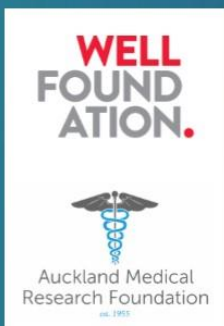


**Te Whatu Ora
Waitematā
University of
Auckland
AUT**

**Collaborative
Research
Symposium
2023**

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**MEDICAL AND
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***Collaborative Research Symposium
Online Event Programme
22nd May 2023***

Te Whatu Ora - Waitematā, University of Auckland and AUT Collaborative Research Symposium 2023 Online Event Programme - 22nd May 2023

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Event

The 2023 Te Whatu Ora Waitematā, University of Auckland and AUT Collaborative Research Symposium will be held as an online forum from 22 May 2023, with an awards, networking event at Whenua Pupuke, North Shore Hospital, on 24 July.

[Research Symposium | Te Whatu Ora - Waitematā \(waitematadhb.govt.nz\)](https://waitematadhb.govt.nz)

Entry criteria: The research must be connected to the Waitematā District community through population, location, or contributors. Weighting will be given to projects which have a strong connection to the Waitematā District and which align with the [national research strategy](#).

Awards

Oral Presentation Awards:

Waitematā - AMRF Best senior presentation
Waitematā - AMRF Best Emerging researcher
AUT Most Impactful Allied Health Research
AUT Most Impactful Nursing or Midwifery research
UoA Best Māori Researcher
UoA Best Pacific Researcher

Poster awards:

WellFoundation - Best Poster
Waitematā People and Culture - People's choice

Welcome mihis

2 minute welcomes from all 3 organisations.

- Dr Jonathan Christiansen, Chief Medical Officer,
Te Whatu Ora Health New Zealand – Waitematā
- Professor John Fraser, Dean of Faculty of Medical and Health Sciences,
Waipapa Taumata Rau, University of Auckland
- Professor Nicola Kayes, Professor of Rehabilitation and Associate Dean of Research,
Faculty of Health and Environmental Sciences,
Auckland University of Technology, Te Wānanga Aronui o Tāmaki Makau Rau

Oral Presentations

10 min talks on the research topic.

1. Changing the script: medicine optimisation recommendations made during proactive multidisciplinary meetings with older adults

Presenter: Dr Katherine Bloomfield

Authors: Dr Katherine Bloomfield, Dr Joanna Hikaka, Ms Julia Brookes, Dr Zhenqiang Wu, Ms Annie Tatton, Ms Cheryl Calvert, Dr Michal Boyd, Dr Kathy Peri, Professor Martin Connolly.

Te Whatu Ora - Waitematā Older Adult Services; Department of Medicine, University of Auckland.

Abstract:

Background: Inappropriate medications and polypharmacy have the potential to cause harm, particularly in older adults. Prescribing recommendations, such as the STOPP/START guidelines, are available to help facilitate appropriate prescribing in older adults.

Aims: We performed a randomised controlled trial (RCT) of a multidisciplinary (MD) intervention versus usual care in retirement village residents in the Waitematā and Auckland area health districts, with the aim to reduce hospitalisations. Here we describe the medicine optimisation recommendations made during a MD meeting undertaken as part of the active arm of RCT.

Methods: 173 residents participated in the active RCT arm which included a 45 minute meeting with resident (+/- support person) and older adult specialist research team (clinical pharmacist, geriatrician or nurse practitioner, and gerontology nurse specialist). Recommendations, including medicine-related and other healthcare guidance, were agreed with participants, formally written-up, and provided to general practitioners and participants. Medicine-related recommendations were retrospectively reviewed to describe the number and type of (start/increase, stop/reduce) drug recommendations made at MD meetings and alignment with STOPP/START guidelines.

Results: Mean age was 81 years, 128 (74.0%) were female. One hundred and thirty-five (78.0%) participants had 310 medicine optimisation recommendations, averaging 1.8 per participant. Eighty-nine (28.7%) recommendations aligned with STOPP, 33 (10.6%) with START guidelines and 188 (60.6%) were independent of STOPP/START guidance. The most common drugs recommended to stop/reduce: statins (n=31), proton-pump inhibitors (n=20) and diuretics (n=16). The most common drugs recommended to start/increase: paracetamol (n=29), vitamin D (n=14) and topical analgesics (n=11).

Discussion: An individualised, holistic approach to appropriate prescribing based on understanding patient needs and goals and supported by specialist knowledge is the likely reason that a large number of recommendations were made additional to STOPP/START guidance.

Conclusion: Integration of clinical pharmacists in primary care and improving communication between primary and secondary care may improve appropriate prescribing.

Acknowledgements:

Funding: Ageing Well National Science Challenge, Ministry of Business, Innovation & Employment, New Zealand (Project EO-R - UOOX1901, 18450 SUB 1939) and Waitematā District Health Board

2. Frailty, quality of life and resilience in a cohort of retirement village residents

Presenter: Dr Katherine Bloomfield

Authors: Dr Katherine Bloomfield, Dr Zhenqiang Wu, Dr Joanna Hikaka, Ms Annie Tatton, Ms Cheryl Calvert, Dr Michal Boyd, Dr Dale Bramley, Prof Martin Connolly

Te Whatu Ora - Waitematā Older Adult Services; Department of Medicine, University of Auckland

Abstract:

Background: Frailty is a syndrome characterised by increased vulnerability to adverse outcomes including physical, cognitive and/or social decline.

Aims: To a) design a frailty index (FI) and assess frailty prevalence in older adults residing in retirement villages (RVs) in Waitematā and Auckland areas, b) assess the impact of a previously performed randomised controlled trial (RCT) of a multidisciplinary (MD) intervention on frailty, c) analyse the relationship between frailty, quality of life (QoL) and resilience.

Methods: The 'RV study' included 578 participants with baseline interRAI data (2016-2018). In 400 at-risk residents, an RCT of MD intervention versus usual care to reduce acute hospitalisations, long-term care (LTC) admission and mortality was undertaken (2017-2019) with no effect seen. In our extension study we developed a FI from baseline interRAI data and studied its association with adverse outcomes. Repeat interRAI data was collected in 479 of the original 578 participants (2019-2020). General linear models were used to study effects of intervention on FI in subset of RCT participants. Regression analysis was used to study associations between FI and QoL/resilience.

Results: Baseline mean (SD) FI was 0.16 (0.09) with 19% moderate-severely frail. Baseline FI was associated with prior and future acute hospitalisations, LTC and mortality. At follow up, mean FI was 0.19 (0.09), 31% moderate-severely frail. There was no significant difference in FI between intervention/control arms of RCT. Follow-up FI was associated inversely with QoL and psychological resilience.

Discussion: Frailty is common in RV residents and increases with time. Possible reasons for negative RCT results will be discussed. While prior studies have found association with frailty and QoL, very few have addressed the association with frailty and resilience.

Conclusion: Future analysis will determine personal and/or RV-level factors associated with change in frailty, thereby informing potential future interventions to improve health and wellbeing outcomes.

Acknowledgements:

Funding: Ageing Well National Science Challenge, Ministry of Business, Innovation & Employment, New Zealand (Project EO-R - UOOX1901, 18450 SUB 1939), and Waitematā DHB.

3. “I don’t want to be here... let’s get out of here, let’s get moving”: older adults’ perspectives on successful rehabilitation.

Presenter: Mr Oliver Frear

Authors: Mr Oliver Frear, Dr Katherine Bloomfield, Dr Michal Boyd, Professor Vanessa Burholt

Te Whatu Ora - Waitematā Older Adult Services; University of Auckland, School of Medicine/Dept of Medicine and School of Nursing

Abstract:

Background: While clinicians and healthcare management likely see successful rehabilitation in terms of length of stay, discharge destination and objective clinical markers, it is unclear what older adults undergoing rehabilitation themselves see as markers of rehabilitation success. Understanding the perspectives of those engaged in rehabilitation potentially allows for greater patient-centered care and understanding of what is of value to patients.

Aims: To investigate what successful rehabilitation means to older adults undertaking inpatient rehabilitation at Te Whatu Ora Waitematā (TWO-W).

Methods: A convenience sample of cognitively intact older adults on three inpatient rehabilitation wards at TWO-W, as identified by ward clinicians, were approached to participate. Consenting older adults undertook an individual semi-structured interview by a member of the research team exploring their thoughts on successful rehabilitation. Interviews were audio-recorded, transcribed and a general inductive analysis of emerging themes was undertaken.

Results: Fourteen older adults participated: 9 women, 4 Māori, 1 Pasifika, mean age 78 years. Four themes emerged: 1) unacknowledged psychological experiences (grief, fear, uncertainty, frustration, acceptance); 2) multidimensional components of successful rehabilitation (achieving goals, individual mental attitude, trust in staff expertise, whānau/cultural/spiritual support, staff shortages); 3) communication and the importance of providing knowledge; 4) the language of rehabilitation (reflecting power structures and institutionalised knowledge about health professionals expectations).

Discussion: Older people framed success around achieving a normal life with multiple factors impacting on this. Participants perceived themselves as determined and optimistic, perceiving this attitude crucial to their success. There was satisfaction with professional expertise and attention to physical health, however many experienced psychological distress that was not addressed and impacting on their rehabilitation.

Conclusion: Inpatient health psychology input, provision of timely information and adequate staffing would likely aid patient wellbeing and contribute to rehabilitation success as determined by patients.

Acknowledgements:

Oliver Frear was funded by University of Auckland summer studentship program

4. A Decision Support System at Adult ED Triage for predicting health outcomes

Presenter: Dr Zhenqiang Wu

Authors: Dr Zhenqiang Wu¹, Dr Kate Allan², Dr Natalie Anderson³, Ms Sue Lamb², Ms Annie Park⁴, Prof Robert Scragg⁴, Prof Martin Connolly^{1,2}, Dr Joanna Broad¹, Dr Laura Chapman²

¹Department of Geriatric Medicine, Waitematā Clinical Campus, University of Auckland; ²Te Whatu Ora – Waitematā; ³School of Nursing, University of Auckland⁴; School of Population Health, University of Auckland

Abstract:

Background: Emergency department (ED) overcrowding is a major global healthcare issue, making it crucial to improve the problem through innovative research. Triage is the first point of contact between patients and ED, thus improving the accuracy of triage may optimise resource allocation and use with better patient outcomes.

Aims: To develop a decision support system (clinical prediction models) at ED triage time to predict healthcare outcomes. It is not to replace triage assessors but to provide relevant knowledge and timely support for their decision-making.

Methods: This was a retrospective cohort study including five years (2016-2021) of ED presentation data from two Waitematā hospitals. All adults with an ATS triage code were eligible for the study. The routinely collected data before and at triage were used to develop and validate prediction models for predicting hospital admission, mortality and other healthcare outcomes. The data were divided into training (60%), validation (30%) and test (10%) datasets. Both traditional regression and progressive modelling approaches were utilised.

Results: Analysis and model development included 530,165 presentations from 197,942 adults, with a mean (SD) age of 53 (22) years. Of these presentations, 65% were European, 12% Māori and 9% Pacific. All models for hospitalisation prediction had significantly higher discrimination and calibration ability than the reference model (triage code only); in validation, neural network, and logistic regression models exhibited the strongest ability to discriminate with c-statistics of 0.86 and 0.85, respectively. The highest discrimination ability was 0.94 for mortality in hospital, 0.91 for ICU admission, and 0.68 for ED representation in 7-day.

Discussion & Conclusion: As a proof of concept, prediction models utilising routinely collected hospital data for patient care have an excellent ability to predict hospital admission, mortality, and ICU admission. These models show potential for decision-support for triaging practice, for prioritising patients and for resource allocation.

Acknowledgements:

This study was funded by the Precision Driven Health (PDH)-Health Research Council of New Zealand (HRC) Postdoctoral Fellowships grant (22/862). We would like to express our gratitude to the staff at the Research & Knowledge Centre, i3 (Institute for Innovation + Improvement), and Health Information Group of Te Whatu Ora - Waitematā for their assistance in the locality application and accessing the data. We also thank the data scientist team of PDH and the research support team from the University of Auckland for their invaluable support.

5. A Clinicians' and Patients' Survey to Examine PreventS-MD Software Usability for Primary Stroke Prevention (PRIME)

Presenter: Anjali Bhatia & Jesse Dyer

Authors: Anjali Bhatia, Jesse Dyer, Bala Nair, Dr Yogini Ratnasabapathy, Luke Skinner, Dr Joyce Wan, Dr Alex Merkin, Prof. Rita Krishnamurthi, Prof. Valery Feigin

Te Whatu Ora - Waitemata Stroke units; National Institute of Stroke and Applied Neurosciences (NISAN); Auckland University of Technology (AUT).

Abstract:

Background: Stroke is a leading cause of death and long-term disability affecting all ages, ethnicities, and socioeconomic groups. Over the last decade, an increase in stroke incidence rates among young adults has been observed, particularly among Māori and Pacific people, in comparison to European New Zealanders. Despite the impact of strokes, many clinicians lack tools tailored for stroke prevention. With PreventS-MD software, clinicians can measure the risk of stroke and provide patient-tailored recommendations in minutes.

Aims: We aimed to examine patients' and clinicians' impressions of the usability of the PreventS-MD software for stroke prevention and optimise the PreventS-MD software based on their feedback interview.

Methods: The study interviewed two clinicians from stroke clinics and ten patients from the outpatient clinic of Te Whatu Ora Waitemata. These patients underwent stroke assessment assisted by PreventS-MD software and were provided with an assessment summary and recommendations generated from the software. Semi-structured interviews were conducted with the clinicians after assessments; and with the patients at baseline and one month after screening. The audio recordings were transcribed, and the data were thematically analysed using NVivo analysis.

Results: The clinicians indicated a higher value for PreventS-MD in stroke prevention and the convenience of using a web-based software interface. The patients shared that the recommendations were easy to understand and resulted in 100% compliance at one month, including readiness towards change to a healthier lifestyle. They believed the recommendations were tailored and aimed to improve their health and lifestyle.

