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

JUNE-AUGUST 2024 Volume 52, Number 1

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The passing of a great College advocate

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Let us have your feedback!

Tēnā koutou katoa. Welcome to the June-August issue of *The Dissector*. This is our second digital version and we'd love to have your feedback on what you think of the new format. We do apologise for the delays to our previous issues. Hopefully the technical problems are now resolved and we will be able to get subsequent issues out in a more timely fashion.

This issue is yet again jam-packed with articles derived from post-graduate study. It truly is a pleasure to be able to share the knowledge these nurses have uncovered during their research. I personally find it very rewarding to work with the authors to transform their university assignments, literature reviews and research papers into the wonderful articles you get to read.

I am constantly impressed with the high academic standard our authors have achieved. So if you are currently completing post-graduate study (or even have a special interest area), please do consider sharing this with your colleagues. Don't worry if you've never been published before; we'll happily provide guidance and support! You can contact us on dissector.editor@gmail.com and one of our friendly Editorial Committee members will be in touch.

Te Tiriti o Waitangi in Perioperative Practice

This issue Dean Cowles, National Nursing Advisor for Māori Affairs, Nursing Directorate at Southern Cross Healthcare, builds on his two essential-watching webinars to deliver an article examining historical discourse relating to Māori health inequities as well as providing insights into the application of Te Tiriti o Waitangi to perioperative practice.

As a Māori researcher, Dean has drawn upon his lived experience within a te ao Māori world to share insights into the practical application of Māori values into perioperative practice. Dean reminds us that it is essential we combat racism and discrimination in healthcare. He suggests this will require a concerted effort from all of us to ensure cultural understanding is enhanced, Indigenous perspectives are integrated and policies are aligned with Te Tiriti o Waitangi.

50th Anniversary

As you know, 2024 is our 50th anniversary year and we are continuing to re-publish award-winning articles celebrating the last half-century of perioperative nursing focussed publications. Many thanks to Karen Hall for combing through the NZNO archives to source these. The second of these highlighted articles won the *Davis and Geck Theatre Nurses' Scholarship Prize* in 1990. Shirley McGirr's essay, a surgical case study published in *The Dissector* Volume 17 No. 1 & 2, highlights "the challenges and rewards of nursing a surgical patient in a bicultural context". It's an interesting insight into the care provided by a student nurse and, though our nursing training is different now, the lessons are as relevant today as they were then.

Briefing and de-briefing for surgical cases

Novice writer Emma Lineman and Dr Isabel Jamieson provide us with a scoping review of the literature which aimed to identify challenges to implementing multi-professional team briefing and debriefing processes for surgical cases. Findings from the included articles are discussed thematically, highlighting the challenges of implementing briefing and debriefing. Emma and her supervisor Isabel argue that the identified challenges are addressed to enable successful implementation of briefing and debriefing into perioperative practice.

Remembering Kathryn Fraser

We were saddened to hear of the passing of Kathryn Fraser. She was a very active member of the Ruahine-Egmont PNC Region until the 2024 AGM. However, Kathryn was perhaps best known to our readers as Chief Editor of *The Dissector* for the six years from 2006 to 2012. One of the innovations during her tenure was the 'Table Talk', our regular feature from our Chair — Kathryn came up with the title. Previous Editorial Committee member Bettina Marenzi contributes a tribute to an amazing perioperative nurse, role model and mentor. She will be very much missed and we send our condolences to her family and friends.

PET Scanning

Previous Chief Editor Shona Matthews has provided an article on Positron Emission Tomograph (PET) imaging based on Medical Imaging Technologist Paul Maggs' presentation at the Medical Imaging study day held in Auckland last year. This comprehensive article gives insight and understanding on this effective and highly sensitive medical imaging method used to detect a variety of conditions including cancer, heart disease and brain disorders.

Join us!

We are still looking for additional Editorial Committee members. 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 pnc.sec@xtra.co.nz 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*

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Your College on the International stage

Wow! This year is really shaping up as an active one with the Perioperative Nurses College focus at the start of the year including engagement, leadership, and workforce development. We are also networking internationally, engaging with regional members and supporting new PNC representatives to lead in their regional positions.

Now, without the restrictions of Covid, PNC National Committee and its subcommittees are able to lead, support, and network with national and international stakeholders of perioperative nursing practice and patient care.

This connectivity enables us as leaders to explore, discuss and ensure that New Zealand is benchmarking perioperative standards, nursing practice and education research with the world. Connecting with international stakeholders from the Association of Operating Room Nurses (AORN) in Nashville, USA, the European Operating Room Nurses Association (EORNA) in Valencia, Spain, and the International Federation of Perioperative Nurses earlier this year has strengthened the need for New Zealand to forge ahead with providing an online learning platform for our own perioperative nursing community.

PNC is well aware of current local programmes already in place in New Zealand. However, by partnering with the most valuable provider, PNC can continue to support and promote the high standards of nursing practice and perioperative accreditation to our nurses. We invite you to get on aboard with this and be a part of this important development for our perioperative nursing practice by joining Gill Martin and her PNC Perioperative Practice Committee team. Send your applications to pnc.sec@xtra.co.nz

On the topic of leaders and contributors to the Perioperative Nurses College of NZNO, we must remember and reflect upon former *Dissector* Editor, PNC member and former regional representative for Ruahine-Egmont, Kathryn Fraser. Kathryn's life was duly celebrated in Manawatu recently by family and friends and we also pay our respects to Kathryn within this edition, valuing her extraordinary contribution and dedication to perioperative nursing in New Zealand and beyond. PNC is saddened by her passing but pleased to remember Kathryn's contributions and achievements within this 50th year of celebration of *The Dissector*.

Embrace the future

Speaking of celebrating perioperative achievements, education and research, don't forget that our 48th national Conference is being held in Wellington from October 17-19 with a theme of 'Embracing the future: Everything counts'. The conference aims to deliver recent perioperative research, initiatives and case studies by nurses for nurses. Please join us and support your colleagues who are presenting and sharing their quality improvements, successes and hard mahi for perioperative practice in New Zealand. Education is delivered by poster presentations, breakout sessions, free paper presentations including keynote speakers specialising in perioperative practice and healthcare. Registrations are open now at https://www.perioperativeconference.org/registration

See you there!

Role of the Perioperative Nurse

Finally, a large piece of work that PNC is continuing to develop is the position statement of the "Role of the Perioperative Nurse". We are working on this with NZNO and we have submitted a position statement to the International Federation of Perioperative Nurses (IFPN) to assist on the international statement.

I can also inform you that from the recent IFPN Board meeting in Valencia, New Zealand has been invited personally to work further on the position statement as part of an international working party and we look forward to this important development as an active stakeholder in perioperative practice of the world. This would not have been possible without the support of the National Committee, Perioperative Practice Committee, *The Dissector* Editorial committee and the valuable contributions from members. As the Chairperson of PNC, I thank you for your past, previous and future contributions allowing this active involvement at international level and future development of the role of the perioperative nurse both internationally and in New Zealand.

Gracias and nos vemos pronto

— Cassandra Raj,
Chairperson, Perioperative Nurses College

48th Conference of the Perioperative Nurses College of Toputanga Tapuhi Kaitiaki o Aotearoa, NZNO

17 – 19 October 2024

The conference is the ideal opportunity for connecting and promote excellence in nursing practice in the pre-, intra- and postoperative care of patients.

CONFERENCE THEME

Embracing the future
Everything counts

CELEBRATING 50 YEARS
of the PNC and The Dissector

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Friday 23 August 2024

Our Conference programme is now LIVE!

We are excited to share that our Conference programme is now LIVE on our website **perioperativeconference.org/full-programme**.

perioperativeconference.org

The October 17-19 PNC Conference venue is the Museum of New Zealand Te Papa Tongarewa in the heart of Wellington.

PNC Conference returns to its roots

October's national Perioperative Nurses College conference in Wellington will mark 51 years since the first such event took place in New Zealand. That was October 1973, in Wellington. The 1973 gathering was called a 'seminar' and attracted 187 operating theatre nurses, including five from Australia. It also led to the establishment of a national operating theatre nurses organisation (today's College) and the publication of the first issue of *The Dissector.*

Not only does the October 17-19 PNC Conference provide an opportunity for Perioperative Nurses to meet with colleagues from around the nation, it is also an opportunity to reflect on the half century of achievement the founders of our College set in motion.

October 17-19 is the ideal opportunity for Perioperative Nurses to reconnect and promote excellence in nursing practice in the pre-, intra- and postoperative care of patients.

The 2024 Conference is running under the theme: "Embracing the Future: Everything Counts" and is being organized by the Wellington PNC Regional Organising Committee: Reggie Williams (Convenor), Juliet Asbery (Vice convenor), Amber Cox (National Committee Representative), Emma Brooks, Grace Cui and Tim Hill.

"We are excited to be conferencing in the Museum of New Zealand Te Papa Tongarewa (Te Papa). Located in the heart of Wellington's cultural precinct, Te Papa also offers views of Wellington harbour."

For the full conference programme click here. For other information check the promotion on page 7 and click on the link, or or email: pnc@composition.co.nz

ACORN 2024 International Conference

The Australian College of Perioperative Nurses (ACORN) is hosting an international 'Uniting and Igniting' conference in Sydney, November 28 to 30, 2024.

This will be the first face-to-face ACORN conference since 2018 and will provide perioperative nurses and the profession with an opportunity to hear and network with international and Australian leaders in the field.

ACORN has secured an impressive exhibition space and a great line-up of keynote speakers. Click here for the educational programme outline.

The Australian College of Perioperative Nurses (ACORN) is Australia's peak body of perioperative nursing and the largest specialist nursing college. ACORN's mission is to advocate for safe, quality perioperative care for every patient on every occasion.

For registration details visit the website or email: contact@acorn.org.au for more information.

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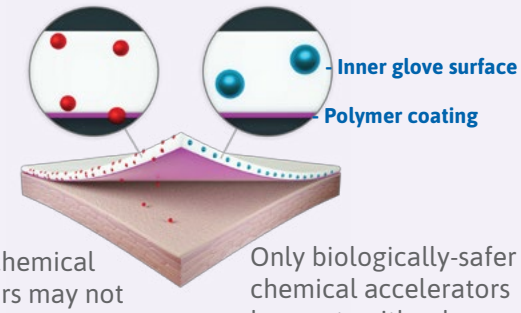

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Ruahine-Egmont AGM and Study Day

Our 2024 annual general meeting (AGM) was held on April 13 in Whanganui, followed by a study day.

The AGM saw the passing of the baton, with two PNC members who have given long and sterling service to the Region finally stepping down. The meeting opened with Kathryn Fraser in the chair for the last time, and Bettina Marenzi as secretary. As they were both PNC Life Members, and no longer financial members of the College, they stepped down.

Nominations were then called for their replacements with the result that Michelle Argyle was voted in as Regional Chair and Jenny Condliffe as Co-chair. Their contact details are: Michelle Argyle, email: michelleargyle@gmail.com or michelle.argyle@midcentraldhb.govt.nz and Jenny Condliffe, email: jennyco@mdhb.health.nz or jenny.condliffe@midcentraldhb.govt.nz

Diane McClelland continues on as Regional Treasurer with Karen Prendiville retaining the National Committee Representative position, in a caretaker role.

After correspondence was read and the Treasurers, and Chairpersons reports tabled, Karen reported to members on the most recent National Committee meetings, including discussions and work from February's meeting and Zoom meetings. She reported that New Zealand Nurses Organisation (NZNO) CEO Paul Goulter and NZNO wants to understand the colleges and sections; to grow and create stronger membership; to enable more influence in our union and profession.

This created good discussion and conversation among members.

Moving onto our Regional Meeting, we held two education sessions. The first was on Local Anaesthetic Toxicity/Spinal and Epidural Anaesthetics with introduction of NRFit at Whanganui Hospital.

We also discussed our June 18 Webinar Session (Safe Patient Positioning and Documentation) for presentation.

I have passed on myhealthhub coordination contact to our presenters. Our next face-to-face meeting was scheduled for New Plymouth on June 22 and will include education sessions/presentations. We shall report on that in the next issue of *The Dissector.*

— Karen Prendiville

ENT airway management

The Otago/Southland PNC Region held another fantastic study day in May at Marinoto House which is on the grounds of Mercy Hospital in Dunedin. The theme was ENT airway management, and the day was organised by our PNC life member Annie Chapman along with Shirley Smith-Palmer and Amanda Figgins.

We were very fortunate to have Mr. Dean Ruske give up an hour of his birthday to talk to us on Thyroidectomy.

