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Oral presentations

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

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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.

AIM

We performed a randomised controlled trial (RCT) of a multidisciplinary (MD) intervention versus usual care in Te Whatu Ora Waitematā, The University of Auckland & AUT Collaborative Research Symposium 2023 Application for Poster Presentation 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

One hundred and seventy-three 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

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

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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 an 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 District Health Board.

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

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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-centred 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 (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

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A clinicians' and patients' survey to examine PreventS-MD software usability for primary stroke prevention (PRIME)

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BACKGROUND

Stroke is a leading cause of death and long-term disability affecting all ages, ethnicities and socio-economic 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 10 patients from the outpatient clinic of Te Whatu Ora – Waitematā. 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 1 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 1 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 clinicians' 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.

Beatwise ECG classification for the detection of atrial fibrillation with deep learning

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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 issue found in manual analysis.

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

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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 healthcare 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 techniques.

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.

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

K Tennant

Te Whatu Ora – Waitematā

BACKGROUND

Research and evidence-based practice is essential for the delivery of high-quality patient care and, as highlighted in the Waitematā 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 New Zealand 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 while 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 5 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

While 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

Co-teaching: reviewing the delivery of co-taught prescribing workshops

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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

Eighty-one out of 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.

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

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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 co-designed 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

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Changes in hospital admission for stroke: findings from the ARCOS studies (1981–2022)

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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 5 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, 1,642, 2,038 and 2,556 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 5 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 5 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 5 decades, due to specialised medical care services and treatment options.

ACKNOWLEDGEMENTS

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

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Te Whatu Ora – Waitematā

BACKGROUND

I am a New Zealand 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 New Zealand, or experienced birth in Kiribati and supported other I-Kiribati birthing in New Zealand, 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 New Zealand 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.

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Kaumātua insights into Indigenous Māori approaches to pain management: a qualitative study

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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

Fourteen 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.

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

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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 sensitisation. 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 focussing 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.

Addressing the social stigma of chronic pain

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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

Two hundred and fourteen 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 among 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 that could guide strategies to reduce chronic pain stigma among health professionals and the public, and reduce self-stigma among people with pain.

Pain, disability and patient satisfaction after total knee joint replacement with or without supervised group physiotherapy—a propensity score matched case control study

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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 post-operative 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 post-operative 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

Thirty-six patients (no knee pain class) were matched one-to-one ($n=36$) from a pool of 74 patients from the historical cohort who completed a minimum of two supervised group rehabilitation sessions (median six, range two 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.

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Ann Bennett—former Waitematā physiotherapist.

Cognitive behavioural pain management prior to total knee joint replacement: a feasibility trial

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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 three-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

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Pain patients’ service expectations and subsequent engagement in an internet-delivered self-management intervention

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Te Whatu Ora – Waitematā

BACKGROUND

Since 2011, the Waitematā 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 among 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

Eleven 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.

Associations of pre-operative inflammatory markers and post-operative outcomes in patients undergoing uni-compartmental knee arthroplasty

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BACKGROUND

Osteoarthritis (OA) is associated with inflamma-

tion; 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 6-week ($r=0.44$), 6-months ($r=0.61$) and 1-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 6 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

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Use of the Oxford Knee Score for identifying patients at risk of revision knee arthroplasty

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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 6 months (TKA $n=27,708$, UKA $n=8,415$), 5 years (TKA $n=11,519$, UKA $n=3,365$) or 10 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 6 months, 10% and 12% at 5 years and 9% and 5% at 10 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 6 months (area under the curve (AUC): TKA, 0.77 vs 0.76, NS; UKA 0.81 vs 0.77; $p=0.02$), 5 years (TKA, 0.78 vs 0.75, NS; 0.81 vs 0.77; $p=0.02$) and 10 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

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Two weeks of low molecular weight heparin for isolated symptomatic distal vein thrombosis (TWISTER study)

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BACKGROUND

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

AIMS

Objective: assess whether 2 weeks of therapeutic anticoagulation is efficacious/safe for IDDVT. Primary outcome: symptomatic 3-month venous thromboembolism (VTE) incidence in the 2-week anticoagulation group. Secondary outcomes included post-thrombotic syndrome (PTS) and bleeding.