Discussion: The software facilitated the provision of person-centred stroke prevention recommendations while saving clinician's time. It reduced the gap between current stroke prevention knowledge and community awareness.

Conclusion: Clinicians and individuals at risk of stroke demonstrated high confidence and motivation in the recommendations. With this technological breakthrough, clinicians and communities can work towards preventing strokes and reducing their impact on individual lives.

6. Beatwise ECG Classification for the Detection of Atrial Fibrillation with Deep Learning

Presenter: Mr Vincent Jiayuan Yang

Authors: Mr Vincent Jiayuan Yang, Prof Bruce H. Smaill, Patrick Gladding, Dr Patrick Gladding, Assoc Prof Jichao Zhao

Asian International Collaboration, Te Whatu Ora

Abstract:

Background: Atrial fibrillation (AF) is the most common, sustained cardiac arrhythmia. Early intervention and treatment could have a much higher chance of reversing AF. An electrocardiogram (ECG) is widely used to check the heart's rhythm and electrical activity in clinics. The current manual processing of ECG and clinical classification of AF types (paroxysmal, persistent and permanent AF) is ill-founded and does not truly reflect the seriousness of the disease.

Aims: The aim of this paper is to propose a new machine learning method for beat-wise classification of ECG to estimate AF burden, which was defined by the percentage of AF beats found in the total recording time.

Methods: We proposed a novel deep learning model to process arbitrary length of ECG, to classify each heartbeat into the following classes: Sinus Rhythm, AF, noise and others. The model consists of two deep learning networks: a 1D U-Net and a Recurrent Neural Network. These networks analyse each heartbeat both morphologically and temporally to predict a percentage score for AF existence. The training data and labelling were obtained from patients recruited from the WDHb with the application of both a 5-lead holter monitor and a single-lead ECG patch (VivaLNK) simultaneously. The model was trained entirely on the single-lead ECG data.

Results: We achieved a training accuracy score of more than 80%. F1 scores for classes sinus rhythm, AF, noise and others are found to be 0.86, 0.81, 0.79 and 0.75 respectively.

Discussion: Classification of AF from ECG has conventionally been achieved through event classification, which was defined by summarising one class for an entire ECG tracing. Beat-wise classification is a better solution to assist AF burden determination.

Conclusion: Our model has proven the possibility and robustness of beat-wise ECG detection through deep learning, to tackle the error-prone issued found in manual analysis.

7. Integrating oral care into nursing practice from community home-based care to aged care residential facilities

Presenter: Ms Oda Keiko

Authors: Ms Oda Keiko, Dr Bakri Noor Nazahiah, Ms Majeed Sarah, Dr Bartlett Shennae, Prof. Thomson William M, Assoc. Prof. Parsons John, Assoc. Prof. Boyd Michal, Dr. Ferguson Anna, Dr. Smith Moira

Faculty of Medical and Health Sciences, University of Auckland; Department of Public Health, University of Otago Wellington; Centre of Population Oral Health and Clinical Prevention Studies, Universiti Teknologi MARA, (Malaysia); Sir John Walsh Research Institute, University of Otago; Te Whatu Ora - Waitematā Nursing

Abstract:

Introduction: Oral care is important for the overall health and quality of life of older adults and can reduce aspiration pneumonia occurrence. However, oral care remains a low priority for community-home based care and aged care residential (ARCs) nursing staff (registered nurses (RNs) and health care assistants (HCAs)) owing to a lack of knowledge, effective training, and awareness of its benefits. To address this gap, a training protocol for community home-based and ARCs nursing staff in New Zealand called Nursing Oral Health care and Assessment Training (NOHAT) was co-developed by an interprofessional collaboration (IPC) we established between oral health and nursing professionals.

Aims: To assess the effectiveness of NOHAT in facilitating nurses to deliver oral care assessment and care planning for older adults.

Methods: Participatory action research using pre/post-training surveys and a focus group was employed to assess the impact of NOHAT on nursing staff knowledge, confidence, and skills in oral care delivery.

Results: Nursing staff significantly improved their oral health knowledge and attitude, with RNs also significantly enhancing their confidence in oral health assessment following NOHAT.

Discussion: While nursing staff showed capacity to integrate oral care into routine practice, they lacked confidence to provide individualised oral care for older adults with complex needs, in particular palliative care and advanced dementia patients' oral health care knowledge and technics.

Conclusion: Our co-developed NOHAT protocol shows potential to improve older adults' oral health by upskilling nursing staff in oral health assessment and care delivery. Nevertheless, additional measures, such as onsite IPC coaching and appointment of oral care champions, are needed to fully enable nursing staff to deliver person-centred oral care for older adults, particularly those with complex needs.

8. What is the experience of nurses undertaking research activity whilst in paid employment within a Te Whatu Ora district?

Presenter: Kathryn Tennant

Authors: Kathryn Tennant

Te Whatu Ora – Waitematā, Research & Knowledge Centre

Abstract:

Background: Research and evidence-based practice is essential for the delivery of high quality patient care and, as highlighted in the Waitemata DHB (WDHB) Research Strategy (2021), research is fundamental to improving the health of the community. As part of building capability and capacity of nursing research within Te Whatu Ora-Waitematā it is vital to understand how best to support nurses undertaking such research activity.

Aims: The NZ Health Research Strategy (2017) highlighted that support and research education are vital to create a vibrant research environment. Therefore, the aim of this study was to explore the experiences of nurses undertaking research activity whilst employed in order to build research capacity and capability of nurses through making recommendations for the development of support systems.

Methods: This was an interpretive descriptive study. Six semi-structured interviews were undertaken with nurses who had completed research activity within the previous five years.

Results: A number of themes were developed that help understand the experience: adult learning theory vs. lack of methodological support; time management and role conflict – worker vs researcher; ‘little pockets of research’ – isolation and a lack of academic awareness within the workplace; ‘it just sits on a shelf getting dusty’ – need to close the loop through application and recommendations for practice; ‘the process grows you’ – enhanced role and self.

Discussion: Whilst it is evident that nurses undertake meaningful research, there are a number of challenges that they face during the process. Nurses need to feel value in the research they do, in that it can make a difference to patient care or outcomes, and to feel valued themselves for their role as a nurse researcher.

Conclusion: This study will aid the development of research support and inform the broader research culture within Te Whatu Ora- Waitematā

9. Co-Teaching: Reviewing the delivery of co-taught prescribing workshops

Presenters: Mrs Avril Lee & Dr Tony Zhang

Authors: Mrs Avril Lee, Dr Tony Zhang

Te Whatu Ora – Waitematā, Medical Education and Training Unit; Te Whatu Ora – Waitematā, Pharmacy Department
University of Auckland, School of Medicine

Abstract:

Background: Co-teaching utilises presenters from two or more professional areas to engage learners through demonstration of complimentary expertise. Co-teaching has been demonstrated to be a valid and potentially valuable pedagogy for content integration into undergraduate medical education but there is a paucity of literature exploring the use of this in postgraduate medical education.

Aims: Our aim was to explore postgraduate year 1 doctors' (PGY1) perceptions on co-teaching through a series of prescribing workshops run at our institution. Our workshops are co-taught by a doctor and a pharmacist or nurse specialist.

Methods: All attendees at prescribing workshops were invited to participate in an anonymous survey regarding their views on co-teaching. Feedback was obtained and collated via an online survey tool from three workshops held in 2021. **Results:** 81/ 82 (98.8%) felt co-teaching was useful and 79/81 (97.5%) would like to see increased use in medical education. PGY1s perceived overall enhanced learning experiences through four domains: clinical application, knowledge retention, engagement and understanding. The majority agreed presenters explored subjects from different perspectives and contributed areas of knowledge from their respective fields. They felt the workshops showcased interactive, case-based and interprofessional learning.

Discussion: We found that co-teaching was well received by PGY1 doctors who attended prescribing workshops and added value to their learning. Beyond these workshops, co-teaching has the potential to be a valid and valuable pedagogy to enhance the learning experiences amongst junior doctors, rather than being limited to undergraduate students as previously described. Smooth delivery relies on meticulous planning and preparation between two or more educators. We reflect on drivers for success and barriers to implementation of a co-taught model of education.

Conclusion: We have found that role-modelling learning, working and teaching together benefits all of us. This aligns with the Māori worldview: Ako. Pharmacists are medication experts, and the doctors add valuable context to the teaching.

Acknowledgements:

Pharmacy Department and Medical Education and Training Unit, Waitematā District.

10. Aphasia in Aotearoa: A codesigned project to update aphasia therapy in Aotearoa New Zealand.

Presenter: Mrs Robyn Gibson

Authors: Mrs Robyn Gibson¹, Dr Clare McCann², Prof. Alan Barber³

¹Te Whatu Ora Waitematā - Speech Language, ²Speech Science, the University of Auckland, ³Centre for Brain Research, FMHS, the University of Auckland

Abstract:

Background: The significant gap between aphasia research and clinical implementation, and the impact of that on people with aphasia, is now well established. However, no research has previously investigated this area in Aotearoa New Zealand.

Aims: To explore the experiences of speech-language therapists (SLTs) and people with aphasia in Aotearoa New Zealand, and to improve the provision of aphasia therapy through a codesigned intervention.

Methods: This doctoral research was divided into three separate studies: A questionnaire distributed to SLTs, semi structured interviews with 16 people with aphasia, and a co-designed workshop for SLTs.

Results: In study one, SLTs described highlights of aphasia rehabilitation, including breakthrough moments and positive outcomes, and some of the barriers they experienced to providing aphasia therapy, including workplace limitations and access to resources and research. In study two, themes generated from interviewing people with aphasia included the importance of the therapeutic relationship, the relevance of the therapy, the availability of SLT services and access to those services. In study three, the co-designed workshop was effective in improving the SLTs' self-rated provision of aphasia therapy, with statistically significant improvement in their ability to tailor their interventions for people with aphasia, and their confidence in working with people with aphasia, in particular for Māori with aphasia.

Discussion: The evidence-practice gap in aphasia appears to be greater in Aotearoa New Zealand than in other countries. This research provides key information about the impact of the evidence-practice gap on SLTs and on people with aphasia and their whānau. The resultant workshop was designed to meet the needs of SLTs and has begun to address the challenges and service gaps identified in studies one and two.

Conclusion: This research is an important step on the journey to ensure that all those with aphasia in Aotearoa New Zealand receive best practice aphasia therapy.

Acknowledgements:

The doctoral research was funded through the New Zealand Lotteries Health Research Doctoral Scholarship.

11. Changes in hospital admission for stroke: Findings from the ARCOS studies (1981-2022)

Presenter: Professor Rita Krishnamurthi

Authors: Professor Rita Krishnamurthi, Mr Balakrishna Nair, Ms Jesse Dyer, Mr Anupam Verma, Ms Anjali Bhatia, Dr Ekta Singh Dahiya, Ms Varsha Parag, Dr Yogini Rathnasabapathy, Dr Daniel Exeter, Professor Anna Ranta, Professor Suzanne Barker-Collo, Professor Valery

Te Whatu Ora - Waitematā Stroke

Abstract:

Background: The Auckland Regional Community Stroke Studies (ARCOS) are population-based studies conducted in Auckland, New Zealand, every decade since 1981. The primary source of notification has been Te Whatu Ora, including Waitematā.

Aims: We aim to evaluate the changes in hospitalisation for stroke, case-fatality and mortality by the former District Health Board regions, overall and by demographic groups over the past five decades.

Methods: Five ARCOS studies have been conducted (ARCOS I- 1981, ARCOS II- 1991, ARCOS II-I 2002, ARCOS IV- 2011, ARCOS V- 2021). Stroke cases were identified through multiple case ascertainment methods, including public hospitals and emergency departments. ARCOS II did not identify hospital admission details; hence this data is omitted from analysis. Deaths (28-day case fatality) were captured for all incident cases. ARCOS V data is preliminary.

Results: There were 994, 1642, 2038 and 2556 admissions for stroke, accounting for 73%, 85%, 97% and 96% of total strokes in ARCOS I, III, IV and V, respectively. Over this time, Te Whatu Ora Waitematā admitted 6%, 32%, 35% and 33% of stroke cases respectively. In ARCOS V, 7%, 15%, 4% and 6% of patients admitted to Auckland, Middlemore, North Shore and Waitakere hospitals respectively are Māori. In 1981, no Māori or Pacific patients were admitted to North Shore or Waitakere hospitals. North Shore had the greatest proportion (59%) of people aged 75 years or older. 28-day case fatality reduced significantly across all hospitals in the last five decades, (e.g. from 43% at the North Shore Hospital in 1981 to 10.2% in 2021).

Discussion: The pattern of hospitalisation for stroke has shifted dramatically over the past five decades, as has the demographic make of stroke patients, with a greater proportion of Māori, Pacific and Asian patients admitted with stroke.

Conclusion: Greater hospitalisation and higher absolute numbers of strokes suggest an ongoing and increasing demand for stroke services. Case fatality may have improved over the past five decades, due to specialised medical care services and treatment options.

Acknowledgements:

The ARCOS studies were funded by the Health Research Council of NZ. We acknowledge the ARCOS V Steering Committee members, Professors Craig Anderson (PI ARCOS III), and Ruth Bonita (PI ARCOS I-II), the research assistants and Te Whatu Ora nurses and physiotherapists, and all the ARCOS patients and families.

12. What is the experience for migrant Kiribati women of childbirth in New Zealand?

Presenter: Kathy Carter-Lee

Authors: Kathy Carter-Lee, Emeritus Professor Liz Smythe & Professor Judith McAra-Couper

Te Whatu Ora - Waitematā, Maternity

Abstract:

Background: I am a New Zealand (NZ) European midwife with a caseload in which there are often 30 to 40% I-Kiribati (people of Kiribati, in the Pacific Ocean). There is anecdotal evidence of more serious complications in this immigrant group than for others in my care. Limited research exists.

Aims: Using hermeneutic phenomenological methodology, this research seeks to uncover meaning in migrant Kiribati women's experience, to enable midwives to better understand the challenges they face as migrants.

