NEW ZEALAND NURSES ORGANISATION | TŌPŪTANGA TAPUHI KAITIAKI O AOTEAROA

PERIOPERATIVE NURSES COLLEGE N.Z.N.O

The Dissector

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

March – May 2025 Volume 52, Number 4

OBITUARY

Dissector founder Pam Marley: The passing of a legend

EDUCATION: QR codes: a perioperative nurse's new best friend

CLINICAL: Preventing DVT with pneumatic compression devices

FROM THE ARCHIVES: Coping with a mass casualty event

OBITUARY: Remembering Editorial Committee member Jo Lynch

SIMEON MEDICAL

PUSHING TECHNOLOGY TO EXCELLENCE

HIGHLINE SURGICAL LIGHTS

CUTTING-EDGE LED TECHNOLOGY • REVOLUTIONARY DESIGN

The latest single-colour and multi-colour LEDs, the patented reflector technology, and the arrangement of the LEDs in a unique design provide more light without shadows. Simeon HighLine lights provide optimal illumination for conducting operations.

CLEAR ADVANTAGES:

Shadow-free light • Single or multi-colour
High-end materials • Wireless solution
Highest hygiene levels • Innovative solutions
Long life time • Cost effective
Patented reflector technology • User friendly

Keyport

Specialist Medical Equipment and Services

P O Box 466 Hamilton 3240

Tel: 07 849-3766 Mobile: 0274 939 046
Fax: 07 849-3767 sales@keyport.co.nz
www.keyport.co.nz

There is a lot of work going on in the background at PNC

Tēnā koutou katoa. Welcome to the Autumn/Winter 2025 issue of *The Dissector*. We had a lovely summer and the warm weather and long days were a welcome respite after our dreary wet winter.

We had our first National Committee meeting of the year in February, and it was lovely to meet our new Vice Chair Lucy Middleton, and incoming Regional Representatives Ashley Walker (Hawkes Bay | Te Matau a Māui), Mirelle Quinn (Ruahine Egmont), and Rebecca Porton-Whitworth (Canterbury West Coast/Nelson Marlborough).

We have included a short biography on each of them in this issue for you (see page 8). We'd like to express our deepest gratitude to the outgoing National Committee members for their service and commitment during their tenures.

A lot of work goes on quietly in the background of PNC, both at a regional and national level, especially in the last few years, with so much going on in our area of practice.

If you are not already involved in your region, I encourage you to do so. It is important that our high standards of practice are maintained to ensure patient safety in the perioperative and medical imaging environments.

Conference

This issue features two articles related to last year's PNC Conference in Wellington. Dallas Jessiman Award winner Rebecca Wood provides a reflection on attending the conference for the first time and Cassie Scott provides us with an article based on her well-received presentation.

Cassie's article explains how a team at Dunedin hospital developed a variety of Quick Response (QR) codes, designed to provide easy access to surgical techniques and troubleshooting guides. She argues that the use of QR codes is innovative and effective strategy for enhancing efficiency and patient safety as well as enhancing learning experiences for novice perioperative nurses.

Recognising Pam Marley

We were saddened to hear of the passing of Pam Marley at the beginning of March. Pam was perhaps best known as the first Chief Editor of *The Dissector*. Michael Esdaile, from AdVantage Publishing provides a tribute to one of our founding members. We send our condolences to her family and friends.

Pneumatic Compression Devices

Novice author Sandeep Mullassary provides our clinical article this issue, based on a post-graduate assignment from completing a Postgraduate Certificate in Specialty Care (Perioperative Nursing) from Whitireia. Sandeep's article reviews the use of intermittent pneumatic compression devices used within the intra and post-operative setting, as well as pharmacological deep vein thrombosis (DVT) prophylaxis options and other interventions designed to help prevent DVT formation. Sandeep argues that these nursing interventions can significantly reduce the risk of thrombus formation in patients undergoing surgery.

50 Years of *The Dissector*

Our archival article this issue is Rebecca Porton-Whitworth's award-winning reflection from March 2020, *Christchurch mosque massacre: The aftermath a perioperative team reflection* (Vol. 47, No. 4). The Editorial Committee agreed that this was a well written, moving and sobering reminder of those involved in the care of patients from the Christchurch terror attack six years ago.

Regional reports

At our National Committee Meeting, it was agreed that Regional Reports for *The Dissector* will be published every six months, updating members on what has been happening in your regions. We have developed a new format, which we hope you will enjoy. Please let us know if there's anything else you would like included.

You'll have seen an expression of interest for an Editorial Committee member with a medical imaging background. If you are interested in joining us, please consider submitting a letter expressing your interest with a copy of your CV to the PNC secretary on periop.sec@gmail.com and include *the Dissector* Chief Editor on dissector.editor@gmail.com.

For further information on the role and responsibilities of the editorial committee please contact the Chief Editor..

Noho ora mai

— Bron Taylor, Chief Editor

THE DISSECTOR

CONTENTS MARCH - MAY 2025

AUTHOR GUIDELINES

The Editorial Committee of *The Dissector* welcomes articles, reports, book reviews, letters to the editor, exemplars, case study experiences, research papers/projects, theatre regional news etc. Please send your ideas to: dissector.editor@gmail.com

SIMEON MEDICAL

PUSHING TECHNOLOGY TO EXCELLENCE

Keyport

Specialist Medical Equipment and Services

www.keyport.co.nz

Tel: 0800 Keyport Email: sales@keyport.co.nz

Future-proof Investment Protection

for Operating Lights and Video Solutions

SIMEON HighLine

Excellent Light Performance

Anti.BAC®
Innovative Coating.
Better Hygienic Conditions.*
* For SIMEON HighLine only

My.GRIP
One Handle.
Personalized Options.
SIMEON Multifunctional Handle.

Sim.FLEX
The Revolutionary Suspension Arm System.

High-end materials
Use of aluminum and safety glass.
Optimal heat management.

SIMEON BusinessLine

Great Light. Great Value.

Patented reflector technology
Sim.POD: three high-performance LEDs of latest generation, positioned in the center of an aluminum-coated reflector.

Great Variety
Single color or multi color lights.
Light intensity from 120.000 to 160.000 lx*.
*Depending on the lights model

Full HD 1080

Sim.CAM HD & Sim.CAM HD Wireless
More Details.
Great Flexibility.

4K ULTRAHD

Sim.CAM 4K Wireless
More Details.
Better Visualization.

Advocating for the role of the nurse in the perioperative environment

Kia ora everyone,
It is an absolute privilege to step into the role of Interim Chair for the Perioperative Nurses College. I am excited for the year ahead, with all the opportunities and challenges it will bring.

We recently held our bi-annual PNC Conference, which was a huge success. It was fantastic to see such a great turnout of both longstanding members and newcomers, all coming together to share knowledge, connect, and grow. The education sessions were excellent, reinforcing the incredible work happening in our profession and the importance of ongoing learning in the perioperative space. A huge thank you to everyone involved in making the Wellington event such a success!

Looking forward, I'm particularly excited about the upcoming AORN International Conference in Boston. This will be a fantastic opportunity to engage with perioperative nurses from around the world, bring back fresh ideas, and strengthen global connections in our field.

Closer to home, we are seeing exciting changes within the PNC National Committee, with new members coming on board, Ashley Walker, Rebecca Porton-Whitworth, Mirelle Quin and Lucy Middleton. I'd like to take a moment to sincerely thank Jan-Marie Wilson and Karen Prendeville for their dedication and hard work over the past few years. Their contributions have been invaluable, and we deeply appreciate everything they have done to support the profession.

One of our key focus areas this year is continuing to define and advocate for the role of the nurse in the perioperative environment. We are also engaging with undergraduate education providers to ensure that perioperative nursing is well represented and understood at an early stage in nurses' careers. By strengthening this connection, we hope to inspire and support the next generation of perioperative nurses.

It's an exciting time for our profession, and I look forward to working alongside all of you to continue advancing perioperative nursing in New Zealand. Thank you all for your dedication and passion—you are what makes this community so strong.

Ngā mihi

— Emma Ladley
Chairperson, Perioperative Nurses College

The Dissector
The official Journal of the Perioperative Nurses College of the New Zealand Nurses Organisation (PNCNZNO).
www.nzno.org.nz/groups/colleges/perioperative_nurses_college

March – May 2025, Volume 52, Number 4
The Dissector is published quarterly (March, June, September, December) on behalf of the College by Advantage Publishing Ltd.

EDITOR: BRON TAYLOR
Email: dissector.editor@gmail.com

ADVERTISING: MICHAEL ESDAILE
Email: michael@advantagepublishing.co.nz
Tel: 09 416 5309 / 027 495 4510

EDITORIAL COMMITTEE
BRONWYN TAYLOR RN, BN, MN (Hons)
Associate Nurse Director, Perioperative Services, Te Toka Tumai, Auckland. dissector.editor@gmail.com or btaylor@adhb.govt.nz

REBECCA PORTON-WHITWORTH RN, RNFSA, MHSc (Hons), Associate Theatre Manager, Southern Cross Hospital, Christchurch. Rebecca.Porton-Whitworth@schl.co.nz

FINAU FAKAÏ RN, PACU, Level 4 Operating Rooms, Te Toka Tumai Auckland. FFakai@adhb.govt.nz

AMBER COX RN, BN, PG-Dip, Nurse Educator Perioperative Services, Wairarapa Hospital. Amber.cox@wairarapa.dhb.org.nz

SUE CLYNES, RGON, PG-Dip Nsg, Dip Edit, RN, (recently retired). clynes@xtra.co.nz

CIRCULATION *The Dissector* is emailed direct to all financial members of PNC, NZNO as well as paid subscribers, including medical industry representatives, libraries and nurse training institutions.

FOUNDING EDITOR: Pam Marley (1974 – 1979)

EDITORIAL MATERIAL The Editorial Committee welcomes articles, reports, book reviews, letters to the editor, practice issues, exemplars, case study experiences, research papers/projects, regional news etc. Please send your ideas to: dissector.editor@gmail.com

All editorial material is reviewed by the Editorial Committee. Whilst every effort is made to ensure accuracy, the Publishers and their agents take no responsibility whatsoever for errors, omissions, or any consequences of reliance on this material or the accuracy of information. The inclusion or exclusion of any product or advertisement in no way means the Publisher or the Perioperative Nurses College advocate or reject its use in any way.

AUTHOR GUIDELINES The Editorial Committee has developed Author Guidelines designed to help first-time authors, as well as those who have published previously. They are available by clicking this link.

CORRESPONDENCE The Editorial Committee welcomes all correspondence intended for publication. Correspondence should be addressed to the Editor, Bron Taylor: dissector.editor@gmail.com or call: 027 323 2857

PNC,NZNO WEBSITE
http://www.nzno.org.nz/groups/colleges/perioperative_nurses_college
SSN: 1174-7579

PROTECTION FIT FOR SURGICAL ENVIRONMENTS

As a perioperative nurse, you need gloves you can count on - for protection, comfort, and performance. Our polyisoprene range offers skin-friendly, high-quality surgical gloves featuring patented Worker Experience Technologies that support your well-being and ensure reliable protection. Reduce the risk of skin allergies and sensitivities for you and your patients, so you can focus on delivering exceptional care.

POLYISOPRENE NON-LATEX RANGE

GAMMEX® Non-Latex PI

Soft glove formulation delivering extra comfort

GAMMEX® Non-Latex PI Textured

Textured finish for exceptional instrument handling and grip

GAMMEX® Non-Latex PI Micro

Exceptional dexterity and tactile sensitivity, made 15% thinner than Ansell's standard PI glove

GAMMEX® Non-Latex PI Underglove

High level of tactile sensitivity, with a green underglove designed for quick breach detection

GAMMEX® Non-Latex PI Ortho

Ultra-thick surgical glove to withstand the rigours of surgery, especially where power tools and bone fragments are present

GAMMEX® PI Hybrid

Polyisoprene and neoprene blend surgical glove delivering the best of both materials: exceptional comfort and superior durability

WORKER EXPERIENCE INNOVATION TECHNOLOGIES

PI-KARE™
Skin-friendly, non-sensitizing PI Technology

Skin-friendly, non-sensitising technology that uses biologically safer chemical accelerators not known to cause allergic contact dermatitis

DERMASHIELD™
Donning Aid Technology

Inner coating is applied for fast and easy damp or dry hand donning

ERGOFORM™
Ergonomic Design Technology

Supports musculoskeletal health by reducing muscle effort to help prevent injuries and improve work performance

A.R.T™
Pinhole Barrier Technology

A coating is applied in the manufacturing process to add an extra level of robustness by minimising possible defects that may later result in pinholes

Experience the difference! Contact EBOS Healthcare today on 0800 18 17 16.

EBOS HEALTHCARE

Four new members for the National Committee

At the Annual General Meeting of the Perioperative Nurses College of the New Zealand Nurses Organisation (PNC NZNO) in Wellington in October 2024, four new Regional Representatives were elected to the National Committee. The Dissector welcomes them and publishes these short biographies:

Rebecca Porton-Whitworth
(RComp, BHSc, MNurs (Hons), ANEC). Associate Theatre Manager, Southern Cross Healthcare Christchurch.
National Committee Member for Canterbury-West Coast/ Nelson Marlborough

Rebecca has worked for more than 30 years in a variety of specialties and roles within the perioperative environment.

After graduating from Christchurch Polytechnic in 1992, she has worked within the public and private sector in New Zealand, as well as overseas. This is where she developed her passion for cardiothoracic surgery, working in both paediatric and adult acute and acquired congenital.

Rebecca has completed a variety of postgraduate education and is tertiary qualified at Masters Level with First Class Honours focussing on the Registered Nurse First Surgical Assistant (RNFSA) within the New Zealand healthcare system. This set her on a new path working as an RNFSA within the cardiothoracic specialty.

In 2024 she obtained her American Nurse Executive Certification via the American Nurse Credentialling Centre.

Rebecca has spent the last nine years working as a Clinical Nurse Specialist in the Cardiothoracic and Vascular Theatres at Christchurch/Waitaha Te Whatu Ora Hospital and as a RNFSA. In June 2024 she moved to Southern Cross Healthcare Christchurch in a new role as Associate Theatre Manager.

