptive pathway. Once activated, descending pathways within the brain release chemicals such as endorphins, enkephalin, serotonin and noradrenaline. These chemicals produce an analgesic effect and inhibit the transmission of noxious stimuli as they bind to receptors, preventing the release of neurotransmitters from primary afferent nociceptors (Douglas & Schoenwald, 2013).

Thoracotomy pain

Thoracotomy pain has been described as one of the most perceptible pains during the postoperative period. This is due to dissection of multiple muscle layers, rib resection and retraction, continuous motion of the operative site due to respiration, injury to intercostal nerves and irritation of pleura, particularly if a chest drain is in place (Yamauchi *et al.*, 2017).

Unresolved pain following a thoracic procedure decreases diaphragmatic and respiratory muscle function which can cause hypoxia and pulmonary infections (Wojtyś *et al.*, 2019).

Atelectasis is a common postoperative complication following pulmonary resection. It results from remaining secretions and lack of aeration of the residual pulmonary parenchyma (Rotman, Plodkowski, Hayes, de Groot & Shepard, 2015).

If postoperative pain is not adequately controlled, the patient can develop post thoracotomy pain syndrome. Hetmann, Kongsgaard, Sandvik and Schou-Bredal (2017) describe this as pain along the thoracotomy incision which persists for over two months and can develop into chronic pain.

...compared with TEB, PVB has the potential to completely block nerve signals from reaching the spinal cord, making PVB uniquely effective in long term pain prevention.

Acute pain is considered an essential biological protective mechanism as it signals the presence of injury or disease. It directs immediate attention to the situation and prompts reflexive withdrawal.

Pain management is necessary for patients undergoing a lobectomy. If a patient is not in pain, they will be less reluctant to take deep breaths and cough. Effective postoperative pain management decreases the likelihood of developing complications such as postoperative patient morbidity, adverse pulmonary function, pneumonia and chronic pain (Ding *et al.*, 2018).

Local anaesthetic following thoracic surgery

Local Anaesthetic (LA) is used in theatre as an acute intervention to manage postoperative pain. It is injected into a specific area of the body and reduces the perception of pain without altering consciousness (Sundaramurthi, Gallagher & Sterling, 2017).

LA binds to a site within the sodium channel and inhibits the channel from opening. This prevents depolarisation from occurring and therefore blocks the transmission of the pain impulse (Cherobin & Tavares, 2020).

Reardon, Anger and Szumita (2015) state that LA such as lidocaine, bupivacaine and mepivacaine are the backbone of intraoperative analgesia. LA used as part of a multi-modal regime on patients will reduce postoperative pulmonary complications.

Local anaesthetic delivery

There are many methods of delivering LA during a thoracic procedure and these have been widely debated as to which provides the best pain relief. Ding *et al.*, (2015) recognises thoracic epidural analgesia (TEA) as the gold standard for postoperative pain control post thoracotomy.

Another method of analgesia is a paravertebral block (PVB). Although this method provides adequate pain relief during the early postoperative phase, it has negligible effects later as compared to continuous wound infiltration with LA.

Dexmedetomidine is known to prolong the duration of nerve blocks when used with LAs, although it is not known if it can improve the analgesic effect of PVB compared to TEA while providing equivalent postoperative analgesia. Ding *et al.*, (2015) conducted a randomised, prospective, controlled study which investigated the postoperative analgesic effect of thoracic epidural analgesia (TEA), thoracic paravertebral block (PVB) and PVB with dexmedetomidine (PVB-RD) in patients undergoing thoracoscopic lobectomy. The results of the study concluded that PVB-RD provided the best pain control when patients must cough. This is significant as coughing after a lobectomy has a known role in decreasing postoperative complications such as pneumonia and atelectasis.

Similarly, a study conducted by Hassan and Mahran (2017) revealed that adding dexmedetomidine to PVB improves the efficacy of the analgesia. This was evidenced by patients requiring less opioids and reduced pain

level on cough postoperatively.

Zhang *et al.*, (2015) found that as part of multi-modal analgesia, PVB provided better pain relief than infiltration, which was demonstrated by reduced pain on cough postoperatively, reduced morphine use and overall patient satisfaction.