Methods: Guidance was sought from Kiribati Advisors on how to proceed. Purposive sampling through advisors and local networks found participants; 9 Kiribati women with experience of birth in NZ, or experienced birth in Kiribati and supported other I-Kiribati birthing in NZ, and 4 midwives who had cared for I-Kiribati. Unstructured one-to-one interviews in English using indicative questions were undertaken at a location of participant's choice. Interviews included time for introductions, for questions, for chatting, and to eat and drink. Interviews were recorded and transcribed by an independent professional. Data analysis was carried out via reflexive thinking, crafting stories from the transcripts, and engaging in a process of reflecting, writing, and re-writing according to the methodology, in collaboration with supervisors. Participants' full stories or transcripts were sent for them to keep and confirm permission to use them.

Preliminary Results: Tension shows. Silence speaks. Trust is created.

Discussion: Tension shows from being torn between two cultures, and between NZ and traditional Kiribati healthcare. Silence speaks, often masking anxiety and confusion. Trust becomes the bridge between and is won by taking time, by not assuming, by listening, by getting to know the woman.

Conclusion: Migrant women face additional challenges through childbirth as they seek to understand the ways of their new country of residence. Midwives can play a part in making maternity care easier to access and safer for migrant clients.

Acknowledgements:

Health Workforce and AUT Doctoral Grants. Self-funded.

13. Kaumātua Insights into Indigenous Māori Approaches to Pain Management: A Qualitative Study

Presenters: Dr Debbie Bean & Ms Eva Morunga

Authors: Dr Debbie Bean^{1,2}, Ms Eva Morunga^{3,4}, Ms Korina Tuahine², Ms Karlee Hohepa⁵, A/Prof Gwyn Lewis², Mr Donald Ripia², Dr Gareth Terry²

¹Chronic Pain Service, Te Whatu Ora – Waitematā; ²Health & Rehabilitation Research Institute, Auckland University of Technology, Auckland; ³Department of Psychological Medicine, University of Auckland, Auckland; ⁴Cancer Support Service, Te Toka Tumai, Auckland; ⁵Department of Psychology, Massey University, Auckland; ⁶Student Learning Centre, Auckland University of Technology, Auckland; ⁷Centre for Person Centred Research, Auckland University of Technology

Abstract:

Background: Chronic pain is the leading cause of disability in Aotearoa New Zealand and is more prevalent and disabling in Māori than non-Māori. Little is published about Māori views of, or approaches to, managing chronic pain/mamae. This mātauranga could be used to develop treatment approaches.

Aim: To understand kaumātua views on the effects of pain, traditional pain management practices, and mātauranga Māori relating to managing pain.

Method: 14 kaumātua participated in interviews or a focus group/hui. Interviews and the hui were transcribed, and reflexive thematic analysis was used to develop themes in the data. Findings were discussed and refined in collaboration with participants.

Results: Analysis wove the kōrero of the kaumātua into three themes: 1. The Multidimensional Aspects of Pain: Pain stretched beyond the physical and encompassed emotional trauma, wairua pain, grief and hurt resulting from the loss of loved ones, contamination of the environment or breaches of tikanga. Some mamae was described as everlasting, passing between people or generations. 2. Hōhonutanga: Healing through Connection. Healing of pain was seen to occur through strengthening connections with people, the spiritual realm, the natural world, and with papakāinga, connection to place. 3. Kia Maia Kia Kaha, Being Strong in the Face of Pain. Self-reliance to manage pain and self-determination to make health decisions were viewed as critical. A stoical approach to pain was described, in part because complaining was seen as futile, unnecessary or weak, but also because of a desire not to burden whānau.

Conclusions: Mātauranga Māori emphasises that pain and its healing should be considered multidimensional phenomena incorporating physical, mental, and relational components as well as existing in the spiritual realm and incorporating links between people, places, the past and future. Resilience and toughness in the face of such pain mean that pain can be managed by individuals with stoicism.

Acknowledgements:

New Zealand Pain Society research grant; AUT internal funding

14. Anxiety, pain, and disability predict outcomes of Complex Regional Pain Syndrome: An 8-year follow-up of a prospective cohort

Presenter: Shari A. Cave

Authors: Shari A. Cave^{1,2}, Lisa M. Reynolds¹, Natalie L. Tuck^{2,3}, Tipu Aamir⁴, Arier C. Lee⁵, Debbie J. Bean^{2,3}

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²Department of Anaesthesiology & Perioperative Medicine, Te Whatu Ora Health New Zealand – Waitematā.

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⁴The Auckland Regional Pain Service, Te Whatu Ora Health New Zealand – Te Toka Tumai, New Zealand.

⁵Section of Epidemiology and Biostatistics, School of Population Health, The University of Auckland, New Zealand.

Abstract:

Background: Complex regional pain syndrome (CRPS) is a challenging condition that can have significant impacts on those who develop it. The long-term outcomes of CRPS vary substantially, though little is known about the factors contributing to this variation. One hypothesis is that psychological, or psychologically-influenced factors (e.g., pain, disability) factors may influence CRPS outcomes based on their well-evidenced influence on other chronic pain conditions.

Aims: This study aimed to determine whether baseline psychological factors, pain, and disability influence long-term CRPS outcomes.

Methods: We conducted an 8-year follow-up from a previous perspective study of CRPS outcomes. Sixty-six people diagnosed with acute CRPS were previously assessed at baseline, 6 months, and 12 months and in the current study, 45 were followed up after 8 years. At each timepoint, we measured: signs and symptoms of CRPS, pain, disability, and psychological factors. Mixed-model repeated measures were used to identify baseline predictors of CRPS severity, pain, and disability at 8 years.

Results: Predictors of greater CRPS severity at 8 years were female sex, greater baseline disability, and greater baseline pain. Predictors of greater pain at 8 years were greater baseline anxiety and disability. The only predictor of greater disability at 8 years was greater baseline pain.

Conclusion: Findings suggest CRPS is best understood from a biopsychosocial perspective, and baseline anxiety, pain and disability may influence the trajectory of CRPS outcomes as far as 8 years later. These variables could be used to identify those at risk of poor outcomes or form targets for the development of early interventions.

Acknowledgements:

We thank all the participants of the study for their time and cooperation. We would like to acknowledge The Oakley Mental Health Research Foundation for partially funding the initial study and the Maurice and Phyllis Paykel Trust for their scholarship contribution to the first author of the present study.

15. The chronic pain of chronic pancreatitis; support for a transdiagnostic approach.

Presenter: Dr Natalie Tuck,

Authors: Dr Natalie Tuck^{1,2}, Dr Keith Teo³, Dr Debbie Bean^{1,2}, Dr Louise Kuhlmann^{4,5,6}, Professor Søren Olesen^{4,6}, Dr Usman Rashid¹, Mr Andrew MacCormick^{3,7}, Dr Gajan Srikumar⁷, Professor Asbjørn Drewes^{4,6}, Professor John Windsor³

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⁴Centre for Pancreatic Diseases & Mech-Sense, Department of Gastroenterology and Hepatology, Aalborg University Hospital, Aalborg, Denmark

⁵Department of Internal Medicine, Randers Regional Hospital, Randers, Denmark

⁶Department of Clinical Medicine, Aalborg University, Aalborg, Denmark

⁷Department of General Surgery, Te Whatu Ora Counties Manukau

Abstract:

Background: Approximately 60% of people with chronic pancreatitis report persistent abdominal pain. These patients tend to have poorer outcomes than those with intermittent pain, and traditional biomedical interventions are not reliably helpful. Constant pain in chronic pancreatitis may indicate the involvement of central pain mechanisms. If this is the case, then these people may have similar clinical characteristics as those with chronic primary pain, with potential implications for evidence-based treatment.

Aims: This study compared the pain characteristics of people with chronic pancreatitis to those with chronic primary pain.

Methods: Patients with chronic pancreatitis (N=91) and chronic pain (N=127) completed the Comprehensive Pancreatitis Assessment Tool (COMPAT) which measures pain intensity, quality of life, pain catastrophising, and features of central sensitization. Latent class regression analysis (N=192) grouped participants based on pain characteristics.

Results: Analyses identified three latent groups, that mapped onto the following diagnostic categories 1) combined chronic pancreatitis (constant pain) and chronic pain, 2) chronic pain only, and 3) chronic pancreatitis (intermittent pain) only.

Discussion: Within chronic pancreatitis, patients with constant pain show similarities to some patients with chronic pain, potentially indicating shared nociplastic mechanisms. Rather than focusing on surgical and pharmacological interventions, adopting a biopsychosocial approach to pain management may be suited to this patient group.

Conclusion: Rather than a diagnosis-driven approach, these findings support a transdiagnostic approach to pain management based on observable features of pain (pain phenotypes) that correspond with underlying mechanisms.

16. Addressing the social stigma of chronic pain

Presenter: Dr Natalie Tuck

Authors: Dr Natalie Tuck^{1,2}, Amber Drylan³, Dr Usman Rashid² & Dr Debbie Bean^{1,2}

¹Waitematā Pain Services, Department of Anaesthesia and Perioperative Medicine, Te Whatu Ora Waitematā

²Health and Rehabilitation Research Institute Auckland University of Technology; ³Department of Psychology, Auckland University of Technology (AUT)

Abstract:

Background: People with chronic pain may experience stigma, for example feeling disbelieved or blamed for their pain, treated negatively in the workplace, or dismissed by healthcare providers. However relatively little research has investigated the factors that contribute to chronic pain stigma or the effects of stigma on pain outcomes.

Aims: The aim of this study was to determine whether opioid use, pain beliefs and mental health comorbidities influence chronic pain stigma; and also, to determine whether stigma is associated with pain, disability, depression and social support amongst people with chronic pain.

Methods: 214 people with chronic pain completed measures of stigma, pain, disability, depression, social support, medication use, mental health history and beliefs about pain.

Results: 40% of participants exhibited elevated levels of stigma. In line with hypotheses, three factors were associated with higher levels of stigma: use of strong opioids, a history of mental health diagnoses, and stronger endorsement of beliefs that pain is organic (rather than psychological). Further, stigma was associated with greater disability and depression and lower social support, however stigma did not influence pain intensity itself.

Discussion: Chronic pain stigma may be related to the association between pain and mental health conditions, opioid use, and the lack of clear physical pathology. Stigma likely has a negative influence on the lives of people with chronic pain and could become an area of intervention. Interventions to reduce internalised stigma and improve self-esteem amongst people with chronic pain would be worth exploring. Additionally, strategies to alter negative societal beliefs about chronic pain should be investigated.

Conclusion: This study demonstrates the contributors to, and negative effects of, stigma for people with chronic pain. It presents an integrated model which could guide strategies to reduce chronic pain stigma amongst health professionals and the public and reduce self-stigma amongst people with pain.

17. Can a Single Session of 2ma Active Transcranial Direct Current Stimulation (TDCS) Over the Primary Motor Cortex Enhance Exercise Induced Hypoalgesia (EIH) Compared to Sham TDCS in Individuals with Knee Osteoarthritis (OA)?

Presenter: David Toomey

Authors: David Toomey¹, Associate Professor Gwyn Lewis¹, Dr. Natalie Tuck^{1,2}, Dr. Usman Rashida¹, Associate Professor David Rice^{1,2}

¹Health and Rehabilitation Research Institute, Auckland University of Technology; ²Te Whatu Ora - Waitematā Pain Services, Department of Anaesthesiology and Perioperative Medicine

Abstract:

Background: A recent study found that a single session of anodal tDCS, a form of non-invasive brain stimulation, can enhance exercise induced hypoalgesia (EIH) during experimentally induced pain, compared to a sham condition. The effects of such an intervention have not yet been examined in an osteoarthritis (OA) population, who exhibit more variable EIH that can lead to flares in pain, adversely affect exercise adherence and limit exercise related pain relief.

Aims: This study examined whether a single session of 2mA active tDCS over the primary motor cortex could enhance EIH compared to sham tDCS in individuals with knee OA.

Methods: A double-blind randomised controlled cross over trial was undertaken, with 27 participants. Each participant took part in 2 sessions (active tDCS, sham tDCS), in a randomised order, a minimum of 7 days apart. Following tDCS, a standardised isometric resistance exercise was performed, and pre-post exercise change in pressure pain thresholds, resting knee pain and knee pain during stepping were measured in each session. Participants, study personnel administering the intervention and personnel collecting the outcome measures were blinded to treatment allocation. Linear mixed regression analysis was utilised to assess between session differences in outcomes (anodal vs sham tDCS).

Results: All 27 participants completed both tDCS sessions. Pre-postexercise change in pressure pain thresholds, resting pain and pain during stepping were not different between sessions (all $p > 0.66$).

Conclusions: The findings of the current study suggest a single session of 2mA active tDCS over the primary motor cortex does not enhance EIH compared to sham tDCS in individuals with knee OA. Future research may wish to explore the effects of multiple tDCS sessions and/or examine the effects of targeting the tDCS intervention to individuals with absent or dysfunctional EIH.

Acknowledgements:

Funding – Auckland University of Technology

18. Pain, disability and patient satisfaction after total knee joint replacement with or without supervised group physiotherapy – A propensity score matched case control study

Presenter: Mr Steen Bastkjaer,

Authors: Mr Steen Bastkjaer¹, Dr Gloria Paterson², Assoc. Prof. David Rice^{3,4}, Prof. Peter McNair³

¹Physiotherapy Department, Te Whatu Ora Waitematā

²Physiotherapy Department, Te Whatu Ora Te Toka Tumai Auckland

³Health & Rehabilitation Research Institute, Auckland University of Technology

⁴Waitematā Pain Services, Department of Anaesthesia and Perioperative Medicine, Te Whatu Ora Waitematā

Abstract:

Background: Typically, all patients who have a total knee joint replacement (TKJR) at Te Whatu Ora Waitematā are referred to Physiotherapy for a period of in person postoperative rehabilitation including group based knee class. During the recent COVID-19 pandemic, this wasn't possible, and a cohort of patients did not receive any formal, supervised postoperative rehabilitation (no knee class).

