



Centre for Health Systems  
and Technology (CHeST)

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**Programme Booklet**

**CHeST Symposium 2023**

**Emerging Technologies and Health Systems**

**19 September 2023**

**Mark Parker Room, University College**

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Health systems are notorious for being complex and challenging—where introducing, implementing and sustaining any change is considered a mission. Emerging technologies to drive process and quality improvement such as digitalisation, big data, automation and AI have opened up a new research stream that addresses the organisational and policy-related prerequisites to ensure successful implementation of such innovations. Moreover, health systems attract a range of external stakeholders and businesses with expertise (or a lack thereof) in emerging technologies and their implementation, bringing further complexities.

This year, CHeST invited researchers and practitioners to present their research, innovations, and quality improvement projects on the topic of *Emerging Technologies and Health Systems*. Initiatives in this area and their successful implementation could serve as a valuable source of supporting and improving healthcare operations, and contribute to public policy and management.

We hope you enjoy the symposium.

## Morning Session

9:10am	Welcome
9:15am	Keynote speech by Dr. Chris Paton <b>How can we ensure that new AI-based digital health technologies are safe and effective?</b>
10:00am	Morning tea
10:20am - 12:30pm	Presentations Session 1


### Session 1

10:20am - 10:40am	An AI, triangulation cocktail: Mixology for 21st century health <b>David Hill</b>
10:40 - 11:00am	The quantum triangle: a GIS approach <b>Sam Hill</b>
11:00am - 11:20am	The potential role of ChatGPT in assisting the reduction of stereotype towards Māori in healthcare <b>Chris Lin</b>
11:20 - 11:40am	Where does Big Data come from? <b>Pauline Norris</b>
11:40am - 12:00pm	Predicting subsequent knee injury within two years after Anterior Cruciate Ligament reconstruction: A preliminary analysis <b>Melissa Barry</b>
12:00 - 12:20pm	Sending automated text messages to pregnant women improves follow up visits for antenatal care: Experiences from a pilot study in rural Bangladesh <b>Joby George</b>
12:20 – 12:40	New Zealand ‘Te Pae Ora’ healthcare reforms 2022: Viable by design? A qualitative study using the Viable System approach <b>Natasha Podgorodnichenko</b>
12:40 - 1:30pm	Lunch

## Afternoon Session

1:30pm	Keynote speech by Dr. Yih Yng <b>The Hospital without Walls – A Digital Transformation journey of the Tan Tock Seng Hospital</b>
2:20pm – 5:00	Presentations Session 2

### Session 2

2:20 - 2:40pm	Health funding model for achieving universal health <b>Krishnamurthy Vankateswaran</b> 
2:40 - 3:00pm	Research prioritisation setting for the primary care research network <b>Jing-Ru Li</b>
3:00 - 3:20pm	Mixing it up: An exploration of the motivations and experiences of consultants in public-private dual practice in southern New Zealand <b>Erin Penno</b>
3:20 - 3:40pm	A qualitative study of facilitators and barriers to presurgical exercise training <b>Anna Liu</b>
3:40 - 4:00pm	A systems analysis of the development and uptake of equity-focused practices <b>Jeff Foote</b>
4:00 - 4:20pm	How did New Zealand's Regional District Health Board Groupings work to improve service integration and health outcomes? A realist evaluation <b>Tim Stokes</b>
4:20 - 4:40pm	Utilising Viable System Model insights to address health system disconnects: Introducing three novel pathologies <b>Sharen Paine</b>
4:40 - 5:00pm	Unveiling Thalamus: Transforming healthcare through data-driven decision-making

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## **Keynote Speaker – Dr Chris Paton**

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Dr Chris Paton is a UK-trained medical doctor specialising in clinical informatics/digital health. He is the Course Director for a new, fully-online Postgraduate Diploma in Digital Health at the University of Otago and is also a Clinical Researcher at the University of Oxford. Following his medical training in the UK, he joined the University of Otago in New Zealand as a clinical lecturer in Health Informatics before moving to the University of Auckland as a Senior Research Fellow at the National Institute for Health Innovation. He received his Executive MBA from the University of Auckland in 2011, was elected