A randomised controlled trial conducted by Yeung *et al.*, (2018) discussed the effectiveness of thoracic epidural blockade (TEB) and PVB. They noted that compared with TEB, PVB has the potential to completely block nerve signals from reaching the spinal cord, making PVB uniquely effective in long term pain prevention.

Haager, Schmid, Eschbach, Passlick and Loop (2019) discuss the effectiveness of PVB and TEA compared to systemic analgesia. They hypothesised that regional anaesthesia would provide superior postoperative analgesia for video assisted thoracoscopic surgery (VATS) patients with a lower incidence of pulmonary complications. However, they concluded that PVB, TEA and systemic analgesia provided comparable analgesia without side effects. Yamauchi *et al.*, (2017) demonstrated that PVB was at least as effective as TEA, however with fewer side effects.

In contrast, Mesbah, Yeung and Gao (2016) argue that TEA is advisable for VATS patients as opposed to PVB. They suggest that although PVB was found to have fewer side-effects when compared to TEA, the paravertebral space has less opioid receptors and therefore will require supplementation with intravenous opioids.

Additionally, Wojtys *et al.*, (2019) recognise TEA as the method of choice for pain management post thoracic surgery, although in their

study, complications were more often observed within the TEA group than the PVB group. Despite this, the authors still conclude that TEA is a better method for pain management after a thoracotomy, although both TEA and PVB are comparable.

Current literature supports the use of LA as part of a multi-modal approach for patients undergoing thoracic surgery. There are many methods of delivery such as infiltration, TEA and PVB. The literature above suggests the use of any of these methods to deliver LA will improve patients' outcomes. This is due to LA being an effective method to manage pain in thoracic surgery and therefore decrease complications such as lung collapse and chest infections due to ventilation-perfusion mis-match and altered mechanical lung function (Saad, Baradie, Aliem, Ali & Kotb, 2018).

Nursing reflection

Reflecting on my nursing practice, I am aware of the physiology of pain and the use of LA either by PVB, TEA or infiltration is the gold standard for treating post thoracic surgical pain. I have a deeper understanding of how LA works on the pain pathway and how it is an effective method of anaesthesia and of the different methods of LA delivery for thoracic surgery such as infiltration, PVB and TEA. The literature suggests advantages and disadvantages to each. However, they all conclude that they are effective analgesic methods which improve patient outcomes by decreasing postoperative complications and the potential for long term chronic pain.

Working within the perioperative environment, postoperative pain can

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Unresolved pain following thoracic surgery has huge implications for patients especially regarding pulmonary function.

impact on a patient's recovery. As a nurse it is important to recognise and assess pain using verbal and non-verbal cues to provide quality nursing care. As pain is subjective, it is whatever the patient says it is. However, it is also important for nurses to be aware of their role in physiological pain assessment. This includes recognising signs of pain through fluctuations in heart rate, blood pressure and breathing cycles as well as diaphoresis and pupil dilation (Cowen, Stasiowska, Laycock & Bantel, 2015).

Sierzanowicz *et al.*, (2020) discuss the importance of choosing an effective pain management strategy for surgical patients. The use of multi-modal analgesia is commonly used within the perioperative environment with the aim to increase the effects of analgesics and decrease the severity of nociception. They note that LA is the most important method as it provides the best results.

The body of research is in accordance with current practices within the theatre where I work: LA is used in the form of infiltration, PVB and infusion of LA into the operative site through a wound catheter.

Unresolved pain following thoracic surgery has huge implications for patients especially regarding pulmonary function. Within my future practice I will discuss with the anaesthetic team LA methods of delivery.

TEA is not used within my work place and requires further discussion with the specialist anaesthetists as current literature does support this method. LA as part of a multi-modal pain relief strategy is appropriate and effective for the thoracic patients who come under my care and will improve their outcomes.

Conclusion

Pain is a normal physiological response to noxious stimuli and occurs through four stages; transduction, transmission, perception and modulation. Effective pain management is paramount to decrease implications such as atelectasis, pneumonia, chest infections, increased morbidity and prolonged recovery. Current literature supports the use of LA as an acute intervention to manage postoperative pain.

Different methods of LA delivery were discussed in relation to thoracic surgery with the main benefit identified as improved postoperative recovery rates and lower incidence of chronic thoracic pain. It is important for nurses to understand the physiology of pain and how best to manage it for the patients in their care. Nurses should continue to research, question and up skill to provide effective, best practice pain management.