Aim: To assess pain, disability and patient satisfaction ≥ 6 months after surgery in the no knee class cohort compared to a historical cohort of patients who had attended knee classes and had the same outcome measures available.

Methods: Propensity score matching was used to select patients from the historical TKJR cohort that were most similar to patients in the no knee class cohort in terms of age, sex, BMI and number of additional pain sites. Non-parametric ANCOVAs were used to compare WOMAC pain (0-100), WOMAC disability (0-100) and patient satisfaction (1 – very dissatisfied to 5 – very satisfied), between cohorts, with time since surgery (in months) as a covariate.

Results: 36 patients (no knee pain class) were matched 1-to-1 ($n=36$) from a pool of 74 patients from the historical cohort who completed a minimum of 2 supervised group rehabilitation sessions (median 6, range 2 to 10). All matching variables had standardised mean differences < 0.1 and p -values > 0.05 , suggesting successful balancing of potential confounding variables between groups. There were no significant differences in WOMAC pain, WOMAC disability or patient satisfaction between the two groups ≥ 6 months after surgery (all $p \geq 0.851$).

Conclusions: These findings provide preliminary evidence that failing to attend supervised in-hospital group rehabilitation classes did not adversely affect long term outcomes after TKJR. Existing (p)rehabilitation resources may be better targeted to patients at high risk of poor outcome or who are not following expected recovery trajectories.

Acknowledgements:

Ann Bennett – Former Waitematā Physiotherapist

19. Cognitive behavioural pain management prior to total knee joint replacement: A feasibility trial

Presenter: Dr Debbie Bean

Authors: Dr Debbie Bean^{1,3}, Ms Jill Collier¹, Assoc. Prof. David Rice^{1,3}, Assoc. Prof. Michal Kluger^{1,4}, Prof. Peter McNair¹, Assoc. Prof. Simon Young^{2,5}, Mr Matt Walker², Dr Natalie Tuck^{1,3}

¹Waitematā Pain Services, Department of Anaesthesia and Perioperative Medicine, Te Whatu Ora Waitematā

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³Health & Rehabilitation Research Institute, Auckland University of Technology

⁴Department of Anaesthesia, University of Auckland

⁵Department of Surgery, University of Auckland

Abstract:

Background: Approximately 20% of people experience persistent pain following total knee arthroplasty (TKA), and although psychological factors predict post-surgical pain, few studies have assessed whether it is possible to alter these variables prior to surgery, and if this reduces the likelihood of persistent post-surgical pain.

Aims: To test the acceptability and feasibility of a cognitive-behavioural intervention prior to TKA, to inform a future randomised controlled trial.

Methods: Patients on North Shore Hospital's TKA waiting lists with elevated anxiety and high expected pain were recruited for a 3-session cognitive behavioural intervention. The intervention aimed to lower pain-expectations and anxiety using pain neuroscience education, relaxation skills training, and goal setting. Acceptability and feasibility data were analysed alongside pre- to post-intervention scores for pain, function, catastrophising, expected pain and anxiety.

Results: Of 241 people on the TKA waitlist, 65 met inclusion criteria, 43 consented to participate, and 30 completed the study. Satisfaction ratings were very high, and participants found the treatment easy to understand, useful, and relevant. There were significant reductions in pain catastrophising (17% change) and WOMAC pain scores (8% change). Most other changes were in the expected direction with the exception of trait anxiety which increased. Effect sizes indicate that approximately 65 people would be needed for an adequately powered RCT.

Discussion: Cognitive behavioural 'prehab' targeting anxiety, expectations and catastrophising is acceptable to patients awaiting TKA. Based on effect sizes and participant engagement and feedback a multicentre RCT appears acceptable, feasible, and warranted.

Conclusion: Psychological intervention was highly acceptable to patients awaiting TKA and may lead to reductions in pain and catastrophising. Future work will test whether changes in pain related catastrophising contribute to better post-surgical outcomes in this group.

Acknowledgements:

AUT internal start-up funding

20. Pain patients' service expectations and subsequent engagement in an internet-delivered self-management intervention

Presenter: Mr Dieter Dvorak

Authors: Mr Dieter Dvorak

Te Whatu Ora - Waitematā Anaesthesiology (Chronic Pain Service)

Abstract:

Background: Since 2011, the Waitemata Pain Service routinely provides chronic pain patients participation in an empirically supported patient activation/self-management intervention based on the methods and principles of Acceptance and Commitment Therapy (ACT) for chronic pain. Since March 2020 this course, run by a single clinician, is being offered as an - also empirically supported - internet-delivered intervention. Due to its scalability and flexibility, this digital service delivery mode has significantly improved patient access to this intervention as well as reduced costs and ecological impact per patient. Despite a seemingly good overall acceptance and service user satisfaction amongst course completers, a small number of patients who had explicitly agreed to participate subsequently do not engage at all.

Aims: The aim of this qualitative project was to Identify patients' provided expectations upon entering the service (via a routine intake questionnaire) as possible indicators for subsequent non-engagement despite their initial agreement to participate.

Methods: Between August 2021 and 2022 the intake questionnaires of 238 patients enrolled in the course were qualitatively explored and encoded for their general service expectations. The main focus was on the 18 enrolled patients (7.6%) who did not engage at all.

Results: 11 patients had provided a clear expectation of being a recipient of remedial bio-medical treatments while 5 patients used euphemisms to express the same sentiment (88.9% of enrolled course non-starters).

Discussion: Clearly stated, as well as euphemistically phrased, expectations of remedial interventions appear to be somewhat indicative of patients' subsequent non-engagement.

Conclusion: Correctly identifying patients' expectations of being the passive recipient of remedial interventions will make it possible to approach those patients with an introduction to the ACT self-management intervention that emphasises the motivational aspect in order to increase the probability of their subsequent active engagement with the course.

21. Can virtual humans deliver mindfulness to reduce stress?

Presenter: Mariam Karhiy

Authors: Mariam Karhiy

Te Whatu Ora - Waitematā, Department of Anaesthesia and Perioperative Medicine

Abstract:

Background: Stress is an epidemic, yet limited psychological services are available. Mindfulness is effective for stress reduction and can be delivered via digital technologies to expand access to student populations. However, digital interventions often suffer from low engagement and issues with adherence. A virtual human (VH) may improve engagement and adherence through its humanlike appearance and behaviours.

Aim: The primary aim was to examine whether a VH could reduce stress in university students compared to a chatbot, and tele-therapist, using a mindfulness intervention.

Methods: Stressed university students (N=108) were randomly allocated to the VH, chatbot, or tele-therapist. Participants were asked to complete mindfulness homework sessions at least twice weekly for four weeks. Changes in stress and mindfulness, homework completion, and perceptions of the agent were compared between groups. Thematic analysis was conducted on participants' responses.

Results: All three delivery modes significantly reduced self-reported stress immediately post-intervention and at the 1-month follow-up with moderate effect sizes ($p < .001$). Mindfulness improved significantly ($p < .001$). Data for physiological measures were mixed; all groups had higher temperatures post-intervention ($p < .001$), only the teletherapy group had higher electrodermal activity ($p = .011$) compared to baseline. There were no significant changes in heart rate. VH delivery had the highest adherence ($p = .022$), while chatbot delivery was associated with lower homework satisfaction and engagement ($p = .045$). Suggestions for improvement targeted the robotic voice for the VH, preference for audio in the chatbot group, and feelings of judgement from the tele-therapist.

Conclusions: Overall, results support the use of VHs for delivering a mindfulness intervention to reduce stress in university students. Findings show they may increase adherence to online interventions compared to other digital tools. Future research could investigate the use of VHs for mindfulness delivery over a longer timeframe and in other populations.

Acknowledgements:

Study funded by the University of Auckland and in collaboration with Soul Machines

22. Associations of Pre-Operative Inflammatory Markers and Post-Operative Outcomes in Patients undergoing Unicompartmental Knee Arthroplasty

Presenter: Mei Lin Tay

Authors: Mei Lin Tay^{1,2}, Dr. Scott M. Bolam^{2,3}, Dr. Sue R McGlashan⁴, Assoc. Prof. A Paul Monk^{3,5}, Dr. Brya G Matthews⁶, Assoc. Prof. Simon W Young^{1,2}

¹ Te Whatu Ora - Waitematā, Department of Orthopaedic Surgery, North Shore Hospital; ²Department of Surgery, Faculty of Medical and Health Sciences (FMHS), University of Auckland, Auckland; ³ Te Whatu Ora - Auckland, Department of Orthopaedic Surgery; ⁴Department of Anatomy and Medical Imaging, University of Auckland, Auckland; ⁵Auckland Bioengineering Institute, University of Auckland; ⁶Department of Molecular Medicine and Pathology, University of Auckland.

Abstract:

Background: Osteoarthritis (OA) is associated with inflammation, however there is limited understanding of the molecular mechanisms involved. Residual inflammation can also influence patient outcomes following uni-compartmental knee arthroplasty (UKA).

Aims: This prospective, observational study aimed to: (1) characterise inflammatory profiles for medial UKA patients, and (2) investigate if inflammatory markers are associated with post-operative outcomes.

Methods: Bloods, synovial fluid (SF), tibial plateaus and synovium were collected from medial UKA patients in 2021. Cytokine and chemokine concentrations in serum and synovial fluid (SF) were measured with multiplexed assays. Disease severity of cartilage and synovium was assessed using validated histological scores. Post-operative outcomes were measured with Oxford Knee Score (OKS), Forgotten Joint Score (FJS-12) and pain scores with 1-year follow-up.

Results: The study included 35 patients. IL-5, IL-6, IL-8, MCP-1, MIP-1 β , TNF- α , VEGFA were detected in serum and SF. Increased synovitis was correlated with higher SF IL-8 ($r=0.48$), IL-10 ($r=0.41$) and MIP-1 β ($r=0.40$; all $p<0.05$). SF VEGFA was negatively correlated with pre-operative pain at rest ($r=-0.5$), and FJS-12 at six-week ($r=0.44$), six-months ($r=0.61$) and one-year follow-up ($r=0.63$; all $p<0.05$). Serum and SF IL-6 were positively correlated with OKS at early follow-up (serum: 6 weeks, $r=0.39$; 6 months, $r=0.48$; 1 year, $r=0.24$; SF: 6 weeks, $r=0.35$; 6 months $r=0.16$; 1-year, $r=0.13$; all $p<0.05$). At six weeks, increased synovitis was negatively correlated with improvements in pain at rest ($r=-0.41$) and with mobilisation ($r=-0.37$; all $p,0.05$).

Conclusion: UKA patients are characterised by local and circulating IL-5, IL-6, IL-8, MCP-1, MIP-1 β , TNF- α , and VEGFA, and some degree of synovitis, which was associated with local IL-8, IL-10 and MIP-1 β . Lower levels of synovitis and higher levels of IL-6 and VEGFA were associated with better post-operative outcomes. These findings can guide further biomarker research to further characterise OA disease phenotypes and optimise patient selection for UKA.

Acknowledgements:

The authors would like to thank the patients and theatre staff at North Shore and Auckland City Hospital who assisted with the sample collection, Greg Gamble for statistical advice and Satya Amirapu for assistance with histology for this study. This study was supported by a Maurice & Phyllis Paykel Trust Project Grant and a University of Auckland School of Medicine PBRF Small Project Grant. MLT is supported by a University of Auckland Doctoral Scholarship

23. Use of the Oxford Knee Score for Identifying Patients at Risk of Revision Knee Arthroplasty

Presenter: Mei Lin Tay

Authors: Mei Lin Tay^{1,2}, A Paul Monk^{3,4}, Chris M Frampton⁵, Gary J Hooper⁵, Simon W Young^{1,2}

¹Te Whatu Ora - Waitematā, Orthopaedic Surgery; ²Department of Surgery, Faculty of Medical and Health Sciences (FMHS), University of Auckland; ³Te Whatu Ora - Auckland Orthopaedic Surgery; ⁴Auckland Bioengineering Institute, University of Auckland; ⁵Department of Orthopaedic Surgery and Musculoskeletal Medicine, University of Otago, Christchurch.

Abstract:

Background: Self-reported outcome measures are increasingly being collected for healthcare evaluation; therefore, it is prudent to understand their associations with patient outcomes. The Oxford Knee Score (OKS) is a commonly-used measure that captures patient pain and function following knee arthroplasty.

Aims: The aims of this research were to: 1) investigate if OKS is associated with impending revision at early and long-term follow-up, and 2) identify which of the 12 OKS question(s) were the strongest predictors of subsequent revision.

Methods: All primary total (TKAs) and uni-compartmental knee arthroplasties (UKAs) in the New Zealand Joint Registry between 1999 and 2019 with an OKS at six months (TKA n=27,708, UKA n=8,415), five years (TKA n=11,519, UKA n=3,365) or ten years (TKA n=6,311, UKA n=1,744) were included. Prediction models were assessed using logistic regression and receiver operating characteristic analyses.

Results: For every one-unit increase in OKS, the odds of TKA and UKA revision decreased by 10% and 11% at six months, 10% and 12% at five years and 9% and 5% at ten years. A reduced model with three questions ('overall pain', 'limping when walking', 'knee giving way') showed better or comparable diagnostic ability than full OKS for predicting TKA and UKA revision at six months (area under the curve (AUC): TKA, 0.77 vs. 0.76, NS; UKA 0.81 vs. 0.77; p=0.02), five years (TKA, 0.78 vs. 0.75, NS; 0.81 vs. 0.77; p=0.02) and ten years (0.76 vs. 0.73, NS; 0.80 vs. 0.77; NS).

Discussion/Conclusion: The OKS had a strong negative association with risk of impending TKA and UKA revision from early to long-term follow-up. Questions on 'overall pain', 'limping when walking' and 'knee 'giving way' were the strongest predictors of subsequent revision. Attention to low OKS scores from these questions during follow-up may allow for prompt identification of patients most at risk of revision.