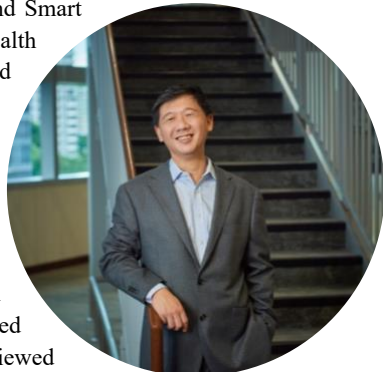
as a Fellow of the UK Faculty of Clinical Informatics in 2018, and was elected as a Governing Body Fellow of Reuben College, Oxford in 2019. He is currently the Chair of the International Medical Informatics Association (IMIA) Open-Source Working Group and conducts research on the application of AI-based clinical decision support systems in Africa and South-East Asia.

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## **Keynote Speaker – Dr. Ng Yih Yng**

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Dr. Ng Yih Yng is the Director of the Digital and Smart Health Office of the Ng Teng Fong Centre for Health Innovation. He is trained as an emergency and public health physician and practices preventive medicine as a senior consultant of the Department of Preventive and Population Medicine at the Tan Tock Seng Hospital. He is concurrently an Associate Professor of the Lee Kong Chian School of Medicine, Nanyang Technology University, with an interest in digital health and emergency medicine and has published over 100 local, regional and international peer-reviewed scientific articles.



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## **Information for the Attendees**

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The symposium is taking place in the Mark Parker Room in the University College at 315 Leith Street, Dunedin North, Dunedin 9016. It is the very big white building next to the Otago Business School.

There are some 2-hour parking spots on the clyde street or you can also use the Wilsons Carpark at the intersection of clyde street and Albany street. The university staff members get a discount by scanning their employee card at the machines.

If you are attending it online, the zoom link would have been sent to you. If there are any concerns or queries, please email [adeel.akmal@otago.ac.nz](mailto:adeel.akmal@otago.ac.nz)

For the online attendees, we want to remind you to keep your microphone on mute during the presentations, and type your questions in the chat.

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## **Information for the Presenters**

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Each presenter has a 20-minute timeslot. Please refer to the programme to see when you will be presenting. Please finish the presentation within 15-minutes and leave the rest of the time for Q&A. We will have a timekeeper to keep things moving and stick to the programme.

It is required that you send us your slides before Tuesday so they can be loaded up. If you are presenting online, then you will be able to share your screen.

# An AI, Triangulation Cocktail: Mixology for 21st Century Health

David Hill

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## Background

Healthcare generates lots of data. What should be stored and what should be done with it? Healthcare has to gain insights from their data permitting equitable access to appropriate care and address the social determinants that drive health outcomes.

## Methods

Using and stratifying multiply sourced data, provides causal inferences permitting advancement of political, social and health care provider level initiatives to eliminate disparities in health outcomes.

(See: [https://www.aha.org/system/files/media/file/2021/03/Market\\_Insights\\_Disparities\\_Data.pdf](https://www.aha.org/system/files/media/file/2021/03/Market_Insights_Disparities_Data.pdf))

*Triangulation* uses data sets / methods of quantitative and qualitative research allowing a broad understanding of particular topics or research questions.

*Swevzn*® technology delivers information that draws on an AI/ML tool providing real time data about the patients' health. It triangulates data from:

- PMS
- GIS
- Patient generated data

The combined data produce the Quantum number, Qn® (ICE Qn®) higher numbers representing poorer health.

The PMS data was validated by correlating the Qn® with ED / hospital attendances.

## Results

*Swevzn*® shows the determinants of an individual's poor health. It transforms reactive care to a proactive, precision driven delivery of healthcare focussed on wellness, allowing transdisciplinary teams to focus on needs that improve outcomes.

