SUBMISSION TO THE
PAE ORA LEGISLATION COMMITTEE

DECEMBER 2021

HealthHubPROJECT
WELLNESS EDUCATION RESEARCH

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HealthHubPROJECT

SUMMARY OF OUR POSITION

We support the stated aims of the Pae Ora Bill.

KEY MESSAGE #1
The Bill's planned bold transformation of our broken health system requires bold action, diversity of thought and the application of creative ideas in the policy and design phase. We urge the Pae Ora Legislation (POL) committee to think broadly and seek out on-going conversations with a wide range of groups, ourselves included, who have a track record of thinking beyond the traditional constraints of the current system and can see the possibilities laid out by the Bill.

KEY MESSAGE #2
As a population-based, community health-care provider caring for 12,000 patients in our region, HHPNZ has a track record of a) applying innovative models of care that disrupt the current general practice model and ensure equity in healthcare, and b) developing fit for purpose digital-health tools to seek better patient outcomes at the population-health scale.

KEY MESSAGE #3
Since 2018, we have been trialling and testing in our regional 'laboratory' clinic in Palmerston North many of the ideas and concepts the Bill seeks to enact via the reforms. We are actively planning for the introduction of new healthcare models (such as Transition Care Facilities) into our community, and we will gladly share our learnings with the POL Committee and other new health agencies - to help inform aspects of the Bill's development and subsequent policy implementation.

OUR POSITION: AT A GLANCE
HHPNZ wholeheartedly supports the Bill, its purpose and intent and we have four key areas we wish to provide the committee with feedback on:

- The Bill needs to take a broader ecosystem[1] thinking approach to the determinates of wellness, and mandate that all aspects of the human context need to be examined in the health policy and planning that flows from it. The Bill should set out a framework to examine not only an individual's health condition and associated social determinants, but also their community and context conditions, and the health of the environment they live in.
- To support implementing a wider ecosystem view in the Bill, there needs to be an objective added to direct greater convergence in the aims and collaboration between the government Ministries responsible for these different determinants (i.e. clustering together the Ministry for the Environment, Ministry of Social Development, Ministry for Housing, etc.).
- The consultation undertaken when giving effect to the Bill needs to be far-reaching and inclusive of diverse perspectives (ethnic, cognitive, cultural, and sector) to limit the amount of unconscious bias built-in from the start, and
- We offer our experience and expertise to add to future policy discussions that derive from enacting the Bill, on how to drive the type of organisational change needed in the health sector to support these reforms. Lessons that we have learnt from implementing our own organisational-scale reform.

1 Hodgson, Ann. Spours, Ken. (2016) The evolution of social ecosystem thinking: its relevance for education, economic development and localities. *https://discovery.ucl.ac.uk/id/eprint/1537510/3/Spours_Ecosystem%20thinking%20Stimulus%20Paper.pdf*

OUR SUMMARY OF RECOMMENDATIONS IN THIS SUBMISSION

RECOMMENDATION #1
We feel strongly, and our research supports that the Bill's outlook needs to broaden and ecosystem thinking needs to be applied to the reforms.

The narrowly focussed Health New Zealand objective (c) needs to be amended to include as well as **social**, both **environmental** and **housing/economic** factors as key determinants of health.
To support this wider ecosystem view, there needs to be an objective added to the Bill directing greater convergence in the aims and collaboration between government Ministries responsible for these different determinants (i.e., clustering together the Ministry for the Environment, Ministry of Social Development, and Ministry for Housing etc.).

RECOMMENDATION #2
As a health entity that contributes to population health outcomes in our locality, we put our 'hand up' to be involved in developing both the NZ Health Plan and the Locality Plan co-design process; and can offer our 12,000 strong Palmerston North patient community, and the voices of our community partners as a 'live' case study project to support this work.