About the author:

Olivia Talyancich is 25-years-old and completed her Bachelor's Degree in nursing in 2016. She began her NetP position at Christchurch Public Hospital in the operating theatre. Over the last four years she has worked within the vascular, general surgery and cardiothoracic specialties. She works on an after hours team which she enjoys as she gets exposure and experience across all theatre specialties. Olivia is currently undertaking a postgraduate certificate in Perioperative Nursing, which will be completed at the end of 2020. Olivia is passionate about Perioperative Nursing and sees her career progressing within this department.



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Reflections from Cameroon

By Harriet Zych



Class photo taken outside Mbingo Baptist Hospital. Author Harriet Zych is third from left while New Zealand nurse Owen Ashwell is fifth from right. Two of the student nurses were missing from this group, but it gives an idea of the class size.

In January 2017 New Zealand nurse Owen Ashwell and I spent six weeks at Mbingo Baptist Hospital, near Bamenda in north-western Cameroon teaching a recovery room course to 29 students.

Owen and I would spend an hour to an hour and a half lecturing the nursing students early in the mornings, Monday to Saturday, and then on the weekdays we would take two students into the recovery room for a morning shift, and two more for an afternoon shift. The evenings were spent working on shaping the upcoming lectures and examinations.

We conducted practical as well as written exams at the end of the course, and reviewed clinical performance “on the job” to evaluate student progress.

Our time in Bamenda flew by, but sometimes it felt as if we had been there for months as so much happened in a relatively short time.

International collaboration

Owen and I met for the first time in Addis Ababa airport in Ethiopia for the final five-hour flight to Douala, 3200 kilometres further west, on the

opposite side of the African continent.

Prior to our meeting we had collaborated on constructing the nursing course from opposite ends of the world and clock, as he was in New Zealand while I was in England.

Owen was a wonderful man with 20 years nursing experience, and a former recovery room charge nurse and practice educator. His considerable experience in paediatrics complemented my more detailed area of knowledge in anaesthetic drugs, so we divided topics to focus on, based on our experience and background.

It was sobering to realise that if I were to train nurses in England, they would get something like six weeks supernumerary time in recovery shadowing me before they were allowed to take one patient, then weeks later, take two.

At Mbingo Baptist Hospital, we did not have that luxury. The students received a total of 10 hours clinical experience with us, as there were so many students to rotate through. However, there were students from



We had been told that there would be mannequins for the students to practice with, but the reality was somewhat different...

three other hospitals, so it was great to think any teaching had a further reaching impact than just Mbingo Hospital.

Many of the students were actually nursing assistants, which is a one-year course, as opposed to the three-years training that nurses have. The theory was that they act under the supervision of a registered nurse, though in practice I did not see any difference in their responsibilities.

ABOUT CAMEROON

The Republic of Cameroon sits on the Africa's Atlantic coast where Western and Central Africa meet. It is in the Gulf of Guinea and was named by Portuguese explorers for the Rio dos Camarões ('River of Prawns').

Cameroon's geography includes the Mandara Mountains in the north-west, coastal plains, a densely forested plateau and savanna plains.

Cameroon is just north of the Equator and is therefore in the Tropic of Cancer.

Its inland capital, Yaoundé, and its biggest city, the seaport Douala, are transit points to ecotourism sites as well as beach resorts like Kribi – near the Chutes de la Lobé waterfalls, which plunge directly into the sea — and Limbe, where the Limbe Wildlife Centre houses rescued primates.

French and English are two of the official languages, a heritage of Cameroon's colonial past. Part of the country was a French colony and another section was British. Eight out of the ten regions of Cameroon are primarily French-speaking, representing 83 per cent of the country's population, and two regions, representing 17 per cent of the population, mostly speak English.

Cameroon joined the British Commonwealth in 1960.

There are no fewer than 260 national languages, but only 40 are taught in schools.

Its land mass (476,350 km²) is 75 per cent more than that of New Zealand and it has a population of 25 million people.

Until recently there has been relative harmony between the country's approximately 250 ethnic groups, none of which dominates nationally. However, since November 2017, Cameroon has been beset with two violent conflicts but also faces rising ethno-political tensions. Its main conflict, between the government and separatists from the English-speaking minority in the south, has killed more than 4000 people and displaced 765,000 of whom 60,000 are refugees in Nigeria. According to the United Nations,

This meant there was a large range of student education level in the class: some students had a degree in nursing while others went to primary school before doing their nurse assistants training.