She has also been involved in volunteer work with the Mutima Project which travelled to Zambia to perform heart surgery, as well as with the Friends of Fiji Heart Foundation. She has worked within the Perioperative Nurses College as part of *The Dissector* editorial team since 2019 and has presented at various perioperative nurses conferences and has had multiple articles published in *The Dissector* journal.

Ashley Walker
RN, PGCert in Health Science, PG Cert in Specialty Care (Perioperative Nursing)
National Committee Member for Hawkes Bay

Originally from Hawke's Bay, Ashley completed her undergraduate training at EIT Tairawhiti in 2016. After graduating she returned to Hawke's Bay as a new graduate nurse in the operating theatre at Hawke's Bay Hospital, where she worked for four years in a variety of specialities.

She has completed two separate postgraduate certificates and has a passion for continuing her education.

Ash currently works at Royston Hospital and still works casually at Hawke's Bay Hospital. At Royston her time is spent between working in orthopaedic and vascular surgery, and her role as Theatre Education Coordinator which she has been doing for the past three years. In her role of Educator she facilitates PDRP, monitors and plans for training and in-services, looks after student nurses and new graduates, and supports staff to help provide learning opportunities to junior staff in the operating theatre.

Ash has been a member of the PNC since her new graduate year and attended her first conference in Hawke's Bay, in 2017. Ash joined the PNC National Committee in 2025 and looks forward to working with the rest of the National Committee members.

Mirelle Quin
National Committee Member for Ruahine Egmont

Mirelle is the new PNC Regional Representative for the for Ruahine Egmont Region of the PNC, taking over from Karen Prendiville.

Mirelle has been nursing for 27 years. She trained in New Plymouth and Auckland before starting work at Greenlane Hospital's cardio-thoracic ward in 1998, then moved on to Wellington's Wakefield Hospital. At Wakefield she I moved through the ward, ICU, Angiography (cardiac and interventional radiology), and operating theatres.

Her next move was across the Tasman, to Sydney, where she spent 13 years in Interventional Cardiology, holding multiple

Left to right: Rebecca Porton-Whitworth, Ashley Walker, Mirelle Quin and Lucy Middleton.

roles including Educator, ALS2 trainer, Policy Coordinator, and TAVI Coordinator.

In 2019 she returned home, settling in Taranaki in 2019 where she has focused on operating theatre, and completed the RNAA Bridging programme in 2023.

"Union membership and participation has always been important to me since going in strike with my mum as an 8-year-old," she says. "I've been with NZNO since a student, and a delegate at Wakefield Hospital, Taranaki Base Hospital and in Australia with NSWNA."

Mirelle says she loves procedural nursing work, supporting patients in intensely vulnerable moments.

"I'm passionate about demonstrating and teaching perioperative nursing values to new staff and keeping our patient as the centre at all times. I look forward to engaging with important issues in perioperative nursing and advocating for my colleagues in my tenure with the PNC."

Lucy Middleton
PACU Clinical Team Leader, Grace Hospital, Tauranga
PNC National Vice-Chairperson

Lucy's first experience with PNC was at with the Central North Island Region in 2014. She attended her first regional study day and "naively held my hand up when they were asking for expressions of interest for a new secretary," she says.

"As the years passed, my passion for all things perioperative expanded exponentially. My tenure with Central North Island Region concluded with the successful 2019 PNC Conference in Hamilton as Conference Convenor.

"During my years away from PNC I have embarked on new career opportunities from private urology services, international research projects and non-profit Kaupapa Māori services. My current mahi at Grace Hospital in Tauranga has evolved since my commencement in March 2024 with expansion of my learning and professional development. This role has sparked my passion and directed me back towards PNC.

"Perioperative nursing is a specialised cohort of individuals who need representation at a regional and national level. As a College of the New Zealand Nursing Organisation, PNC has support and representation at Government level that is invaluable to the continued success of the profession," Lucy says.

"Continued education and learning has always been a passion and my journey continues in 2025 with post-graduate study through Massey University.

"I am a proud Tangata Tiriti wāhine who actively participates in the Te Ao Māori space. My professional practice and personal foundations are based on Te Ao Māori values with Tika, Manaaki and Pono being three key aspects that have pride of place in my wairua.

"I am excited about the direction and goals outlined at the recent National Committee hui held in Wellington. With a knowledgeable, enthusiastic, and professional group of colleagues, the PNC is well placed to successfully guide and support ongoing education, career pathways and perioperative guidelines in the future."

The Dissector founder has passed away

The founding editor of *The Dissector* has died.

Pamela Ross Marley (Pam) slipped away peacefully on March 9, 2025 at Malvina Major Retirement Village, Broadmeadows, Wellington aged 91 years.

Pam was the dearly loved daughter of the late Kenneth and Gladys Marley, loved brother of Roger (Thailand), loved aunt of Brett and Philippa and special great aunt to Loren and Sam.

Pam Marley never married and had no children. She devoted almost half her life to nursing and also served as Nurse Advisor to the Department of Health.

Born in Auckland, then raised in a variety of rural areas, Pam was to call Wellington 'home' in her adult years —apart from seven years in London in the 1960s.

In a very busy life, Pam Marley managed to get herself involved in a large number of social programmes, including cubmaster for the cubs in Woodville, founder member of the Country Girls Club there, organist at a number of Presbyterian churches and a period spent drain laying in Germany as part of a World Council of Churches (WCC) programme.

In the late 1960s she returned to operating theatre nursing in Wellington and was one of the driving forces who founded the first New Zealand operating theatre nurses group in Wellington. She also involved in staging the first 'conference' (then called a seminar) for perioperative nurses and founded *The Dissector* in 1974.

One of Pam Marley's legacies is the journal you are reading. Fifty-one years later, *The Dissector* is still the voice of perioperative nursing in New Zealand.

There is insufficient room on these News pages to detail Pam Marley's amazing life, so we have an extended tribute to her, beginning on page 17.

Sue Claridge has died

Sue Claridge, Editor of *The Dissector* from 2000 to 2003, has died. Sue was one of the team that former College chair Jean Koorey put together to resurrect the journal in 1998 and took over as editor when Jean stepped down in 2000.

Sue was known as Sue McIntosh in that period but reverted to her maiden name in 2004.

As well as being the journal editor, Sue was heavily involved with the Perioperative Nurses College of the New Zealand Nurses Organisation (PNC^{NZNO}) for many years, serving in various roles at regional and National Committee level. She was a very keen stamp collector and was a member of the New Zealand Philatelic Federation, serving that organisation in many roles.

She had a very wide stamp collecting interest that included stamps related to ophthalmology, hospitals, Florence Nightingale, Edith Cavell and World War I.

Sue worked in the operating theatres at St Georges Hospital in Christchurch for many years but had retired in 2024.

She was found dead in her Hoon Hay home on the weekend of June 28-29 of a suspected major cardiac event. She was 69.

The Dissector will be publishing an obituary on Sue in the next issue.

Editorial Committee Member passes

Joanna Cornwall, who served six years on the Editorial Committee of *The Dissector,* has died. Joanna was 55-years-old. She was 36 when she joined *The Dissector* team in 2006 and provided valuable input until she eventually stepped down in 2012.

She was diagnosed with cancer in 2023.

Joanna was a very private person and passed away peacefully surrounded by her loved ones at Dove hospice in Glendowie, Auckland on May 20.

We have an obituary to Jo on page 25.

Perioperative Trauma Care Course

From August 4-6, 2025 Auckland City Hospital's Trauma Service is hosting The Definitive Surgical Trauma Care (DSTC), the Definitive Anaesthetic Trauma Care (DATC), the Definitive Perioperative Nurses Trauma Care (DPNTC) and the Definitive Anaesthetic Assistants Trauma Care (DAATC) courses.

Registration is now open. Go to: DSTC Course NZ - New Zealand Association of General Surgeons

The course is the perfect opportunity to focus on:

- Surgical decision-making in complex scenarios
- Operative technique in critically ill trauma patients
- Hands on practical experience with experienced instructors (both national and international)
- Insight into difficult trauma situations with learned techniques of haemorrhage control and the ability to handle major thoracic, cardiac and abdominal injuries

The Definitive Perioperative Nurses Trauma Care (DPNTC) and Definitive Anaesthetic Assistant Trauma Care (DAATC) courses are held in conjunction with the DSTC and DATC courses. They are aimed at instrument/scout (scrub/circ) and anaesthetic nurses or technicians with a minimum of two years' recent clinical experience in a perioperative setting, allowing them to develop their knowledge and skills in a multidisciplinary environment.

For perioperative nurses, the DPNTC course provides equivalent hours towards annual continuing professional development (CPD) as outlined by the Nursing and Midwifery Board of Australia.

DPNTC Course for nurses or anaesthetic techs – $1025 NZ plus GST ($1178.75)

For enquires contact: Bron Taylor on btaylor@adhb.govt.nz or email Auckland Trauma for further registration information if required.

	Registration Convene	Sessions Start	Sessions End	
Day 1	07:15	08:30	17:30	18:00 **Course Dinner**
Day 2	07:45	08:00	17:00	
Day 3	07:50	08:00	16:45	17:00 **End of Course**

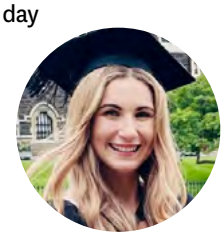
Busy time in Otago-Southland

The second half of 2024 was a busy time for the Otago-Southland PNC Region. In October we were able to provide funding for two regional committee members to attend the biennial PNC Conference, held in Wellington. With regional members presenting in both the Free Paper session and the concurrent sessions we were well represented. Although we were not winners of the Percy Peacock trophy for the annual challenge this time, the conference made for a fantastic few days, full of education, networking and many laughs.

In November we held a successful study day at Mercy Hospital on perioperative innovations. We had a variety of speakers all discussing the latest advances in technology in the perioperative environment. Topics included, but were not limited to: robotic surgery, ApiFix scoliosis surgery, transcatheter aortic valve replacements and the implementation of QR codes in the perioperative setting. A huge thank you goes out to those who presented and those who helped organise the day.

December saw us holding our Christmas meeting at Number 7 Balmac (a local Dunedin favourite). We celebrated the year with a brief meeting over some delicious food.

To help switch things up we held a pot luck dinner for our February meeting. For those who were unfortunate to miss out on the large spread, a Zoom link was provided. During this meeting we made progress on planning our next half day study day and our July webinar. Details of these will be made available in due course.



— April-Lily Sule, Clinical Nurse Coordinator: Elective Orthopaedic Surgery, Dunedin Public Hospital Main Operating Theatres

Canterbury-West Coast/ Nelson-Marlborough

Interest in College membership has been growing significantly in Canterbury, as seen by the high attendance at meetings. With some solid relationships in the Nelson area, we are also witnessing an increase in interest there. The West Coast has yet to see membership.

We have planned several meetings for the year. All meetings will include education, however the exact programme has yet to be determined. We had a study day in March at St Georges Hospital in Christchurch and our annual general meeting was in June.

We are planning to host the My Health Hub webinar on November 18, 2025.

The Canterbury-West Coast/Nelson-Marlborough (CWCNM) PNC Region Chair is Vanessa Bacaltos, the Secretary is Shirley Robinson and the Treasurer is Robyn Strachan.

The CWCNM wish to thank Emma Ladley who is continuing to support the Perioperative Nurses College in the role of Chair for the next year.

– Rebecca Porton-Whitworth, Associate Theatre Manager Operating Theatre and Registered Nurse First Surgical Assistant, Southern Cross Healthcare Christchurch

Greater Wellington Region

It has been a quiet time in Wellington Region since the PNC Conference at Te Papa in October 2024. A big thanks to all that helped organise and all who attended!

There was a huge effort put into the conference by the members of the regional conference committee (RCC), PNC chair and Professional Nurse Advisor.

The conference was a huge success. “Embrace the future; everything counts” was the central theme of the conference and incorporated the celebration of 50 years of *The Dissector* journal.

The Wellington PNC Region has committee positions up for appointment and we want you!

Jenny Kendal steps down as Chair, Judith de Wilde steps down from Treasurer and I will be stepping away from National Committee.

The Secretary role is currently being filled by myself and this too is available. So have a good long think about what you could do for perioperative nursing in the Wellington region.

All these positions offer great professional and personal development. I have particularly enjoyed my time a regional representative and strongly encourage you to give this position a go. Perhaps you know someone working in the Wellington region who would make a great candidate. If so... grab a nomination form today.

Nomination forms and more information are available from periop.wellington@gmail.com.

This year’s AGM date is to be announced shortly. Our Regional Webinar is set for June and the planning for this is underway.

It would be great to get the Wellington Region meeting regularly thoughout the year; please consider hosting an event at your work and get in touch on the email above.

— Amber Cox, Nurse Educator, Perioperative Services, Te Whatu Ora Wairarapa

Hawke’s Bay- Gisborne

This year I will be stepping forward as regional representative on the National Committee and look forward to the challenge this will bring. I attended my first face-to-face meeting in Wellington in February, and I was officially nominated at our AGM in April. I deeply thank Jan-Marie Wilson for her continued encouragement and support during this period. PNC Hawke’s Bay-Gisborne Region as a whole thanks her for her service in this role.

Moving into 2025, the Hawke’s Bay-Gisborne committee has been keeping in contact via Messenger and email, as we are spread between Te Whatu Ora Hawke’s Bay, Royston Hospital and Kaweka Hospital.

This year continues to be busy at the Hawke’s Bay Hospital, with the usual trend of the hospital being at capacity, with elective surgeries often being postponed for acute surgery due to lack of beds being available.

Royston Hospital continues to not only serve private patients but holds several Health New Zealand | Te Whatu Ora outsourcing contracts, allowing public hospital patients to receive their surgeries in a timely manner and take load off the public system. Royston Day Surgery has officially opened its second theatre and both hospitals look forward to the commencement of new

surgeons during the year.

Kaweka Hospital also continues to serve both private and public patients through outsourcing contracts, with their second stage set to be complete in late 2025. While the health system continues to face many challenges, our community continues to benefit from the growth of available surgical capacity and the safe, efficient care our perioperative nurses provide region wide.

Last year (2024) finished on a positive note for Hawkes Bay-Gisborne, with our region sending a large contingent to the PNC Conference in Wellington and also winning the coveted Percy Peacock Trophy again at the conference dinner.