METHODS

Prospective multi-centre cohort study. Consecutive low-risk IDDVT patients enrolled within 72 hours of diagnosis and treated with therapeutic dose enoxaparin or rivaroxaban. At 2 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 4 more weeks. Patients with extension into the popliteal vein on 2-week ultrasound were treated off-study. Patients were reviewed at 3 and 6 months.

RESULTS

Two hundred and forty-one eligible patients received ≥ 2 weeks' anticoagulation. One hundred and sixty-seven out of 241 (69%) were assigned to the 2-week anticoagulation group; 71/241 (30%) to the 6-week anticoagulation group; 3/241 patients (1%) had extension into the popliteal vein on 2-week CUS. Two patients in the 2-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 2 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 2 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 2 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.

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The DIAMOND trial—Different Approaches to MOderate and late preterm Nutrition: Determinants of feed tolerance, body

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Te Whatu Ora – Waitematā

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 (150ml.kg⁻¹ day⁻¹ or exclusive breastfeeding).

RESULTS

Five hundred and thirty-two (55% boys) babies were recruited. Percentage 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

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Patients' understanding of risk—a survey of probability literacy

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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 socio-economic decile were not. Māori/Pasifika scored significantly worse than Pakeha/European (total score 3.2 vs 3.6, patients' socio-economic 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.

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North Shore Hospital, Lakeview Cardiology Department; Waitakere Hospital, Huia Ward.

Safety of topical lidocaine in awake in-office laryngology procedures

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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 utilised 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, and 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 nebulised 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 fall 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 concentration.

New Zealand Pacific parents' perspectives on skin-to-skin with their preterm infants on a neonatal unit

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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 and 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 in New Zealand-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 in 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 newborn intensive care unit (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.

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What caregivers say about sleep systems for children with complex neurodisability

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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. While 24-hour 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 were 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 caregivers' 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 ongoing 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.

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Factors that influence nurses' attitudes towards working with older adults: a qualitative descriptive study

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BACKGROUND

In line with global trends, the population in New Zealand is ageing with approximately 20% to be 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 healthcare 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 in completing this Masters research.

Posters

Systematic review of the efficacy and purpose of student surgical interest groups

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Te Whatu Ora – Waitematā

BACKGROUND

Medical termination of pregnancy (MTO) is routinely performed at North Shore Hospital. MTO 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 MTO between 13–20 weeks of gestation in the Hine Ora ward from January–December 2020.

METHODS

Retrospective case series study on all patients admitted to North Shore Hospital for MTO between 13–20 weeks of gestation in time period of January–December 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 MTO was foetal anomalies (84.6%).

On most recent maternity ultrasound, all foeti had heartbeat and their mean crown rump length (CRL) was 58.3mm.

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 MTO and age, BMI, ethnicity, gestational age, CRL or previous maternity history.

DISCUSSION

Incidence of RPOC post second trimester MTO 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 MTO is resulting in acceptable incidence of RPOC.

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

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BACKGROUND

There are persistent inequities in cervical screening coverage, worsened during the COVID-19 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 an 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

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Systemic lupus erythematosus (SLE) Te Whatu Ora – Waitematā patients in Auckland: epidemiology and attainment of Lupus Low Disease Activity State (LLDAS)

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BACKGROUND

There is significant lack of lupus research in New Zealand. The Asia Pacific Lupus Collaboration (APLC) is an international collaboration of lupus experts. New Zealand became a member of the APLC in 2018. Te Whatu Ora – Waitematā (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 is 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 New Zealand 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.

Vancomycin use for haemodialysis patients—development of a new dosing protocol

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Te Whatu Ora – Waitematā

BACKGROUND

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.