Re-writing lectures

The lectures that I had spent many hours meticulously crafting before I left weren't always fit for purpose in Cameroon. As we began to realise that some of the students didn't have knowledge of terminology and physiology, Owen and I sat down and stripped out many medicalised words from the lectures, and added anatomy and physiology teaching as we went. Those students without a strong theoretical foundation in nursing struggled to understand the more specialised aspects of surgery and anaesthesia, and its implications. Looking over one lecture, there was a slide describing "disseminating intravascular coagulopathy" written as a symptom and I just laughed and said "scrap it! Bleeding, the patient bleeds", as I pictured worried looking faces when the slide appeared in class.

We tailored the teaching to the context as that was feasible, to not lose the full content of our lectures: for example, using the protocols that exist in Cameroon for managing patients' pain and nausea in recovery.

Adaptability

We had to get inventive, of course.

We had been told that there would be mannequins for the students to practice with, but the reality was one baby head with inflatable lung bags,



three of the Anglophone regions' four million people are affected by the humanitarian crisis while about 800,000 children are out of school. The country also faces a reinvigorated Boko Haram insurgency with renewed deadly attacks in the Lake Chad basin after a brief respite. The war with Boko Haram, centred in the far north, has killed over 3000 Cameroonians, displaced about 250,000 and triggered the rise of vigilante self-defence groups.

Cameroon has been led for more than four decades by recently turned 88-years-old President Paul Biya.

and one cabbage patch doll!

At first, the students were incredibly shy and unused to a teaching style which asked them to ask questions, and participate, or do group work, but toward the end of our course “scenarios” session, we had some great answers from the students, and it was wonderful to see many of them flourish.

The general attitude of the students was nothing short of remarkable. They were so respectful, so eager to learn and hungry for knowledge. Their probing questions really pushed me to know and do my best, and that was a wonderful thing. I did not mind having to repeat the same things, as I’d rather students ask than sit in silence not understanding.

My time in the Republic of Cameroon made me feel that going there to teach was a wonderful decision, but at the same time it was tinged with sadness in knowing how easy it was in England for me to access information and distinguish reliable sources and data from non-research-based articles or opinion, whereas the students did not have that privilege.

Recreation

On Sundays we would go hiking. The hospital was originally set up as a leper colony on land donated by the government and there were thousands of acres of countryside which were safe to explore.

One day we followed some very vague information and found two waterfalls a couple of hours hike away, one of which we could swim at. It was a great opportunity to relax at the end of each week.

Frustrations

Prior to going to Cameroon, the easiest problems to imagine were learning about the new drugs or adapting to the fact there was going to be less equipment to work with. When there was one nurse to six patients and only three monitors, it took skill and a game of musical trolleys to give priority to the highest risk patients.

However, the hardest thing to deal with was the frustration that comes from seeing poor outcomes or poor practice, even when the physical facilities were available. I learned how difficult it is to reach a common understanding or enforce systemic changes to improve patient safety when one is coming from a different healthcare culture, system and language, and staying for such a short amount of time with the team in Mbingo.

We kept drumming into the students to expect a thorough handover, to put oxygen masks on patients and sit them up when their saturations were low, to get help when patients were deteriorating, and to give good handovers to the ward staff. But if patients arrived without these things, or other members of the hospital team did not respond how we had taught the nurses to expect, it reinforced the status quo.

I should add here that there was no anaesthetic doctor in this major



Owen Ashwell preparing for the first student practical examinations.



Above: The author in Ethiopia where she worked with Médecins Sans Frontières after her time in Cameroon. Below: A Nurse recovering a child post tonsillectomy. Note the advice on the child's hospital gown!



hospital, they were all nurses with an additional course in anaesthetics.

One day I saw a child die in the intensive care unit — which shared the other half of the room with the recovery room, because the nurses all got fixated on another patient's airway problem and forgot to look at the whole room. That was hard to address and to deal with, but I had to learn that changes in clinical practice are slow and I could not expect such marked outcomes, which I came to understand and accept better with more overseas experience. We added a session on patient safety and human factors to introduce this conversation to the team. I think the important thing was to focus on what we could achieve. There was some amazing work done at this hospital. There are many people alive today who owe their survival to that facility.