This year continues to be a busy one for the Hawke's Bay-Gisborne Region. Our biannual education seminar has been set for August 16, 2025. Our region also hosted the online My Health Hub webinar on June 17, 2025 for members.

Our membership currently stands at 47 members. As a committee we will be driving to increase our membership again this year and increase member engagement from Hastings up to Gisborne and the wider Tairawhiti region

— Ashley Walker National Committee Representative, Operating theatre registered nurse and Theatre Education Coordinator, Royston Hospital, Hastings.

Ruahine-Egmont

The Ruahine-Egmont PNC Region would like to thank Karen Prendiville for all her hard work and dedication and we wish her all the best as she steps down from the role of Regional Representative on the PNC National Committee.

The national PNC conference in October last year was attended by six active Ruhaine-Egmont members and throughly enjoyed by all. Following this we advertised and have been encouraging new and more active membership within our region.

The Ruahine-Egmont region has been communicating through informal chats amongst active members regarding succession planning and committee member roles. We have also been communicating using Messenger, WhatsApp, and Zoom platforms. We held a regional meeting in June 2024 at New Plymouth with an education meeting prior. Our AGM was on April 12, 2025, in Whanganui, which is where Mirelle Quin took over the Regional Representative role.

Mirelle works for Southern Cross Hospital in New Plymouth, in the intraoperative area.

— Mirelle Quin, Scrub/Circ and Anaesthetic Nurse Assistant, Southern Cross Healthcare, New Plymouth

Central North Island

On May 11, 2024 the Central North Island PNC Region held its annual general meeting (AGM) at which tenure of Committee members Cassandra Raj and Sue Clynes ended.

The future of our PNC Region was discussed thoroughly, and most members were keen to maintain its existence, thus nominations and voting was completed.

A handover meeting was chaired by Cassandra Raj on June 17, 2024, guiding us in the direction we would like to bring our region. Our current regional Chair is Stephanie Perkins, our Secretary/Treasurer is Cheryll Dales, and members of the Committee are Pip Gleed, Vicki Strawn and Kim Baker, all from Tauranga Hospital.

Perioperative nurses in New Zealand are facing a time of great change and turbulence in the workplace. Pressure is mounting around us. Technology is changing what we do and widespread budget cuts are happening across the country, causing more pressure and dissatisfaction in our workforce.

The development of merging roles from other registered health professional groups, as well as a cultural and generational shift in our workplace, is changing the landscape on every level.

Our aim is to ensure continued membership and to strengthen the face of perioperative nurses by joining the College.

As a perioperative nursing group, we need to widen our net, attracting both new graduates into the fold for the first time and welcoming back our experienced nurses. It is imperative we remember who we are whilst maintaining our professional mana (self-respect). Widening our influence and leadership in our work sphere is vital.

— Maria May Nazarita Ragot, Registered Nurse, Tauranga Hospital

Auckland-Northland

Our first regional committee meeting was held on March 26 where started the planning for education sessions for the year, nominating and electing new committee members into roles and start the planning for the next PNC conference in 2026.

Our current membership is much the same as last year, standing at approximately 100, which doesn't sound too bad till you think of how many perioperative nurses are employed in our region, so don't forget to renew your membership, if you have not already done so.

Please talk to your colleagues and tell them all about PNC and what we have to offer.

We held our annual Medical Imaging study session in November 2024, which was again hosted by OBEX Medical and was well attended by both Medical Imaging Nurses and Medical Imaging Technologists. This was a great opportunity for our two professions who work closely together every day to share our knowledge and skills.

We are looking forward to planning this years' session , which will be without the leadership of Shona Matthews, long time PNC member and driving force behind Medical Imaging education in our region.

Shona retired from employment at Christmas to spend more time with family and sail the high seas with her husband. She has of course been invited to speak at our next session, either on a Medical Imaging related topic or her tips for retirement.

Last years' PNC Conference was a great success, and it was great to see members of our members of our region presenting. Shona Matthews, Assunta Rodrigues and Ben Mcintyre all presented in the Free Paper Session, with Assunta winning the Debbie Booth Award. Additionally, Bron Taylor presented twice in the plenary sessions: on the work that Te Toka Tumai has been doing around the 'flexible workforce' as well as a brief history of *The Dissector* on Sunday morning.

— Gillian Martin, Nurse Specialist (RN, PG dip, VABC), Radiology Department, Auckland City Hospital

Cooper Medical

Medical Instruments and Equipment Specialists

PRODUCTS FOR HEALTHCARE PROFESSIONALS

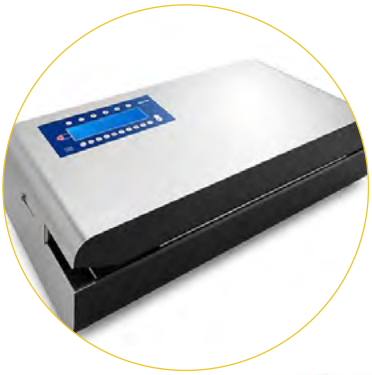
Cooper Medical Ltd is a family owned and operated New Zealand business. We supply new and custom made medical equipment and surgical instruments. We source products from all over the world and from New Zealand manufacturers and provide Biomedical Engineering support.

We are passionate about providing high quality, cost effective products, that will ultimately save the health dollars spent in New Zealand.

Our range

- Gynaecology - full range
- Heat Sealers
- Infertility Diagnostic Products
- Ophthalmic Instruments
- Orthopaedic Instruments
- Shelving for Healthcare
- Sterile Services
- Surgical Instruments
- Surgical Lighting Solutions
- Surgical Mesh
- Urology

Cooper Medical also provide scope repairs and servicing & custom made equipment



Cooper Medical are now the distributor in New Zealand for Sunoptic Light Sources - Free trials available!

SUNOPTIC SURGICAL

Sunoptic Surgical designs and manufactures high end, high value surgical light sources, portable and wireless headlights, high definition camera systems, xenon lamps, fiberoptic cables and components for the healthcare industry.

www.coopermedical.co.nz

PH: 0800 0800 823 - Email: sales@coopermedical.co.nz - Contact Alison Cooper Ph: 021 545 512

57 Mahunga Drive, Mangere Bridge, Auckland 2022, New Zealand

QR Codes: A Perioperative Nurse's New Best Friend

By Cassie Scott

Abstract: The inclusion of Quick Response (QR) codes in the operating theatre has the potential to improve patient outcomes and safety by providing the perioperative team with quick and easy access to important information. This article is based on Cassie Scott and Roneel Nand's presentation at the PNC Conference in Wellington, October 2024.

Introduction

A QR code, a small black-and-white image similar to a barcode, can be scanned using a smartphone or other electronic device.

In the perioperative setting, once scanned, the QR code directs the user to specific websites, instructional videos, clinical updates, demonstrations of new procedures, or other relevant information.

QR codes provide the perioperative team with immediate access to essential resources, streamlining processes and reducing the likelihood of errors. In a time-critical environment where precision and efficiency are paramount, QR codes serve as a valuable tool for enhancing knowledge and communication within the perioperative team.

Dunedin Hospital Experience

Dunedin Hospital's perioperative team includes perioperative nurses, anaesthetic technicians, medical team members (surgical and anaesthesia), and other support staff servicing 13 operating theatres across four locations.

Beginning in 2023, the team strategically introduced QR code technology in three key areas to address challenges associated with delays and difficulties in accessing surgical technique guides and setting up complex equipment. The initiatives included:

1. Incorporation of QR codes in surgical preference cards: QR codes were integrated into surgical preference cards, linking to detailed surgical technique guides, specific surgeon preferences, and other relevant procedural guidelines. This initiative aimed to provide the team with immediate access to critical information before surgery commences.

2. Application of QR decals on complex surgical equipment: QR decals were applied to complex surgical and anaesthesia equipment

Image One: Example of QR Code linking Surgical Preference Card to Surgical Technique Guide for Trigen Meta-Nail

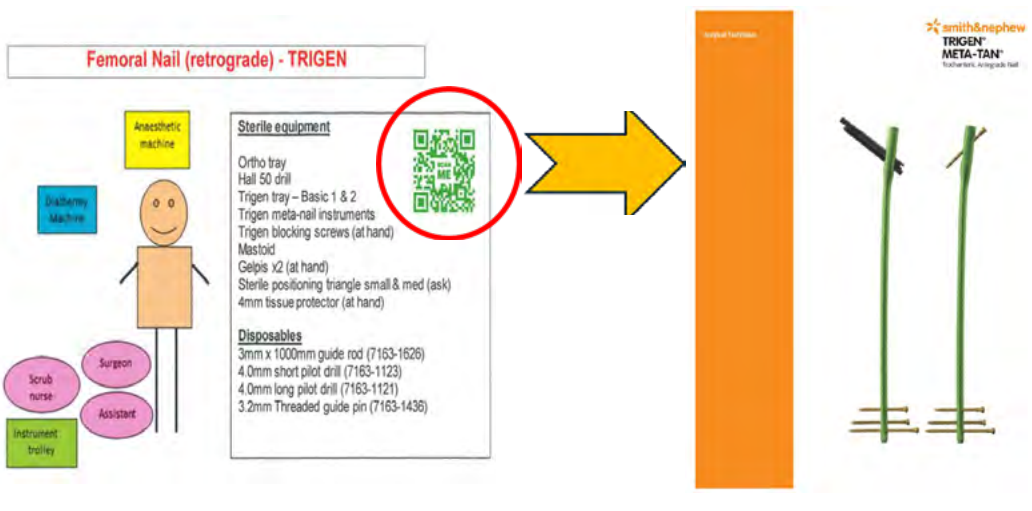


Image Two: Example of QR Code decal providing user set-up instructions for surgical and anaesthesia equipment

Image Two: Example of QR Code decal providing user set-up instructions for surgical and anaesthesia equipment

to provide specific setup and user instructions. This initiative sought to simplify the setup process, including providing troubleshooting information to reduce errors related to equipment preparation.

3. Digitalisation of staff procedural logs: Staff procedural logbooks were digitalised and made accessible via QR code decals placed on the back of staff ID badges and displayed in each operating theatre.

The goal was to enhance patient safety and improve perioperative efficiency by providing streamlined access to critical information for the perioperative team. A phased rollout of this project was undertaken to ensure staff were gradually introduced to the changes, reducing the risk of overwhelming the team. As the project progressed, the project team expanded to include staff members completing quality improvement work as part of their professional development and recognition programme (PDRP) submissions and members of the anaesthetic technician team.

Education and training on the correct usage of QR code technology were offered to perioperative staff members who required assistance. However, the need for training was minimal due to the widespread use of QR code scanning and tracking during the COVID-19 pandemic.

Results and Feedback

Qualitative data and feedback were collected through an anonymous staff survey three months after the project's rollout. The feedback was overwhelmingly positive, with three consistent themes emerging:

1. Instant access to critical surgical information:
Staff reported rapid and easy access to critical surgical information, which facilitated smoother workflows, improved knowledge, and better adherence to departmental policies and guidelines.

2. Simplified equipment setup procedures:
QR code decals affixed to complex surgical and anaesthesia equipment streamlined setup processes, reduced setup time

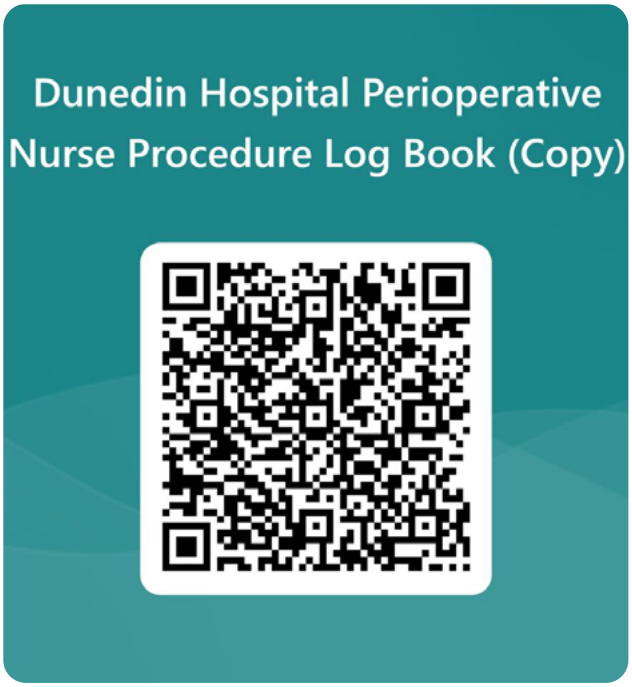


Image three: Example of the Digital Staff Procedural Log – scan for access

and stress, and minimized the potential for errors.

3. Enhanced learning experiences for novice nurses through the digitalised procedural log:
Before the introduction of the digitalised procedural log, novice nurses and NETPs were required to complete a paper-based log. The main challenges with this method included the physical books being lost, forgotten at home, or unavailable at work, as well as the difficulty for senior nursing staff and preceptors to track progress in real time.

Novice nurses benefited from the integration of QR codes and the digital procedural log. This provided a quick and convenient way to log all surgical cases in which they participated. The information was collated in a 'live' spreadsheet, allowing preceptors, senior nurses, and the perioperative education and leadership team to monitor progress and tailor theatre allocations to meet learning needs and goals.

Of the survey respondents, 72 percent reported no technical issues when using the digital platform via QR codes for the learning log. However, 14 percent reported minor issues due to a lack of technical proficiency, and another 14 percent did not respond to this question. The non-responses were likely due to some staff not using the digital procedure log. While all staff were given the opportunity to use the log, it was a requirement only for novice nurses in new surgical specialties or NETP nurses.

Conclusion

QR codes can be scanned to provide easy access to surgical techniques and troubleshooting guides. With continual advances in technology the aim is to help nurses navigate the specialised equipment and stay up to date with surgical techniques. The integration of QR code technology within the main operating theatres at Dunedin Hospital has proven to be an innovative and effective strategy for enhancing perioperative efficiency, patient safety, and staff development. Work is ongoing to expand this project, with the aim of improving the quality of perioperative care we deliver.

Novice nurses benefited from the integration of QR codes and the digital procedural log. This provided a quick and convenient way to log all surgical cases in which they participated.