Dean, who is one of our senior ENT specialists, shared with us the anatomy around the thyroid, demonstrating the major nerves and vessels and their normal location. He discussed the surgical approach and after care required for these patients. The main take away message from this session was the risk of haematoma post op. and the potential of airway obstruction.

Reviewing tracheostomy equipment with Amanda Figgins, Shirley Smith-Palmer and Dr Nick Hope

Mr Dean Ruske receiving his birthday cake from Richelle our star baker.

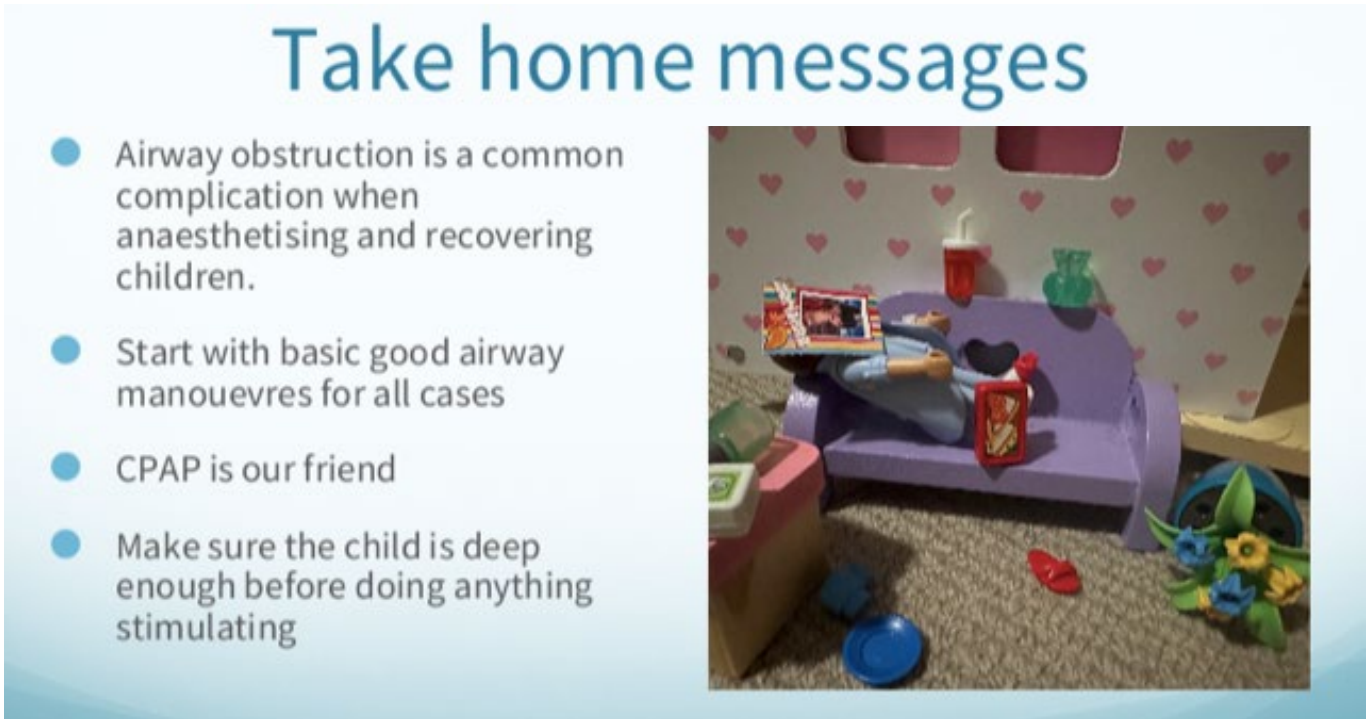
Next up was Phil Collier, our local Stortz representative who presented Transillumination techniques and equipment required for this. He showed photos of a thyroid where the parathyroids had been illuminated green, making them much easier to see.

Dr Sheila Barnett, one of our Paediatric Anaesthetists, then presented "A Really Rubbish Day in the ENT Theatre when Everything goes Wrong."

She started with paediatric airway anatomy and then, with the clever use of her Lego model, ran through a scenario including laryngospasm on induction and stridor on the removal of the Guedel. We came away with clear and useful techniques for managing these situations.

Morning tea as always was a highlight with a sideboard chock-full of deliciousness. Our last session was a run through of the equipment in the Tracheostomy Boxes in both hospitals, followed by a demonstration by Mr. Nick Hope, another of our ENT specialists, on the insertion of an emergency tracheostomy.

The morning finished with our Otago/Southland AGM. There have



Take home message from Dr Sheila Barnett's Airway Obstruction and Laryngospasm Presentation

been a few comings and goings from the committee, but we still remain a strong and dedicated team. Our Chair Aimee Keogh has committed for another year as has Cassie Scott our secretary and April-Lily Sule our National Representative on the PNC National Committee. Tina Shaw has stepped down as Treasurer and Sandra Millis has taken on this role.

Patti De Klerk, Annie Chapman, Jenna Coleclough and Sarah Eton have remained on the committee.

We welcome Tina Shaw, Roneel Nand Amanda Figgins and Shirley Smith-Palmer and farewelled with heaps of gratitude Samantha Lobb, Viv Cuthbertson and Kris Kvick.

— *Sandra Millis*

NZNO Colleges and Sections Day 2024

Each year the New Zealand Nurses Organisation (NZNO) hosts a Colleges and Sections Day at its Wellington headquarters. This provides an annual opportunity for key people from all 20 colleges and sections, representing 12,500 nurses across 20 specialties, to mingle, network and share ideas and discuss current issues they face.

This year members of the professional colleges and sections were called on to "shape the issues" facing health.

It was great to hear about what the other colleges and sections have been up to, what their struggles are and what their successes were too. One thing that was interesting is that most of the Colleges and Sections have their own LinkedIn page. Perhaps this is something PNC should consider.

CEO's challenge

"If you don't provide the voice of nursing, then who will?" NZNO chief executive Paul Goulter challenged

"Unless that voice is heard, and heard continuously and heard on an evidence base, nursing will be excluded from the conversation around our health system and others will take your place and pretend to speak for you," he warned.

The expertise contained within colleges and sections was "absolutely critical" to decision-making, he said, vowing NZNO would provide the support needed to grow their influence.

"I love your work — but I'm aware of the frustrations many of you, as leaders in your areas, feel about things getting in the way or stopping you being as good as you can be. And that's what I want you to be — as good as you can be."

Goulter was very excited about NZNO's work with the college and sections. He highlighted a few key projects for NZNO:

- Greater focus on the college and sections
- More recognition for Health and Safety representatives
- Achieving pay equity for non-Health New Zealand employees
- Looking into safe staffing ratios - utilising international models.
- Huge works into the Senior Nurses pay scale.

Upholding nursing's 'integrity'

PNC was represented by Chair Cassandra Raj, along with Gillian Martin and Emma Lineham. Cassandra told the assembled delegates that Te Whatu Ora's 2024 health workforce plan showed nurses being edged out of operating theatres. To stop this, it was important nurses understood the value of their role.

"We need to shout that out to the world, we need to make an impact… so that managers and employers circle back to the nurse," she said. "The integrity of nursing is yours to uphold."

Communications & support

One of the members from the NZNO communication and support team came to talk to all the colleges and sections. Included in the chat was having each college and section update their websites and handle media requests.

Nursing Council of New Zealand Scope Review

Nurses from the Nursing Council of New Zealand (NCNZ) came to talk to us about the constitutional review for the Enrolled Nurses and Registered Nurses. Results from the feedback received included the following:

- 2773 individual responses and 103 written responses from organisations;
- NCNZ is revising the RN competencies and EN competencies;
- The RN scope of practice description is being revised following the competency revision;
- The full published report will come out with the revised competencies;
- The new revised set was available for commenting In June and will be revised and sent to the Board in August for approval;
- NCNZ is removing the Competency Assessment Programme (CAP), changing to a new assessment and changing the requirements for Internationally Qualified Nurses.

Perioperative Nurses College chair Cassandra Raj (second from left) with Perioperative Nurses Gillian Martin (far left), Emma Lineham and Enrolled Nurse Sharyn Ford (far right).

Challenges of implementing multi-professional team briefing & de-briefing for surgical cases

By Emma Lineham and Dr Isabel Jamieson

Abstract A scoping review of the literature was conducted aiming to identify challenges to implementing multi-professional team briefing and debriefing processes for surgical cases. The review aimed to cover both elective and acute surgical cases, focussing on intraoperative briefing and debriefing rather than the intraoperative Surgical Safety Checklist components. The studies all explored the challenges to implementing multi-professional briefing and debriefing in the surgical setting. Findings from the articles are discussed thematically, highlighting the challenges of implementing briefing and debriefing.

Keywords: World Health Organisation, Surgical Safety Checklist, inter-professional team, surgical briefing, surgical debriefing, surgical complications, team communication, Health Quality Safety Commission New Zealand, process challenges, safe culture

The Surgical Safety Checklist

In 2008 the World Health Organization (WHO) developed a set of surgical safety checklists to improve communication and prevent adverse events in all operating theatres (OTs). They predicted that if the Surgical Safety Checklist (SSC) was successfully implemented and complied with globally, over half a million deaths in the OT per year would be prevented.

The comprehensive SSC consists of three separate sections, each completed at different stages of the intraoperative process. The 'sign in' is completed by the anaesthetist when the patient arrives to the OT. The 'time out' is completed by the surgeon before the first surgical incision. Third and last, the 'sign in' is completed by the nurse before the patient leaves the OT.

The SSC aims to reduce surgical harm, improve team communication and reinforce surgical safety principles (World Health Organization, 2008). The SSC were widely adopted by OT personnel around the world.

The WHO undertook a study to examine if the SSC had made positive global improvements to surgical safety and patients' complications (Haynes et al., 2009). This study included eight hospitals from eight different countries and encompassed 3733 patients, looking at patient outcomes 30 days post-operatively. Data confirmed the WHO prediction that the use of the SSC would annually prevent half a million deaths globally.

Briefing a debriefing

While the SSC has made a substantial global impact on morbidity and surgical complications, there is evidence communication in the OT between the inter-professional team needs to be further improved (Pugel & Simlanu, 2015). The concept of surgical briefing and debriefing has been introduced to compliment the SSC protocols.

The intent of briefing is to share information amongst the multi-professional team members prior to the first patient entering OT. The briefing clarifies the teams' expectations and roles for the day. Debriefing allows the team to review the day and address any issues or give positive feedback. The debriefing aims to foster learner performance, correct errors, and reflect through peer review and clinical reasoning (Schapp et al., 2020).

The Health Quality Safety Commission New Zealand (HQSC) recommends all OT personnel incorporate the WHO SSC into everyday practice (Health Quality Safety Commission, 2021b). In 2016 the HQSC recommended that briefings and debriefings should also be added to the SSC in the intraoperative setting, to further improve communication. With the increasing complexity of patient care and patient needs, it is critically important for a standardised communication tool to help improve better overall patient outcomes (HQSC, 2016).

The HQSC state that there is strong evidence to support the use of briefing and debriefing (HQSC, 2021). An example of this is Civil and Shuker's (2015) case study of one surgeon's adoption of briefing and debriefing in his everyday practice. The case study shows a timeline of the day with the briefing and debriefing tool implemented and

analyses the positive impacts that it has on practice. The results from implementation show a two-third reduction of communication failures, with adverse events reduced by 25 percent (Civil & Shuker, 2015). Additionally, the results from another study looking at the effect of briefing and debriefing showed there was a positive influence on team climate, higher perceived efficiency, and less unexpected operating time delays (Lan Leong et al., 2017).

HQSC created a briefing and debriefing tool to be used in conjunction with the SSC. Briefing is comprised of four stages. The first is introduction, which is to ensure all team members are present and have introduced themselves and their role. The second stage is the list outline, which provides an overview of the cases, the estimated duration, any changes, if there are any uncertainties, they ways to identify them and inform the team, and finally any other patient information not on the OT list. The third stage is the case events. At this step, the team reviews each patient, the surgical plan, any key points or specific requirements, blood loss risk, any potential difficulties and the contingency plan and correct equipment is confirmed. In this stage the anaesthetic plan is also discussed, including type of anaesthetic, issues or concerns and if there is a difficult airway or aspiration risk. The final stage is staffing and questions, providing the team with an opportunity to confirm their understanding, ask questions or express any concerns. The shorter debriefing covers what went well, what did not go well, why it did or did not and asks for suggestions for what can the team do better next time (HQSC, 2021a). The briefing and debriefing tool is shown in **Figure 1**.