## Conclusion

HHPNZ has redesigned service delivery and improved workflows that better utilises increasingly limited staff resources, moving away from supply-driven health care organised around what physicians do and to a patient-centred system organised around what patients need. (See <https://hbr.org/2013/10/the-strategy-that-will-fix-health-care>)

Importantly, it provides real time data to inform policy to change the real determinants of health inequity that are socioeconomic, political and racist. (Hill-Briggs F, Fitzpatrick SL., *Diabetes Care* 2023; 46: 1-9).

# The quantum triangle: a GIS approach

Sam Hill

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## Background

Every person has a right to complete physical, mental, and social health and wellbeing. In addition to standard health metrics (e.g., HbA1c, cardiovascular disease risk etc.), a key component of health and wellbeing are the underlying socioeconomic and environmental factors (SEFs, also known as the social determinants of health).

## Methods

SEF data also forms a fundamental element of the Quantum Number (Qn) triangulation (as discussed by David). The Qn is a patient health status index being developed by HHPNZ and its partners in precision and proactive healthcare. To incorporate the SEFs into Qn triangulation, a method of extracting SEF data and linking it back to patient residential addresses must be established. One approach we identified was through the use of geographic information systems (GIS).

## Results

In an ongoing partnership with Dragonfly Data Science, multiple SEF quantitative variables (e.g., many of the above) have so far been extracted using GIS methodology (from LINZ, LCDB, StatsNZ data) initially in a trial region (Palmerston North area), with a view to expanding this methodology out both nationally and internationally. Short-term aims are to systematically examine each of these SEF variables and assess its relationship to patient hospitalisation frequency and duration and/or cardiovascular risk, clinic appointment frequency, thereby producing statistical weightings (for each variable).

## Conclusion

This quantitative SEF data in concert with data from the patient management system, and “always on” wearables, will improve Qn sensitivity and specificity.

## Practical Implications

Thereby providing precision and proactive healthcare. The Qn provides healthcare professionals such as clinicians with a single number that is a reflection of a patient's health status, moreover it will over time direct the clinician as to the main driver(s) of a patient's current health status, assisting the clinician in their decision making. This will also for example aid the identification of appropriate interventions.



# The potential role of ChatGPT in assisting the reduction of stereotype towards Māori in healthcare

Chris lin

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## Background

We developed a text-based tool called the Similarity Rating Test (SRT) to evaluate and potentially reduce bias toward Māori among undergraduates and to enhance their cultural competency in healthcare settings. The aim of the study was to explore the feasibility of using ChatGPT to assist in the development of the SRT and its ability to detect stereotypical statements about Māori.

## Methods

We compared ChatGPT's and students' rating scores of interpretative statements for each SRT scenario using equivalence testing and difference testing. Moreover, we compared the consistency of ChatGPT's and students' rating scores based on a priori-defined thresholds for interpretative statements (the consistency of stereotype attribution).

## Results

There was no significant equivalence or difference between ChatGPT's and students' rating scores. ChatGPT's consistency rate of stereotype attribution was significantly higher than that of students (86.11% vs 73.09%,  $\chi^2 [1] = 29.27$ ,  $P < 0.0001$ ). The consistency rate was higher for non-stereotypical than for stereotypical statements, regardless of rater type.

## Conclusion

The significantly higher consistency of stereotype attribution by ChatGPT suggested that ChatGPT could be a reliable and valid tool for assisting in the development and scoring of the SRT and for detecting stereotypical statements about Māori. ChatGPT could potentially facilitate future research and education on stereotypes toward Māori in healthcare.

# Where does Big Data come from?

Pauline Norris

Va'a o Tautai – Centre for Pacific Health, University of Otago

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## Background

Emerging technologies such as Big Data and AI present enormous potential for improving people's lives and driving improvements in healthcare. But these rely on data being collected and interpreted accurately in order to avoid exacerbating existing social inequalities and ensure data commensurability.

## Methods

The case studies used a combination of interviews, focus groups, observation and document review to understand the social context and chain of events leading to data, which becomes part of the IDI (integrated data infrastructure).