I am still in contact with some of the students, and it always gives me pleasure to hear how the course helped them in their practice, especially with a deteriorating situation in Cameroon, and life-saving surgery



Top to bottom: The Mbongo Baptist Hospital grounds, as seen from the hill above. New Zealander Owen Ashwell teaching airway anatomy. Road entrance to the Mbongo Baptist Hospital.

becoming more under pressure than before due to increased conflict.

I think education and support is among the most beautiful of gifts nurses can give each other and I feel very fortunate to have been a small part of the work done in Mbongo.

About the author:

Harriet Zych trained as a nurse at King's College London, graduating in 2012. She worked as a Recovery nurse at Guy's and St Thomas' hospitals, as well as others in London and surrounding counties. Always having an interest in healthcare in lower resourced and emergency aid settings, she studied for a diploma in tropical nursing at the London School of Hygiene and Tropical Medicine and worked with Doctors of the World in Greece at the height of the European refugee crisis in 2015-16. She found out about the need for teachers in Cameroon through a link shared on social media by the International Collaboration of PeriAnaesthesia Nurses. After working in Cameroon, she joined Médecins Sans Frontières (Doctors without Borders), and is currently on her third assignment, working on a Covid-19 project and camps in Syria. She looks forward to furthering her theoretical knowledge this September by returning to London School for a master's degree in public health for development. In between overseas work, she is still passionate about recovery nursing and teaching students when the opportunity arises.

Owen Ashwell: a New Zealand perspective

Owen Ashwell is a New Zealand registered nurse who has worked as a staff nurse, clinical nurse educator and charge nurse in the Post Anaesthetic Care Unit (PACU) at Wellington hospital, as well as varied nursing roles overseas, including the Scottish Liver Transplant Unit in Edinburgh, Scotland.

His interest in nurse education saw him assist in running a national post anaesthetic care course out of the simulation suite at Wellington Hospital.

Owen is currently the Senior Specialist Advisor for the Perioperative Mortality Review Committee, and also works as a Specialist in the Adverse Events programme, part of the Health Quality & Safety Commission.

Volunteering

While working as an educator and then CNM at Wellington PACU, Owen was heavily involved with the International Collaboration of Peri Anaesthesia Nurses (ICPAN) group and had spoken at several of their overseas conferences.

ICPAN also has a Facebook page, and one day a message popped up on their timeline outlining an opportunity for peri anaesthesia specialists to volunteer to support and educate nurses in Cameroon, specifically in the PACU.

Always interested in the idea of volunteering, when this opportunity appeared, perfectly matching Owen's skill set, it seemed like the right thing to do. He registered his interest having discussed the idea with his employer as it meant an extended break. He also gained the support of his family who would remain in New Zealand, then sought out more information as to what was required.

He was put in contact with Harriet Zych.

"We then went about the tricky process of putting together a course that we thought would fulfil the requirements," Owen recalls. I say 'tricky' because we had never met, and we were on opposite sides of the planet and time zones! "We finally met on the last leg to Cameroon, where we were on the same plane from Ethiopia. I remember thinking 'What if she doesn't show up!?' or 'What if we don't get along?'. I needn't have worried – we clicked straight away and our respective strengths really helped in how we delivered the course collectively."

Most vivid memories:

Harriet has already summed these up – the contrast, the need to be adaptable and finding a teaching style and content that was applicable to the setting. I echo her sentiment that it was one of the best things I have ever done and it has been nice to reflect on the experience.



Author Harriet Zych (left) with Wellington PACU charge nurse Owen Ashwell (right) together with the Mbongo Baptist Hospital Charge Nurse Manager and one of the students.



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Cubro teams with Opritech to deliver world-leading theatre innovations

Tauranga-based Cubro Ltd has teamed up with Nelson-based operating theatre equipment specialist Opritech Ltd to bring world-class modular operating theatre solutions to New Zealand hospitals.

Recognising the need for New Zealand hospitals to consider a different approach to building operating theatres, Opritech decided to first introduce the European system of building modular ORs in 2018.

Having successfully installed the modular solution in New Zealand and seeing the many benefits it provides, Opritech recognised it needed additional resources and expertise to realise the full potential of this new solution.