Scoping review design and processes

The scoping review question was *"Are there any challenges associated with the implementation of multi-professional team briefing and de-briefing for surgical cases?"* Eligibility criteria was divided into four categories: participants, concept, context, and the types of sources. Participants included in the eligibility criteria were members from the multi-professional team involved the operating theatre (OT) for the day.

The concept for the review was to identify any challenges arising when implementing briefing and debriefing. Literature that mentioned challenges to the briefing and debriefing were included in the review. Articles were excluded if they did not mention what the challenges were. The review considered all types of sources, including opinion and text papers and was conducted in line with the Joanna Briggs Institute (JBI) methodology for scoping reviews (Peters et al., 2020), and in accordance with the Preferred Reporting Items for Systematic Reviews (PRISMA-ScR) (Page et al., 2021).

Following the search, five articles were reviewed. The reviewed studies were from Australia, New Zealand, United States of America, and the Netherlands. Data were extracted using an extraction tool guided by the JBI protocol and agreed upon by the reviewers. The results from the search process are reported in the PRISMA-ScR flow diagram shown in Figure 1. Findings were categorised into two main themes: Process Challenges and Personnel Challenges.

Process Challenges

The first theme from the literature reviewed was about process challenges. Three sub themes were identified: briefing and debriefing are time consuming and delay surgical start times; not all questions are relevant and that the impacts on the list due to acutes; team changes are identified as process challenges.

Three articles mentioned that briefing and debriefing consumed too much time and delayed surgical start time. Lan Leong et al. (2017) reported that 35.5 percent of respondents recorded that the surgical list started on time with the briefing and debriefing

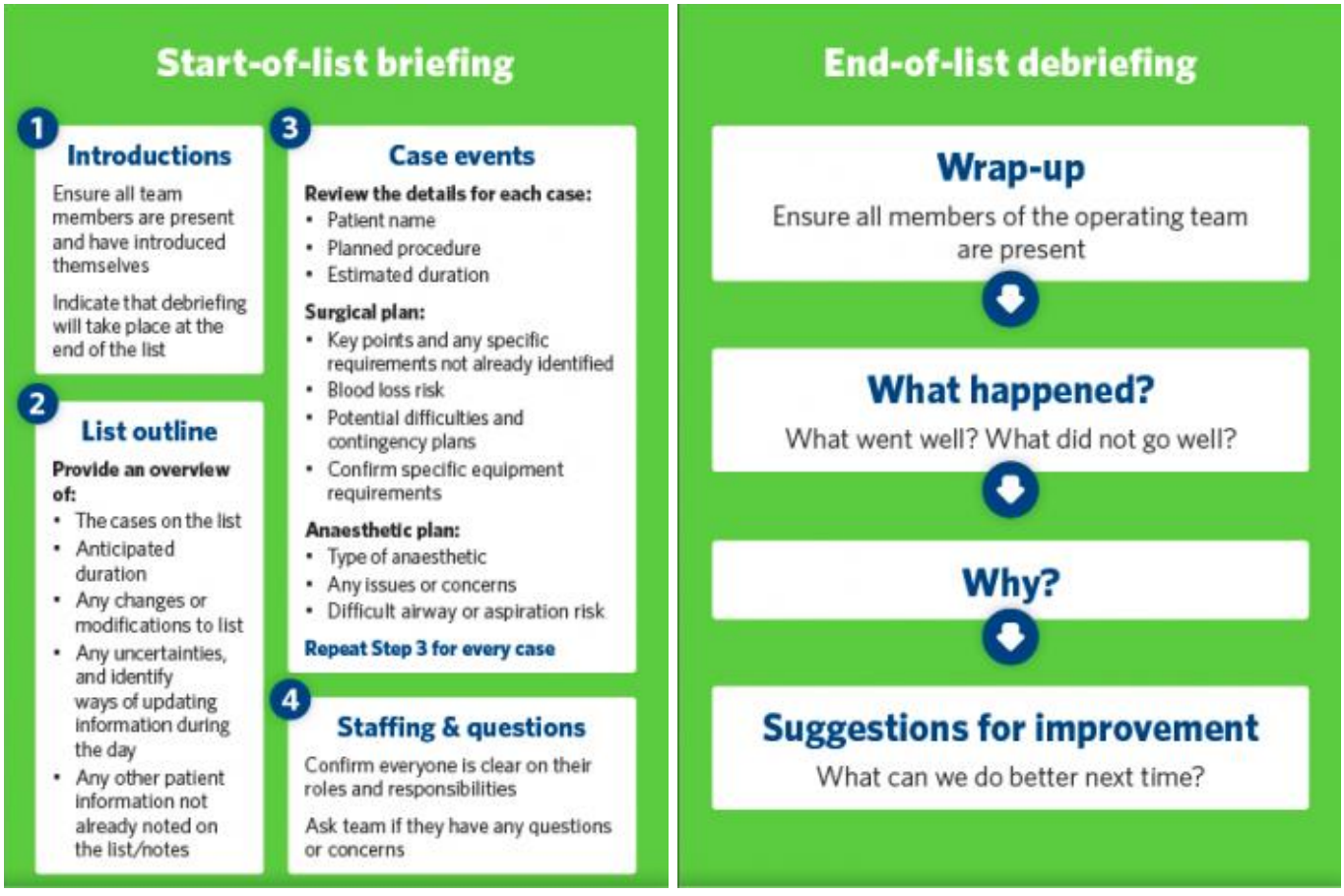


Figure 1: Briefing and debriefing posters (Health Quality Safety Commission, 2021)

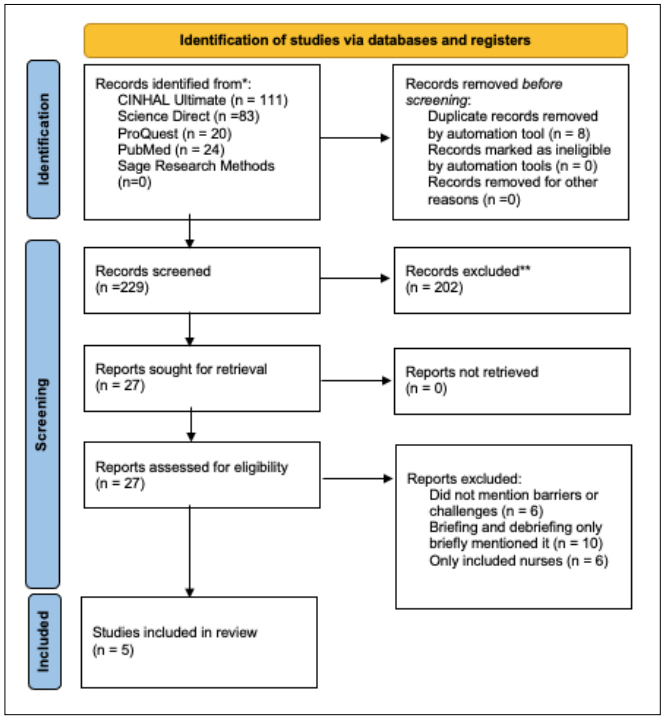


Figure 2. *PRISMA-ScR Flow Diagram (from Page, M., McKenzie, J., Bossuyt, P., Bourton, I., Hoffman, T., & Mulrow, C. (2021). The PRISMA 2020 Statement: an updated guideline for reporting systematic reviews.* BMJ, *372(71). doi: 10.1136/bmj.n71)*

being integrated. They identified that staff were reluctant to engage in briefing and debriefing as they assumed it takes up too much time, delaying operation start times. However, they argued that briefing takes roughly four minutes to execute (Lan Leong et al., 2017), indicating that any delays should be minimal. Fruhen et al. (2019) also report that the perception of briefing and debriefing consuming too much time and delay operation times is a challenge. They state that the briefing and debriefing are not accommodated in the operation schedule, causing a delay in the operation start time. Carbines et al. (2017) reported that the number of late starts increased after the briefing and debriefing were introduced.

One article highlighted that not all the questions used in the briefing and debriefing are relevant. Schaap et al. (2020) report that people feel the introduction round at the start of the briefing is not always applicable or relevant as the teams stay the same. Additionally, team members expressed that not all questions are relevant, such as the hygiene questions.

Two articles mentioned that briefing and debriefing were not able to be fully completed due to impacts on the surgical list, such as changes in the team or having acutes added on throughout the day. Fruhen et al. (2020) state that the emergency cases and variations in surgical staff were a reported barrier to briefing and debriefing. This is due to the lists having unexpected changes because of emergency cases and different operating teams coming in for the case.

Schaap et al. (2020) also state that it is difficult to complete team briefings and debriefings when the operating surgeon changes throughout the day, depending on the case.

Personnel challenges

The second theme from review of the literature related to personnel challenges. The six sub-themes related to this theme are: there is a higher perceived workload with implementation of briefings and debriefings; an incomplete team; a lack of knowledge; no safe culture to give feedback; there is little done with the results from the debrief; and negative attitudes of the team members.

The first sub theme is that there is a higher perceived workload associated with the briefing and debriefing tool. Lan Leong et al. (2017) report that their respondents strongly agreed that there was a higher perceived workload after implementing the briefing and debriefing.

Three articles mentioned that an incomplete team made it hard for both the briefing and the debriefing to be completed. Lan Leong et al. (2017) mentioned that an incomplete team was a large reason for the debriefings were evaluated less positively, as they were not able to be structurally carried out or were hastily performed because of this.

Fruhen et al. (2020) reported that an incomplete team was a challenge to briefings and debriefings being completed. They stated that the incomplete team was due to the surgeon or anaesthetist finishing rounds, the nurses completing a complex set up or being busy locating equipment, late team members or team members not starting before 8am.

Schaap et al. (2020) also stated that many staff members are late to the start of the list briefing. Additionally, they added that debriefing was not done due to team members leaving to transfer for patient to the recovery unit or leaving OT before the patient is off the table and do not return to the room for the end of the list debriefing.

Two articles mention that a lack of knowledge is a challenge to briefing and debriefing. Fruhen et al. (2020) report that the characteristics associated with the lack of knowledge includes the visiting or junior surgeon not knowing the procedure or being aware of the briefing and debriefing and that the staff who are present in the briefing may be different to those involved in the actual operation. Schaap et al. (2020) report that the lack of knowledge involves the team members not knowing the potential benefits of briefing and debriefing.

Schaap et al. (2020) mentioned that people reported they felt there was no safe culture to give feedback during the debriefing. Positive feedback was often reported and well received, however, the staff felt that if they reported negative feedback or their disappointments in the team, people would take this personally and feel attacked.

Two articles mentioned that there was little done with the results of the debrief. Lan Leong et al. (2017) reported that some team members felt the debriefing was not as useful as the briefing as they felt there was little actually done with the issues and learning points from the debriefing. Schaap et al. (2020) report that team members do not know what happens with the results from the debriefing or who takes responsibility for fixing them.

Finally, three articles mentioned that the negative attitudes of the team members were a huge challenge to implementing briefing and debriefing. Fruhen et al. (2020) reported that the negative attitudes of the team members include people seeing briefing and debriefing as a formality, with no space for questions and steps missing, team members being uninterested and refusing to participate and not being supportive of the process. McDowell & McComb (2016) reported that nurses perceived the surgeons as uninterested and not always participating. Schaap et al. (2020) reported a lack of priority as there are more pressing tasks that need to be done rather than the debriefing and some people find it 'worthless' as the debriefing is not always done.

Discussion

It is apparent that from the five articles included in the scoping review that there are challenges to implementing briefing and debriefing into surgical care. The two main themes emerged were

Theme Group	Sub Theme	Frequency Count
Process Challenge	Time consuming and delayed surgical start times	3
Process Challenge	Not all questions are relevant	1
Process Challenge	Impact on list due to acutes or team changes	2
Personnel Challenge	Higher perceived workload	1
Personnel Challenge	Incomplete team	3
Personnel Challenge	Lack of knowledge	2
Personnel Challenge	No safe culture to give feedback	1
Personnel Challenge	Little done with the results of the debrief	2
Personal Challenge	Negative attitudes	3

Table 2: *Theme Groups*

process challenges and personnel challenges. The process challenges were caused by external or organisational factors. They include, time consuming and delay surgical start times, not all questions being relevant and an impact due to acutes or team change. The personnel challenges were a result of the staff working in the OT. These were, a higher perceived workload, incomplete team, a lack of knowledge, no safe culture to give feedback, little done with the results from the debrief and negative attitudes.

The lack of research about the challenges of briefing and debriefing in surgical care and implementing them into practice identifies a huge gap in knowledge. Additionally, solutions or recommendations to eliminate or reduce these challenges were not included in the literature, this also demonstrates a gap in knowledge. The majority of articles were both quantitative and mixed method with only one article conducting a qualitative study. No systematic reviews were revealed in the search.