## Results

In both cases, participants' primary purpose was providing appropriate care and protection and data used for research and policy was a by-product of this. Reports of concern were made to Oranga Tamariki for a range of reasons and organisational processes impacted on reporting. Access to InterRAI assessments, and who attends them, were likely to affect data completeness and quality.

## Conclusion

Understanding the social context of data production has always been crucial for research and policy, but emerging technologies make this even more salient.

# Predicting subsequent knee injury within two years after Anterior Cruciate Ligament (ACL) reconstruction: a preliminary analysis

Melissa Barry

ACC

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## Background

Rupture of the anterior cruciate ligament (ACL) is a common, preventable injury. From the inception of the ACC scheme until June 2019, ACC has paid costs estimated at \$1.5B for ACL related surgeries. The estimated cost per client ranges from \$33,266 to \$77,458 and is highest for multiple surgeries. As a client's recovery from ACL injury is dependent on their clinical history, social supports, and psychosocial factors, identifying the factors that have a significant impact on a client's recovery becomes important. Knowing the impactful biopsychosocial factors alongside operative data may enable targeted programme and health pathway design for at risk populations. It may improve recovery after injury, prevent further injury or the need for multiple procedures. In this analysis we used machine-learning to determine what factors are predictive of subsequent injury in ACC clients who have had an ACL reconstruction (ACLR) in Aotearoa, New Zealand.

## Methods

A deidentified dataset of 235 variables was created from linking the New Zealand Anterior Cruciate Ligament (NZACL) Registry (collected from 2014 – 2020) with ACC data (final dataset, N = 11,658). In this preliminary analysis we used the machine-learning model Light Gradient-boosting machine (LightGBM) to identify the potential predictors of subsequent injury to either knee within two years after an ACLR. With LightGBM a bee-swarm summary plot was used to determine the hierarchy of importance of these variables then a series of dependence scatter plots, from which hypotheses have been drawn.

## Results

Initial results show that both ACC claim variables and NZACL Registry data are potential predictors of subsequent knee injury post ACLR. Predictive variables identified in this preliminary analysis included age, post-operative Knee Injury and Osteoarthritis Outcome Scores (KOOS) quality of life scores, post-operative Marx scores, number of physiotherapy sessions, time between ACL injury and ACL reconstruction surgery, and number of previous lower limb injuries. Results also showed a lower Marx score at 6 months post ACLR was predictive of subsequent injury compared to a higher Marx score at 12 months.

## Conclusion

Results from this initial analysis corroborate with New Zealand based data what is known clinically and reported in international literature. They also outline potential areas to focus on for clinical and policy decision-making. However, it is important to emphasise that

these results are preliminary and further work needs to be done to understand the outputs of the model.

# **Sending automated text messages to pregnant women improves follow up visits for antenatal care: Experiences from a pilot study in rural Bangladesh**

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## **Background**

In Bangladesh, the completion of the recommended four or more antenatal check-ups for pregnant women remains a challenge. Even though 82% of women seek the first antenatal check-up, only 47% complete four or more visits (BDHS 2017). Since many pregnant women do not return to the follow-up visits at the recommended time, the coverage for ANC after the first visit remains low. The Ministry of Health and Family Welfare, introduced a mHealth tool to send text message reminders to women, linking it with the data from the electronic health management information system (eMIS). The pilot phase was implemented in five Union Health and Family Welfare Centres in Madhabpur Upazila of Habiganj district.

## **Methods**

The routine service data from the electronic health management information system was analysed for the period before and after the implementation of the initiative. A telephone survey was conducted among 173 randomly selected 173 clients who received the text reminder messages.

## **Results**

Overall, the follow-up antenatal care contacts increased from 24% (2018) to 28% (2019) among eligible women after receiving the text message reminders. Adherence to recommended schedule increased from 26% to 36% for the second visit; from 27% to 34% for the third visit and from 20% to 21% for the fourth visit. The phone survey showed that 36% of clients visited the health centre for check-ups after receiving the text message reminder. Among them, 42% came back only because of the text message reminder.