Acknowledgements:

The authors would like to thank the patients registered with the New Zealand Joint Registry who consented to collection and use of their data. MLT is supported by a University of Auckland Doctoral Scholarship

24. Two Weeks of Low Molecular Weight Heparin for Isolated Symptomatic Distal Vein Thrombosis (TWISTER study).

Presenter: Eileen Merriman

Authors: Eileen Merriman¹, Sanjeev Chunilal², Tim Brighton³, Vivien Chen⁴, Simon McRae⁵, Paul Ockelford⁶, Jennifer Curnow⁷, Huy Tran⁸, Beng Chong⁹, Mark Smith¹⁰, Gordon Royle¹¹, Helen Crowther¹², Alison Slocombe¹³, Huyen Tran^{2,14,15}

¹Te Whatu Ora - Waitematā, Haematology; ²Department of Clinical Haematology, Monash Medical Centre, Melbourne; ³Department of Haematology, New South Wales Health Pathology; ⁴Australia Department of Haematology, Concord Hospital; ⁵SA Pathology, Royal Adelaide Hospital; ⁶Department of Haematology, Te Whatu Ora - Auckland; ⁷Department of Haematology, Westmead Hospital, NSW; ⁸Department of Haematology, Frankston Hospital, Victoria; ⁹Department of Haematology, St George's Hospital, NSW; ¹⁰Te Whatu Ora - Christchurch, Haematology; ¹¹Te Whatu Ora – Counties Manukau, Haematology; ¹²Department of Haematology, Blacktown Hospital, NSW; ¹³Department of Haematology, Box Hill Hospital, Victoria; ¹⁴The Alfred Hospital, Melbourne; ¹⁵Australian Centre for Blood Diseases, Melbourne

Abstract:

Background: Treatment of low-risk patients with isolated symptomatic distal deep vein thrombi (IDDVT) is uncertain.

Aims: Objective: assess whether two weeks of therapeutic anticoagulation is efficacious/safe for IDDVT. Primary outcome: symptomatic three-month venous thromboembolism (VTE) incidence in the two-week anticoagulation group. Secondary outcomes included post-thrombotic syndrome (PTS) and bleeding.

Methods: Prospective multicentre cohort study. Consecutive low-risk IDDVT patients enrolled within 72 h of diagnosis and treated with therapeutic dose enoxaparin or rivaroxaban. At two weeks, patients had repeat complete whole leg compression ultrasound (CUS)/clinical review. If resolution of leg symptoms AND no radiological evidence of thrombus extension, anticoagulation was stopped. If ongoing symptoms and/or radiographic extension within distal veins, anticoagulation was continued for four more weeks. Patients with extension into the popliteal vein on two-week ultrasound were treated off-study. Patients were reviewed at three and six months. Findings/interpretation: 241 eligible patients

Results: 241 eligible patients received ≥ 2 weeks anticoagulation. 167/241 (69%) were assigned to the 2-week anticoagulation group; 71/241 (30%) to the six-week anticoagulation group; 3/241 patients (1%) had extension into the popliteal vein on two-week CUS. Two patients in the two-week anticoagulation group had symptomatic IDDVT recurrence in ≤ 3 months; VTE recurrence 2/156; 1.3% (95% CI 0.05–4.85%). 69% of patients had complete resolution of symptoms within two weeks. Six-month PTS rates were 8/184, 4.4% (95% CI 2.1–8.5%). No major bleeding was reported.

Discussion: We've demonstrated that the majority (69%) of low-risk IDDVT patients can be treated with two weeks of anticoagulation with resultant symptom resolution, no proximal DVT/PE and a low rate of VTE recurrence (2/156 or 1.3%; 95% CI 0.05–4.85%).

Conclusion: Our findings suggest it's safe/efficacious to stop therapeutic anticoagulation at two weeks in low-risk IDDVT patients with resolution of symptoms/no extension on ultrasound. This could replace 6–12 weeks of anticoagulation for ambulatory, low-risk IDDVT patients.

Acknowledgements:

I would like to thank everyone who has contributed to this study, in particular my PhD supervisors, Dr. Huyen Tran and Dr. Sanjeev Chunilal, and the recently deceased Dr. Mark Smith, who was my mentor when working as a haematology advanced trainee at Christchurch Hospital, New Zealand. I would also like to thank the members of the Data Safety Monitoring Board (Dr. Rob Fitridge, Dr. Pete Wood and Dr. Louise Phillips), the Event Adjudicators (Dr. Harry Gibbs, Dr. Denise Roach and Dr. Peter Blombery) and statistician (Hamish Neave) for their contributions.

25. The DIAMOND trial – Different Approaches to MOderate & late preterm Nutrition: Determinants of feed tolerance, body

Presenter: Dr Tanith Alexander

Authors: Dr Tanith Alexander, Dr Sharin Asadi, Dame Jane Harding, Dr Michael Meyer, Dr Yannan Jiang, Dr Mariana Muelbert, Professor Clare Wall, Dr Jane M. Alsweiler, Professor Frank Bloomfield on behalf of the DIAMOND Study Group.

Te Whatu Ora - Waitematā, SCBU units

Abstract:

Background: Optimal nutritional management strategies are unknown for moderate-to-late-preterm (MLPT) babies pending full enteral feeds with mother's own milk.

Aims: To investigate the impact of different feeding strategies on feed tolerance and body composition in MLPT babies.

Methods: Multi-centre, factorial, randomised trial in babies born 32+0 – 35+6 weeks' gestation with intravenous access whose mothers intended to breastfeed. Babies were randomised to combinations of three factors: (1) intravenous (IV) amino acid solution vs. IV dextrose until full milk feeds established; (2) milk supplement vs. exclusive mother's own milk (MOM); and (3) taste/smell given or not given before gastric tube feeds. The primary outcome for factors 1 and 2 was fat mass (%) at 4 months' corrected age, and for factor 3, time to full enteral feeds (150 ml.kg⁻¹ .day⁻¹ or exclusive breastfeeding).

Results: 532 (55% boys) babies were recruited. % fat mass at 4 months' corrected age (n=324) was not different between babies given IV amino acids or dextrose (factor 1) [mean (standard deviation, SD) 26.0(5.4) vs 26.2(5.2) %, p=0.7] or between babies given milk supplement vs MOM (factor 2) [26.3(5.3) vs 25.8(5.4) %, p=0.3]. Time to full enteral feeds (n=526) was not different between babies exposed or not exposed to taste/smell [mean (SD) 5.8(1.5) vs 5.7(1.9) days, p=0.6]. There also was no difference in the time to full enteral feeds for factor 1 [5.7(1.7) vs 5.8(1.8) days, p=0.6] or factor 2 [5.7(1.7) vs 5.8(1.7) days, p=0.1]. Time to discharge home was similar between groups [overall 24.8(11.4)].

Discussion: Provision of parenteral nutrition or formula in addition to MOM does not affect body composition at 4 months' corrected age. Early nutritional support strategies do not affect time to full enteral feeds or days in hospital.

Conclusion: Providing breastmilk only should be the goal for the nutritional management of MLPT babies.

Acknowledgements:

DIAMOND study group, AUT and Massey University provided access to equipment, HRC and Counties Manukau Health funded the study

26. Patients understanding of risk – a survey of probability literacy

Presenter: Mrs Ruth Newcombe

Authors: Mrs Ruth Newcombe, Dr Guy Armstrong, Mr Tyson Wijohn, Mrs Julia Reynolds, Dr Seif El Jack

Te Whatu Ora - Waitematā, CardioVascular Unit, University of Auckland

Abstract:

Background: The central concept of informed consent is communication of the chance of a successful outcome. It is not easy or intuitive to map a population-derived risk estimate to our self as an individual.

Aims: The aim of this study was to test patient's comprehension of basic probability concepts needed for informed consent. **Methods:** Patients (n=478) completed 5 questions testing risk estimates relevant to informed consent. The questions posed non-medical scenarios, to avoid patients associating them with their clinical care.

Results: Correct answers varied from 36% for Q3 to 83% for Q5. Sixty four percent of patients could not say that 1:10 is a higher frequency than 1:100 or 1:1,000. Age and ethnicity were independent predictors of overall score, whereas sex and socioeconomic decile were not. Māori/Pasifika scored significantly worse than Pakeha/European (total score 3.2 vs 3.6, patients' socioeconomic decile was the highest of all groups. This may have been a language issue.

Discussion: Many patients do not grasp risk sufficiently to understand informed consent. Increased comprehension may be achieved by a combination of written documents and unhurried verbal explanations, with time for questions. Risk presented as "2 in a 1,000 chance of a serious complication" may be better comprehended if spelt out in full to patients as; "out of every 1,000 patients undergoing this procedure, around 2 may experience a serious complication". Communication should be culturally appropriate and, in the language preferred by the patient.

Conclusion: This project has highlighted the need to ensure the information given, in particular about risks, is tailored to the needs of ethnic groups particularly focussing on Māori tikanga practice and appropriate language.

Acknowledgements:

North Shore Hospital - Lakeview Cardiology Department Waitakere Hospital- Huia Ward

27. Safety of topical lidocaine in awake in-office laryngology procedures

Presenter: Jimmy Lim

Authors: Associate Professor Jacqui Allen, Jimmy Lim

Te Whatu Ora - Waitematā, Otolaryngology, University of Auckland and Auckland ENT Group

Abstract:

Background: Local anaesthetic-mediated office-based laryngology procedures have increased due to improvements in technology, improved safety and speed of procedures, and reduced expense. Typically, topical lidocaine is utilized with good effect, however, the rate and volume of transmucosal absorption of lidocaine is not known. Given high serum concentrations of lidocaine can result in serious toxicities, we sought to quantify serum levels of lidocaine following administration via the nasal and pharyngeal routes, to ensure safety and provide guidelines for transmucosal use.

Aims: 1. Obtain serum lidocaine concentrations following topical administration to the laryngopharynx to evaluate absorption rate and peak serum levels. 2. Establish that currently used topical doses of lidocaine result in serum levels that are within safe ranges.

Methods: A prospective case cohort study of 50 subjects undergoing awake laryngopharyngeal procedures under local anaesthesia was conducted. A combination of 2% lidocaine gel, topical nebulized 4% lidocaine and cophenylcaine sprays were used in the nose and oral cavity to provide anaesthesia. Exact lidocaine dose administration was recorded and correlated with blood serum levels taken at specific time points (5, 15, 30, 45 and 60 minutes) following lidocaine administration.

Results: Serum lidocaine concentrations following topical administration for awake laryngopharyngeal procedures falls well below the toxic levels. All results were below 1.8mcg/mL. However, time to reach peak plasma concentration is longer than expected at 50-60 minutes. No serious lidocaine-related adverse events were found during observed procedures.

Conclusion: This study demonstrates feasibility of topical lidocaine for awake laryngopharyngeal procedures and that absorbed dose and serum levels remain well below toxic levels. Clinicians performing such procedures should be aware of the risk of lidocaine toxicity and mindful of current dosing volumes, and note longer time to peak con

28. New Zealand Pacific Parents' Perspectives on Skin to Skin with their Preterm Infants on a Neonatal Unit

Presenter: Cheree Taylor

Authors: Cheree Taylor

Te Whatu Ora - Waitematā, Community Child Health, Rehabilitation Teaching & Research Unit, Department of Medicine, University of Otago

Abstract:

Background: Prematurity is the leading cause of death in children under 5 years of age worldwide. Infants who survive this period have greater risk of neurodevelopmental impairments than their full-term peers. Skin to skin is an intervention during the neonatal period that improves physiological stability, decreases infant mortality, morbidity and improves neurobehavioral and psychosocial outcomes. Within New Zealand, the infant death rate is highest among Pacific infants born less than 28 weeks gestation, warranting further investigation into all aspects of care for this population.

Aims: The purpose of this study was to explore Pacific parents' lived experiences of skin to skin with their preterm infants while on NZ based neonatal units to inform culturally responsive care and service delivery.

Methods: Interpretive Phenomenological analysis informed by Talanoa research methodology was used to guide this qualitative study. Recruitment and data collection took place between November 2020 and July 2021 on the neonatal units across Auckland. Interviews took place with Pacific parents of preterm infants born less than 33 weeks.

Results: Data analysis identified five superordinate themes and 13 subordinate themes. This included "overcoming fear and anxiety", "connection", "words matter", "actively managing racial bias" and "spirituality and religious beliefs facilitates resilience". Skin-to-skin promoted connection and strengthened all four pou of the Fonofale model. Communication styles of individual nurses greatly influenced the Vā (relational space) experienced by families, which subsequently affected their experience of skin-to-skin.

Conclusion: Findings indicate the need for Pacific cultural competence training in order to provide culturally safe care when supporting an intervention like skin-to-skin. Intentionally encouraging and facilitating Pacific parents' spirituality within the NICU is another key strategy to optimise skin-to-skin. Within the stressful NICU environment supporting nurses in their communication and actions when facilitating skin to skin, has the potential to affect the initiation, uptake, and experience of skin-to-skin.

Acknowledgments:

Te Whatu Ora Waitematā – PDF funding Otago University supervisors Dr Fiona Graham and Doctor Dawn Elder Cultural supervisor Anveli Brown Purcell

29. What caregivers say about sleep systems for children with complex neurodisability

Presenter: Jane Hamer

Author: Jane Hamer

Te Whatu Ora - Waitematā, Community Child Health; Child Women and Family Division Rehabilitation Teaching & Research Unit, Department of Medicine, University of Otago

Abstract:

Background: Children with complex neurodisability typically experience limited mobility, hip displacement, scoliosis, and contractures which impact on pain, sleep, and functional aspects of everyday life for children and families. Whilst 24hr postural management is recommended to moderate these negative effects, adherence is variable, with limited research into caregiver's experience.

Aims: Develop understanding of caregivers' experience of implementing sleep systems for children with complex neurodisability to help inform clinical practice and improve care.

Methods: Interpretive Descriptive methodology guided this study. Recruitment occurred within the Auckland metro area, with data collection between July 2020 and March 2021, with interviews of nine caregivers. Data was analysed with themes developed.