Potential recommendations to help remove and address the challenges so the briefing and debriefing can be implemented successfully could include:

- Education provided on the benefits of briefing and debriefing. This should be funded by the employer and governing commissions.
- Offering sessions where members of the multi-professional team are able to give their opinion on what belongs on the forms. This was used when the WHO SSC were being introduced and could have a positive impact on the briefing and debriefing tools.
- Introduce 'Champions' to advocate for briefing and debriefing and be available to answer questions.

Conclusion

This scoping review aimed to find out if there were any challenges to implementing multi-professional briefing and debriefing into surgical care. It is shown that the use of briefing and debriefing for every surgical list improves team climate and has reduced communication failures and adverse events by two thirds. The limited literature available revealed that there were multiple challenges people have faced when implementing briefing and debriefing. While the worthwhileness of the briefing and debriefing has been shown, it is important challenges are addressed to enable successful implementation of briefing and debriefing into surgical care. Efforts should be undertaken by employers and governing commissions to reduce the challenges and negative attitudes of staff towards briefing and debriefing. The long-term benefits of the WHO SSC have been well researched and demonstrated. This should be translated to the importance and potential large benefits that briefing and debriefing can have on patient outcomes and team climate.

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Emma would like to thank her supervisor, Dr Isabel Jamieson, for her support with this study.

Dr. Isabel Jamieson, RN, PhD. *Isabel Jamieson is a senior lecturer above the bar, at the University of Canterbury, Faculty of Health. She is the coordinator of the Master of Health Sciences (nursing) and Doctor of Health Sciences programmes. Her areas of research include the healthcare workforce, nursing students' readiness to practice, the graduate nurse experience, and career change. Her clinical background was perioperative nursing (operating theatre). Isabel has served many roles in the Perioperative Nurses College, including three years (2000-2003) on the Editorial Committee of The Dissector. She has a passion for nursing and supporting students to succeed.*

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Te Tiriti o Waitangi in Perioperative Practice

By Dean Cowles

Abstract There is ongoing concern about surgical outcomes among the Māori population in New Zealand, which can be traced back to the country's colonial history. This persistent issue is evident in the significant gap in life expectancy between Māori and non-Māori (Ministry of Health [MOH], 2022). The WAI 2575 Health Services and Outcomes Kaupapa Inquiry highlighted widening health disparities over a period of 25 years, exposing alarming rates of disease progression and poor surgical outcomes (MOH, 2019). Despite extensive research in the health sector to understand this disproportionate burden, there is little education available about applying Te Tiriti o Waitangi within the perioperative environment. This article utilises a strong evidence base to promote knowledge acquisition for perioperative health professionals. As a Māori researcher, I have drawn upon my lived experience, within a te ao Māori world, to share insights into the practical application of Māori values into perioperative practice.

Keywords: Māori, Te Tiriti o Waitangi, Indigenous health,

Introduction

Racism and discrimination in healthcare systems globally perpetuate disparities in Indigenous health, stemming from historical injustices and systemic biases (Wylie & McConkey, 2018). Addressing these issues necessitates enhancing cultural health literacy among practitioners and integrating Indigenous perspectives into healthcare practices (Kidd et al., 2018). Perioperative processes must align with Te Tiriti o Waitangi, which entails fostering meaningful engagement with Māori, respecting cultural protocols, promoting equitable outcomes, and acknowledging the spiritual dimensions of health and well-being. This article examines historical discourse relating to Māori health inequities whilst providing insights into the application of Te Tiriti o Waitangi in perioperative practice.

Racism & discrimination

Globally, Indigenous health is often viewed as a burden on healthcare systems, with governmental bodies, policymakers, and individuals prioritising economic considerations over addressing health disparities (Wylie & McConkey, 2018). This perspective overlooks the pervasive impact of racism and discrimination experienced by Indigenous communities, reflecting a failure to acknowledge the complexities of Indigenous health (Wylie & McConkey, 2018; Kidd et al., 2018).

Historical injustices, such as colonialist invasions, have led to the confiscation of land, suppression of autonomy, and degradation of identity among Indigenous populations, contributing to systemic challenges including poverty, inadequate housing, and limited education (Kidd et al., 2018).

Studies conducted in Canada and New Zealand reveal similar themes that led to stereotyping and discriminatory attitudes towards Indigenous peoples within healthcare settings (Wylie & McConkey, 2018; Hunter & Cook, 2020). These biases contribute to misdiagnoses, delayed diagnoses, and inadequate referrals for Indigenous populations, resulting in disproportionately high rates of morbidity and mortality for life-threatening conditions (Wylie & McConkey, 2018; Kidd et al., 2018). Delays in accessing timely interventions further exacerbate healthcare disparities, reflecting institutional racism within healthcare infrastructures (Theunissen, 2011).

This is evident for Māori.

Cultural Health Literacy & Relationship Building

Huria et al. (2014) identify a significant gap in health professionals' understanding of Māori worldviews, attributed to factors like tunnel vision, ignorance, or racial prejudice. Conversely, Hunter & Cook (2020) stress the ethical imperative for achieving cultural competence in healthcare, promoting cultural safety. In New Zealand's health system, enhancing cultural health literacy among all practitioners is crucial for equitable care and combating racism.

A kaupapa Māori study (Kidd et al., 2018) explored cultural health literacy in palliative care, involving patients, whānau, and key informants. While health literacy typically means understanding health information, incorporating Māori worldviews and practices is vital for effective communication with Māori patients (Kidd et al., 2018). Inadequate integration of cultural considerations in healthcare interactions leads to trust issues and communication barriers (Graham & Masters-Awatere, 2020). Māori patients often struggle to understand communication from a Western perspective, impacting rapport (Kidd et al., 2018). In sensitive contexts like surgical cancer care, prioritising whanaungatanga (connectedness) is crucial for effective communication (Wilson et al., 2021). Yet, this is often overlooked, leading to negative experiences and disparities for Māori (Kidd et al., 2018). Huria et al. (2014) suggest a lack of institutional awareness and cultural knowledge due to Westernised policies and legislation.

Policy & legislation aligning with the Crown

In 1840, James Busby and Captain William Hobson co-wrote the document known as the Treaty of Waitangi. Busby was British

Resident, a consular representative of Britain, and Hobson was a British Royal Navy officer who was to serve as Governor and Commander in Chief.

The task of translating the English text into te reo Māori was given to missionary Henry Williams and his son, Edward. They were given one night to complete the translation. This was the night of February 4, 1840. Next day leading chiefs assembled to debate this Māori version, and eventually sign it.

The Treaty was written to establish a sovereign relationship between the British Crown and Māori (Came et al., 2020a). Since then, the English version has significantly influenced the development of public policies, legislative precedence and political discourse, often to the detriment of the Māori population (Came et al., 2020b). However, the Māori text holds legal precedence over the English version, making it the sole legitimate version (Came et al., 2020a).

There has been a long-standing and widespread misconception that Te Tiriti o Waitangi is an exact translation the Treaty of Waitangi. In actuality, these documents are distinct with individual meanings and unique implications. The preference for the English text by the Crown became apparent as it took precedence in colonial projects, leading to the suppression of Māori language and culture through legislation such as the Native Schools Act (1867) and the Tohunga Suppression Act (1907) (Came et al., 2020b).

In 1975, the Royal Commission on Social Policy applied principles from the Treaty of Waitangi to formulate and implement the 'three P's' — participation, protection, and partnership — in the health sector (Came et al., 2020a). Nearly 20 years later, the New Zealand Health and Disability Act (2000) embraced these principles, subsequently influencing additional policy initiatives (Came et al., 2020a). However, the Waitangi Tribunal has found persistent Māori health disparities, attributing them to Crown shortcomings and historical policies based on the English version of the Treaty of Waitangi.

The WAI 2575 report highlighted health inequities, access challenges, racism, and discrimination, demonstrating the influence of Western constructs on public policy and health strategies (Came et al., 2020a). The integration of Western methodologies in mainstream services, as demonstrated in practical implementations, underscores institutional racism and the complex socio-political environment. In contrast, Māori relate to aspects of the Māori text, highlighting their Māori origin and relevance, such as kāwanatanga (governance), tino rangatiratanga (sovereignty), ōritetanga (citizenship), and wairuatanga (spirituality), advocating for their direct integration into clinical practices (Came et al., 2020a). These are the four key elements derived from Te Tiriti o Waitangi.

Kāwanatanga

Kāwanatanga refers to Māori governance. This includes protecting Māori interests and requires meaningful Māori involvement in decision making (Berghan et al., 2017). The presumption of substantive Māori engagement is fundamental to this element. Upholding kāwanatanga promotes Māori decision-making at all levels that affect Maori (Berghan et al., 2017). Due to historical discourse, this has been omitted. When examining this element, we can correlate institutional racism with certain governmental actions that breach kāwanatanga (Came et al., 2020a).

To optimise kāwanatanga in the perioperative setting, Māori expertise and governance should guide all decision-making, policy development and clincial care (Came et al., 2020b). By doing so, perioperative health professionals can engage hospital Māori support services, explore strategies to enhance cultural competency, develop effective communication techniques, understand holistic care, and embark upon self-reflective processes to achieve cultural safety (Ramsden, 1990). All of which improve health outcomes and address health disparities. This highlights the necessity to establish and strengthen Māori health working groups in surgical settings through culturally sensitive approaches, training, advocacy, and integration of Te Tiriti o Waitangi elements into policies and practices.

...biases contribute to misdiagnoses, delayed diagnoses, and inadequate referrals for Indigenous populations, resulting in disproportionately high rates of morbidity and mortality for life-threatening conditions...

Tino Rangatiratanga

This element refers to Māori self-determination and authority. It encompasses autonomy over land, water, natural resources, knowledge, language, customs, and all that was and is of value to Māori, including culture and good health (Berghan et al., 2017). It underscores the importance of whānau involvement, cultural protocols and respectful communication to support Māori patients' decision-making and care experiences within perioperative settings.

In perioperative clinical practice, incorporating whānau involvement is crucial for the overall health and wellbeing of Māori. Patients and whānau should be actively encouraged and supported by staff to participate in all aspects of care and decision-making processes (Came et al., 2020b). Staff should inquire whether the whānau or patient wish to nominate a spokesperson, acknowledging and actively involving this person throughout the care process. Providing a private room and ample time for consultation allows for meaningful involvement of whānau in decision-making. Staff should consider requests from whānau to be present during minor clinical interventions, explaining relevant health and safety protocols. Additionally, special support should be extended to whānau when death is anticipated and involve appropriate Māori staff, support services or chaplains promptly (Duncan & Rewi, 2018). Information should be communicated in multiple ways, such as spoken and written, in both te reo Māori and English and interpreters should be offered as needed, ensuring understanding through feedback confirmation loops.

Ōritetanga

Ōritetanga refers to citizenship. It enables Māori to have the same rights as English subjects, as well as the right to equitable health outcomes and opportunities (Berghan et al., 2017). Literature argues for the New Zealand health system to improve their game in terms of ethical adherence to addressing the determinants of health for Māori (Came et al., 2020a). Due to the effects of colonisation, the socioeconomic status of Māori place them in an already disadvantaged position. So, ethically, we need to prioritise Māori health above all else. Otherwise, we will never see equity.

In perioperative care, recognising and respecting Māori interconnectedness through whanaungatanga is vital. This involves nurturing relationships rooted in whakapapa, understanding the connections within whānau, hapu, and iwi (Wilson et al., 2018). Practitioners should prioritise rapport-building with Māori, respecting their cultural backgrounds and preferences. Health literacy assessments should be culturally sensitive, promoting understanding and trust. By addressing disparities and promoting informed decision-making, these efforts aim to provide equitable, culturally safe care for optimal perioperative outcomes.

Wairuatanga

Wairuatanga is the spiritual aspect of Māori health and cannot be separated from health, well-being or policy (Berghan et al., 2017). Understanding and implementing the principles of wairuatanga is essential in perioperative health practice as it encompasses sacred ideas that intertwine the physical and spiritual dimensions of patient care.

By acknowledging and respecting the beliefs and rights of Māori patients and their whānau, healthcare providers restore their mana (prestige) and empower them (Came et al., 2020a) in the perioperative setting. This recognition is crucial for maintaining tapu (sacredness) and noa (not-sacred) in healthcare practices (Berghan et al., 2017), ensuring that culturally appropriate measures are taken to uphold the well-being and dignity of patients and their whānau throughout the perioperative journey.