## **Conclusion**

The e-MIS is an ideal platform to design and implement an automated and personalized mHealth text message reminder system.

# **New Zealand ‘Te Pae Ora’ healthcare reforms 2022: Viable by design? A qualitative study using the Viable System approach**

Natasha Podgorodnichenko

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## **Background**

The Aotearoa New Zealand Te Pae Ora (healthy futures) health reforms came into effect in July 2022 with the establishment of Health New Zealand and the Māori Health Authority – the organisations charged for healthcare provision and delivery. This is the biggest health reforms for the country in the last few decades. It is imperative to conduct early evaluations of the reforms design to realise if they will deliver a viable and sustainable health system to the population.

## **Methods**

This study focuses on the evaluation of the health reforms at a very early stage using Beer’s Viable Systems Model (VSM). A qualitative exploratory design with semi-structured interviews and documents analysis using the thematic analysis approach was used. We conducted 28 interviews and 14 informal discussions with senior healthcare managers and reviewed over 300 official documents and news analyses. The interview schedule is also provided as a supplementary file.

## **Results**

The VSM posits that for a system to be viable, all its five sub-systems (operations; co-ordination; operational control; development and governance) need to be strong. Our analysis suggests that the health reforms, despite their strengths, do not satisfy this requirement.

The reforms appreciate the complexity of the healthcare environment—multiple stakeholders, social inequalities, interdependencies etc—as well as the “wickedness” of healthcare. However, our analysis suggests a severe lack of details regarding the implementation and operationalisation of reforms. Furthermore, resourcing and coordination within the reformed system is unclear too.

We conclude that the health system reforms may not lead to a viable New Zealand health system going forward.

## **Conclusions**

There are serious concerns around coordination, operational control and the long-term development and sustainability of the system. Poor communication of the reform implementation and operationalisation will likely result in system failure and inhibit the ability of frontline health organisations to deliver care.

# **Health Funding Model for achieving Universal Health**

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## **Background**

The United Nations (UN), the World Health Organization (WHO), and every one of the 195 nations on planet Earth wish to provide quality and timely healthcare to each one of their citizens within their available resources. To enable them to achieve this goal, experts in healthcare, economics, psychology, human behaviour analysis, demographic studies, technology, and more have designed numerous methods of healthcare funding suited to the nation's circumstances to help provide emergency and curative services to their population.

## **Methods**

I am using a software 1000Minds to arrive at a consensus decision from about fifty participants who are all experts in the health industry.

## **Results**

The final survey is yet to take place.

## **Conclusion**

This thesis aims to see if the “human nature” of self-interest could be exploited to achieve a good outcome by turning the existing paradigms on their head and making it essential for providers, funding agencies (insurance companies, government, donors), and patients to remain honest in their self-interest with a “pre-pay” model called Global Capitation (GC). GC will provide certainty of volumes and revenue, result in the elimination (or substantial reduction) of all waste in the system, and permit the same amount of funds to reach a far wider population, making Universal Health possible.

## **Practical Implications**

If the model of funding that I propose gets adopted in any nation, then I strongly believe that the nation would be able to provide total healthcare to its citizens in full on time with no waiting for anything.

# Research Prioritisation Setting for the Primary Care Research Network

Jing-Ru Li

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## Background

A large amount of primary health care (PHC) data is collected every day. However, New Zealand lacks the infrastructure to readily access and use PHC data for research. The Southern Primary Care Research Network (SPCRN) aims to facilitate the use of routinely PHC data for research promoting health equity. This project aims to explore stakeholders' perceptions of the most important questions in PHC to shape the research agenda for the SPCRN to ensure research undertaken is fit-for-purpose.

## Methods

In Delphi exercise, participants were asked to submit up to 3 most important research areas and 5 most important research questions in Aotearoa PHC. Responses were collated and refined, then a shortlist of questions was sent back for second round. These results will be further prioritised using Hanlon Process of Prioritisation. So far, we have finished the first round of Delphi survey.