Results: Theme one 'It's a complex night', addressed the night-time health challenges caregivers' experienced that impacted their ability to implement sleep systems. Theme two 'This is what I know' with subthemes 'What I know about my child' and 'What I know about sleep systems', addressed caregiver's knowledge and beliefs of sleep systems regarding purpose, comfort and future prevention of problems. Theme three 'Support me to support my child' identified the therapeutic relationship as critical to successful implementation of sleep systems.

Discussion: Multiple factors contribute to night-time complexity, with caregivers prioritising their child's sleep, health, and comfort needs. Findings suggest that current sleep-system intervention does not fully account for this complexity, resulting in support that does not meet their beliefs, priorities, and needs. Findings indicate therapeutic relationships were central to their experience, with timely on-going support, and open non-judgmental communication critical to developing desired collaborative therapeutic partnerships. Family-centred care principles guide care, however findings suggest these principles are not fully integrated within current practice.

Conclusion: This study provides insight into caregivers' experience of implementing sleep systems, identifying barriers and challenges, with strategies to improve implementation and engagement. Co-design work with families and clinicians are recommended as next steps.

Acknowledgements:

Professional Development Fund, Waitematā District Health Board

30. Factors that influence nurses' attitudes towards working with older adults: A qualitative descriptive study

Presenter: Mr Shayne Rasmussen

Authors: Ms Sharon Fisher, Mr Shayne Rasmussen

Te Whatu Ora - Waitematā Nursing, Auckland University of Technology – Department of Nursing

Abstract:

Background: In line with global trends, the population in New Zealand is ageing with approximately 20% aged 65 years and older by the late 2020s. To meet their needs, there will need to be an increased number of nurses who specialise in the care of older adults. The concern is that not enough nursing graduates are choosing to specialise in gerontology, resulting in a nursing workforce that may be challenged to meet increasing future demands of older adults within the healthcare system.

Aims: The purpose of this study is to ascertain the factors that influence new graduate nurses in New Zealand when making choices to work with older adults. **Methods:** Using a qualitative descriptive methodology, eight participants were interviewed; four student nurses from Auckland nursing schools and four experienced RNs from a regional Auckland hospital.

Results: Two main themes emerged from the data: pre-existing factors (sub-themes - previous experiences with older adults, ageism, and older adults as other) and the second is specific factors related to nursing education (sub-themes – undergraduate clinical placements, visibility of older adults, perceptions of less skill required).

Discussion: The findings of this research have implications for how specialist knowledge around nursing older adults is delivered at undergraduate level. It is hoped the recommendations could lead to a beneficial impact on how student nurses understand and perceive the complexity of nursing older adults, increasing the numbers choosing this area of nursing as a practice destination.

Conclusion: Understanding the factors influencing nurses' likeliness to choose working with older adults may help Te Whatu Ora Waitematā better meet the workforce requirements to meet the health care needs of this population. Working collaboratively with tertiary education providers can help shape students' perceptions and support equitable health outcomes for older adults.

Acknowledgements:

We are grateful to the study participants who shared so generously and to Te Whatu Ora Waitematā colleagues for supporting Sharon complete this Masters research

Posters

1. Systematic Review of the Efficacy and Purpose of Student Surgical Interest Groups.

Authors: Victoria Murphy, Jonathan Koea, Phillip Chao & Sanket Srinivasa

Te Whatu Ora Health New Zealand – Waitematā, Department of Surgery

Abstract:

Background: Medical termination of pregnancy (MTOP) is routinely performed at North Shore hospital. MTOP in second trimester is associated with high rates of retained products of conception (RPOC) up to 30.8%.

Based on expert opinion, there appears to be a significant number of RPOC with the current protocol at North Shore hospital. Given the burden of this complication on patients and medical services, proper study is needed to quantify this.

Aims: To identify the incidence of RPOC and its contributing factors in patients who underwent MTOP between 13-20 weeks of gestation in Hine Ora ward from Jan-Dec 2020.

Methods: Retrospective case series study on all patients admitted to North shore hospital for MTOP between 13-20th weeks of gestation in time period of Jan-Dec 2020. Twenty six patients met the study protocol. All study data were analysed using SPSS v22.

Results: Mean age of patients was 32.8 with a mean gestational age of 16.3. Most common ethnicities were Pākehā (34.3%), other European (30.8%) and Māori (7.7%). Main reason for MTOP was foetal anomalies (84.6%).

On most recent maternity ultrasound, all foeti had heartbeat and their mean crown rump length (CRL) was 58.3 mm. In 17 patients (65.4%), the procedure went without any complications. A total of eight patients (30.8%) ended up with a clinically significant RPOC.

There was no statistically significant relationship between failure of second trimester MTOP and age, BMI, ethnicity, gestational age, CRL or previous maternity history.

Discussion: Incidence of RPOC post second trimester MTOP at North shore hospital is comparable with the available literature. Unlike previous literature, we could not find any relationship between incidence of RPOC with foetomaternal characteristics. This could be because of small sample size of this study.

Conclusion: Current local guidelines for second trimester MTOP is resulting in acceptable incidence of RPOC.

2. Feasibility and acceptability of telehealth and contactless delivery of human papillomavirus (HPV) self-testing for cervical screening with Māori and Pacific women in a COVID-19 outbreak in Aotearoa New Zealand.

Authors: Dr Karen Bartholomew, Jane Grant, Anna Maxwell, Dr Collette Bromhead, Fiona Gillett, Dr Rajneeta Saraf, Kate Moodabe, Dr Susan M Sherman, Dr Georgina McPherson, Dr Deralie Flower, Dr Jyoti Kathuria, Professor Sue Crengle, Dr Richard Massey, Dr Nina Scott, Pania Coote.

Māori Health Pipeline, Planning, Funding and Outcomes, Te Whatu Ora - Waitematā and Auckland
With Tamaki Health (Total Healthcare PHO) and Te Whatu Ora - Counties Manakau

Abstract:

Background: There are persistent inequities in cervical screening coverage, worsened during the COVID lockdowns. Self-collected human papilloma virus (HPV) samples can facilitate continued screening during care disruptions and can also be used to accelerate catch-up screening as we move out of pandemic-related crisis care.

Aims: To determine the feasibility and acceptability of an offer of a telehealth and contactless delivery of HPV self-test for cervical screening during a COVID-19 outbreak.

Methods: During the August 2021 COVID-19 outbreak and associated Alert level 4 lockdown in metro-Auckland never-screened, due or overdue Māori and Pacific women aged 30-69 years enrolled in a Tamaki Health clinic were invited by text message to have a HPV self-test. Study invitation, active follow-up, nurse-led discussions, result notification and post-test questionnaire, were all delivered through telehealth with contactless delivery.

Results: From the primary care enrolment lists 197 eligible Māori and Pacific women were invited to take part. We were able to contact 86 women, of whom 66 agreed to take part (35 from initial text and 31 after a round of active follow-up). Five were subsequently found to be ineligible. Overall uptake was 61 samples returned (31.8%) and uptake of all contactable women was 70.9%. Six of the 61 HPV self-tests (9.8%) were positive.

Discussion: COVID-19 has impacted on the delivery of preventative healthcare, particularly face-to-face activity such as primary care and screening. This study provides further policy-relevant information on the utility of a telehealth and mail-out model (courier, contactless) for the National Screening Unit as it moves to change to primary HPV testing (including self-testing) this year.

Conclusion: The offer of HPV self-testing during COVID-19 lockdown was feasible and acceptable for Māori and Pacific women. HPV self-testing via telehealth and mail-out, alongside other options, offers a potential pro-equity approach for addressing inequitable participation and deferred screens.

Acknowledgements:

This proof of concept study was funded by the previous Auckland, Waitemata and Counties Manukau DHBs and by Total Healthcare PHO (Tamaki Health)

3. Systemic Lupus Erythematosus (SLE) Te Whatu Ora Waitemata patients in Auckland: Epidemiology and Attainment of Lupus Low Disease Activity State (LLDAS)

Authors: Nisha Prashar¹, Sue Austin², Kristine (Pek Ling) Ng²

¹Te Whatu Ora Health New Zealand – Counties Manukau, Rheumatology Department; ²Te Whatu Ora Health New Zealand – Auckland, Rheumatology Department.

Abstract:

Background: There is significant lack of lupus research in New Zealand (NZ). The Asia Pacific Lupus Collaboration (APLC) is an international collaboration of lupus experts. NZ became a member of the APLC in 2018. TWOW is the lead site for the APLC treat-to-target (T2T) Lupus Low Disease Activity State (LLDAS) prospective study.

Aims: To assess epidemiology, LLDAS attainment, lupus damage index and clinical characteristics in lupus patients from the TWOW APLC Auckland cohort.

Methods: All patients who fulfilled either the American College of Rheumatology (ACR) or Systemic Lupus International Collaborating Clinics (SLICC) criteria were invited to participate in the study. At each study visit (3 to 6 monthly), patients are assessed for flares using SLEDAI-2K. Information on clinical manifestations, medication use, and laboratory data are collected.

Results: Sixty two patients were recruited during 2018-2020. The incidence of SLE in TWOW is 5.72 per 100,000. The ethnic breakdown was Asian (n=27, 44%), European (n=25, 40%), Pacific Island (PI) (n=5, 8%) and Māori (n=3, 5%). Arthritis was the most common clinical feature (n=51, 82%), followed by photosensitivity (n=31, 50%). Fourteen patients (23%) had renal disease. In terms of medications used, 35 patients (56%) had used prednisone at some point with the majority of patients (n= 52, 84%) on hydroxychloroquine. LLDAS attainment at any time point was achieved in 56 patients (90%). About 1/3 of patients flared at least once during study (n=24, 39%). Six patients (9.6%) had a severe lupus flare. The average SLICC-ACR Damage Index was 0.22 (range 0 - 47).

Conclusion:

This is the first NZ prospective study on TWOW lupus patients. The majority of patients were able to achieve LLDAS, a clinical state associated with better outcomes. Corticosteroid use occurred in more than half of the cohort indicating the lack of effective lupus therapeutics.

4. Vancomycin use for haemodialysis patients—Development of a new dosing protocol

Authors: Enya Ho¹, Sarah Gleeson¹, Sarah Roberts², Kristen Bondesio², Andrew Salmon¹

¹Te Whatu Ora Health New Zealand – Waitematā, Renal service; ²Te Whatu Ora Health New Zealand – Waitematā, Pharmacy department.

Abstract:

Aim: To develop a dosing and monitoring protocol to achieve therapeutic vancomycin levels on intermittent haemodialysis.

Methods: We identified 15 vancomycin treatment courses received by patients on intermittent haemodialysis at Waitematā District in Auckland, New Zealand. Demographic, biochemical and clinical parameters were gathered from their health records. We subsequently devised and implemented a new vancomycin protocol consisting of weight-based loading dose, and subsequent dose titration according to same-day measured pre-dialysis levels. We then re-audited 16 vancomycin treatment courses to assess the performance of the protocol.

Results: A significantly higher proportion of vancomycin levels were within the target range (15–20 mg/L) following the implementation of protocol, from 23% to 46% ($p < .005$). Additionally, a greater proportion of treatment courses had >50% of pre dialysis levels within the target range, rising from 13% to 56% ($p < .01$). In the pre protocol group, 19 out of 117 doses of vancomycin were withheld during treatment, compared to 1 out of 118 doses in the post-protocol group. A total of 62% of total maintenance doses were administered in adherence to protocol. Length of hospital stay and number of positive blood cultures while on treatment were reduced.

Conclusions: Our initial audit revealed deficiencies in our clinical practice in the absence of a local vancomycin protocol for patients receiving intermittent haemodialysis. Following the implementation of our novel protocol, there was an improvement in therapeutic levels and fewer doses were withheld. Our sample size was too small to allow for interpretation of clinical outcome data.

Summary at a Glance: Vancomycin is commonly used in haemodialysis patients, but it is readily cleared by high-flux dialyzers. We developed a novel dosing and monitoring protocol for the use of vancomycin on haemodialysis. Following its implementation, there was an improvement in therapeutic levels with fewer doses being withheld

5. What key clinical, psychological and neurophysiological factors predict the magnitude of exercise induced hypoalgesia (EIH) in individuals with knee osteoarthritis (OA)?

Authors: David Toomey¹, Associate Professor Gwyn Lewis¹, Dr. Natalie Tuck¹, Dr. Usman Rashid¹, Professor Jo Nijs², Associate Professor David Rice^{1, 3}

¹Health and Rehabilitation Research Institute, Auckland University of Technology; ²Pain in Motion International Research Group, Department of Physiotherapy, Human Physiology and Anatomy, Faculty of Physical Education and Physiotherapy, Vrije Universiteit Brussel, Ixelles, Belgium; ³Te Whatu Ora Health New Zealand – Waitematā, Pain Services, Department of Anaesthesiology and Perioperative Medicine.

Abstract:

Background: Prior research indicates that individuals with knee osteoarthritis (OA) exhibit more variable exercise induced hypoalgesia (EIH) that can lead to flares in pain, adversely affect exercise adherence and limit exercise related pain relief.

Aims: This cross-sectional study explored potential clinical, psychological and neurophysiological predictors of the magnitude of EIH in individuals with knee OA.

Methods: 119 men and women (mean age 68 ± 10) with knee OA completed baseline clinical tests, psychological questionnaires (e.g anxiety, depression, catastrophising, kinesiophobia, expectations) as well as measures of pain sensitisation using standardised quantitative sensory testing. Before and immediately after a bout of isometric resistance exercise, pressure pain thresholds (PPT) were completed at the knee (local EIH) and the contralateral forearm (remote EIH). Linear regression analysis was utilised to explore which variables predicted the magnitude of EIH (change in PPT), while linear mixed regression was used to determine what portion of the variance in EIH was explained by the observed variables.

Results: The magnitude of EIH was larger at the knee than the arm ($p < 0.001$). Of the observed variables, only age, anxiety and expected change in pain were associated with the magnitude of EIH (all $p < 0.05$). However, together these variables accounted for <10% of the total variance in EIH. A large amount of the remaining variance was due to individual and test site (knee, forearm) related differences.