Moreover, integrating cultural practices such as karakia (prayer) demonstrates a commitment to supporting the spiritual needs of Māori (Duncan & Rewi, 2018). Similarly, preserving taonga (valuables) and incorporating cultural protocols into equipment processing, linen management, tissue return practices and other aspects of healthcare operations demonstrates a commitment to kaitiakitanga (guardianship) and upholding tapu in the surgical environment.

Understanding the significance of death and dying in Māori culture, including the role of karakia and tikanga in ensuring a dignified passage for the wairua (spirit), further emphasises the importance of wairuatanga (Duncan & Rewi, 2018) in perioperative health practice.

Conclusion

In conclusion, combating racism and discrimination in healthcare requires a concerted effort to enhance cultural understanding, integrate Indigenous perspectives and align policies with Te Tiriti o Waitangi. By prioritising Māori governance, self-determination, citizenship, and spirituality, healthcare systems can strive for equitable outcomes and culturally safe care in perioperative settings and beyond. This holistic approach acknowledges the interconnectedness of physical, spiritual, and cultural dimensions in promoting the health and well-being of Indigenous populations.

About the Author

Dean Cowles' *clinical background is in clinical education, theatre, PACU and public health. He has spent most of his nursing career in the public sector, and made the move into private healthcare four years ago. Dean currently works as the National Nursing Advisor for Māori Affairs, within the Nursing Directorate, at Southern Cross Healthcare. He co-chairs Kawa Whakaruruhau committees at tertiary institutions, provides consultation for perioperative groups across New Zealand and is involved in various national research projects, and runs virtual workshops and webinars for rural health practitioners to ensure his message reaches all corners of the nation. Dean has recently completed his Master's thesis exploring strategies to improve Māori health outcomes in private surgical settings, by understanding the value of Māori nurses in this space. Dean is motivated to inspire transformational change for Māori patients and whānau by re-indigenising the way in which healthcare is provided.*

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An overview of PET SCANNING and patient & staff SAFETY ISSUES

By Paul Maggs & Shona Matthews

Abstract A PET CT uses x-rays and radionucleotide combined with a pharmaceutical to help reveal the metabolic or biochemical function of tissues or organs. It is an effective and highly sensitive way to detect a variety of conditions including cancer, heart disease and brain disorders. The length of the scanner and scan itself, in combination with the radiation dose can present challenges both the patient and staff.
Keywords: Positron Emission Tomography (PET), Computed tomography (CT), pharmaceuticals, radionuclides, claustrophobia, radiation dose.

Introduction

Positron Emission Tomography (PET) has become an integral part of diagnostic imaging arsenal, although at this stage it is only provided on contract through private imaging providers in New Zealand. The following overview offers a summary of a presentation by Medical Imaging Technologist (MRT) Paul Maggs given at the 2023 Medical Imaging education morning in Auckland.

PET CT involves two imaging modalities working hand in hand. Patients having a PET CT get two scans, a diagnostic quality CT first followed by a PET scan. The CT produces anatomical images (CT) with overlaid physiological information being provided by the PET. In this way the metabolic/physiological activity of organs and structures within the body can be demonstrated and accurately localised.

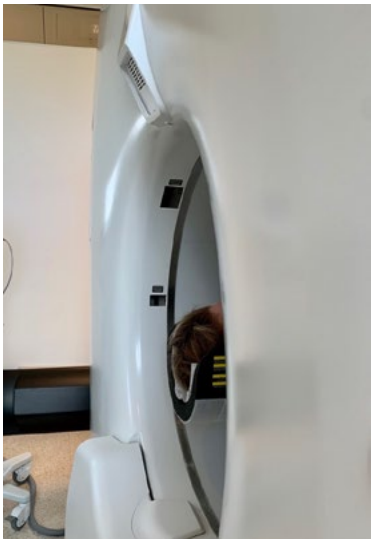
PET CT, or PET scans as they are commonly referred to, can be used to identify a range of conditions such as cancers, especially early metastatic disease, infections and inflammation. The characteristics of the scanner in conjunction with the use of radionuclides presents challenges for both patients and technical staff. The following summary provides an overview of PET imaging and then focuses on these challenges.

PET CT

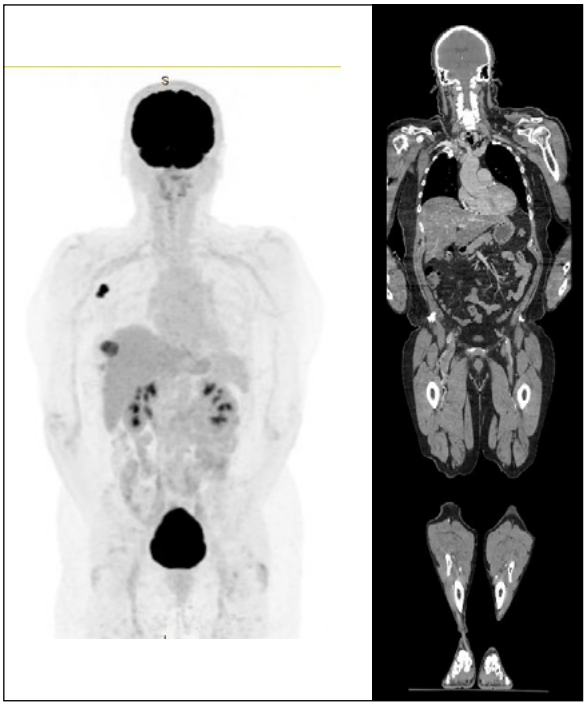
The gantry of the scanner houses two sets of imaging detectors, CT at the front and PET at the back. Patients having a PET CT scan always get two scans, a diagnostic CT scan first followed by a PET scan. The CT and PET scanners are bolted together to form a single unit which makes the bore of the scanner quite long.

The computed tomography or CT component involves rotating an x-ray tube and its detectors through 360° as the scanner table with the patient on it moves through the X-ray beam, acquiring a block or volume of data in the process. A computer then plots the x-ray intensity received at the detector(s) against the position of the tube and patient to work out where that intensity value originated.

The gantry houses two sets of imaging detectors, CT at the front and PET at the back. Patients having a PET CT scan always get two scans, a diagnostic CT scan first followed by a PET scan. Below: A patient (170cm) positioned inside the scanner.



PET image (below left) and CT (right).

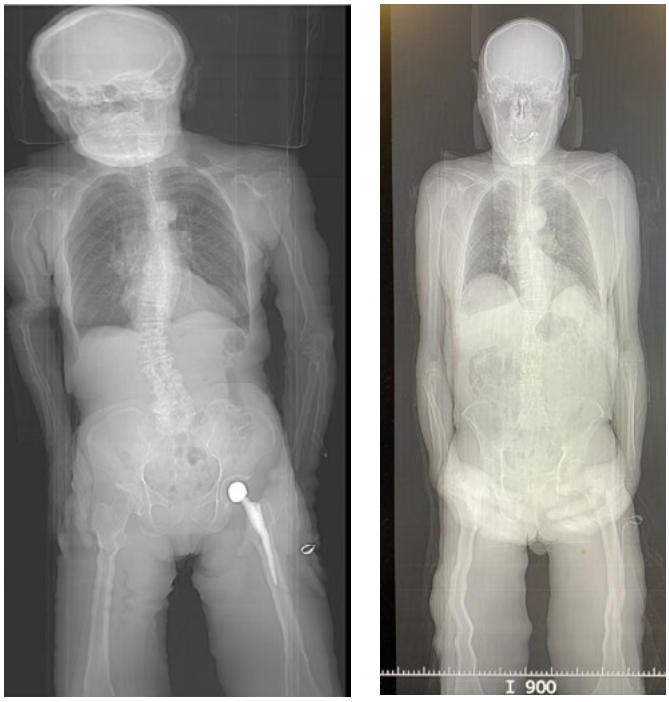


The intensity value is then converted to a grey scale value. By back plotting the point of origin, a grey scale density map of the body's internal layout can then be formed. The computer can then be instructed to 'slice and dice' the resulting volume of data in any plane and present it as slices of density information on a screen. A vertex to mid-thigh CT scan takes approximately 10 seconds.

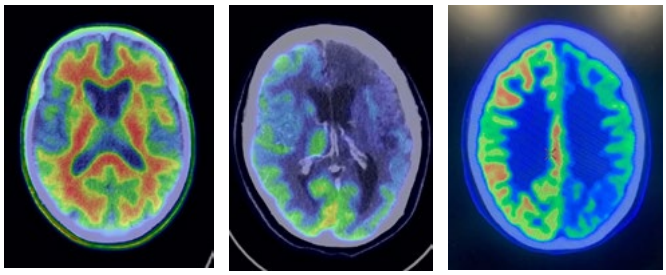
The PET component involves a ring of stationary detectors that the patient moves past with the patient themself being the source of radiation, having earlier received an injection of a radionuclide. The patient is scanned in discrete sections called 'beds' which are imaged sequentially. It takes one and a half to three minutes to obtain enough data from each bed position to create a diagnostic image. A 'vertex to thighs' scan takes approximately 15 minutes; a whole-body scan takes about 22 minutes. The spatial resolution of the images is relatively low compared to a CT scan (4-5mm v 0.5mm) (Lisa Morris,2023).

PET images appear much blurrier and/or noisier due to the relatively limited number of photons that can be collected during an imaging study. In addition, detector resolution is poorer due to the detector physics.

PET CT has certainly become an important cancer staging tool in assessing the presence and extent of metastatic disease and therefore treatment options. For example, in the Radiology department at Green Lane Clinical Centre, the Radiologist undertaking a lung biopsy now generally has access to PET CT imaging to indicate the most active / avid part(s) of the lung tumour, so that



Images showing patient movement



The brain should be symmetrically active

these can be biopsied, thus increasing the likelihood of obtaining diagnostic material.

Use of Radionuclides

PET CT requires the patient to be injected with a radioactive material called a radionuclide, an unstable element that emits high energy ionizing radiation from its nucleus. The radionuclide breaks down or decays over time by releasing or emitting positrons from its nucleus; hence the name, positron emission tomography.

A positron is the antimatter counterpart of an electron i.e. an electron with a positive charge. Radionuclides commonly used in medical imaging are Carbon[11], Nitrogen[13], Oxygen[15], and Fluorine[18]. These isotopes are relatively short-lived, optimising imaging photon counts whilst keeping the associated patient radiation dose relatively low. The rate of decay, or activity, is exponential and is determined by the half-life of the isotope/radionuclide. This is the time it takes for half of the original nuclei to decay. For example, the half-life of F18 is 110 minutes. Its activity therefore reduces by 50 percent every 110 minutes.

Radioactive rates of activity are measured in units or Becquerels (1Bq = 1 decay/second). In PET we use activities measured in megabecquerels (millions of decays per second). Patients generally require 3Mbq of activity per kilo of body mass. The dose is based on the sensitivity of the scanner's detectors and the radiologist's preference for image quality versus dose. At Astra Radiology these parameters were established by the GE applications specialist and Lisa Morris, Charge Nuclear Medicine Technologist, when the scanner was being set up.

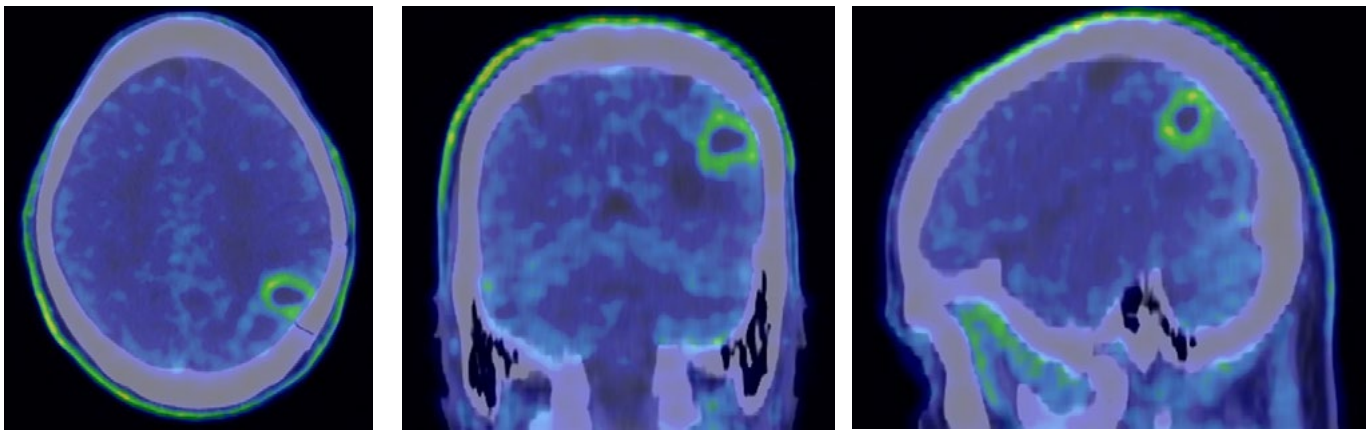
The isotope is very active initially, so about 1ml of isotope is enough to scan 10 patients. Approximately 0.1ml of the radioactive isotope is injected per patient - this is too small a volume to draw up so it is mixed with saline and delivered to the patient via an automatic injection delivery system as a 50ml bolus of isotope and saline. Because patients need 3.0Mbq of activity/kg, larger patients need more activity per unit volume of isotope hence a weight-based appointment system is used as in the morning there is more activity per ml than in the afternoon. The rate of decay must be allowed for when ordering the radionuclide the day before.