RECOMMENDATION #3
As a health entity that is: a) is implementing innovative, self-managing (TEAL), team-based ways of working in our general practice and b) is also representative of the interests of both workers and many others in our wider health-care provider community; we put up our hand to be involved in the co-design process for the proposed NZ Health Charter (and can again offer our Palmerston North practice as a case study project to support this work).

! **HHPNZ would like to make an oral submission to the committee to elaborate on the points raised in this submission.**

Note on how to read this document: under each section heading that follows, we present each of our key messages / recommendations up front to set the scene for the reader. We then provide a short commentary or explanation to support our thinking / position. Where more detailed technical or research information is needed to support or expand on concepts outlined in the body of our submission, we do this via hyperlinks in the e-document or, glossary-style headings in a printed version, which then link to relevant explanatory sections in the *Appendices*.

INTRODUCTION AND CONTEXT

OUR KEY MESSAGE #1

We support the stated aims of the Pae Ora Bill.
The Bill's planned bold transformation of our broken health system requires bold action, diversity of thought and the application of creative ideas in the policy and design phase. We urge the Pae Ora Legislation (POL) committee to think broadly and seek out on-going conversations with a wide range of groups, ourselves included, who have a track record of thinking beyond the traditional constraints of the current system and can see the possibilities laid out by the Bill.

"Building a stronger health and disability system that delivers for all New Zealanders." [2]

As a health-care provider, we are thrilled that Aotearoa-New Zealand's overly complex and fragmented health-care system is being overhauled to provide more equitable and better care.

The legislation giving effect to this health system reform is now working its way through Parliament's select committee process. If enacted, the Bill will result in a major restructuring of the health sector that will start to take effect from July 2022.

In this submission we share Health Hub Project NZ's thoughts on the Pae Ora *Bill,* and provide our opinion as to how these future-focussed reforms can be effectively enacted within our communities.

The purpose of the reforms is to:

- protect, promote, and improve the health of all New Zealanders; and
- achieve equity by reducing health disparities among New Zealand's population groups, in particular for Māori; and
- build towards pae ora (healthy futures) for all New Zealanders.[3]

We support the aims of Pae Ora as stated above, which paint a picture of a future health system that is people-centred, equitable, accessible, and cohesive.

We all know that the demand for health services will only keep growing, due to our ageing population, advances in care and more people having chronic health conditions, and that our health services will need to adapt.

Health New Zealand will establish localities to plan and commission primary and community health services effectively and engage with communities at the appropriate level. [4]

We are encouraged that the Bill recognises the need to engage local communities in health improvement and that it sets out a process for government to work with other agencies to address the determinants of health. But, as we will elaborate on in subsequent sections of this submission, we think:

- the intent of the Bill needs to go much further,
- the determinants that impact on population health that are being considered by the Bill, need to be widened out so they take a broad ecosystem approach to reform, and as a consequence
- the relevant government ministries need to be clustered together, in order to collaborate on addressing the range of determinants that impact on improving health outcomes for all New Zealanders.

We acknowledge these reforms are a radical move to introduce health care that is responsive to the present and future needs of our population and make a start on addressing the inequities for groups that have not had their health needs well met in the past.

2 Source: *https://dpmc.govt.nz/sites/default/files/2021-04/heallth-reform-white-paper-summary-apr21.pdf*
3 Explanatory Note - *Pae Ora (Healthy Futures) Bill*
4 As for 2

HEALTH HUB PROJECT NZ: WHO ARE WE?

OUR KEY MESSAGE #2

As a population-based, community health-care provider caring for 12,000 patients in our region, HHPNZ has a track record of a) **applying innovative models of care** that disrupt the current general practice model and ensure equity in healthcare, and b) **developing fit for purpose digital-health tools** to seek better patient outcomes at the population-health scale.

Disruptors at heart

The Health Hub Project New Zealand Limited Partnership (HHPNZ) is an innovative and profitable[5] healthcare and health education provider, currently serving the needs of some 12,000 patients in Palmerston North.