Conclusions: Age, anxiety and expected change in pain were associated with the magnitude of EIH in people with knee OA. Large between participant and between-location variance suggests that there is still a significant space for exploration of additional clinical variables which may eventually explain differences in the EIH response. This may be important in order to design more effective exercise-based interventions for people with knee OA.

Acknowledgements:

Funding – Health Research Council and Auckland University of Technology.

6. Can a targeted pre-exercise education intervention enhance the exercise induced hypoalgesia (EIH) response in individuals with knee osteoarthritis (OA)?

Authors: David Toomey¹, Associate Professor Gwyn Lewis¹, Dr. Natalie Tuck¹, Associate Professor Ben Darlow², Dr. Usman Rashid¹, Associate Professor David Rice^{1, 3}

¹Health and Rehabilitation Research Institute, Auckland University of Technology; ²University of Otago- Wellington; ³Te Whatu Ora Health New Zealand – Waitematā, Pain Services, Department of Anaesthesiology and Perioperative Medicine.

Abstract:

Background: Prior research indicates that individuals with knee osteoarthritis (OA) exhibit more variable exercise induced hypoalgesia (EIH) that can lead to flares in pain, adversely affect exercise adherence and limit exercise related pain relief. Recent evidence in a healthy pain-free population has shown that explicit education about the pain-relieving effects of exercise can enhance the subsequent EIH response, but this has yet to be examined in an OA population.

Aims: This study examined whether positive pre-exercise education leads to a greater EIH response in people with knee OA, compared to neutral pre-exercise education.

Methods: A double-blind randomised controlled trial was undertaken with a parallel design involving 42 participants, randomly allocated into two groups - positive pre-exercise education (n=21) and neutral pre-exercise education (n=21). Each group received two 1-on-1 education sessions by a postgraduate qualified physiotherapist, 24-72hrs apart. OA-related and exercise-related beliefs were evaluated pre and post-education. Following this, a standardised bout of isometric resistance exercise was performed and pre-post exercise change in pressure pain thresholds, resting knee pain and knee pain during stepping were measured by a blinded assessor. Two step ANCOVAs using linear regression were utilised to assess between group differences in outcomes.

Results: There was a significant difference in the change in exercise-related ($p = 0.004$) but not OA-related beliefs ($p = 0.195$) post intervention, in favour of the positive education group. However, the pre-post exercise change in pressure pain thresholds, resting pain and pain during stepping were not different between groups (all $p > 0.561$).

Conclusions: Despite successfully modifying exercise related beliefs compared to neutral pre-exercise education, positive pre-exercise education did not enhance the EIH response in people with knee OA. Higher dose interventions may be required to successfully modify OA-related beliefs.

Acknowledgements:

Funding – Auckland University of Technology.

7. Quality Performance Indicators compliance for the Surgical Treatment of Gastric Cancer at North Shore Hospital.

Authors: Yijiao Wang, Suheelan Kulasegaran, Sanket Srinivasa, Jonathan Koea, Andrew MacCormick

Te Whatu Ora Health New Zealand – Waitematā, Department of Surgery.

Abstract:

Background: This is the first retrospective study of its kind undertaken in New Zealand to investigate the adherence rate of Quality Performance Indicators of Gastric adenocarcinoma (GA) management and its barriers. This is in keeping with the recent focus on the importance of Quality Performance Indicators (QPIs) in surgical care, these are objective measurements used to highlight elements of patient care that perform strongly and poorly.

Aims: Primary aim was to establish the achievement rate of the selected QPIs. The secondary aims were to identify areas of GA care requiring improvement and to comment on potential barriers, as well as to document the change in treatment practice by including both historic and recent data.

Methods: All patients with gastric adenocarcinoma treated at North Shore Hospital between 1st January 2010 and 31st December 2015 were included. Electronic data in the form of clinic letters, operation notes, and histology and radiology reports were reviewed with ethics approval. Adherence rate was collected in binary form.

Results: A total of 125 patients were included, 61 patients (48.8%) received operative management. Almost 40% were diagnosed with stage 4 GA at time of referral. QPIs with high compliance rate include preoperative radiological staging and histological diagnosis, subspecialty surgeon training and pathology report documentation. Those with low compliance include perioperative chemotherapy (32.7%), postoperative radiological surveillance (32.5%) and minimally invasive approaches to surgical resection (12.5%).

Discussion: QPIs could be the foundation to establish treatment pathway for all newly diagnosed GA such as ERAS protocols. We look at individual QPIs that could be improved and assess reasons for poor rates.

Conclusion: Indicators are variably implemented in clinical practice. With this established baseline, we hope to achieve a standardised perioperative protocol for Gastric adenocarcinoma care at our locale and to investigate its implementation with mortality rate.

8. Selective use of radiological staging in node-positive Stage II breast cancer patients may have a role in treatment.

Authors: Chaey Leem, Yijiao Wang, Joshua Kirkpatrick, Eva Juhasz.

Te Whatu Ora Health New Zealand – Waitematā, Department of Surgery.

Abstract:

Background: Advanced staging radiography is used inconsistently for early stage (stage I + II) breast cancer (Bca) patients. However, accurate and appropriate staging of newly diagnosed Bca may significantly impact on treatment decisions.

Aims: Our primary aim is to determine the proportion of node-positive stage II Bca patients who have distant metastases at initial evaluation prior to treatment. Our secondary aim was to evaluate the radiological staging pattern across Bca patients at North Shore Hospital

Methods: 499 Stage II and III Bca patients who were seen in the breast service at North Shore Hospital from 2013 to 2018 were enrolled in the study and audited for radiological staging.

Results: 102 Stage II patients had computed tomography (CT) at baseline. 88 of 102 (86%) of Stage II patients were node positive ($\geq N1$) with 6 patients (6.8%) had distant metastatic disease and were upstaged to stage IV. 52 Stage III patients out of 72 (72%) had baseline staging CTs. 9 out of 52 patients (17%) of Stage III patients were upstaged to Stage IV. Despite guideline recommendations, baseline staging for T4 disease (Stage IIIB) was poor, with only 7 out of 13 patients with Stage IIIB disease radiologically staged.

Discussion: Our result show higher rate of distant metastasis detection in node positive patients. This corresponds to the hypothesis metastases from Bca may transit through regional lymph nodes first. The modality of baseline staging is open for further discussion however CT staging has been the most frequent choice at our locale.

Conclusion: Consideration for baseline radiological staging should be given to stage II and III, cN1 Bca patients, in which diagnosis of distant metastatic disease would change the treatment plan. Regional guidelines for baseline radiological staging for Bca patients may have an impact on patient management in Bca patients.

9. Cancer screening services: What do indigenous communities want? A systematic review.

Authors: Dr Eunjong (Franklin) Han¹, Mr Sanket Srinivasa^{1,2}, Assoc. Prof. Jason Gurney³, Prof. Jonathan Koea^{1,2,4}

¹Te Whatu Ora Health New Zealand – Waitematā, Department of Surgery; ²Department of Surgery, The University of Auckland; ³Department of Public Health, University of Otago, Wellington; ⁴Te Kupenga Hauora Māori, University of Auckland.

Abstract:

Background: Indigenous communities experience worse cancer outcomes compared to the general population partly due to lower cancer screening access. “One-size fits all” screening programmes are unsuitable for reaching Indigenous communities.

Aims: In this review we summarise available evidence on the perspectives of these communities; with a view to informing the improvement of cancer screening services to achieve equitable access.

Methods: We undertook a systematic review according to the PRISMA guidelines, using the databases MEDLINE, Scopus, PubMed, and Google Scholar. The search terms used were: “indigenous community or indigenous communities”, “cancer screening”, and “facilitators, enablers, desires, or needs”. Qualitative studies published up to the 30th of August 2022 investigating the perspectives of Indigenous communities on factors encouraging screening participation were included into the study. The included studies were reviewed and analysed inductively by two independent reviewers, and key themes regarding indigenous access to cancer screening were then extracted.

Results: A total of 204 unique articles were identified from the search. The title and abstracts of these studies were screened, and 164 were excluded based on the exclusion and inclusion criteria. The full texts of the remaining 40 studies were examined and 18 were included into the review. Four key themes were identified pertaining to culturally tailored education and information dissemination, community involvement, positive relationships with healthcare providers and individual empowerment and autonomy.

Discussion: Current cancer screening programmes have failed to provide equitable screening access for Indigenous communities worldwide. Interventions aimed at addressing the four themes identified from this review, as expressed by Indigenous communities should be considered to improve cancer screening for Indigenous communities.

Conclusion: Improvements, based on the key themes identified from this review, must be made at all levels of the healthcare system to achieve equitable screening participation in Indigenous communities.

10. Risk and protective factors of self-harm and suicidality in adolescents - an umbrella review.

Authors: Miss Rebecca Richardson¹, Dr Tanya Connell¹, Dr Mandie Foster¹, Dr Julie Blamires¹, Dr Smita Keshoor¹, Chris Moir², & Dr Irene SL Zeng¹.

¹Faculty of Health and Environmental Science, Auckland University of Technology; ²Centre for Postgraduate Nursing Studies, University of Otago, Christchurch

Abstract:

Background: Suicide remains the second most common cause of death in young people aged 10–24 years and is a growing concern globally. The literature reports a vast number of factors that can predispose an adolescent to suicidality at an individual, relational, community, or societal level. There is limited high-level research in identifying and understanding these risk and protective factors of suicidality in adolescents.

Aims: To use a systematic method to synthesise recent review literature on adolescent mental health outcomes (self-harm and suicidality) and their risk and protective factors.

Methods: An umbrella review method and meta-analysis was used to synthesize evidence from the literature in the past 20 years on risk and protective factors of self-harm and suicidal attempts in adolescents. It derived the population attributable fraction (PAF) of the identified exposure based on the data synthesis.

Results: Bullying victimization was the most attributed environmental exposure with PAF 22.16% for suicide ideation and 31.12% for suicide attempts, the pooled odds ratio for suicide attempt was 3.0 (95% C.I. 2.58-3.53, <.0001). The other significant school and individual factors were sleeping disturbance, school absenteeism, and exposure to antidepressant. Several major vulnerable young populations were identified with significant higher prevalence of suicide attempts and ideation, including LGBT youth and those with mental health disorder, problem behaviours, previous suicidality, self-harm, and gender (female).

Discussion: Health professionals working in population health, school settings and community mental health should consider these risk factors when assessing and treating vulnerable young people. A person-centred approach with an emphasis on connectiveness and bully-free school environments, should be a priority focus for schools, health professionals and public health policy makers.

Conclusion: To reduce the suicide behaviour and ideation in adolescents and youth, it is vital to create bully-free environments, eradicate school related exposures, and provide protective interventions within schools.

Acknowledgements:

AUT Faculty of Health and Environmental Science, Research Office 2023 Summer Scholarship Fund

11. Designing a spiral curriculum – navigating inter-professional prescribing education.

Authors: Mrs Avril Lee^{1,2,3,4}, Dr Ta-Chen Kuo¹, Dr Lucy Gray^{1,3}, Miss Kayla Turner^{2,4}, Miss Hiyori Nakano³

¹Te Whatu Ora-Health New Zealand – Waitematā, Medical Education Training Unit; ²Te Whatu Ora-Health New Zealand Waitematā, Pharmacy Department; ³The University of Auckland, School of Medicine; ⁴The University of Auckland, School of Pharmacy

Abstract:

Background: The Equip study (UK) highlighted that most prescribing errors occurred among 1st (Postgraduate Year 1) and 2nd year (Postgraduate Year 2) doctors. Our prescribing program at Waitemata District is built on recommendations from this study and our own research. Waitematā has developed an inter-professional workplace education program supporting safe prescribing through interprofessional scholarship, program development and collaboration between medicine, pharmacy and nursing. This has helped design a ‘fit for purpose’ spiral curriculum with experience specific objectives. The program pipeline is contextualised to the level of experience of the learner across five years of training: three undergraduate years of clinical students learning about medication histories and safe prescribing, to PGY2 doctors learning about subspecialised medication safety.

Aims: To measure the impact of the final undergraduate year as participants undertake the challenging transition from student to clinician (PGY1).

Methods: All PGY1 doctors that were former students at Waitematā in 2021 were invited to participate in an anonymous retrospective self-reported survey. Participants graded each statement on a 4-point Likert scale from strongly disagree to strongly agree.

Results: 100% (N=22) found the prescribing workshops helpful in preparing for PGY1, boosting confidence for prescribing. 13.6% (3) did not feel confident using protocols and 4.5% (1) did not enjoy the workshops. 95% agreed that working with pharmacists in the workshops improved their working relationship with them.

Discussion: It is challenging to measure any meaningful impact of the program. We do not have a consistent cohort as learners move across hospital sites and districts during this 5-year period. This attempt was aimed at readiness for practice, prescribing confidence and perception of pharmacists. Near peer teaching, role-modelling, collaborative practice and the pipeline of educational strategies should play a role in sequentially improving prescribing practice.

Conclusion: We are on the right path, with more to achieve.

Acknowledgements:

Pharmacy Department and Medical Education and Training Unit, Te Whatu Ora-Health New Zealand Waitematā

12. Providing a pro-active response to COVID-19 demands: Totara Club Dementia day stay.

Authors: Gael Ansell, Hayley Sesto, Gloria Cho, Linda Pereira

Equip Mental Health & Addictions Service

Abstract: Submitted 2021

Background: Equip Totara Club is a community dementia day care service contracted to Te Whatu Ora Health New Zealand – WDHB that provides interactive day care for people diagnosed with mild to moderate dementia. Due to COVID-19 shutdowns, this service was unable to continue which resulted in members and carers being isolated and where stress increased significantly, with this and other supports diminished or non-existent.

Aims: To provide a proactive response to COVID 19 demands.