Currently the radionuclides are all made in Wellington by Cyclotek using a machine called a cyclotron. Different radionuclides are made on different days, so worklists are tailored to their production schedule. Because radionuclides decay, they must be freshly made every night and flown from Wellington in the morning. Flight delays due to weather or traffic congestion are therefore problematic and may result in patient cancellations later in the day, because the isotope's activity has dropped to a level that makes it unusable.

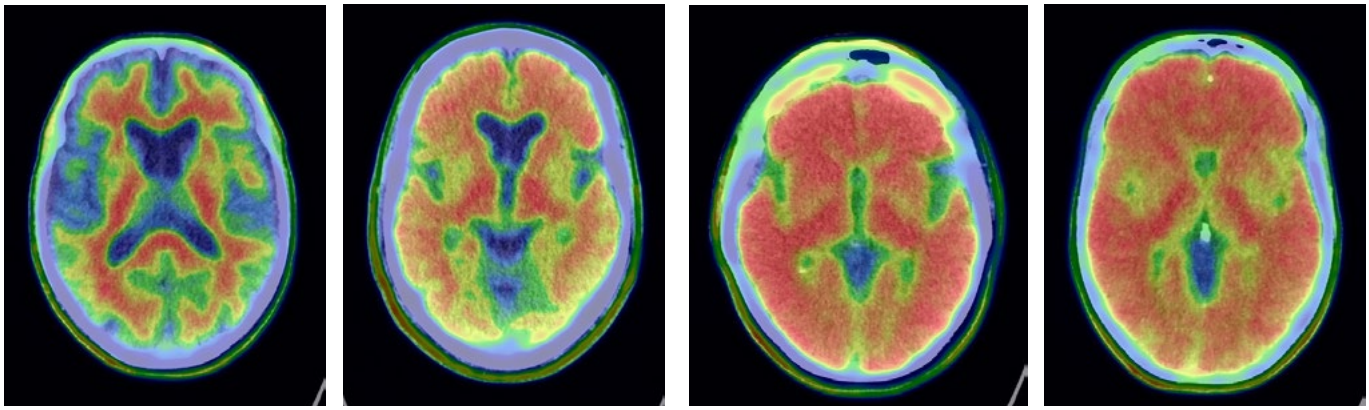
Use of pharmaceuticals

To demonstrate metabolic activity, it is necessary to use a pharmaceutical that acts as a 'carrier' for the radionuclide. Glucose, in the form of Fluorodeoxyglucose (FDG), is the most commonly used pharmaceutical as all cells metabolise glucose to some degree. When cells are actively multiplying, as cancer cells do, the uptake of glucose is significant.

Activated inflammatory cells fighting off infection and inflammation also take up increased amounts of glucose. Some parts of the body are so active that they may mask an underlying pathology. The brain and bladder are subject to this drawback. More niche pharmaceuticals can be used to target these areas, for example PSMA (Prostate Specific Membrane Antigen) which targets the



FET = [18F]Fluoroethyltyrosine brain scans for Glioma tissue. Altered perfusion and increased metabolic activity = progression



FBB = [18F]Florbetaben brain scans for β-amyloid plaques Left to right progressively abnormal scans

prostate gland, FBB (Florbetaben) which targets β-amyloid plaques in the brain and FET (Fluoroethyl-L-tyrosine) which targets high grade Gliomas.

Pharmaceuticals and diet

Patients receiving a glucose-based pharmaceutical are required to follow a low carbohydrate and sugar diet on the day prior to their scan. This is to ensure the body readily takes up or metabolises the radionuclide-laced glucose. For metabolically active organs such as the heart, a three-day diet is required as it takes longer to starve it of carbohydrates. Failure to follow the diet reduces the efficacy of the scan and will be very apparent when reviewing the images.

Potential for radiation incidents

During a magnetic resonance scan (MRI), if the patient has a claustrophobic panic attack and feels unable to continue, the scan can be abandoned without penalty. With a PET CT scan, the patient is injected with a radionuclide 60-90 minutes before the scan. From that point on staff are committed to completing the study; if the patient is unable to do so they will have been exposed to a source of ionising radiation from which they have received no diagnostic benefit. Should this eventuate, it must be managed as a radiation incident and be reported to the Office of Radiation Safety.

It is therefore important to screen patients for claustrophobia when booking an appointment. Additional screening occurs during the consent process and, occasionally, a trial run on the scanner might even be necessary prior to injection of the radionuclide to ensure the patient can cope and remain completely still. Where concern remains, an oral sedative such as Lorazepam may be used. In severe cases IV Midazolam may be given.

The importance of remaining completely still for the duration of the scan is also emphasised as additional imaging may be required if the patient moves. To this end, every effort is made to ensure the IV cannula is patent and well secured and the patient is asked to empty their bladder immediately prior to the scan. Supportive patient care and clear instruction / rationale are essential to ensuring a successful outcome.

Radiation dose

Absorbed radiation dose in tissue is measured in Sieverts (Sv). A Sievert is a large amount of radiation so occupational radiation doses are measured in millisieverts (mSv) or microsieverts (μSv).

For a radiation worker the occupational dose limit is 20mSv/year measured over five consecutive years with a maximum of 50mSv in any single year. For pregnant radiation workers and members of the public, the maximum dose is 1mSv/year (Radiation Safety Act, 2016).

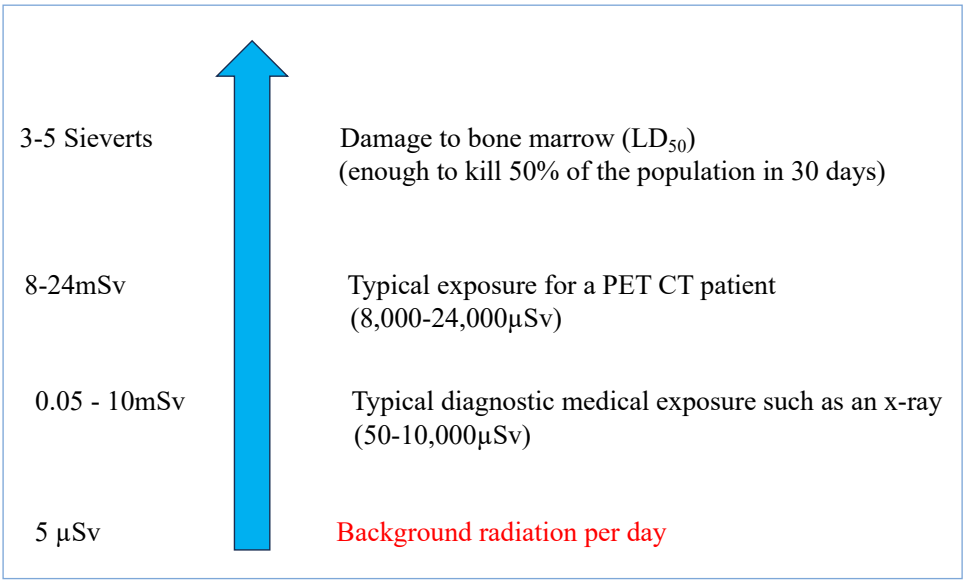
In PET CT the medical imaging technologists (MITs) and nuclear medicine technologists wear dose meters that record both the rate of exposure in microsieverts/hour (μSv/h) and the accumulated dose. In addition, the nuclear medicine technologists wear a ring dosimeter to monitor hand dose when manually injecting radionuclides.

Three key factors will influence the dose staff receive, namely:

- **distance** from the patient;
- **when** the dose was administered;
- **how long** they were in proximity to the patient.

Multiple strategies are employed to try and minimize technologists' dose. These include thorough vetting of the patient prior to the appointment and determining whether the patient is able to move independently. Those who require assistance are asked to bring a family member whilst ward patients need to be accompanied by a nurse. A comprehensive explanation of the procedure and answering all questions *prior* to the injection is crucial.

Environmental control measures include lead-lined walls and doors and a sliding lead-lined screen which protects the CT operator. The patient's



How large is a Sievert? The non-linear scale above denotes the different ranges
Source : Dr Darin O'Keeffe, Diagnostic Imaging Medical Physicist

post procedure 'cool down' room is situated next to the exit and access to the department is by swipe card only. Internal cameras are also used to monitor the patient's movements. Whenever possible, an automated injection system is used to deliver the radionuclide; when it isn't, a portable lead shield is used during hand injections. The technologists maintain distance from the patient as best they can whilst personal dosimeters provide real time feedback of the dose they are receiving. Intravenous lines are removed as quickly as possible and Coban bandages may be used to apply pressure if necessary. Upon leaving the department, patients are reminded to avoid pregnant women and small children for six hours.

The nuclear medicine technicians usually receive a dose of 3-4 µSv/day scanning a maximum of 12-14 patients per day if they use the automated injecting system, more if they hand inject.

The CT operator gets the patients on and off the scan table and removes their IV cannula, so their dose is 2-3 times higher, typically 8-12 µSv/day (Maggs, 2023). This is considered acceptable and cumulatively falls well within the occupational exposure limit of 20 mSv per year (Radiation Safety Act, 2016).

Transport and ward nurses are provided with aftercare instructions. The key points are to avoid exposure to pregnant nurses, maintain distance from the patient where possible, body fluid precautions are treated as a biohazard as usual and no 24-hour urine collection within a day of the scan. *(See sidebar article* **Nursing Staff Instructions).**

Conclusion

PET CT provides both anatomical and physiological information in a single examination. Good planning and patient preparation are key to both a good scan and a positive experience for the patient. The radiation dose the technical staff receive from the patient is actually quite small, in the presenter's case equivalent to approximately two days' worth of background radiation, assuming 10 patients per day are scanned. For ward nurses or transit nurses, the dose will be significantly lower.

PET CT is an important addition to the imaging arsenal, especially for the detection of cancer and metastatic disease, informing appropriate, targeted treatment.

About the authors

Paul Maggs *Paul Maggs was educated in England and trained as an MIT at The Middlesex Hospital in London from 1982-84. He worked at The Middlesex for 10 years before emigrating to New Zealand in 1994. He has worked at Green Lane Hospital / Clinical Centre ever since and also works for Astra Radiology, primarily in the PET CT Department. Paul was also a Unitec Medical Imaging clinical tutor for 25 years.*

Shona Matthews, MHSc (Nursing)(Hons) *Shona Matthews has worked in the medical imaging field for over 25 years and has been Clinical Charge Nurse in Radiology at Green Lane Clinical Centre since 2020. She has been actively involved with the Perioperative Nurse's College from 2009 when Medical Imaging Nurses joined the College and long-term involvement with The Dissector Editorial Committee, six years as Chief Editor. Shona and Paul have worked together for many years developing the outpatient colonography service at Green Lane and have collaborated on a number of presentations.*

Acknowledgements

The author's wish to thank Lisa Morris, Charge Nuclear Medicine Technologist at Astra Radiology for her assistance in developing the original PowerPoint on which the article is based. Lisa also checked the technical accuracy of the final article and offered further suggestions.

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Nursing staff instructions caring for patients having a F^{18} PET/CT scan

Accompanying Staff and General Nursing Care

For an F^{18}-FDG (fluorodeoxyglucose) diagnostic test, no specific extra nursing care is required except that required by the patient's clinical condition.

For diagnostic tests, the risk to staff is extremely low. Even a one metre distance between nurse and patient greatly reduces the radiation dose received. This should be noted by escort nurses accompanying patients for nuclear medicine studies. Although there is unlikely to be a significant hazard to the foetus of a pregnant escort nurse, it is sensible to avoid unnecessary radiation to a foetus. Please do not send a pregnant nurse as escort if at all possible and do not direct a pregnant nurse to give continuous, close nursing care during the first 12 hours after a patient has been administered F^{18}-FDG. The patient does not need to be nursed separately from other patients.