The overwhelmingly positive feedback from staff reinforces the success of this project and its demonstrated adaptability has led other staffing groups within our team to adopt it in their own subspecialties.

About the Author

***Cassie Scott** is the Charge Nurse Manager 2iC, Perioperative at Dunedin Hospital. Having started her nursing career in Australia, Cassie has worked as a perioperative nurse for 20 years in countries including Australia, Ireland, the United Kingdom and New Zealand. Throughout her career, she has been deeply committed to advancing perioperative nursing practice around the globe.*
Cassie is particularly passionate about enhancing the quality of care provided to surgical patients and has a special interest in implementing Quality Improvement projects that lead to better patient outcomes and improving overall perioperative efficiency.

"LADY PAMELA"

Pamela Ross Marley

September 18, 1933 – March 9, 2025

Just over 50 years ago, Wellington theatre nurse Pam Marley demonstrated the 'can do' attitude for which New Zealanders were once renown. She stepped completely outside her comfort zone, adding 'editor' to her operating theatre nursing expertise.

One of the driving forces who helped establish the first New Zealand operating theatre nurses' group in Wellington, Pam Marley was also involved in staging the first 'conference' (then called a seminar) for perioperative nurses.

In the debrief that followed, the idea of an operating theatre nurses journal was mooted and without pausing, she volunteered to do that too, perhaps inspired by the speech US President John Kennedy had delivered a decade earlier.

> *"We set sail on this new sea because there is new knowledge to be gained, and new rights to be won, and they must be won and used for the progress of all people. ...We choose to go to the Moon in this decade and do the other things, not because they are easy, but because they are hard; because that goal will serve to organize and measure the best of our energies and skills, because that challenge is one that we are willing to accept, one we are unwilling to postpone, and one we intend to win..."*

So Pam Marley chose to do the 'other things' — and it was hard. Not only did she have to coax her colleagues to contribute articles, she had to learn how to edit that material, learn how to have it set into type, lay it out and get the publication printed. Then came the time-consuming process of producing mailing labels, affixing them to envelopes, putting postage stamps on the envelopes then delivering the boxes of journals to New Zealand Post.

Thus the first issue of *The Dissector* arrived in perioperative nurses' mailboxes around the country in September 1974.

Formative years

Like most of her generation, Pam Marley's world view was informed by her childhood circumstances. She was born in the midst of the Great Depression (1933) when 240,000 New Zealanders were out of work (of a population of 1.5 million), work camps for building major infrastructure projects were common and New Zealanders became even more adept at "making do".

Her birth year and month coincided with the election of the country's first female Member of Parliament, Elizabeth

Founding Editor Pam Marley was a special guest at the 2004 PNC Conference in Auckland, with a dinner in her honour at the Sky Tower restaurant. In attendance were several editors and editorial committee members of The Dissector. They included (left to right): Fiona King, Shiela Street, Margaret Cullen, Karen Hall (partly obscured), Pam Marley, Margaret Gick, Barbara Jolly, Sue Claridge, Catherine Logan and Bettina Marenzi.

McCombs winning the seat of Lyttleton for the Labour Party.

Marley's mother Gladys was also an outstanding woman: New Zealand 220 yards breaststroke champion every year from 1925 and 1931, except 1929 when she was runner-up. Gladys was selected for the New Zealand team at the inaugural British Empire Games, held in Hamilton, Canada in 1930. She was the only female member of the team.

Growing up during the Great Depression, Pam was fortunate that her policeman father had regular employment, but she had to adjust to regular moves. Born in Auckland, she was living in Gisborne by her third birthday. This was to be her home for six years and she attended Kaiti School. In 1942 the Marley family moved to the small rural town of Matawai in the Gisborne region. This was the middle of the Second World War when food and clothing were rationed, with ration books issued to the populace. Pam remembered air raid practices and many local farmers being called up to serve in the NZ military — with several being killed on active service.

After two years at Matawai School, Pam was sent to Gisborne Intermediate and boarded privately but she became very homesick, so it was back to Matawai for her Standard 6 year (today's Year 8).

In August 1945, with the Second World War coming to an end, the Marley family moved to Wellington, Pam completing her primary school education at Wadestown School before beginning her secondary education at Wellington Girls' College. That year (1946) as also saw the birth of brother Roger.

By the end of 1949 Pam completed Sixth Form (Year 12) and become an office girl for the chemical, industrial, automotive and marine agency business J. Russell Hancock Ltd. in the old Evening Post building.

In 1950 her father was posted to Woodville so 17-year-old Pam moved with the family and worked as a clerk for the manager of the Hawkes Bay Farmers.

It was in Woodville that she became heavily involved in local activities, playing tennis and outdoor basketball where her height was an advantage, was cubmaster for the local pack which had been without a leader, played the organ at the Presbyterian Church and was a founder member of the local Country Girls' Club.

Nursing training

In 1952 at age 19 she was accepted for general nursing training at the New Plymouth Base Hospital, joining an intake of 13 students, all aged within a few months of one another. The bonds formed between them then were never broken. During the New Plymouth years, she was also a Bible Class Leader at St Andrew's Church.

In an interview with Sue Claridge published in *The Dissector* in August 2004, Pam described the training at New Plymouth as "very formal where you didn't mix with your seniors", and recalled having to put her "hands behind back when spoken to in the corridor" and the expectation as a junior, "of getting to your feet when a senior came into the sitting room."

Training in an era where "nurses were the antibiotics, acting as a bastion between the patients and infection," Pam recollected wearing, "a plain white uniform in the wards, changing to a dress uniform (blue with long sleeves) and a knitted cardigan upon leaving the ward."

When state examination results came out, "it was a custom for those present in the dining room to applaud the new graduates, making it a special acknowledgement by our peers."

After three years' training, Pam graduated in June 1955 — with a leg in a plaster cast after slipping in the ward and breaking an ankle ten days earlier. Her first experience of an operating theatre was in New Plymouth but after six months she moved south, to Oamaru, where she spent 12 months nursing at the Presbyterian Home and Hospital for the Aged.

Whilst in Oamaru she showed her musical ability – filling in as organist for the nearby Eveline congregation.

To expand her nursing skills, Pam then moved to Dunedin, training as a maternity nurse for six months at Hill Jack Hospital and also playing organ at Knox Church. Switching from newborns back to the operating theatre, she spent four months in Dunedin Public's Neurological suite, which nurses nick-named the "Nutcracker Suite."

Clearly enjoying the operating theatre work, later in 1957 she returned to Wellington for the post-graduate course in Theatre Nursing, the students known as the "theatre piglets".

A Senior Theatre Sister's position at Palmerston North Public Hospital beaconed and thus Pam returned to the bosom of her family. She also became a Bible Class Leader at St David's and related regional and national activities, including being one of the two Camp Nurses at several annual Summer Conferences.

The 'Big OE'

Two months before her 28th birthday, she and a fellow theatre nurse decided it was time for the "big OE". Although the Boeing 707 and Douglas DC-8 had opened up the Jet Age for commercial flights, affordable international air travel was still almost a decade away, so on July 14, 1961, Pam and her friend embarked on the MV Ruahine bound for England — via Tahiti, Miami and the Panama Canal.

It would be five years before Pam returned to the operating theatre. In the interim, she "pushed a pen" in the office of a major gas distributing company, commuting to work by the London underground rail service, first from South Croydon and, after three years, from Battersea. During this time, she became a Deacon at St Andrew's Church.

During her time in London, Pam visited many countries in Europe as part of the World Council of Churches (WCC) programme of projects to assist communities still recovering from the ravages of World War II.

Along with 26 other young people from different countries and denominations, she dug and laid drains in Hagen, Westphalia in 1962 as part of the WCC programme. When that project was finished, she and several other camp members

Pam Marley (left) was on hand at the 39th Annual Perioperative Nurses College Conference in Wellington in September 2012 to present Kathryn Fraser with a bouquet as an appreciation from the Editorial Committee for her six years as Editor of The Dissector.

Members remember

Long time Perioperative Nurses College stalwart and Life Member Anne Johnston recalls her first memories of Pam "were when l did the theatre course at Wellington Hospital in 1962. It was a recognised state certificated programme for a year (long gone now). We were known as the 'theatre piglets', because our uniforms were pink to differentiate us from the regular staff.

"Pam was the sister in charge of the Children's Theatre, known to all as Lady Pamela.

"She was tall, immaculate, and aristocratic in manner and speech. We 'piglets' were rotated around all the theatres and spent the required time with Pam.

"However, intimidating at first appearance, she was kind and supportive.

"I later got to know Pam well when I was a theatre supervisor in Wanganui. We had regular meetings in Wellington, sponsored by the suture company Davis and Geck. It was from these meetings the Theatre Nurses Section was born.

"l went to England to work in 1970. The group was formally integrated within NZNO while l was away so I always regretted that l was never able to be included as a founding member.

"Pam became the secretary of the group and started the journal, *The Dissector*. And the rest is history.

"What an amazing contribution to our organisation and what a tribute to her memory that *The Dissector* is still going all these years later. Her dedication and consistent hard work never faltered.

"I was proud to call her colleague and friend. RIP Lady Pamela."

— Anne Johnston

She was a true leader and inspiration for theatre nurses in New Zealand and certainly the Perioperative Nurses College would not be what it is without her initial input.

– Fiona King, Dissector editor 2004-2005

took a train into East Berlin to experience the then divided German nation and see the Berlin Wall for themselves.

A little later, she represented the Presbyterian Church of New Zealand at the WCC's first Youth Conference and took part in the Service of International Reconciliation which was part of the series held when the rebuilt Coventry Cathedral was dedicated. At a later Interdenominational Youth Conference in Leicester, she and others shared the stage with the Archbishop of Canterbury.

After five years at the gas company, Pam returned to nursing as a theatre staff nurse in the Fitzroy Nuffield Hospital in central London, working with most of London's leading surgeons in a wide range of specialties. That was the latter part of 1966.

Home for Christmas...

On her departure from New Zealand, she had told her family she would be "home for Christmas." Eight years later she finally made it, by which time her "little brother" was a husband, and father to a son.

After catching up with family, she returned to her beloved Wellington to run the Children's Operating Theatre suite for the next 11 years.

Her arrival in the capital was fortuitous as just two months earlier a small group of like-minded Wellington Theatre Nurses had formed the Wellington Operating Theatre Nurses group, linking the theatre nurses from two public and four private hospitals.

Marley joined early in 1970 the group and in August 1971 it was accepted as a Special Interest Section of the New Zealand Nurses Association (NZNA). Two years later she planned and ran the first New Zealand Operating Theatres Nurses Conference (Wellington October 1973) with Tina Ackland, Joan Curle, Grace Williams plus Sister Francis from Calvary Hospital.

This led to the formation of a Steering Committee to pursue two objectives: the establishment of a regular journal and the formation of a National Theatre Nurses Section of the New Zealand Nurses Association, as NZNO was then named. Pam and her colleagues soon achieved both goals and Pam was to serve as the journal editor from 1974 to 1979 and then again from 1989 to 1991.

During her first term as Editor of *The Dissector*, Pam represented New Zealand at operating theatre nurses' conferences in Canberra and Manila and in 1975 won a Department of Health study award which allowed her to spend five months studying surgical nursing in the USA, Canada and United Kingdom. In August 1980 she presented a paper entitled "A hospital education Program for OR nurses" to the 2nd World Conference of Operating Room Nurses in Lausanne, Switzerland.

Nurse Advisor

Later that year she was appointed a Nurse Advisor to the Department of Health. The following decade saw her involved in various areas of nursing, including immigration, as well as working with other health professionals on broader health issues.

During this period, she enrolled extramurally at Massey University in a nursing-oriented bachelor's degree programme, graduating BA (Soc Sci) in 1983.

After she bought a home in Broadmeadows, she transferred from Khandallah Parish to St James presbytery where she served on the Board of Managers as Secretary, and was member, and later convener, of the parish Adult Education Committee. She was ordained as an Elder in 1993 and was also appointed Clerk of the Presbytery of Wellington, retiring five and a half years later.

She also served a second term as Editor of *The Dissector*, from 1989 to 1991.

When the MoH Nurse Advisor position was "disestablished" in 1991, Pam took early retirement and worked as an independent health consultant.

Voluntary work

From 1995 she worked as a Watchhouse Volunteer at the Johnsonville Community Policing Centre, her service there being recognized in 2001 with the Northern Districts Voluntary Service Award. A year later she received a Police Medallion to mark the International Year of the Volunteer.

She also studied for a Masters degree on policing and the role and significance of volunteers working with the New Zealand Police. In yet another diversification, Pam was a member of Wellington Group of the Richard III Society and chairman for 10 years.

Her huge contribution to the Perioperative Nurses College of the New Zealand Nurses organisation was recognised in February 2005 when she was awarded Life Membership of the College. This was presented to her by Robyn Pettet at an Extraordinary Meeting of the Wellington Region and Pam was delighted to reconnect with several colleagues from her time at Wellington Hospital, including Colleen Cook, Margaret Reeves, Joce Norris, Bev Dunlop, Jannine Stevenson, Mary Ryan, Cynthia Krogh and Tina Ackland.

From 2008 to 2014 she resumed an editor's role, this time with the monthly parish newsletter of the Khandallah Presbyterian Church, Family.

In correspondence with *The Dissector* Publisher Michael Esdaile in August 2012, she said of this role "I can tell you that it's a jolly sight more demanding!!! That's because I was spoiled and supported very much by *The Dissector*'s printing team who took everything into their capable hands and did the rest! Wonderful; and often remembered with nostalgia!"

The final years

After selling her Broadmeadows home, Pam moved into the Malvina Major retirement village in Broadmeadows, in her own independent apartment. After a couple of hospitalisations for suspected strokes, falls and episodes of delirium, she was no longer able to maintain her independence and stay safe so was moved into the hospital wing.

She continued to be very mobile (although reliant on a walking frame) for the most part but suffered from dementia. Despite that she usually managed a happy face and often talked about the changes in nursing with her niece Phillipa.

Though twice diagnosed with COVID-19, her symptoms were nothing more than a runny nose.