As a nationwide organisation with a proven track record of delivering high quality healthcare solutions to hospitals for the past 37 years, Cubro jumped at the opportunity, acquiring the Nelson company late last year.

Both Cubro and Opritech are New Zealand-owned, family businesses with shared values so it made sense to combine the expertise and experience of both teams to provide the New Zealand healthcare industry with even more innovative solutions that help achieve the best health outcomes.

As far as day-to-day operations go, the Opritech brands and operations will remain as they are, as will the wonderful team. In addition to its Nelson head office, Opritech has offices in Auckland, Wellington and Dunedin.

In addition to the design and installation of modular operating rooms, Opritech also supplies a wide range of medical equipment, from operating tables to medical refrigerators, stainless steel sinks and benches, sterile storage and shelving, warming cabinets and more.

For Cubro, the Opritech acquisition follows steady growth from its original 1983 roots in Hastings when orchardists the Currie brothers found themselves selling their latest Gib-lifting innovation to a hospital surgeon. As unusual as it was, the hospital saw the potential in their engineering



The first modular operating theatre Opritech designed and installed was for Churchill Private Hospital in Blenheim. Since then, Dunedin Hospital's operating theatre nine has had the same treatment.

and were soon enquiring about what other products the 'Cubro' boys could develop. The brothers left with a brief for wheelchairs and never looked back.

In 1987 they bought a commercial building in Hastings then six years later relocated to a bigger building in Tauranga. Four years after that, the warehouse and office space had doubled, such was the growth, and in 2003 they established an office in Auckland, followed by a Christchurch office a year after that. A Wellington branch was established in 2010 and two years after that, the Cubro team had tripled in number.

Both Cubro and Opritech are excited about this change and remain as passionate as ever about helping to shape the future of hospital care in New Zealand.

For full details on the modular operating theatres, contact Opritech General Manager Brett McLean, 0800 32 40 32 — or email: sales@opritech.co.nz

For other Opritech and Cubro representatives, see their details in the Business Card section elsewhere in this issue.

LifeHealthcare acquires Culpan Medical

LifeHealthcare, one of Australia's leading independent medical device distributors, has acquired the Culpan Medical business in Australia and New Zealand.

Culpan Medical was founded in 1994 by the Culpan family and has grown to become a highly respected medical device distributor, most notably within Neurovascular Intervention representing Microvention, as well as Argon Medical Devices and Civco Medical Solutions that have market leading product portfolios in biopsy solutions and ultrasound consumables respectively.

The business complements LifeHealthcare's mission of providing Australian and New Zealand patients with world-leading medical devices.

Matt Muscio, LifeHealthcare's CEO, stated: "this acquisition will extend LifeHealthcare's presence into Neurovascular Intervention in partnership with Microvention, a leading innovator in the field of stroke treatment. We are pleased to welcome the Culpan team to LifeHealthcare and look forward to working alongside them to serve the needs of Australian and New Zealand patients."

Rick Culpan, Culpan Medical's CEO, stated: "We are thrilled to be joining forces with LifeHealthcare whose values closely align with our own. The synergies between the businesses will be of significant benefit to our people, customers and suppliers alike."

At present the company is still operating as Culpan Medical. It is business as usual for Culpan with the same sales, customer service and administration team across Australia and New Zealand.

OBEX buys DOWNS

Obex Medical Ltd has taken over the long-established medical devices distributor Downs Distributors Ltd, its third major acquisition in five years.

In 2015, Obex Medical bought out Pacific Surgical Ltd and in 2019 it acquired Surgico Medical & Surgical Ltd

The Downs acquisition, which was completed on December 1, 2020, brings two established and reputable organisations together under the same ownership banner.

Downs Distributors was founded in June 1980 by Denis Clayton

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as Managing Director. Following Denis Clayton's death in August 2003, Ann Watkin, who had been a foundation member and Director, continued on as the Managing Director of the company.

Many of the staff who were with Downs then are still there today.

"Since our inception in 1980 it has always been the prime focus of Downs to provide outstanding service and support to our customers. I am very excited that now, in collaboration with Obex Medical, we can even further implement this focus," Ann Watkin says.

"Both companies have very similar modes of operation and share many objectives. We at Downs are proud of our reputation and proud to be working alongside Obex in our future together."

Downs Distributors will continue to operate as Downs Distributors for the foreseeable future, whilst gradually integrating the businesses to the benefit of customers and shareholders.