Body Fluids

After an F^{18}-FDG scan, urine or vomit may be slightly radioactive for a short time. This constitutes no danger to nursing staff provided they handle the body substances in an approved manner. Deal with them as biohazard, using universal precautions, i.e. *wear gloves, dispose of correctly and wash hands.* Flushing contents of bed pans and vomit bowls down the sluice is acceptable. Catheter bags may be emptied into a sluice or toilet and the urine flushed away. Contaminated bed linen should be placed in a marked linen bag and sent to the laundry.

Any spill of urine, vomit, or other body fluid should be thoroughly washed from the skin and cleared from floors etc, as is normal for a biohazard. As with any spillage, it is important that it is contained as soon as possible and not spread around the ward. However, appropriate patient care always has priority. If any staff are concerned about adequate decontamination following a spill, they should contact Astra Radiology PET/CT Department

It is preferable that a 24-hour urine collection is not made within the day after a nuclear medicine Investigation.

After a period of 12 hours, the F^{18} radiopharmaceutical has undergone nearly complete elimination via its physical and biological half-life and the patient's nursing care can return to normal.

Kathryn Maree Fraser

April 7, 1953 — May 8, 2024

A "2 BIZY" life*

After almost a lifetime dedicated to the Perioperative Nurses College, Kathryn Fraser, died on May 8. She was diagnosed then treated for breast cancer in 2010 whilst editor of *The Dissector*. Despite that, she continued to serve as Editor until September 2012.

Kathryn was an incredibly active member of the Perioperative Nurses College, serving in a variety of roles from the time she joined the then new Ruahine-Egmont Region in 1983.

She began this amazingly busy journey in 1974 when she entered the operating theatre at Palmerston North Hospital as an acting staff nurse whilst awaiting the results of her state exams. She became a Registered Nurse in December that year.

Continuing education

Almost 20 years after becoming a RN, Kathryn undertook further education through Manawatu Polytechnic, emerging with a Bachelor of Nursing degree in 1997.

She did not stop there, continuing her education. In 2004, whilst heavily involved with the Perioperative Nurses College, she graduated from Massey University with a Clinical Master of Nursing degree.

Kathryn's postgraduate studies focused on the teaching and learning of adults and older adults, with specific application to clinical practice. This provided Kathryn with new skills and expertise to then apply to her perioperative nursing specialty.

Staff development, mentoring and education provided an ongoing focus for Kathryn's nursing practice. Accompanying her energy and enthusiasm was inevitably a constant stream of ideas and projects that she had thought about during her studies. One of her key areas of interest became patient fasting times prior to surgery and the complexities of providing safe, appropriately managed care, especially in the acute care setting.

Her postgraduate study also led to a career opportunity at Massey University where Kathryn was employed part-time as a lecturer. In this role she taught the 'Introduction to Nursing and Praxis One' papers to undergraduate students. She also taught in the post graduate clinical Master of Nursing programme, including delivering the Perioperative Nursing paper.

Throughout her busy perioperative nursing career, she endeavoured to ensure that understanding self and other individual's needs underpinned excellence in nursing care, especially as patients enter the perioperative continuum.

Active PNC career

Kathryn was involved with the Perioperative Nurses College of the New Zealand Nurses Organisation from the time the Ruahine-



Left to right: Taking notes at the 2005 PNC Conference in Palmerston North. Enjoying the cocktail hour at the 2009 PNC Conference in Nelson. Kathryn (centre) with 2010 Editorial Committee members (left to right), Shona Matthews, Bettina Marenzi, Sue Morgan and Lisa Thomas-Czepanski.

Egmont Region replaced the old Wanganui-Manawatu-Taranaki Region in 1983.

In 1999 she was elected Chair of the Ruahine-Egmont PNC region, serving in that capacity until 2002. At the same time (2001-2003) she also served on the PNC Education Working Party involved in strategic planning and objectives development.

As if that was not enough, Kathryn also served as Education Committee convenor from 2003-2007.

Enjoying the challenge of taking on more PNC responsibility, from 2004 to 2008 Kathryn also served as National Representative for Ruahine-Egmont on the PNC National Committee.

Another over-lapping role was as a member of the Editorial Committee of *The Dissector* (2005-2006) in addition to being National Committee Vice Chair.

Discussing this period (*The Dissector*, March 2022, Vol. 49, No. 4), Kathryn recalled that these were "exciting times and I felt most privileged to be part of this change through the work I was doing with other Perioperative Nurses as members of the Perioperative Nurses College (PNC) — Education Committee."

"One particular evening I saw Catherine Logan and Pam Marley (founding editor) walk into the room and I felt compelled to say hello and connect with them. This was the beginning of a journey I never expected to take.

"I was very involved in the work of the PNC Education Committee and Catherine congratulated me on the work we had been doing. She then asked if I had ever considered becoming a member of " *The Dissector*" Editorial Committee. I had to say 'no, I had not.' It had never been a thought to aspire to be a member of the Editorial Committee."

Shortly after, Kathryn did become an Editorial Committee member. Ten months into this role, following the sudden death of Catherine Logan in July 2006, Kathryn was asked to fill the role of Chief Editor. She was recognised by the PNC Chair as well as Publisher Michael Esdaile as someone who could excel and move the journal forward.

The Dissector

Her energy and enthusiasm combined with her educational qualifications and writing skills made her an ideal fit. Less than two months into the role, she drove the binding and indexing of the first 30 years of journals, an initiative of Catherine Logan. Kathryn was delighted when the process was completed in the latter part of 2007.

Another journal initiative was the Incentive to Publish — a bonus awarded to College members who have articles published in *The Dissector.*

Kathryn was twice asked to extend her Chief Editor role and both times she agreed. Her six-year tenure as Chief Editor saw the journal gain international recognition, firstly in 2011 with Gale CenGage Learning requesting *The Dissector* to be available for a wider international audience. The College benefitted through

Kathryn at her laptop with the Editorial Committee at Protec Solutions' Miramar offices in 2010. Left to right: Fiona Unaç, Lisa Thomas-Czepanski, Sue Morgan, Bettina Marenzi and Joanna Cornwall.

Founding Dissector Editor Pam Marley (left) was on hand to make a presentation on behalf of the College to celebrate Kathryn Fraser's six years' as Chief Editor at 2012 PNC Conference in Wellington.

this, being recognised as the voice of perioperative nursing in New Zealand. This exposure ensured articles published in *The Dissector* would be available through the Gale full text online databases: the Academic OneFile, the Gale Nursing Resource Centre, Nursing and Allied Health Collection and the Health Reference Centre Academic.

In 2012 a similar arrangement was struck with EBSCO for the CINAHL Complete database, which also saw articles available through CINAHL via links to DHB Libraries.

During Kathryn's tenure as Chief Editor she published many articles and presented papers to perioperative nurses, locally, nationally and internationally.

She also took care of *The Dissector's* accounts. In this period, College membership was described as a "subscription" to the journal, so Kathryn had to look after that aspect as well, paying Editorial Committee members' travel costs, purchasing a lap top computer and making the Incentive to Publish payments.

In a note attached to *The Dissectors* March 2010 accounts, Mark Speer, Management Accountant in the NZNO head office wrote: "I am pleased to attach *The Dissector's* Financial Statements for presentation to the 2010 PNC AGM. This was the result of your excellent work in providing everything I needed for the PNC 2010 audit. Thank you."

When she stepped down as Chief Editor in 2012, that accounting role was taken over by long-serving PNC Treasurer/Secretary Berice Beach.

Conference organisation

Kathryn was also involved in the organisation of a number of national PNC conferences staged by Ruahine-Egmont and became a mentor to many nurses, helping and encouraging them in their practise.

With the September 2012 edition, Kathryn stepped down as Chief Editor of *The Dissector* and was awarded life membership of PNC. She was responsible for overseeing the publication of 25 editions of the journal, the most for which any editor has been responsible.

She was further recognised in 2015 when she was presented with the Christina Ackland Award for Outstanding Service to the Perioperative Community — a most deserved award.

Kathryn retired as Professional Development and Recognition Programme (PDRP) coordinator at Palmerston North hospital in 2022 but continued an active role in PNC, as Chair of the Ruahine-Egmont Region until the 2024 Annual General Meeting, when she handed the Chair to Michelle Argyle.

Kathryn is survived by husband Con, step-daughter Kim, daughters Emma and Junell and son Ian. She is also survived by: step-grandson Emilio and grandchildren: Lily, Toby, Harriet, Georgia, and Eilidh. Her seventh grandchild was born on June 10, Brinn Duncan Fraser, an event death cheated Kathryn from witnessing.

At the time of her passing, her family stated "we are so proud of the strength she showed over the last 14 years" as her cancer took stronger hold of her health.

A celebration of Kathryn's life was held on May 14, 2024, at The Cathedral of the Holy Spirit in Palmerston North: attended by family, relatives, friends and nurses.

In her Tabletalk column this issue (Volume 52 Number 1), PNC Chair Cassandra Raj reflects on Kathryn's "extraordinary contribution and dedication to the perioperative community of Aotearoa, New Zealand and beyond.

"PNC is saddened by this news and pleased to remember Kathryn's contributions and achievements within this 50th year of celebration of *The Dissector.*"

— Bettina Marenzi, Bron Taylor & Michael Esdaile

*Kathryn Fraser's car number plate was 2 BIZY and her private email address was twobizy@gmail.com

The Publisher reflects

Kathryn Fraser definitely stamped her mark on *The Dissector*. She brought a new rigour to the Chief Editor's role and was a stickler for correct referencing.

In that era, proof-read copies of articles were returned to Advantage Publishing by post, or facsimile. It was not unusual to see multiple corrections and in some cases complete re-writes of entire paragraphs on Kathryn's proof copies.

Editorial Committee meetings were held in person, mostly in Wellington, either at the NZNO offices or at an upstairs office at Protec Solutions in Miramar, courtesy of friend of the College, Murray McIvor.

Feeling her way into the Chief Editorship, often Kathryn would have us in there for most of a day and would type the minutes as the meetings progressed.

Kathryn had high standards. She also had a collegial approach to her role, encouraging first time authors, something reflected in her initiative to establish the Incentive to Publish scheme.

On reflection, I believe her immediate predecessor, Catherine Logan, was aware of her own ill-health and identified Kathryn as the ideal person to continue her role. At no point did we hear a complaint from either these two remarkable women, despite their health issues.

It is with great sadness that I say farewell to Kathryn Fraser, a truly wonderful colleague. Rest in peace.

— Michael Esdaile

New Surgical light from Keyport

HAMILTON-based medical supplies company Keyport is offering a new era of surgical lights. This is the Sim.LED 8000 series from German manufacturer Simeon Medical. The Sim.LED 8000 has a uniquely intuitive user philosophy and an outstanding and innovative illumination — the ideal solution for all applications, needs and challenges in everyday surgery. The Sim.LED 8000 offers:

- Shadow-free light;
- Active shadow management;
- Excellent depth illumination;
- Dimmable endoscopy light Sim.BIANCE;
- Innovative Anti.BAC® antibacterial coating;
- Reduction of germs by 99.99%
- Easy cleaning of high-end materials.

Operation of all functions of the Sim.LED 8000 is via intuitive gimbal control as well as optional wall touch control. For more details contact Keyport: **0800 KEYPORT** (0800 539 7678) or email: info@keyport.co.nz

The Device Technologies Group acquires Denyers International

As one of Australia and New Zealand's longest-established medical companies, Denyers International is an industry leader in the design and manufacture of quality surgical operating tables, surgical table accessories, and other surgical products. Denyers now joins the Device Technologies Group, which, for more than 30 years has provided innovative theatre equipment and medical technology to the Australian and New Zealand market to help support healthcare professionals in delivering quality patient outcomes.

For more information on the entire Denyers range, visit www.denyers.com.au or email sales@denyers.co.nz.

Cubro introduces Mangar swift transfer slide

The Mangar swift transfer slide is designed to transfer and reposition patients in the supine position with minimal moving and handling force needed, while providing a stable, safe experience for the patient.

Able to be powered by both mains and battery, the Mangar swift transfer slide lifts up to 500kg. Available in both reusable and single-patient use versions.

For more information contact Cubro: **0800 101 255** or email: hospitalcare@cubro.co.nz Alternatively click on https://www.cubro.co.nz

InterMed expands ANZ presence with AMSL & NZMS acquisitions

InterMed Medical Limited (InterMed) has acquired the Medical, Scientific, and Regenerative Medicine divisions of Australasian Medical & Scientific (AMSL) and New Zealand Medical & Scientific (NZMS). The acquisitions took effect on February 1, 2024 and significantly expanded InterMed's footprint in the ANZ region.