Despite her strong independent streak, Pam never drove. She was a frequent user of public transport, or taxis. Until she moved to the hospital wing at Malvina Major, she was still able to get out and about as usual. The Khandallah Presbyterian Church was a big part of her life. She was a frequent supporter of many charities and sponsored a child through World Vision, which gave her a lot of joy.

Intraoperative use of PNEUMATIC COMPRESSION DEVICES to prevent DVT

By Sandeep Mullassery

Abstract Surgical patients are at risk of deep vein thrombosis (DVT) caused by a venous thromboembolism. These can be prevented using pharmacological or mechanical intermittent compression devices (IPC). What is the perioperative nurse's responsibility in DVT prevention of the surgical patient?
Keywords Thrombus formation, pneumatic compression devices, deep vein thrombosis.

Introduction

This article discusses the physiology of normal lower extremity venous flow, in conjunction with the pathophysiology of venous thromboembolism (VTE) formation. Current evidence-based literature on the use of intermittent pneumatic compression devices (IPC) used within the intra and post-operative setting is reviewed, as well as pharmacological deep vein thrombosis (DVT) prophylaxis options and other interventions designed to help prevent DVT formation. Implications of IPC use are also included.

Venous anatomy and circulation

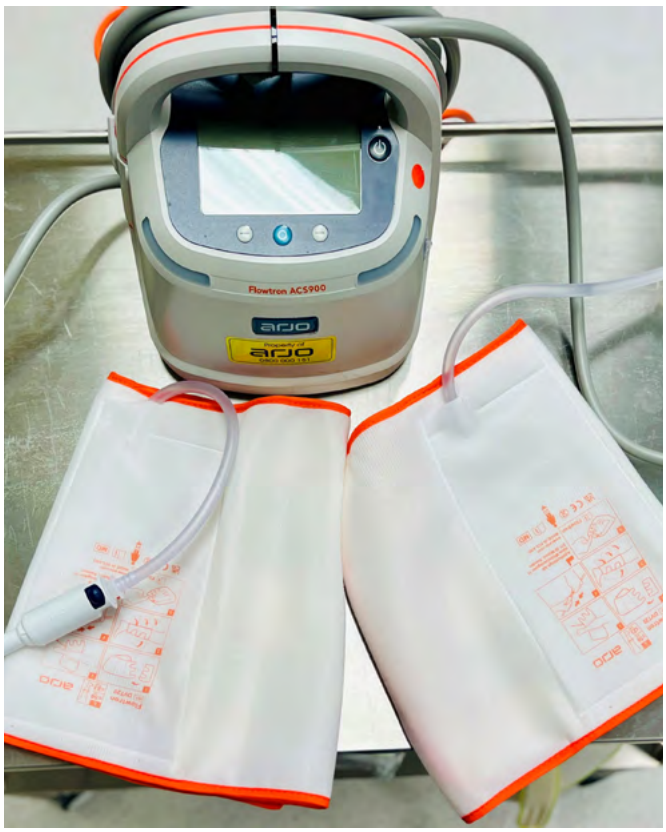
Deep and superficial veins make up the lower leg venous system (Thrush et al., 2023b). Deep veins are situated below the muscle fascia and superficial veins are in-between the muscular fascia and the dermis. Their function is to aid in draining the cutaneous circulation. These deep and superficial veins are connected by several perforating veins (Thrush et al., 2023b). Veins are extremely thin but sturdy with bicuspid valves to stop blood from flowing backwards to the extremities. The bicuspid valves block retrograde flow away from the heart. Several veins, such as the vena cava and common iliac veins, do not contain valves. Veins located further away from the heart have more valves (Thrush et al., 2023b). The walls of the veins are made up of the following layers:

- the tunica intima, the innermost layer;
- the tunica media, the middle layer;
- the tunica adventitia, the outer layer.

All three make up the veins' walls. The placement and purpose of each vessel determines the structural distinctions between these layers (Hadaway et al., 2010).

Blood is returned to the heart through the venous system, which is a low-resistance conduit (Solomon, 2016). Veins function as a blood volume storage system that is crucial in the control of cardiac output because they are collapsible, thin-walled vessels that can expand to a larger cross-sectional area than their comparable arteries (Solomon, 2016). The deep peripheral system, the central system which is in the thorax and abdomen, and the superficial peripheral veins are the three main divisions of the venous system (Solomon, 2016).

Changes in posture, the cardiac cycle, and respiration all have an impact on venous flow (Thrush et al., 2023a). A shift in posture can cause significant pressure changes in the venous system and modify hydrostatic pressure. The difference between the venous pressure at the ankle and right atrium is minimal when a person is lying supine. However, when a person is standing upright, a blood column exists between the right atrium and the ankle veins (Thrush et al., 2023a). The hydrostatic pressure at the ankle, which depends on the person's height and characteristics, is typically between 80 and 100 mmHg. The foot, calf, and thigh muscles are the leg muscle



This image shows an IPC device designed to prevent deep vein thrombosis with calf sleeve. (Photo courtesy the author).

pumps that oversee venous return in the lower extremities.

The calf muscle pump is the most significant and produces the most pressure. (Carmel & Bryant, 2016). The calf muscle pump mechanism, with the help of the venous valves, overcomes the substantial pressure gradient that must be overcome in a standing position to return blood to the heart (Thrush et al., 2023a). The venous sinuses and deep veins, which serve as blood reservoirs, are found in the muscular compartments of the calf (Carmel & Bryant, 2016). Regular tiny contractions in the calf's deep muscles push blood out of the leg by compressing the veins, while venous valves stop the blood from refluxing back down.

Blood drains through the major junctions and perforating veins from the superficial to the deep venous system as a result, creating a pressure differential between the superficial and deep veins in the calf. Blood cannot go from the deep to the superficial veins because of the valves in the perforators (Carmel & Bryant, 2016).

The calf muscle pump mechanism can significantly lower the pressure in the deep and superficial venous systems, to about 30 mmHg during more strenuous exercise, such as walking or running (Thrush et al., 2023a). The term 'ambulatory venous pressure' refers to the pressure shift that happens during exercise.

At rest, whether the person is standing or lying down, the pressure drop across the capillary bed is the same since the hydrostatic pressure is the same on both the arterial and venous sides. Although the pressure on the arterial side of the capillary bed does not change after exercise, the pressure on the venous side of the capillary bed does, resulting in a pressure decrease across the capillary bed that facilitates blood flow back to the heart (Thrush et al., 2023a). After the muscle contraction stops, the venous pressure in the lower leg will start to increase as the capillaries in the arterial system fill the veins with blood (Thrush et al., 2023a).

Thrombus formation

A platelet or fibrin clot that forms inadvertently and obstructs a blood vessel is called thrombosis (Fritsma & Walenga, 2020).

Thrombosis is a complex condition caused by circulatory stasis, as well as anomalies in the coagulation system, coagulation regulatory mechanisms, platelet function, the blood vessel wall, or leukocyte activation molecules. Ischemia and necrosis are brought on by thrombotic blockages (Fritsma & Walenga, 2020). Thrombi fragments known as emboli, can break off from the proximal end of a venous thrombus, travel quickly through the right heart chambers, and lodge in the arterial pulmonary vasculature, resulting in ischemia and the necrosis of lung tissue (Milici, 2018). These emboli are also known as pulmonary emboli (PE) (Fritsma & Walenga, 2020). Thrombi in the deep leg and calf veins cause nearly 95 percent of PEs.

DVT, when blood clots develop in the iliac, popliteal, or deep veins of the calves and upper legs, is the most common type of venous thromboembolism. The signs of thrombosis include localised discomfort, a sense of heat, erythema, tenderness and oedema (*Encyclopaedia Britannica*, n.d.).

The Virchow's triad, which includes venous stasis, hypercoagulability, and endothelial injury to the vein, contributes to the development of DVT (Navarroli, 2018).

Venous stasis is primarily caused by extended inactivity. Patients with a low fluid volume, prescribed oral contraceptives, a history of smoking, and certain malignancies can exhibit hypercoagulability. Damage to the veins can result from intravenous infusions, specific drugs, fractures, and contrast x-ray investigations (Navarroli, 2018).

VTE is the third most common cardiovascular disorder in the world (Singh et al., 2021). All patients undergoing surgery have a VTE risk due to their inability to move, blood vessel damage, use of retractors and prolonged surgical positioning (Guideline quick view: venous thromboembolism, 2023). The previously mentioned risk factors can be seen in many surgical patients.

Pharmacological versus mechanical prophylaxis

Wang et al. (2019) observed two types of DVT prophylaxis: mechanical and pharmacologic. With pharmacologic prophylaxis there is the risk of bleeding, as compared with mechanical mechanisms which are effective, safe with no complications.

An IPC device is a mechanical preventive measure against VTE. An IPC sleeve connected to a pump covers the lower limb (Crossley, 2020). The compartments in the sleeve are inflated in a particular sequence, then deflated starting at the ankle and working its way up to the knee. The compressor inflates each compartment to the correct pressure. The air is expelled after being held for the predetermined amount of time. The sleeves are deflated, a pre-set rest period is initiated, and then the sequence is carried out. It is intended that this predetermined pattern will mimic strolling, which can break up stasis.

The IPC device has a safeguard circuit that works to keep the patient safe from the effects of excessive pressure (Crossley, 2020). According to Perry et al. (2022), a sequential compression device's therapeutic effect is thought to result from the device's compression sleeve relieving stasis and hypercoagulability.

According to Wang et al. (2019), intraoperative administration of IPC significantly reduces the risk of DVT compared with no mechanical prophylaxis. Virchow's triad is likely to be activated during the surgery so optimal DVT prophylaxis intervention is necessary. It is evident in the broad-spectrum study of Wang et al. (2019) intraoperative IPC application incorporates venous refill and stimulate the skeletal muscle pump. IPC enhances the blood flow into the lower extremities during surgery which helps to prevent postoperative DVT. Along with that, IPC increases endogenous fibrinolysis and stimulates vascular endothelial cells, reducing the calibre of veins which decreases DVT incidence.

Wang et al. (2018) conducted research on the therapeutic effect of IPC for the prevention of DVT in lower extremities in patients who underwent major orthopaedic surgery. These devices provide progressive pressure on the ankle, calf, and thigh in a wavelike manner with a maximum pressure of 45 mmHg every minute. They generate pulsatile blood flow, which promotes blood circulation and prevents coagulation factor aggregation and adhesion to the intima. It can also increase the activity of the fibrinolytic system. Zhang et al.'s (2021) study on patients undergoing spinal surgery and Yux et al.'s (2021) study on hip arthroplasty identified similar findings. Mechanical prevention of DVT is the preferred method for patients with a low, medium, or high risk of bleeding. The use of pharmacology also plays a significant role in the prevention of DVT, but comes with the potential risk of bleeding, prosthetic joint infection, and reoperation (Wang et al., 2018).

In a study on patients with achilles tendon rupture undertaken by Juthberg et al. (2019), post-operatively leg-immobilised patients exhibited a 40 percent relative risk reduction in the incidence of DVT while using adjuvant IPC. Furthermore, Ibrahim et al.'s (2015) study on trauma patients found that mechanical thromboprophylaxis is commonly used in trauma due to its low risk of bleeding when compared to pharmacological prophylaxis. The study also found that IPC is equivalent to pharmacological prophylaxis.

In terms of DVT prophylaxis, mechanical devices were found to be safe and should be considered when anticoagulant DVT prophylaxis is contraindicated (Juthberg et al., 2019).

Kakkos et al. (2022) observed that combining IPC with pharmacological prophylaxis, compared with pharmacological prophylaxis alone, also reduced the incidence of PE (low certainty evidence) and DVT (high certainty evidence). However, the addition of pharmacological prophylaxis to IPC increased the risk of bleeding compared to IPC alone (very low-certainty evidence).

The main contraindications to using IPC are cardiac failure or pulmonary oedema from congestive heart failure, pre-existing DVT, severe arteriosclerosis, ischemic vascular disease, ulcer or wounds in the lower leg and severe oedema (Guideline quick view: Venous thromboembolism, 2023).

The perioperative nurse's responsibility in DVT prevention

Perioperative nurses have a significant role to play in preparing an intraoperative DVT prophylaxis plan for their patients. The nurse's responsibility starts with a preoperative DVT risk assessment, identifying the patients at high risk and ascertaining any contraindications to IPC. The circulating

This image shows intraoperative application of an IPC device with a calf sleeve, designed to prevent deep vein thrombosis. (Photo courtesy the author).

nurse is responsible for checking the patient positioning and equipment required for surgery ensuring correct application of the IPC device and functionality.

The IPC sleeves should be applied following the manufacturer's instruction, directly to the skin, with the tubes away from the skin to prevent any pressure injuries. These should be applied prior to the surgery, ensuring the availability of the correct size sleeve and machine. The machine should be pre-set and checked to make sure it is working during the surgery. During the Time-Out phase of the surgical safety checklist, DVT prophylaxis needs to be discussed, and documented accordingly in the intra-operative record. At the end of surgery, the circulating nurse should conduct a postoperative examination of the patient.

It is a theatre nurse's duty to give patients high-quality care and advocate for patients while they are anesthetised. IPC's effectiveness in terms of preventing the formation of a thrombus is crucial. Every person who undergoes surgery runs the risk of developing a thrombus. However, the nurse's intervention can significantly reduce this risk, and prevent subsequent difficulties.

Barriers regarding the use of mechanical prophylaxis intraoperatively can include a lack of knowledge regarding the importance of mechanical prophylaxis and the outcomes for patient recovery, as well as reduced availability of the IPC devices within a department (Long et al., 2019).

Conclusion

This article describes the normal physiology of lower extremity venous flow, and pathophysiology of DVT formation and its complications. The mechanism and effectiveness of IPC as DVT prophylaxis has been explained, based on various evidence-based literature. Patients who come for surgery are at risk of developing DVT, and both mechanical and pharmacological prophylaxis can minimise this risk. Intra-operative application of IPC for major orthopaedic surgery, especially spine, hip arthroplasty and trauma, will reduce the formation of blood clots around the body especially lower extremities, thereby reducing the risk of DVT in this vulnerable patient population.