Downs' agencies

Downs Distributors has many long-term agencies, the majority represented since inception. High quality German endoscopy equipment manufacturer Richard Wolf GmbH has been an agency held by Downs from very early in its history — as has Bien Air SA, the Swiss manufacturer of drill systems.

Downs Distributors has a long history with the Perioperative Nurses College of the New Zealand Nurses Organisation, being a regular advertiser in *The Dissector* since 2001 and more recently the company became the foundation sponsor of the Christina Ackland Award. In fact, it was Shirleyann Gray at Downs who pushed for the Award from the start – in recognition of Christina.

Speaking on behalf of Obex, company CEO Pieter Wijnhoud says "the combined strength of both companies, its breadth and skillset will place us in a unique position to offer our customers with unrivalled product solutions delivering on the ultimate objective to enhance your patient outcomes in the most efficient, sustainable, and cost-effective way.

"It is very exciting to work together with Ann and the entire Downs Distributors team in making our combined objective to deliver more effective and quality solutions to our customers a reality," he says.

"The combined tenure of both companies of nearly 80 years, the long-standing supplier relationships and understanding of the market needs in a rapidly evolving and fast changing environment will help us deliver on our customer expectations in the best way possible."



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Jackson Allison Medical & Surgical Ltd

Kennedy joins CRK

CR Kennedy has appointed Frank Gibson as its new Medical Account Manager. Frank brings a wealth of experience to CR Kennedy having spent more than 10 years in the medical supply industry and has clinical experience in CSSD, Endoscopy, Orthopaedics and Ultrasound. Frank has previously been with Invitro Technologies and Gallay Medical. At CR Kennedy, he covers the following portfolios: CSSD, Infection Control and Endoscopy products.

Frank Gibson may be contacted on mobile: 021 580 789; or email: fgibson@crknz.co.nz



Opritech introduces GS70 Salus Skytron

Opritech NZ Ltd has a new surgical table available to Operating Theatres. It is the latest from Skytron Corporation of Grand Rapids, Michigan. It is the GS70 Salus surgical table, designed with patient and staff safety in mind. It offers unique and advanced features which will keep any OR informed and safe.

Features include a verbal alert when positioning may create a tipping hazard, the ability to set custom articulation limits and visual articulation graphics to help achieve perfect patient positioning. This table sets the standard for safety in the OR.

For more information about the GS70 Salus, or any other Skytron table, get in touch with the Opritech team on 0800 32 40 32 or email sales@opritech.co.nz



New Haddenham Compression

Comfiwave, the latest compression garment from Haddenham Healthcare, is distributed in New Zealand by Jackson Allison.

Comfiwave is more than just a night-time garment — its easy donning and doffing also provides a comfortable solution when resting in the daytime.

Comfiwave is a patented compression garment designed to

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complement the treatment a patient receives during waking hours. The Comfiwave range is available for lower and upper limb, providing a therapeutic pressure of 15-21mmHg.

These compression garments are made from a soft, undyed breathable cotton fabric and feature a patented high elastic knit that make them easy to put on and take off. They are also designed to be used on either the left or right limb when resting in the daytime and can also provide, safe, night-time compression.

Comfiwave can also be used in palliative care and can be worn under Easywrap or bandaging.

Jackson Allison Product Specialist Sue Gibson shares some feedback she received about Comfiwave from a therapist:

"A breast cancer patient using the sleeve has a two-year-old child. Although the patient really needs to wear a sleeve plus glove, she felt this was going to be a challenge with a toddler and constant hand washing etc. We decided to compromise and get her a Comfiwave a-g sleeve to wear at night, and she would just wear the usual compression when she could and see how she went. The therapist saw her after about six weeks, and she was doing GREAT! Hand and arm swelling were reduced and she was coping well, and she is mostly just using the night garment."

Haddenham Healthcare has been specialising in the treatment of lymphodema, chronic odema and woundcare for 23 years. It is focussed on providing problem solving solutions to assist therapists in treating their patients - helping them achieve clinical effectiveness and patient compliance.

Founded in 1998, the company takes its name from the town of Haddenham west Buckinghamshire, England.

For more information on the Haddenham range, contact Jackson Allison Product Specialist Sue Gibson, 021 585 050 - or email: sue.gibson@jackson-allison.co.nz ■



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