"InterMed's acquisition of these AMSL and NZMS divisions marks a transformative opportunity for the company. Through these businesses, InterMed will not only strengthen its presence in the medical market but also extend its reach into the new and exciting areas of Regenerative Medicine and Scientific solutions" remarked InterMed CEO, Andrew Hickey.

As part of this acquisition, InterMed welcomed more than 30 experienced professionals from AMSL and NZMS into the InterMed team. These individuals brought with them extensive product expertise, market knowledge, and dedication to excellence in customer service and logistics which will further enhanced InterMed's company culture and the ability to deliver solutions to customers.

InterMed was established in the New Zealand healthcare market in 1980 and expanded into Australia in 2013.

For more information call 0800 333 444 or email: info@intermed.co.nz or click on: https://intermed.co.nz/

Bamford single-source ordering for Defries' products

After nine years' direct marketing and sales of its products from its Melbourne base, Defries Industries has handed that role back to Wellington-based W.M. Bamford & Co Ltd.

Bamford and Defries have had long-standing 40-year relationship. Known for its wide range of single-use sterile medical products, Defries offers operating theatre consumables, IV pressure dressings and customised procedure packs.

Wayne Titmus, a familiar face among the Perioperative Nursing community, will continue to work very closely with Bamford to support the Defries range in New Zealand and is looking forward to catching up with everyone at the October 17-19 PNC Conference.

For more information on the Defries Industries range, contact Cam Weitz, Clinical Manager, Bamford on 021 764 009 or cam@bamford.co.nz

Working outside normal areas of practice

This was the first webinar established by the Perioperative Nurses College of the New Zealand Nurses Organisation (PNC[NZNO]). The aim was to have each PNC Region provide a one-hour presentation for perioperative nurses once a month.

During the Covid pandemic, many questions were raised to National Committee regarding perioperative nurses working in other areas, especially with the increase in acute services, with many nurses required to retrain or be redeployed as elective care halted.

In response, Suzanne Rolls, Professional Nursing Advisor to the Perioperative Nurses College (PNC), put together this webinar, which remains applicable as New Zealand experiences a chronic nursing shortage and nurses continue to support other working areas either within other perioperative environments or outside of this realm.

The speaker covers the regulatory requirements of the New Zealand Nursing Council and their responsibility to regulate nursing practice and protect the public, health and safety and nurses' competencies with fitness to practice. She discusses the nurse's individual responsibility to self-regulate — what do you bring to your practice — your nursing knowledge, skills and attributes? How do we prepare ourselves to practice? Key areas to help transition and decrease workplace stress included each District Health Board having guidelines on the principles of redeployment, defined role definition, good communication, supporting staff through supervision and retraining as required. Nurses also have a responsibility to speak up if not competent. Ask for advice and know your boundaries. The take home message is how can we as nurses be a flexible workforce.

To view this inaugural webinar, click on this link: https://myhealthhub.co.nz/pnc/ and scroll down to **Recorded Webinar #1:**

Perioperative management of patients with diabetes

In this talk, Amber Cox Perianesthesia Nurse/Nurse Educator Wairapa, covered adult diabetic patients and their comorbidities and management in the perioperative environment.

We need to be aware that New Zealand is in no way exempt from the worldwide epidemic increase in diabetes and pre-diabetic patients. However, we need to be aware that some aspects of diabetes are a fixable problem.

Amber discussed the different types of diabetes — type 1, 2 and gestational, and the systemic effects on coronary arteries, cerebrovascular and peripheral vascular disease, autonomic and peripheral neuropathy and the foetus.

During the pre-operative stage, we need to ensure we are familiar with hospital policy and preoperative diabetic assessments are undertaken, baseline bloods and current medications are recorded. Amber identified perioperative problems, such as increased blood sugar levels caused by surgical stress, fasting, loss of consciousness masking symptoms of hypoglycaemia, disrupted circulation and the potential lack of insulin absorption and difficult intubation.

Post operatively, patients have an increased risk of wounds healing slower and infection which can be helped by using appropriate dressings such as Prevena incision management system or PICO wound vacuum dressing. Goals for postoperative management included maintaining fluid and electrolyte balance, preventing ketoacidosis and preventing deep vein thrombosis and pulmonary embolism.

To view this webinar, click on this link: https://myhealthhub.co.nz/pnc/ and go to Part 2 of **Recorded Webinar #1.**

— Rebecca Porton-Whitworth

Challenges & rewards of nursing a surgical patient in a bicultural context

Karen Hall's on-going research through past issues of *The Dissector* has produced another great historic article. In 1990, suture maker **Davis & Geck** sponsored a Theatre Nurses Scholarship in the form of an Essay Competition. Wellington's Shirley's McGirr was the winner with her dissertation highlighting the challenge and rewards of nursing a surgical patient in a bicultural context. It was published in 1990, Volume 7, Number 1-2. We reproduce the essay here:

Introduction

The following is an account of the perioperative nursing care for Moana, a client undergoing a total abdominal hysterectomy in response to a C.A cervix. The paper opens with a client profile and description of the initial nursing assessment and extends to describe events surrounding Moana's perioperative care. Of particular interest is the impact of her family throughout the experience. Particular emphasis is given to psychosocial and cultural aspects. In conclusion an evaluation of the care provided for Moana is considered.

Client Profile

Moana is a 26-year-old Māori woman. A single parent with two sons aged two years and eight years, she is supported by a Social Welfare benefit. Moana is 1.6m tall and is moderately obese, weighing 85 kgs. She has non-insulin dependent diabetes mellitus (NIDDM) which is controlled by Glibenclimide tablets — 2.5mg b.i.d. and diet. Moana describes herself as a light smoker — approximately six cigarettes per day. Moana lives alone with her youngest son but within close proximity to her large extended family who permanently care for her older son.

Assessment

Moana was admitted to the ward the morning prior to surgery day, accompanied by her small son and several female relatives. She agreed to have a first year student nurse as her primary care-giver and advised she was familiar with the ward due to her recent previous admission for related diagnostic tests.

After an initial reorientation to the ward, a loosely structured plan for the day was discussed with Moana and a time was set for a nursing assessment interview later in the day. In the interim, Moana was attended at intervals to ascertain and meet needs, provide emotional support through being present and to build a rapport through nurse-client contact.

The nursing assessment interview was conducted in a private room using the Marjory Gordon assessment framework, integrating the Maori Health concepts of Te Taha Wairua, Te Taha Hinengaro, Te Taha Tinana and Te Taha Whanau.

Moana's son was provided with playthings and the atmosphere was relaxed and as free from interruption as possible.

The interview exposed a number of concerns held by Moana. Regarding physical aspects of her surgery, Moana specified fears concerning postoperative pain and vomiting, scarring and wound dehiscence.

Moana was also very anxious about undergoing anaesthesia, frequently making statements such as "I'm scared I won't wake up." In addition, it was evident a knowledge deficit regarding surgical and perioperative nursing procedures was of concern. Further, Moana was troubled by the nature of the proposed surgery and the knowledge that hysterectomy meant she would be unable in particular to bear a female child. The problem was exacerbated by female relatives with daughters making taunts about Moana's future inability to bear a female child. The assessment highlighted several specific potential problems; for example, respiratory complications related to smoking and obesity, circulatory problems related to smoking and diabetes mellitus and potential alimentary tract problems related to abdominal surgery.

Finally, and regretfully, Moana's wairua was jeopardised when nursing staff and student tutors thrice confirmed to Moana changes of plan as to whether the first-year student (primary nurse), with whom Moana had established a relationship of confidence and trust, or a senior student unknown to Moana, would accompany her through her theatre experience. Moana's immediate and sustained response was "I'm not going if she's (primary nurse) not going".

The incident was a complete contradiction of client welfare being paramount and was quite upsetting to an already very anxious and frightened client.

Client education was perceived as a major priority, to reduce anxiety levels. Using appropriate terminology, nursing procedures were explained, as was the need for BM Stix testing at six hourly intervals. Postoperative deep breathing exercises, coughing and leg exercises were demonstrated and repeated with humour by the client. Acceptable methods of postoperative pain control were discussed and whether or not Moana wished to have her excised body tissue restored to her in respect of cultural needs. The use of antibiotics was explained and in relation to Moana's status as

NIDDM, she was advised about diet and offered the expertise of a dietitian — which she declined. Finally, due to the period of anorexia associated with surgery, Moana was advised the Glibenclimide tablets she used for diabetes control would be withdrawn the evening prior to surgery and re-instituted once her gastrointestinal system recommenced functioning postoperatively.

Perioperative Period

An important feature of Moana's care was the presence of her family for support, companionship and security — Moana found the hospital environment very threatening. Family members remained with her until evening and returned in the morning with her two sons. As Moana did not leave for theatre until late afternoon, the presence of her family was of considerable importance to her psychological and emotional wellbeing.

During surgery the uterus and cervix were removed and at time of wound closure the anaesthetist put up 1000ml Dextrose IV. Moana stabilised in the recovery room until well enough to return to the ward at 6pm.

As a student nurse with barely 12 weeks under her belt at this stage, the connection was not made by the writer between Moana's status as NIDDM and the anaesthetist's error of infusing I.V. Dextrose. Fortunately, the ward staff were quick to notice and a BM Stix indicated blood sugar was stable at 6m.mol/L. IV normal saline was then administered.

Moana mobilised early Day One postoperatively and, with the drip removed from her arm, was encouraged to attempt voiding urethrally as she was not catheterised intraoperatively. Eight hours postoperatively, Moana was experiencing abdominal discomfort due to bladder distension. To alleviate this, an intermittent catheter was introduced to relieve the bladder. A fluid balance chart was maintained_in order to monitor Moana's fluid balance status. All routine postoperative observations and recordings were performed and six hourly BM Stix were done to monitor blood sugar levels in relation particularly to perioperative anorexia.

Bladder tone returned sufficiently for Moana to pass urine urethrally Day Four postoperatively and prior to that it was necessary to maintain an indwelling catheter. The catheter was clamped Day Two postoperatively and double voiding was encouraged. In addition, fluid intake of at least 3L/24 hours was instigated to promote bladder function and prevent urinary tract infection. The gastrointestinal tract became progressively more viable and Moana achieved approximate preoperative equilibrium quickly.

A major factor facilitating Moana's uncomplicated recovery from surgery and prompt discharge from hospital was the support and comfort afforded by the presence of family members. At any one time up to 13 relatives with children were with Mana during her postoperative recovery period. This presented staff with a dilemma — balancing Moana's affiliation needs with her physical needs for rest and recuperation. Maximum consideration was awarded to Moana's need for close family attendance: her two-year-old son and several other small children were jumping on her bed, several relatives were in the room talking with Moana and watching television and it was increasingly obvious Moana was enduring pain and discomfort from her abdominal wound and postoperative fatigue.

Moana agreed to I.M. Pethidine pain relief and nursing staff discussed with Moana and her relatives the need for her to have rest. Moana refused to let her son out of her sight but indicated to all but one of the female relatives to leave her room.

The sensitive charge nurse had put Moana into a single room which led into the large foyer and public lounge area. This enabled the relatives easy access to Moana and provided space for the children to run (riot!). It was difficult to achieve and maintain a therapeutic balance because invariably large numbers of relatives soon gravitated back into Moana's room to talk, watch television and effectively prevent Moana resting. In an effort to control the migration, the doors to the lounge and Moana's room were closed but the implied desire for visitor restriction was by and large ignored.

The psychological and emotional benefit to Moana having her relatives present though was evident by her consistent expression of her desire for family to remain with her.

With restoration of physiological function, instruction regarding follow-up care, an appointment arranged with her GP and social worker and time to discuss any last concerns, Moana was discharged into the care of her family five days post-operatively.

Evaluation

In conclusion, the standard of care Moana received during her surgical experience must be evaluated. Certainly, the introductory and assessment phase saw the provision of quality care — a warm relationship and rapport was established and Moana appeared reasonably confident and well prepared for her surgery.

The incident with staff and tutors that so disconcerted Moana on the morning of surgery however, was quite unacceptable and should be considered an example of poor professional judgement on the part of the two nursing tutors. In mitigation the episode might honestly be said to reflect the struggle involved in providing students with maximum experience in what is often perceived as being an unacceptably scarce allocation of clinical practice time.

The matter involving infusion of dextrose into a diabetic client is disquieting and highlights the need for the utmost vigilance by all staff, particularly when the client is so totally dependent on staff advocacy. Lastly it is rewarding to consider the manner in which Moana's preferences in deference to her culture were acknowledged. At times it was very difficult to balance the needs of Moana, her family, nursing staff and other clients. Overall care seemed to be satisfactory and it was a rewarding experience for the writer to be involved in Moana's care.

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