## Results

Fifty-eight participants responded to the survey, including 8 males and 50 females. Eleven participants are Māori, 52 NZ European/European, and 3 others. A total number of 245 areas and 129 questions were proposed. We identified 13 themes using thematic analysis. Twenty-three research questions were remained after refinement and have been returned to participants.

## Conclusion

This is a work-in-progress project, and no conclusion has been reached at this stage.



# **Mixing it up: an exploration of the motivations and experiences of consultants in public-private dual practice in southern New Zealand**

Erin Penno

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## **Background**

New Zealand (NZ) operates a dual practice system where senior hospital clinicians (consultants) can work in both public and private health sectors. Dual practice is a common phenomenon internationally, yet there is little research exploring the reasons why consultants engage in dual practice, particularly in high-income countries. This study aimed to explore the motivations and experiences of consultants engaged in dual practice in NZ.

## **Methods**

Semi-structured interviews were conducted with 20 consultants who worked in dual practice. Participants were purposively sampled from a range of medical and surgical specialities. Interview data were analysed thematically.

## **Results**

Our study showed motivations to engage in dual practice were multi-faceted. Participants described numerous drivers towards private work, including greater remuneration, more autonomy over their time, satisfaction with getting work done effectively, skill development and maintenance, and alleviating a sense of 'moral injury'. Yet, participants all remained anchored to the public system, citing a sense of commitment to the public system, support for clinical interests, and a greater sense of collegiality.

## **Conclusion**

Our study highlights the complexity of the dual practice model, suggesting it offers clinicians the advantages of both public and private sectors while easing sector-specific frustrations. Our work highlights a need for policymakers to adopt a holistic view of the health system, and consider how dual practice fits with workforce policy, to optimise healthcare delivery and strengthen health system resilience.

# **A qualitative Study of Facilitators and Barriers to Presurgical Exercise Training**

Anna Liu

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## **Background**

There is evidence supporting the use of hospital-based exercise prehabilitation to improve postoperative outcomes, however this can introduce geographical barriers to patient access. Home-based prehabilitation could overcome this, but few studies investigate whether home-based prehabilitation is comparably effective.

## **Methods**

This study uses semi-structured interviews designed to ask patients about perceived facilitators and barriers to their own experiences of home- or hospital-based prehabilitation and general physical activity. The interviews also document comments on how the exercise programme has impacted them before surgery, in-hospital and after surgery. Following surgery, patients will be sent a questionnaire asking how the prehabilitation has affected their 'patient experience'.

## **Results**

To date, 7 patients have been interviewed: 2 hospital-based and 5 home-based prehabilitation. Common facilitators to adherence that were cited included preparation for surgery, support from the research team, and electronic monitoring (home-based group). Common barriers cited were lack of time, and pain or injury precluding exercise. All patients cited exercise, whether that be prehabilitative or general physical activity, as having a positive impact on their 'patient experience.'

## **Conclusion**

This study emphasises the importance of support from the research team and electronic monitoring in home-based prehabilitation, demonstrating feasibility of implementing electronically supervised community-based prehabilitation programmes to improve postoperative outcomes.

# **A systems analysis of the development and uptake of equity-focused practices**

Jeff Foote

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## **Objective:**

To develop a 'systems' map of the organisational factors that shape the development and uptake of equity focused practices in Women's Health Service, Te Toka Tumai Auckland.

## **Methods:**

A causal loop model based on 13 in-depth interviews with Women's Health Service clinicians and managers was created and informed by Geel's multiple level perspective.

## **Results:**

Our systems analysis highlights how organisational factors at the niche, regime and landscape levels interact both hinder and enable innovative equity focused practices and create a system that frustrate transformative change.

## **Conclusions:**

The findings suggest the importance of strategically managing niche level innovations and ensuring that regime level barriers such as resourcing and cultural competency do not reinforce existing systems of care.