About the Author

Sandeep Mullassery *completed his Bachelor of Nursing in 2010, in India. He started his career in the perioperative setting the following year. In 2018 he moved to New Zealand and undertook his Competency Assessment Programme at Westley Institute of Learning in the Hawkes Bay. He moved to Christchurch to continue his passion within the perioperative setting at Southern Cross Christchurch, where he is an orthopaedic specialist nurse. He successfully completed his Post Graduate Certificate in Specialty Care (Perioperative Nursing) at Whitireia in 2023.*

References

Association of periOperative Registered Nurses (2023). Guideline quick view: Venous thromboembolism. *AORN Journal*, *117*(3), 207-210. https://doi.org/10.1002/aorn.13897

Crossley, B. (2020). *Troubleshoot It*: Preventing Deep Vein Thrombosis with Sequential Compression Devices. *Biomedical instrumentation & technology*, *54*(2), 153–154. https://doi.org/10.2345/0899-8205-54.2.153

Carmel, J. E., & Bryant, R. A. (2016). Venous ulcers. In R. A. Bryant & D. P. Nix (Eds.), *Acute and Chronic Wounds* (5th Ed., pp. 204–226). Elsevier. https://doi.org/10.1016/B978-0-323-31621-7.00021-6

Encyclopædia Britannica. (n.d.). Deep vein thrombosis (DVT). In *Britannica Academic*. Retrieved March 30, 2023, from https://academic-eb-com.whitireia.idm.oclc.org/levels/collegiate/article/deep-vein-thrombosis/636313

Fritsma, G. A., & Walenga, J. M. (2020). 39 - Thrombotic disorders and laboratory assessment. In E. M. Keohane, C. N. Otto, & J. M. Walenga (Eds.), *Rodak's Hematology (Sixth Edition)* (6th ed., pp. 720–745). Elsevier. https://doi.org/10.1016/B978-0-323-53045-3.00048-9

Hadaway, L. C. (2010). Anatomy and Physiology Related to Infusion Therapy. In M. Alexander A. Corrigan, L. Gorski J. Hankins & R. Perucca (Eds.), *Infusion Nursing* (3rd ed., pp. 139–177). Elsevier. https://doi.org/10.1016/B978-1-4160-6410-7.00010-4

Ibrahim, M., Ahmed, A., Mohamed, W. Y., & El-Sayed Abu Abduo, S. (2015). Effect of Compression Devices on Preventing Deep Vein Thrombosis Among Adult Trauma Patients: A Systematic Review. *Dimensions of critical care nursing: DCCN*, *34*(5), 289–300. https://doi.org/10.1097/DCC.0000000000000127

Juthberg, R., Edman, G., & Ackermann, P. W. (2019). Which leg immobilized patient gains the most from Intermittent Pneumatic Compression in DVT-prevention? *Muscle Ligaments and Tendons Journal*, 9(2), 272–281. https://doi.org/10.32098/mltj.02.2019.18

Kakkos, S., Kirkilesis, G., Caprini, J.A, Geroulakos, G., Nicolaides, A., Stansby, G., & Reddy, D. J. (2022). Combined intermittent pneumatic leg compression and pharmacological prophylaxis for prevention of venous thromboembolism. *Cochrane Database of Systematic Reviews*, *1*. https://doi.org/10.1002/14651858.CD005258.pub4

Long, L., Lucki, M. M., Polonia, D., Fada, R., Hartwell, J. L., & Gascon, G. M. (2019). Reducing Rates of Perioperative Deep Vein Thrombosis and Pulmonary Emboli in Hip and Knee Arthroplasty Patients: A Quality Improvement Project. *Journal of Clinical Outcomes Management*, 26(1), 19–25.

Milici, J. J. (2018). Respiratory Emergencies. In V. Sweet (Ed.), *Emergency Nursing Core Curriculum* (7th Ed., pp. 452–472). https://doi.org/10.1016/B978-0-323-44374-6.00028-9

Navarroli, J. E. (2018). Cardiovascular Emergencies. In V. Sweet (Ed.), *Emergency Nursing Core Curriculum* (7th Ed., pp. 142–182). Elsevier. https://doi.org/10.1016/B978-0-323-44374-6.00012-5

Perry, A. G., Potter, P. A., Ostendorf, W. R., & Laplante, N. (2022). Exercise, mobility, and immobilization devices. In A. G. Perry, P. A. Potter, W. R. Ostendorf, & N. Laplante (Eds.), *Clinical Nursing Skills and Techniques* (10th Ed., pp. 322–358). Elsevier. https://doi.org/10.1016/B978-0-323-70863-0.00021-5

Singh, A., Sameul, M., Sundarsingh, V., Kabra, P., & Kumari, A. (2021). Deep Venous Thrombosis Prophylaxis Practices in Surgical Intensive Care Unit Patients: A Cross-sectional Study. *Journal of Clinical Diagnostic Research*, *15(2)*, 11-13. http://dx.doi.org/10.7860/JCDR/2021/46724.14495

Solomon, E. P. (2016). Circulation of Blood and Lymph. In E. P. Solomon (Ed.), *Introduction to Human Anatomy and Physiology* (4th Ed., pp. 188–205). Elsevier. https://doi.org/10.1016/B978-0-323-23925-7.00012-6

Thrush, A., Hartshorne, T., & Deane, C. (2023a). Blood Flow and Its Appearance on Color Flow Imaging. In A. Thrush, T. Hartshorne, & C. Deane (Eds.), *Vascular Ultrasound* (4th Ed., pp. 63–77). Elsevier. https://www.crossref.org/_defunct-doi/

Thrush, A., Hartshorne, T., & Deane, C. (2023b). Anatomy of the Lower-Limb Venous System and Assessment of Venous Insufficiency. In A. Thrush, T. Hartshorne, & C. Deane (Eds.), *Vascular Ultrasound* (4th Ed., pp. 235–275). Elsevier. http://dx.doi.org/10.1016/B978-0-7020-4656-8.00013-0

Wang, D., Bao, F., Li, Q., Teng, Y., & Li, J. (2018). Semiautomatic intermittent pneumatic compression device applied to deep vein thrombosis in major orthopedic surgery. *BioMedical Engineering OnLine*, *17*(1), 78. https://onlinelibrary.wiley.com/doi/10.1155/2021/9693012

Wang, X., Song, S., Ni, R., Lu, M., & Mao, Y. (2019). Effectiveness of intraoperative administration of intermittent pneumatic compression in preventing deep vein thrombosis in lung cancer patients undergoing video-assisted thoracoscopic surgery lobectomy. *Journal of Thoracic Disease*, 11(7), *2832*–2838. https://doi.org/10.21037/jtd.2019.07.07

Yu, X., Wu, Y., & Ning, R. (2021). The deep vein thrombosis of lower limb after total hip arthroplasty: What should we care. *BMC Musculoskeletal Disorders*, *22*(1), 547. https://doi.org/10.1186/s12891-021-04417-z

Zhang, S., Shen, G., Luo, M., & Zhong, X. (2021). Analysis of Related Influencing Factors of Deep Vein Thrombosis after Lumbar Internal Fixation and Treatment Strategy. *Evidence-Based Complementary and Alternative Medicine*, 1-8. https://doi.org/10.1155/2021/9693012

Joanna Cornwall

February 4, 1970 - May 20, 2025

Former Editorial Committee member Joanna Cornwall passed away on May 20, 2025. She was farewelled in a beautiful private service in her "pretty little white church with the cornflower blue trim" in Clevedon on May 27. She was 55.

Joanna served on the Editorial Committee of *The Dissector* for six years (2006-2012) during the tenure of Editor Kathryn Fraser. She was a quiet but diligent member of *The Dissector* team.

Joanna studied for her RN degree at the Manukau Institute of Technology from 1995 to 1997, graduating with a Bachelor of Health Science (Nursing) and entered the nursing workforce at Counties Manukau's Middlemore Hospital in April 1998.

She worked in operating theatres in a variety of specialties and roles, providing support across multiple specialties, including specialist higher duties such as after-hours Theatre Coordinator when required. She was also a PST peer assessor.

Deciding to further her nursing education, Joanna studied at Auckland University from 2005 to 2008, graduating with a Postgraduate Certificate in Health Sciences in Advanced Nursing and a Postgraduate Diploma in Health Sciences in Advanced Nursing (Merit).

Whilst on the roster at Middlemore, she also worked as a staff nurse at Ormiston private hospital, supporting operating theatres with various duties and specialties including gastro theatre and PACU between April 2009 and June 2015.

Additional responsibilities at Ormiston included conducting many of the theatre audits, involving extensive documentation and time out audits.

Joanna made a break from theatre work and from March to May 2022 was a Research Nurse in haematology and surgical trials at Middlemore Clinical Trials, which she described as "an incredible place to work with incredible people, staff and participants. Personal circumstances prevented me from continuing."

This was when her husband Trent sustained a traumatic brain injury as the result of a mountain bike accident.

July 2022 saw Joanna working part time at James Cook High School Health and Wellbeing Centre, performing a variety of duties including health assessments, administering first aid, participating in school-based health education, promotion and programmes providing assistance to youth with a wide range of needs including rheumatic fever throat swabbing and sexual health.

In January 2023 Joanna further expanded her healthcare work, this time as a part-time lecturer at the Manukau Institute of Technology's School of Nursing where she was well loved by colleagues and students.

It was while lecturing at Manukau that she was diagnosed with cancer.

Outside of her healthcare roles, Joanna enjoyed walking, running, tennis, and horse riding in her local area south of Auckland. She also liked sewing and craft work, supporting her daughter's dance school with wardrobe assistance for productions.

From a young age, after achieving Bronze and Silver Duke of Edinburgh awards, supporting her community was a really important part of Joanna's life. She served on committees and events for the local kindergarten and Clevedon School on the Parent Teacher's Association and annually as an adjudicator for the annual Ag Day event.

She also supported Hospice South Auckland as a volunteer,

Joanna was a very private person and passed away peacefully surrounded by her loved ones at Dove hospice in Glendowie, Auckland on May 20.

Rob McHawk, who served alongside Joanna on the Editorial Committee recalls that "Jo was a kind caring nurse, she was patient-centred and everything she did was evidence-based. This was evident from her time on *The Dissector*. On some occasions we would be editing together in the Middlemore Hospital team room.

"She was a great mentor with a sense of humour. I always knew that when she was coordinating a shift, that the shift would be well run. Jo always talked passionately about her family."

Sue Morgan also recalls working alongside Joanna on *The Dissector*: "I recall our very collegial editorial meetings, trying to get the best for our contributors and encouraging others to have a go at writing for *The Dissector*, putting together a journal that was interesting, entertaining and informative.

"There were lots of laughs, lots of negotiation and it was great to catch up on each other's worlds during the lunch and tea breaks."

Joanna is survived by husband Trent and daughter Charlotte, to whom we have extended our heartfelt condolences.

My First Conference Experience

By Rebecca Wood

I was excited with the prospect of attending a conference as I had never been to one before in my 10 years of nursing. There were quite a few colleagues from my workplace (Royston Hospital, Hastings) and also many from the other hospitals in Hawkes Bay who had also enrolled for the 48th conference of the Perioperative College of the New Zealand Nurses Organisation (PNC NZNO) in Wellington.

In total there were 21 people from our region so the lead up to the conference was really exciting with us all talking about where we were staying, which sessions we would attend and what to wear for the dinner.

This conference had the overarching theme of "Embracing the future: Everything Counts" which was touched on several times in relation to a number of the presentations. One of the presentations I found of particular interest was the role of flexibility within the perioperative department with training RNs (registered nurses) into the role of anaesthetics with a RNAA (Registered Nurse Anaesthetic Assistant) programme which has been incorporated in a number of hospitals. This role combines the expertise of the RN with the specialised field of anesthesia which in turn can help with staff shortages with the ability to be flexible within roles.

A standout talk which I also attended, alongside a group from Royston, was about local anaesthetic toxicity and its impact on clinical practice. As a perioperative nurse working in an environment where we use local anesthesia every day, it was a valuable opportunity to deepen understanding on local anaesthetics that, if not properly managed, can present significant risks. The speaker delved into the mechanisms of toxicity, what to watch out for and the crucial role of early intervention. I gained insight which has built on my knowledge and practice to ensure patient safety.

It was a good reminder of the importance of staying current with knowledge and skills surrounding a topic which has the potential to be catastrophic. On returning to work we shared knowledge learnt with colleagues and ensured we all know where to locate the local toxicity box.

Gender affirming surgery

Gender affirming surgery was another interesting talk. This one was presented by Dr Rita Yang, who works in Wellington and is the only specialist trained in gender affirmation surgeon in New Zealand. I found it really interesting as she spoke about the challenges she faced while starting her practice in specialising in gender affirming surgeries.

Rita discussed the positive impact she and her team have made for patients both young and old who experienced gender dysphoria and shared cases and stories from patients which have gone through the process and how life-changing it has been for these people.

It was great to see and hear about how she developed a full team by educating and training nurses in the specialist surgery which she undertakes. She is such a strong leader and surgeon in this field and was amazing to hear firsthand from her about it all.

While we lingered around having morning tea, lunch and afternoon tea we wandered the stalls chatting to the representatives from the medical supplies companies and checking out their products.

At the Hallmark Surgical stall we had discussions and looked at a number of pieces of laparoscopic equipment. They had a good range of things to try out and get our hands on. We have since been in contact with Hallmark and are in the process of showing some of our surgeons equipment for trial before purchase! It was also fun to have the Evolution Healthcare

Rebecca Wood Dallas, winner of the 2024 Dallas Jessiman Award, is second from left, in blue dress and top hat.

stand there and meet other Evolution Healthcare staff from throughout the country, who we wouldn't normally have the chance to meet.

The Dinner

A major highlight for myself, and I would say all of the Hawkes Bay contingent, was the conference dinner. We arrived enthusiastically early, keen for a good spot in the dining room. We all took our seats and were able to watch as everyone arrived and were impressed seeing all the costumes and their creativity. We proudly had a number of wins throughout the dinner with two of our squad being runners up in the best dressed competition, coming third in the quiz (out of 22), and then of course the main event, which was a team Challenge where we styled and built a steampunk style hat from a mystery box and presented our character "Lady Florence Langenbeck Nightingale" to the room.

I had a very important role in this, doing the hot glue gunning, which ended up being quite a high-pressure task! With our dramatic act we were announced to be the winners of Percy Peacock Challenge Award for the second time running, and with our large Hawkes Bay group already buzzing from all the excitement, we all celebrated with taking Percy to the dancefloor! He is happily back in Hawkes Bay until he takes a road trip up to Auckland for the 2026 PNC Conference, which I also hope to attend.