Methods: The delivery of service changed and evolved during both lockdowns to provide a continuation of predictable, structured, meaningful activities. Members were allocated between the team and tasked to keep a minimum of 2x weekly phone support with email follow up, along with virtual activities/video links and hard copy activities where needed. These were also shared with Equip Older Adult Service. Pandemic Risk Plans for all members were kept current. These different contacts were captured on CRM system -Sharepoint as a COVID Response

Results: Lockdown 1, 19/3/2020 – 12/6/2020: 36 members contacted over 313 contacts. Lockdown 2 13/8/2020-22/9/2020: 20 members were contacted over 77 contacts. The team's dedication and adaptability ensured that their members continued to receive the support they needed during these challenging times.

Discussion: The Zoom meetings gave us time to connect as a team. Specific learnings were noted such as new technology: Zoom, PowerPoint, virtual activities; deeper insight into family/whanau connections and needs; and deeper understanding of members needs in their home environment. Preparedness for possible future pandemic situations ongoing.

Affiliations:

Te Whatu Ora Health New Zealand – Waitematā, Needs Assessment Service Coordination (NASC)

13. Inter- and intra-rater reliability for assessment of swallowing using a hand-held portable ultrasound device

Authors: R. Hammond^{1,2}, A. Dimmock², K. Winiker¹, M.L. Huckabee¹

¹Rose Centre for Stroke Recovery and Research, School of Psychology Speech and Hearing, University of Canterbury, Christchurch; ²Te Whatu Ora Health New Zealand – Waitematā.

Abstract: Submitted 2021

Background: Ultrasound (US) assessment of swallowing has been documented as reliable in both healthy and dysphagic participants but has not been translated into standard clinical practice. This may be due to cost and accessibility of US devices. Recent innovations have produced inexpensive, wireless portable US technology that may overcome these barriers. This project explored reliability of image acquisition and measurement of US images obtained with this technology in a pressured clinical environment.

Methods: Portable US was used to acquire images of hyoid excursion, thyro-hyoid approximation, tongue thickness and cross sectional area of submental muscles on 8 dysphagic patients. Data were independently collected by 2 investigators within the same day and measured online (during the exam). Inter-rater reliability was calculated with interclass correlation coefficient (ICC). Comparison of acquisition and measurement reliability was made to explore the impact of methods on reliability. Offline inter-and intra-rater measurement was completed with a minimum of 11 days between measures.

Results: For all online acquisition measures, reliability ranged from poor (ICC < .50) to moderate (ICC .50-.75). ICC of live versus offline measurement was also analysed which ranged from moderate (ICC .50-.75) to high (ICC > .75). However reliability of offline measurement was high (ICC > .75).

Conclusion: The high reliability of offline measurement of US images is comparable to previous studies. Reduction in reliability is noted when acquiring or analysing the images dynamically. It is hypothesised live data analysis may be affected by the pressure of a clinical environment, lighting and lower resolution of the device. This finding suggests that in order to achieve clinical translation, exploring methods to improve reliability of live analysis is important.

14. Kaumātua have the ability, desire and right to control their medicines journey.

Authors: Joanna Hikaka^{1,2}, Rhys Jones¹, Carmel Hughes³, Nataly Martini¹

¹The University of Auckland; Te Whatu Ora Health New Zealand – Waitematā; ³Queen's University, Belfast, Northern Ireland

Abstract: Submitted 2021

Background: Understanding patient experience is a vital component of health service development. Pharmacist-led medicines review services can improve the quality use of medicines. These services, developed internationally, are underutilised in Aotearoa and may currently increase health disparities. Utilising kaumātua knowledge to develop medicines review services may support the achievement of Māori health equity.

Aims: Explore kaumātua (Māori older adults) experiences of medicines and medicines-related services in Aotearoa.

Methods: Semi-structured interviews were conducted with 10 kaumātua. Reflexive thematic analysis was used to generate themes using a kaupapa Māori theoretical framework. Themes were presented to participants and kaumātua groups. Themes were then developed into key messages for lay audiences. Key messages were visualised through working with a Māori artist. Eligibility criteria: Māori, 55 years or older 5+ medicines Community dwelling in Waitematā DHB.

Results: Four themes were identified: Medicines have positive and negative impacts on mind, body and social connections. Medicines supply appears to be a business transaction rather than an act of care. Kaumātua have the ability, desire and right to make their own medicine decisions. Caring, authentic health partnerships to support medicines decisions are valued.

Discussion: This research has been used, in part, to develop a medicines review intervention for kaumātua was tested in a feasibility study. An important aspect of this research was developing information to feedback to Māori communities and practicing pharmacists, to better inform everyday practice and support to the achievement of Māori health equity.

15. Association between socioeconomic deprivation and community antibiotic dispensing in the Northern Region of New Zealand using a new measure of deprivation.

Authors: Michael Walsh¹, Assoc. Prof. Daniel Exeter²

¹Te Whatu Ora Health New Zealand – Waitematā, Planning, Funding and Outcomes; ² School of Population Health, The University of Auckland

Abstract: Submitted 2021

Background: With the rise of antibiotic resistance, once treatable infections are becoming difficult to cure. This has led to rising costs to healthcare systems as well as individual and societal costs. Consumption of antibiotics in New Zealand has increased by as much as 49 per cent between 2006 and 2014. It has also been shown to be higher than 22 other European countries. By five years of age, 97% of New Zealand children have had at least one course of antibiotics. Māori and Pacific children have been shown to have received more antibiotic courses than New Zealand European children, as well as children living in areas of high socioeconomic deprivation (a Census-based measure of deprivation) compared with children in least deprived areas.

Aims: To examine the relationship between area deprivation measured by the newly developed New Zealand Index of Multiple Deprivation (IMD) and antibiotic dispensing within the primary health care enrolled population of the Northern region of New Zealand in 2016.

Methods: Non-identifiable PHO data of individuals residing in the Northern Region of New Zealand were matched to antibiotic dispensing data for 2016. Multivariate logistic regression was used to calculate unadjusted and adjusted odds ratios for the association between deprivation and the dispensing of antibiotics.

Results: A total of 1,676,332 individuals were included in the analysis of which 715,141 (42.7%) had one or more antibiotics dispensed and 175,905 (10.5%) had three or more dispensed. The prevalence of having three or more antibiotics dispensed varied throughout the Northern Region. Area deprivation was strongly associated with increasing odds of having three or more antibiotics dispensed with an increasing trend as area deprivation increased. Pacific (adjusted OR 1.82; 95% CI: 1.65 to 2.01) and Māori (adjusted OR 1.64; 95% CI: 1.51 to 1.77) ethnicities were more likely to have three or more antibiotic dispensed than individuals of Asian ethnicity. Compared with quintile 1, individuals living in quintile 5 data zones were 87% more likely to have three or more antibiotics dispensed. Individuals residing in employment, health, income and education quintile 5 data zones were over 80% more likely to have three or more antibiotics dispensed than individuals residing in quintile 1 data zones within the same domains

Conclusion: In this study differences in the prevalence of antibiotic dispensing can be seen throughout the Northern Region of New Zealand. Deprivation, as measured by the IMD, and individuals of Pacific or Māori ethnicity were found to have a strong and consistent association with increased odds of antibiotic dispensing. Further research is required to better understand the factors that lead to ethnic and socioeconomic differences. These findings may have implications for antimicrobial stewardship and public health campaigns.

Online Presentation and Poster Thumbnails

Research Presentations

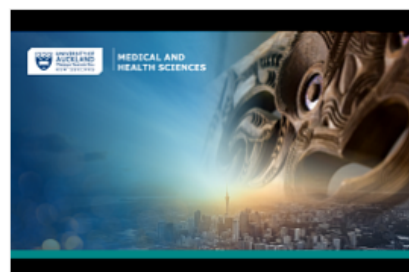
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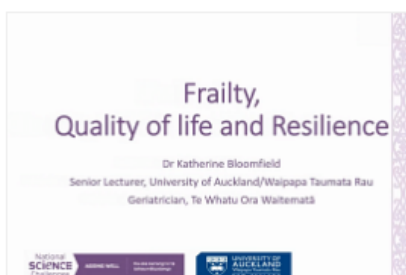
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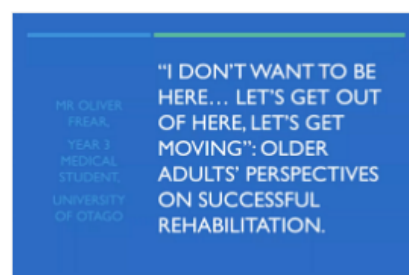
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Beatwise ECG Classification for the Detection of Atrial Fibrillation with Deep Learning



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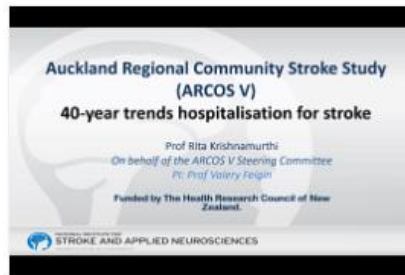
What is the experience of nurses undertaking research activity whilst in paid employment within a Te Whatu Ora district?



Co-Teaching: Reviewing the delivery of co-taught prescribing workshops



Aphasia in Aotearoa: A codesigned project to update aphasia therapy in Aotearoa New Zealand



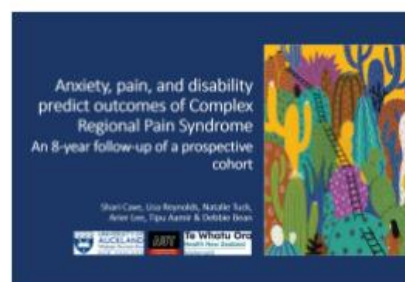
Changes in hospital admission for stroke: Findings from the ARCOS studies



What is the experience for migrant Kiribati women of childbirth in New Zealand?



Kaumātua Insights into Indigenous Māori Approaches to Pain Management: A Qualitative Study



Anxiety, pain, and disability predict outcomes of Complex Regional Pain Syndrome: An 8-year follow-up of a prospective cohort



The chronic pain of chronic pancreatitis; support for a transdiagnostic approach



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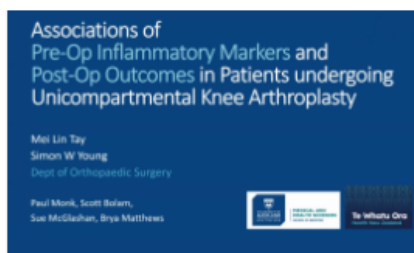
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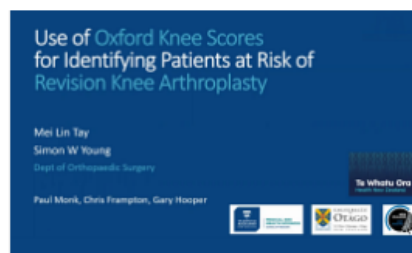
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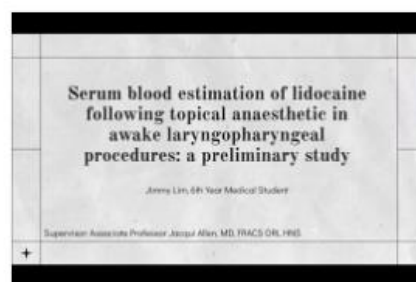


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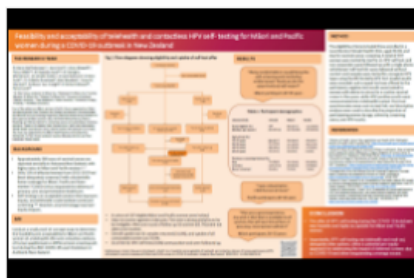
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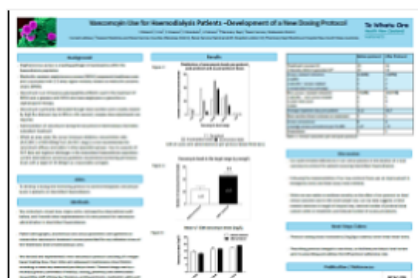
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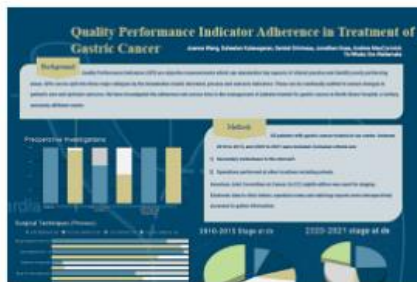
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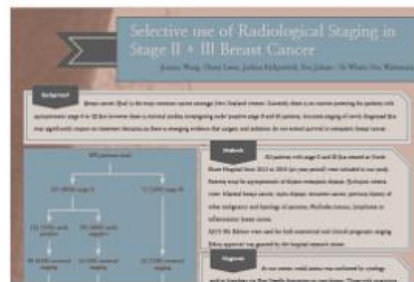
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Can a targeted pre-exercise education intervention enhance the exercise induced hypoalgesia (EIH) response in individuals with knee osteoarthritis (OA)?



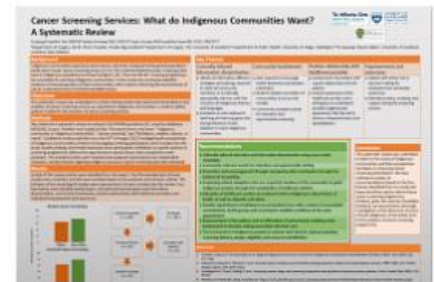
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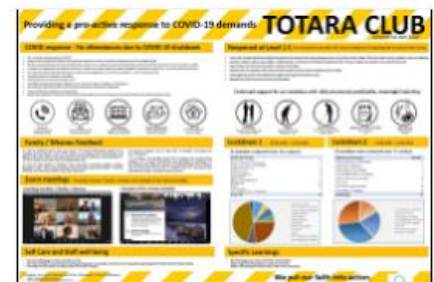
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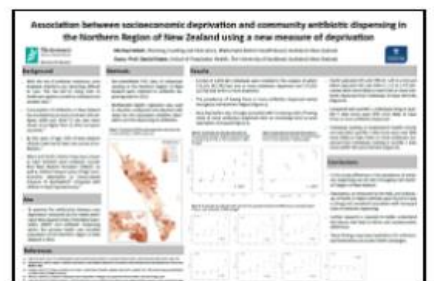
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