# How did New Zealand's Regional District Health Board Groupings work to improve service integration and health outcomes? A realist evaluation

Tim Stokes

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## Background

In Aotearoa New Zealand (NZ) integration across the healthcare continuum has been a key approach to strengthening the health system and improving health outcomes. A key example has been four regional District Health Board (DHB) groupings, which, from 2011-22, required the country's 20 DHBs to work together regionally. This research explores how this initiative functioned, examining how, for whom and in what circumstances regional DHB groupings worked to deliver improvements in system integration and health outcomes and equity.

## Methods

*Design:* We used a realist-informed evaluation study design. We used documentary analysis to develop programme logic models to describe the context, structure, capabilities, implementation activities and impact of each of the four regional groupings and then conducted interviews with stakeholders. We developed a generalised Context-Mechanisms-Outcomes model, identifying key commonalities explaining how regional work 'worked' across NZ while noting important regional differences.

*Participants:* Forty-nine stakeholders from across the four regional groupings. These included regional DHB governance groups and co-ordinating regional agencies, DHB senior leadership, Māori and Pasifika leadership and lead clinicians for regional work streams.

## Results

Regional DHB working was layered on top of an already complex DHB environment. Organisational heterogeneity and tensions between local and regional priorities were key contextual factors. In response, regional DHB groupings leveraged a combination of 'hard' policy and planning processes, as well as 'soft', relationship-based mechanisms, aiming to improve system integration, population health outcomes and health equity.

## Conclusion

The complexity of DHB regional working meant that success hinged on building relationships, leadership and trust, alongside robust planning and process mechanisms. As NZ reorients its health system towards a more centralised model underpinned by collaborations between local providers, our findings point to a need to align policy expectations and foster environments that support connection and collegiality across the health system.

# **Utilising VSM insights to address health system disconnects: introducing three novel pathologies**

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## **Background**

Health systems worldwide are hampered by disconnects between governance, management, and operations, which negatively impact their performance. The literature on health system disconnects is fragmented and discussed in discipline-specific ways. This research shows how, with insights from the Viable System Model (VSM), we can conceptualise health system disconnects impacting on specialist clinical services and develop solutions to address organisational fragmentation.

## **Method**

An action research-based case study of a specialist clinical service was undertaken. The VSM was used to guide semi-structured interviews and stakeholder workshops where the views of clinicians, managers, an academic, and health system reform designers and advisors were sought on the health system's issues and the reforms' aims. The disconnects apparent in the issues and aims were then conceptualised using the VSM. Participants' views were sought on a proposed, new, VSM-inspired operational framework that addresses system disconnects and supports those at the clinical services delivery level to meet the reforms' aims.

## **Results**

The VSM provides a coherent way to conceptualise the disconnects and identify their structural underpinnings. The new framework helps to address disconnects at the clinical service delivery level and support integration of quality improvement and clinical governance efforts into operational functioning. Three novel organisational pathologies emerged from the study that have implications for how health systems define their services, their understanding of the management function, and the importance of coordination.

## **Conclusion**

The resulting clarity of functioning through application of the new framework and an understanding of the three novel pathologies could improve service quality, staff and patient satisfaction, and the effectiveness and efficiency of healthcare service delivery.

# Unveiling Thalamus: Transforming Healthcare Through Data-Driven Decision-Making

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## Background

WellSouth introduces Thalamus, a dynamic data dashboard that revolutionises healthcare decision-making. Thalamus is an intuitive and comprehensive data dashboard that seamlessly integrates Primary Health Care data from both the Patient Management System and the WellSouth Portal in real-time. This tool fosters consistency and transparency in WellSouth's collaborative approach to commissioning services, ensuring that frontline staff, general practice teams, and employers all have access to the same information regarding outcomes, program successes, and gaps.

During this presentation, we will delve into its applications within the Access and Choice/Tōku Oranga programme, highlighting its pivotal role in guiding the programme to reduce disparities, optimise resources, and enhance patient engagement.

We will also explore how Thalamus aligns with the Triple Aim by significantly improving population health, enhancing the patient experience, and reducing costs. Real-world success stories will be shared to underscore the tangible benefits resulting from Thalamus-driven insights.