About the Author

Rebecca was born and raised in Wellington. She completed a Bachelor of Nursing at Massey University in 2013, and her new graduate year at Waikato Hospital, before moving to London where she worked in a fertility clinic, then theatre and recovery in an NHS obstetric unit. She returned to New Zealand and began working at Southern Cross Healthcare in Wellington, then Wellington Public Hospital, before moving to Hawkes Bay in March 2020.

She started working at Royston Hospital in Hastings a few days before the first COVID-19 lock down and has been there ever since. She is now working in a team leader role. Rebecca was the winner of the Dallas Jessiman Award for attending the PNC College conference for the first time.

Christchurch Mosque Massacre: the aftermath

a Perioperative Team Reflection

At 1.40pm on March 15, 2019 a lone gunman entered the Al Noor Mosque in Riccarton, Christchurch and opened fire during Friday prayers. He then drove to the Linwood Islamic Centre, again shooting those engaged in prayer. The attacks ultimately killed 51 people and injured 49. Clinical Nurse Specialist Rebecca Porton-Whitworth and colleagues reflect on an incident that shocked the nation to its core...

Abstract A reflection from a perioperative clinical nurse specialist and other members of the perioperative team on the many challenges faced in managing and caring for the mass casualties from the Christchurch mosque shootings.

Keywords Mass casualty incident, major incident plan, operating theatre, Perioperative Nurses

Introduction

The response by Canterbury District Hospital (CDH) that unfolded in the minutes following the Mosque attacks in Christchurch has been highlighted as "nothing short of extraordinary" (A. Taylor, personal communications, June 20, 2019). The first two victims arrived via the Emergency Department (ED) at 1.50pm with cuts after escaping from the Masjid Al Noor Mosque through a glass window; five minutes later the Major Incident Plan was activated.

The plan involved the identification of patients suitable for discharge or transfer to another ward, removal of patients from the Acute Medical Assessment Unit and the Emergency Department (ED) and secondment of staff from other units, or recalling staff if required. As such, patients were cleared from ED to accommodate the large volume of incoming wounded. Our integrated healthcare system — including primary care, private hospitals and the Canterbury District Health Board (Canterbury DHB) — then stepped up and worked together to ensure people received the care they needed.

What sets the Canterbury DHB experience apart is that around the world many cities would have dealt with this event in multi-trauma units across the city. In Christchurch they were treated in one ED at Christchurch Hospital (A. Taylor, personal communications, June 20, 2019).

At the time of writing this article, another casualty has been added to the list of people who did not survive the attacks in the mosques. I had a personal connection with the deceased as I was involved in his care during his first 24 hours and the following weeks, when he was in the Intensive Care Unit (ICU).

This article reflects on my personal experience and those of some of my colleagues, during the events and how our operating theatre managed the mass casualty incident on March 15, 2019.

Coming back into work during the night was a surreal experience. The area around Hagley Park was cordoned off and I had to drive on the opposite side of the road...

Background

Christchurch Hospital currently has 18 operating theatres spread across three locations: 11 in the Parkside Complex which incorporates our 24-hour acute service, five theatres in the Christchurch Women's complex incorporating the Day Surgical Unit and two theatres in the birthing suite. Ten more theatres will be added with the opening of Hagley Hospital, connected by a 70 metre air bridge. There are also four theatres at Burwood Hospital that perform elective orthopaedic surgery. Currently there are a full time equivalent of 179 Perioperative Nurses, with this growing to 200 to cater for the expansion into the Hagley Complex. The complex is led under one nursing structure with one Theatre Manager, four Charge Nurse Managers and ten Clinical Nurse Specialists (CNS) responsible for each specialty, who work on the floor.

Mass Casualty Response

In reaction to the mass casualty incident, 49 patients were treated. Forty-eight people arrived at ED with critical to minor gunshot wounds requiring resuscitation, with 47 surviving, ranging from young children to adults (K. van Deursen, personal communication, March 15, 2019). Within the first 45 minutes, 44 patients arrived in ED with 33 of those going straight to theatre. Within three hours most of those injured in the event were cleared from ED and by 6pm ED was able to accept more patients (A. Taylor, personal communications, June 20, 2019).

From an operating theatre perspective, we peaked at 12 operating theatres working simultaneously, including some elective cases that could not be cancelled. Due to the nature of the injuries, many people required multiple surgeries and the teams used 180 units of blood in just the first few hours of patients arriving.

The day the massacre occurred was a typically busy Friday. Every theatre had scheduled work and usually five to seven acute theatres run to reduce the workload for the coming weekend.

I work as a Clinical Nurse Specialist (CNS) in the Cardiothoracic and Vascular Operating Theatres and we were between thoracic cases. I had just come back from Purchasing and the Coordinator advised me that there was a shooting and to prepare for casualties.

At this stage we had no idea of the extent of the casualties that would arrive, or what had actually happened. Part of my role involves being on-call and coming in for emergency heart surgeries, which sometimes involved gun shot or stabbing cases, requiring cardiothoracic support. In these instances we take our cardiac trolley down to the ED and assist as required. I went to ED with the consultant and found a very different picture to usual. There was a sea of people around several patients and due to the sheer numbers, some patients were prepared to come straight to theatre with little intervention in ED. The aim was stabilisation to enable movement of patients direct to theatre or for medical imaging. I returned to theatre and informed the staff and we started setting up for thoracotomy and chest openings. This was a new experience for us as we had never dealt with mass gunshot victims.

OT Patient Flow

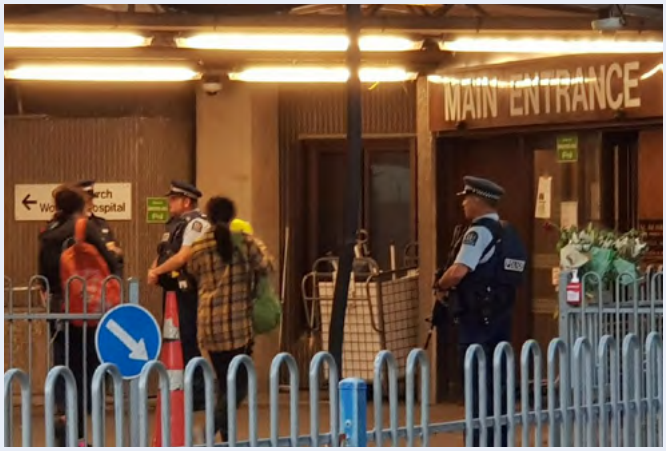
The command centre in our Operating Theatre block is run by a Nursing Co-ordinator, the Duty Anaesthetist and an Anaesthetic Technician. During the event the Nursing Co-ordinator became responsible for managing data and information. Our Theatre Manager worked on the floor management. They used the same protocols that would be used to stop theatres in case of a fire emergency and was used with the earthquakes.

When a fire alarm goes off, any patient not in theatre remains outside. If a patient is not yet anaesthetised or knife to skin, their surgery is delayed. Given the influx, management began looking at where there were potential gaps in the theatres to accommodate the likely need. The flow from ED was extremely quick and unpredictable with lots of people running around with a purpose. Emergency Department staff would arrive and provide patient handovers and what injuries to expect and in-between times other patients would arrive. Given the protocol it did not matter as they still had to go into the first available operating theatre. This made it challenging as what I thought was coming to my available theatre and what we had set up for, changed constantly. Very early on I realised my team of four cardiac nurses would have to be split and sent out to different operating theatres as patients had multiple injuries, not just chest or abdomen, and could not be isolated to one specialty. As such, we supported three cardiac surgeons who were involved in cases in three different theatres.

The aim of initial patient surgery was packing and stabilising which meant patients arrived from ED and once stabilised in the theatre went for imaging and then often came straight back for more surgery. The routine meant that procedures were considered on the go in order to cope with the tempo and constant changes.

Over the course of the next three days, multi-disciplinary meetings were held with representatives from every surgical specialty, where every patient was discussed. Surgeons had to make some assumptions

A wall of flowers — one of the many expressions of support from the local community for those who suffered.



Police guarding the hospital's main entrance.

about the nature of the gunshot wounds — how many times the patient would require a surgical washout, how long could we leave it — while also trying to predict how much surgical time was required. Along with these considerations we still had to balance our everyday acute cases requiring surgical procedures.

By 6pm on March 15, 2019, most of the initial intensity for the operating theatre had decreased and a police briefing was held. Following that briefing we began to get a picture of the events that had unfolded and the number of patients affected. The hospital lock-down was discontinued around 7pm and afternoon staff were able to come and relieve the morning staff. Many of us were able to go home.

Normally by 11pm we operate one acute theatre and one acute caesarean theatre but on that Friday night we had an extra three theatres operating. After leaving work on Friday at 7pm I was called back for the same patient twice, once at 11pm and then again at 4am for different surgical procedures.

Coming back into work during the night was a surreal experience. The area around North and South Hagley Park was cordoned off and I had to drive on the opposite side of the road hoping not to greet another car, and then be processed through security check points. Being greeted by police with rifles at every entrance was quite intimidating. By 4am the first of many media vans was parked in South Hagley Park. Although it should have been comforting, I never got used to the police presence around the Hospital throughout the following weeks.

Over the weekend 51 operations took place, with multiple procedures performed by a variety of surgical teams. Seven acute theatres ran on the Sunday compared with the normal three. Due to the need for phased multiple surgeries on some massacre casualties, 38 planned surgeries for local people were postponed the following week to accommodate this (K. van Deursen, personal communication, March 17, 2019). Offers of support from other district health boards were greatly appreciated with some of our national services like spinal cord injury, diverted to other centres. Many of our staff offered to work longer shifts and volunteered to come in and help support over the weekend. In the operating theatre volunteers were requested to cover the additional operating service provided over the weekend and staff were rostered accordingly to ensure the correct skill mix (K. van Deursen, personal communication, March 15, 2019).

I was supposed to come in on Saturday, but after working all night I left the hospital at 7am that morning. I felt extremely guilty leaving work on both the Friday and Saturday, but realised I had to manage my fatigue and also the nurses under my charge. Many of us would have worked the whole weekend if we could have to support our patients. It was really important for me to go home on the Friday and make sure my teenagers were okay as I was struggling with processing the event and I needed to make sure I spent time with them as well. As nurses we are often torn between our patients, our families and the effects of fatigue or stress.

At the end of the first week 31 people injured in the mosque attack were still in hospital. After one month ten remained as inpatients and nearly three months on (June 10, 2019), one patient remained at Burwood Hospital (A. Taylor, personal communications, June 20, 2019).

Figure one highlights that during the first week, just over four operating theatres were in use every day, four intensive care beds were occupied for a month, and a full 30-bed ward was used for a month to care for those affected from the mosque attacks.

UNIT	Hours of Care	Equivalent Bed Days	Events
Emergency			117
Intensive Care Unit	3132 hours	130 bed days	
Ward	19,566 hours	815 bed days	
Operating Theatre			88
Anaesthetics	175 hours		

Figure One: Overall Statistics (AA Taylor, personal communications, June 20, 2019).

Clinical Nurse Specialists' perspective

Of the 12 theatres running that day, nine were initially general surgical based. As the shooting occurred early afternoon on a Friday, a lot of our equipment was already or had been used on acute and elective patients. As we had no idea what was happening or how many patients were going to be coming through, I got our Operating Theatre Assistants (OTAs) to prepare seven laparotomy setups — they were used within ten minutes. We scrambled to get other sets over to the main theatres to use them for laparotomies. We utilised all equipment as we could — not opening limited instruments until we knew what we were dealing with. I had thought about getting surgical sets sent across from the three private hospitals in Christchurch but did not know if they were going to become acute surgical hospitals to deal with the victims. In the end, we managed.

The Sterile Services Department was amazing with the fast turnaround they achieved.

I made sure there were at least two to three general nurses in each theatre, due to the emergency nature of these cases. A lot of nursing hands were in theatre, but not all had seen or been part of trauma cases previously. Having these staff as 'gophers' was awesome — until the equipment ran out and then we had to come up with alternatives. OTAs were used as runners to and from the blood bank — racking up thousands of steps with their efficiency. Everyone worked as a well-oiled team – it was amazing how we all pulled together.

— Amy Burrough, Acting CNS of General Surgery

Many people ask what it was like on that day for the staff in the hospital. My answer is that each person remembers something specific relating to that day. I commend all my colleagues who worked tirelessly and I especially admired the new graduates and student nurses who followed the guidance of the theatre co-ordinators and senior staff members.

Whenever I think of March 15, 2019, the first and foremost memory in my head is of holding a man's hand as he was going off to sleep. Although he had extensive injuries, he looked up at me and asked me to tell his wife he loved her. I had no idea what the man's name was and often wonder if he remembers that human contact we shared as he was drifting off to sleep.

Even now I sometimes lie awake at night wondering how that man has managed to have the strength to cope with such an atrocity. I think about his family and perhaps the friends and maybe other family members he may have lost. I wonder what fear was running through his mind as he totally relied on the operating theatre staff present that day.

Some memories in your nursing career never leave you; I am certain that this man will remain in my memory among others, for the rest of my life.

— Maggie Glasgow, CNS of Ophthalmology Surgery

Post Anaesthetic Care Unit (PACU)

The day of the shootings had been like any normal day. Patients were having surgeries and being managed in PACU until stable enough post-surgery to return to the wards. When news of the shootings reached our department, we still had some patients undergoing surgical procedures as well as patients already post-surgery, recovering in the PACU bed bays.

As victims started to come in via ED, the PACU area became somewhat of a parking lot or secondary assessment area. Victims had undergone initial assessments in the ED and were then sent through to PACU. As the patients arrived those who were not requiring immediate lifesaving surgery were tended to. Two ED Doctors were seconded into PACU for a period of time.

At first sight, there appeared to be major chaos, but on taking in the proceedings, it was evident there was a clear process going on around each patient. Each patient had a team of people doing assessments and managing their cares and keeping them stable until they could be moved into a theatre. Theatres were freed up as the planned surgeries were completed, and all theatres were made available for the victims.