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 in 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 clin-

ical 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.

Quality Performance Indicators compliance for the surgical treatment of gastric cancer at North Shore Hospital

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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 1 January 2010 and 31 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 pre-operative radiological staging and histological diagnosis, subspecialty surgeon training and pathology report documentation. Those with low compliance include perioperative chemotherapy (32.7%), post-operative 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 GA care at our locale and to investigate its implementation with mortality rate.

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

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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

Four hundred and ninety-nine 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

One hundred and two Stage II patients had computed tomography (CT) at baseline. Eighty-eight of 102 (86%) of Stage II patients were node positive ($\geq N1$); 6 patients (6.8%) had distant metastatic disease and were upstaged to stage IV. Fifty-two Stage III patients out of 72 (72%) had baseline staging CTs. Nine 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 shows a 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 whom 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.

Cancer screening services: what do Indigenous communities want? A systematic review.

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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 30 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 in the review. Four key themes were iden-

tified 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.

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

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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 synthesise 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 victimisation 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 antidepressants. Several major vulnerable young populations were identified with significant higher prevalence of suicide attempts and ideation, including LGBT youth and those with mental health disorders, 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.

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Designing a spiral curriculum—navigating inter-professional prescribing education

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BACKGROUND

The Equip study (UK) highlighted that most prescribing errors occurred among first (postgraduate Year 1 [PGY1]) and second year (postgraduate Year 2 [PGY2]) doctors. Our prescribing program at Waitematā District is built on recommendations from this study and our own research. Waitematā has developed an inter-professional workplace education programme supporting safe prescribing through inter-professional scholarship, programme development and collaboration between medicine, pharmacy and nursing. This has helped design a “fit for purpose” spiral curriculum with experience specific objectives. The programme pipeline is contextualised to the level of experience of the learner across 5 years of training: 3 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

One hundred percent (n=22) found the prescribing workshops helpful in preparing for PGY1, boosting confidence for prescribing. Thirteen point six percent (3) did not feel confident using protocols and 4.5% (1) did not enjoy the workshops. Ninety-five percent 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 programme. 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.

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

G Ansell

Te Whatu Ora Health New Zealand – Waitematā

BACKGROUND

Equip Totara Club is a community dementia day-care service contracted to Te Whatu Ora Health New Zealand – Waitematā District Health Board that provides interactive daycare 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 2 -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-19 response.

RESULTS

Lockdown 1, 19 March 2020–12 June 2020: 36 members contacted over 313 contacts. Lockdown 2, 13 August 2020–22 September 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. After each meeting we could chat about how things were going for us personally, and how we were coping with supporting all the members and their family /whānau. Our flexible structure enabled us to have a break for ourselves if needed. Specific learnings were noted such as new technology including Zoom, PowerPoint and virtual activities; deeper insight into family/whānau connections and needs; and deeper understanding of members' needs in their home environment.

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

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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 eight dysphagic patients. Data were independently collected by two investigators within the same day and measured online (during the exam). Inter-rater reliability was calculated with inter-class 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.

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

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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 under-utilised 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 District Health Board.

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 that was tested in a feasibility study. An important aspect of this research was developing information to feed back to Māori communities and practising pharmacists to better inform everyday practice and support to the achievement of Māori health equity.

Association between socio-economic deprivation and community antibiotic dispensing in the Northern Region of New Zealand using a new measure of deprivation

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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% between 2006 and 2014. It has also been shown to be higher than in 22 other European countries. By 5 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 socio-economic deprivation (a Census-based mea-

sure 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 of more antibiotics dispensed with an increas-

ing trend as area deprivation increased. Pacific (adjusted OR 1.82; 95% CI: 1.65–2.01) and Māori (adjusted OR 1.64; 95% CI: 1.51–1.77) 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 socio-economic differences. These findings may have implications for antimicrobial stewardship and public health campaigns.