Surgical teams were reviewing patients who were in PACU and it was decided some procedures needed to be done in the PACU itself, so these were undertaken then and there under sedation. For example, a washout performed by the orthopaedic team, a urology procedure for a groin injury. The teams working with the patients were not only assessing what specialty to place them under, they were also trying to contact families using the patients' cell phones, liaising with social work teams to link families. Many of the patients already had chest drains; there really were some horrific injuries seen and managed in PACU.

Obviously not everyone could have surgery immediately, the most critical received surgery first. Those who were more stable stayed in PACU until the Clinical Team Co-ordinator knew which specialty was most appropriate and then allocated them to a ward or they remained until their surgery.

— Noel Walker, Nurse Educator

Even now I sometimes lie awake at night wondering how that man has managed to have the strength to cope with such an atrocity. I think about his family and perhaps the friends and maybe other family members he may have lost.

Patient Identification

As part of the Mass Casualty Response scenario, ED opened up a block of hospital patient numbers and patients were allocated one of these. The first three letters on the identification bracelet were the same, however the last four numbers were different. Unfortunately, it did not link well with our current electronic data system so it was hard for theatre to pick up patient bookings. We had moved away from a paper system to an electronic system, however during this event we went back to using a white board.

More than 200 family members were waiting for news on family members and were supported by the police and Canterbury DHB staff. Representatives from the mosque, the muslim community and interpreters were on hand to help with communication (K. van Deursen, personal communication, March 15, 2019). In the days following, the Deputy Commissioner of Maori and Ethnic Services and an additional 15 liaison officers worked with the families to assist in repatriation of their loved ones, respecting the muslim faith, but also taking into account the unprecedented circumstances and the obligations of the Coroner (Ardern, 2019). Extra Coroners also arrived in Christchurch to help with the process.

— Rebecca Porton-Whitworth

OT Assistants & SSD

It became immediately clear that extra stock would be required and I had to organise extra instruments, chest drains and tubing to be sent

The out-pouring of love that came from the wider community was truly humbling. It included cakes, cards of support and care packages from school children, along with home baking from the public — it was amazing to feel the support from everyone.

to ED to help with the numerous chest drains that were being inserted.

In theatre we do not keep chest drain insertion kits so I sent down a lot of Steripeel instruments and also organised for our Cardiothoracic Ward to send their kits to ED.

Our Supply Department is about three kilometres away in Blenheim Road which made communications and urgent resupply challenging. The operating theatre assistants (OTAs) were utilised to obtain additional chest drains from Supply. They did an amazing job, not only sourcing extra cardiac supplies and dressings, but other specialty consumables, swabs and sponges.

One of the initial issues they experienced was making contact with Supply via landline, given everyone in the warehouse was busy organising stock for dispatch. It was also often difficult communicating what we required, as we use names of products versus order numbers or codes in the first instance. A positive outcome from the event is that an emergency list of products has been created and will be organised by the Supply Department as soon as an emergency is activated. This equates to pushing supplies to the hospital verses the normal demand system which pulls supplies to the hospital through raising requisitions.

Sterile Services Department (SSD) staff became active members of the team in turning around sets. They were notified which theatres had which sets and as soon as surgery was complete I called them to say the sets were on their way down. An OTA was also dispatched to ICU and to the Cardiothoracic Ward to collect our mobile chest re-open equipment and consumable trolleys so extra sets were available in theatre. In hindsight, a lesson from that day would be to delay opening major specialty gear as initially all that was required was to gain access to a patient and any basic set could be used.

I was amazed at my first call back to see all of our sets had been reprocessed and I was able to return the re-open trolleys back to ICU and the Cardiothoracic Ward.

— Rebecca Porton-Whitworth

Forensics Specimen Policy

Amy Burrough, our General CNS at the time of the shootings, unintentionally became responsible for the forensic evidence, after a fellow nurse approached her with a metal fragment asking what to do with it.

We have a tiny forensic cupboard with double-swipe access but capacity to hold only three small specimen containers, which clearly was not large enough for such an event.

The Canterbury DHB forensic policy was distributed to every theatre so that all staff had the same information. A forensic area was set up in our holding bay and staff access limited, with strict instructions on where to put items. Everything from tissues, bone, metal fragments, clothing and shoes all had to be documented and labelled. Each patient that came through was a John or Jane Doe with emergency hospital identification numbers. Strict documentation was essential as the identification numbers were all similar bar the last digits.

A forensic area was set up in our holding bay and staff access limited, with strict instructions on where to put items. Everything from tissues, bone, metal fragments, clothing and shoes all had to be documented and labelled.

Once the initial patient load had subsided, the amount of evidence slowed. The chain of command had to be kept to a minimum, so Amy stayed with the evidence until detectives arrived and a slow and methodical handover of evidence and entry into the Police system could be achieved. For Amy, this equated to a working a 14 hour day,

Part of the challenge of identifying family members was through clothing, as we did not have the names of our patients. However, much of the clothing was removed due to the nature of the injuries and was required as evidence. An incident number and hospital number was given to each person but we had no access to names. It was quite a juggle for the Social Workers trying to identify victims.

— Rebecca Porton-Whitworth

Communication and Wellbeing Support

Within minutes of the incident, a barrage of emails started arriving:

"Update 1 - Serious firearms incident, central Christchurch – Christchurch Schools have been placed into lock down"

These were not read and fully comprehended until much later in the night (K. van Deursen, personal communication, March 15, 2019). We were initially unaware of the unfolding crisis happening around us and it was really important to have people focused. Rumours started to emerge that there were six shooters and the hospital was a target. Initially, after hearing about the shooting, we had no comprehension of what we were going to be faced with.

While we waited for our first patient to arrive, I encouraged people to telephone their homes, contact loved ones to sort out childcare, children

and teenagers.

The next barrage of emails also placed Christchurch Hospital and Outpatients into lock-down and recommended residents across Christchurch remain off the streets and indoors until further notice. All hospital appointments were cancelled and no staff or patients were able to enter or leave the building. The continual communication which we received from the Police via our communications department and from the communications team was really important in keeping us up to date over the coming weeks. (K. van Deursen, personal communication, March 15, 2019).

Communication and support began within the first few hours of the incident. I had a variety of staff working within the vascular and cardiac specialty — a nursing student, Nurse Entry to Practice Programme (NetP) nurses still on their orientation, enrolled and registered nurses as well as operating theatre assistants and anaesthetic technicians.

Before patients started arriving, I made sure staff were prepared for what was going to happen. It was really important for people to understand how they could be useful and support the team. Although they may have been junior, or not know our particular specialty, there were plenty of jobs they could do to support the team. For example, our nursing student was a great support, tying up surgical gowns and opening sterile consumables.

A big part of my role over the following weeks was ensuring people's wellbeing, catching up with staff and talking to them about their experience. Part of our acceptance and resilience comes from being able to debrief and talk about the event and discuss things that we did well and things that we could change or improve on. One of the things I came to realise early on with my discussions with staff was that it was really important to touch base with people on a regular basis as how people were feeling changed daily. Some staff needed to talk, others needed space to reflect and others required time off for themselves or to sort out family members.

Canterbury DHB was amazing in providing a variety of support services in addition to Workplace Support and Employee Assistance Programme. One-on-one counselling sessions as well as facilitated Critical Incident Debriefs with experienced Clinical Psychologists with skills in post-disaster support were implemented. This was well timed for theatre and ED staff but a little premature for the ward and ICU nurses who were still dealing with patients and their relatives. Feedback was also sought to deliver specific support or help.

These nurses had never dealt with mass casualties' or multi-trauma. They were put in situations they had never been taught to deal with and every single one of them hit the ground running.

From a personal perspective, I found it really helpful going to a group session where it reiterated the range of emotions that you could be experiencing, such as feeling on edge, upset and angry. Given this was an abnormal event, whatever you were feeling was okay.

On the first Friday following the shootings, a colleague and I attended the two minutes silence at the memorial wall set up along the entrance of Christchurch Gardens. That was the day many of us crashed, both physically and mentally. It had been such a full-on week and it was nice to get out into the sunshine and reflect on the experience.

— Rebecca Porton-Whitworth

NetP Nurses

On March 15, 2019, nine of our newly graduated NetP nurses were about to finish their fifth week of orientation and another eight were only six months into practice. With the attack occurring without warning, no one was able to prepare for what was about to hit our operating theatres.

Another view of the wall of flowers placed by locals in a show of solidarity.

Support came from the wider community and other perioperative teams, DHBs, and private hospitals throughout New Zealand. The personal texts, emails and cards of support were truly humbling.

These nurses had never dealt with mass casualties' or multi-trauma. They were put in situations they had never been taught to deal with and every single one of them hit the ground running. They were able to use the skills they had learnt thus far and assisted where able; changing rubbish bags, positioning patients, holding patients hands where they could as they were anaesthetised, opening sterile instrumentation and cleaning theatres between cases to ensure fast turn over.

Each of our newly graduated nurses stepped up to help with what they knew they could do and without them the outcomes could have potentially been a lot worse.

Support was given via debriefing sessions put on by the operating theatre department; individual sessions were able to be utilised and the NEtP Programme facilitated drop-in sessions specifically for these nurses, which were most certainly used. This crisis situation gave them experience and a new set of skills they are now able to build on, as well as a new found understanding of how the teams come together in a crisis situation.

— Nic Kimpton, RN/Clinical Liaison Nurse (CLN)

Nursing Students

Prior to the influx of trauma patients into the perioperative department, five pre-registration nursing students, from Ara Institute of Canterbury, were approaching the end of their first week of a nine-week operating room placement.

After four days of intense learning in an unfamiliar environment, the students were mentally and physically drained. Little did they know, their perception of nursing was about to be altered. As 'organised chaos' ensued and patients were rushed into operating rooms, students were exposed to the epitome of trauma operating room nursing.

Some may have expected the students to crumble under the pressure, but they did the exact opposite. Each student made themselves known within their specialties. They were forthcoming in asking the nursing team how they could help. Their ability to follow direction in a crisis event really shone through. As they had only been with us for four days, their scope of practice was limited. Despite this, it was clear that every little bit of help was useful. The students assisted in duties such as patient positioning and transfers, running for equipment, documentation, changing rubbish bags and cleaning the operating room. Each student demonstrated outstanding performance during this time.

During lockdown, when things began to settle, operating room clinical nurse specialists (CNSs) and the clinical liaison nurse (CLN) checked in with each student to ensure they were safe, secure and how they were coping with the situation.

The CLN was in constant communication with the Ara Academic Liaison Nurse (ALN) throughout the evening to keep them informed of the status of the students' well-being. Days after the event, the students attended debriefing sessions that were provided by the hospital. Ara promptly implemented additional student support services which

Buses and police cars were used to establish security cordons at various locations in the city.

The media were ever-present.

students were encouraged to attend.

What was inspiring about the students' experience was their level of resilience and determination during and after the event. Many of the students stated that their contribution to nursing care in such an acute setting had affirmed their passion for operating room nursing. The students should be immensely proud of their participation during such a traumatic event. Both the hospital and Ara Institute of Canterbury must also be recognised for their remarkable role in providing immediate and on-going support.

— Dean Cowles (RN/CLN)

Community

Within hours of the shootings I received texts and emails from nursing colleagues around the country. The out-pouring of love that came from the wider community and other perioperative teams, DHBs, and private hospitals throughout New Zealand was truly humbling. Personal texts, emails, pizzas, Subway sandwiches, cookies, cakes, cards of support and care packages from school children, along with home baking from the public, were such a blessing and it was amazing to feel the support from everyone.

As Perioperative Nurses we are not used to receiving thanks from our patients and it really helped us realise what we had achieved and what an amazing effect we had on the patients and community. The cards and emails were displayed on our notice board in the tea room which enabled people to read and appreciate everyone's kind words. Other hospitals also helped us out during our busy period. Burwood Hospital lent us staff, Southern Cross took some of the walking wounded and St George's gave us their supply of disposable gowns.

— Rebecca Porton-Whitworth

National Remembrance Day

The National Remembrance Service held on Friday March 29, 2019 at North Hagley Park for the victims of the Christchurch mosques terrorist attacks brought about a mixed array of emotions.

Prior to the service, the city streets' perimeters were evacuated, with no cars allowed to park. The feeling of anger, shock and fear surfaced while walking to work as the reality of what we had experienced hit home. What has happened to our city? The police and military checkpoints, the police and military with their dogs checking the river and surrounding trees for potential bombs, the streets cordoned off with buses, the continual sound of helicopters flying above and that continued media presence.

Fear for family, friends and victims safety. That was the day that the reality of what happened really registered. I thought I was doing okay but I got very angry that morning walking to work. Again, another life changing event for Cantabrians who normally live in a peaceful community.

— Rebecca Porton-Whitworth

Conclusion

Along with September 2010 and the February 2011 earthquakes, March 15, 2019 is another day in Christchurch's history that will not be forgotten. Our community is still recovering from the earthquakes which saw 185 people lose their lives and it is hard to fathom the enormity of this terrorist attack. It has affected our community in so many ways with people's lives changing forever.

Whether personally through knowing casualties, through our work, or through our family and friends it had a devastating effect on our community. What will be taken away is the amazing outpouring of love and support and hopefully change in how we see our culture and others.

"All of us have been touched in some way and all of us have a story to tell" (Michael Frampton, Chief People Officer (K, van Deursen, personal communication March, 18).

Staffing of theatres was very organic: people turned up where they needed to be and people also sent out for help. Everyone saw something from a different perspective or angle.

— Rebecca Porton-Whitworth

References

Ardern, J. (2019). Jacinda Ardern on Christchurch Mass shooting – 3.30pm. New Zealand Government Press Release. Via K, van Deursen (16, March, 2019).

SHINE A LIGHT

Let Keyport shine a light on you...

Simeon Medical GmbH has it covered
More light, no shadows. That's the promise of Simeon Medical, the German theatre and examination light experts – technological leaders in LED illumination for operating theatres and the world's most versatile supplier.

SIMEON MEDICAL

PUSHING TECHNOLOGY TO EXCELLENCE

Keyport

Specialist Medical Equipment and Services

P O Box 466 Hamilton 3240

Tel: 07 849-3766 Mobile: 0274 939 046
Fax: 07 849-3767 sales@keyport.co.nz
www.keyport.co.nz