We operate from a purpose-built, central site in Downtown Mall in Palmerston North's CBD. We can rapidly mobilise our resources and clinical teams to set up similar non-traditional out-reach sites[6] in, and with, community-based localities; and have initiated conceptual planning to move 70% of patient care into tele-video consults.

Founded in 2015, we are a social good enterprise that is owned by a mix of New Zealand-based private investors and an independent NZ-based charitable trust[7]. We view ourselves as an innovation and research social enterprise[8], with our key purpose being to develop a better understanding of, and new ways to address, both illness and the drivers of poor health in this country.

Our intent has always been to reduce the fragmentation of care delivery to our clients, especially those with multi-morbidities. Involving other agencies, including hospital-based specialists as well as HHPNZ clinicians working in transdisciplinary teams, has meant we have a broad focus on individual wellness in our practice.

We research, develop and refine our own technology to improve our workflows and efficacy, and better utilise the increasingly limited health staff resources that our country has. Our most innovative tool in-development is called Swevnz™. It uses machine learning to integrate sets of complex data about a patient and produce a quantum number (an ICE Qn™), which can be interrogated in order to define the major drivers of health outcomes, both positive and negative. The key goal is to identify the impact of different interventions as viewed from medical, social, and environmental angles. Swevnz™ provides live data that will improve medical management, with the ability to inform policy for social change, and environmental and ecological improvements that impact health.

We have successfully navigated the start-up phase of creating a novel community health-care model that disrupts the status-quo and have some expertise in this area we'll gladly share, on how best to effect change in our sector.

Further information about us can be found in the *Health Hub Project NZ: who are we?* section of the *Appendices* under these headings:

- Our purpose - everyone has a right to health care
- Our use of innovative technology to improve our patient service

5 HHPNZ has grown revenues from just under $1 million in 2016-17 to $3.75 million in 2020-21; and has forecast revenue from healthcare of $4.7 million for 2021-22.

6 An example is our Highbury Clinic with Te Aroha Noa community agency, see *https://www.stuff.co.nz/manawatu-standard/news/117095779/te-aroha-noa-promotes-health-with-medical-back-up*

7 The Trust generates ongoing revenue from all HHPNZ endeavours. It is fully independent and autonomous, with a primary mission to fund projects that directly and indirectly work to reduce poverty in Aotearoa-NZ. To date, the HHPNZ Limited Partnership has raised $3.1 million through equity investment, debt, and converted debentures.

8 In our health-care context, this is community investors putting money into an organisation to benefit their community but still get a return on investment

HEALTH HUB PROJECT NZ: HOW WE WORK?

OUR KEY MESSAGE #3

Since 2018, we have been trialling and testing in our regional 'laboratory' clinic in Palmerston North many of the ideas and concepts the Bill seeks to enact via the reforms. We are actively planning for the introduction of new healthcare models (such as Transition Care Facilities) into our community, and we will gladly share our learnings with the POL Committee and other new health agencies to help inform aspects of the Bill's development and subsequent policy implementation.

Our team's culture

We're encouraging and facilitating an organisational culture of collegiality, teamwork, and innovation amongst our staff. HHPNZ operates as a *self-managing TEAL organisation* (as defined by Frederic Laloux[9] - refer Appendices).

Our intention from the outset was to disrupt the longstanding model of general practice and doctor-centric delivery of primary healthcare and be a hub of patient-partnered and community-oriented population health care in action. This means our HHPNZ doctors and practice nurses, alongside social workers, hospital doctors, physios, and others, and including community members, help our families to become empowered to take responsibility for their own health.

Staff work in transdisciplinary teams, with the opportunity to develop leadership and co-direction skills. The principle of parity of esteem underpins all our day-to-day workings and team culture. Parity of esteem is vital for teamwork because when individuals and teams observe it, and apply it in practice, they respect and value each other, both for what they can do, and for the ideas, views and perspectives they each can contribute.

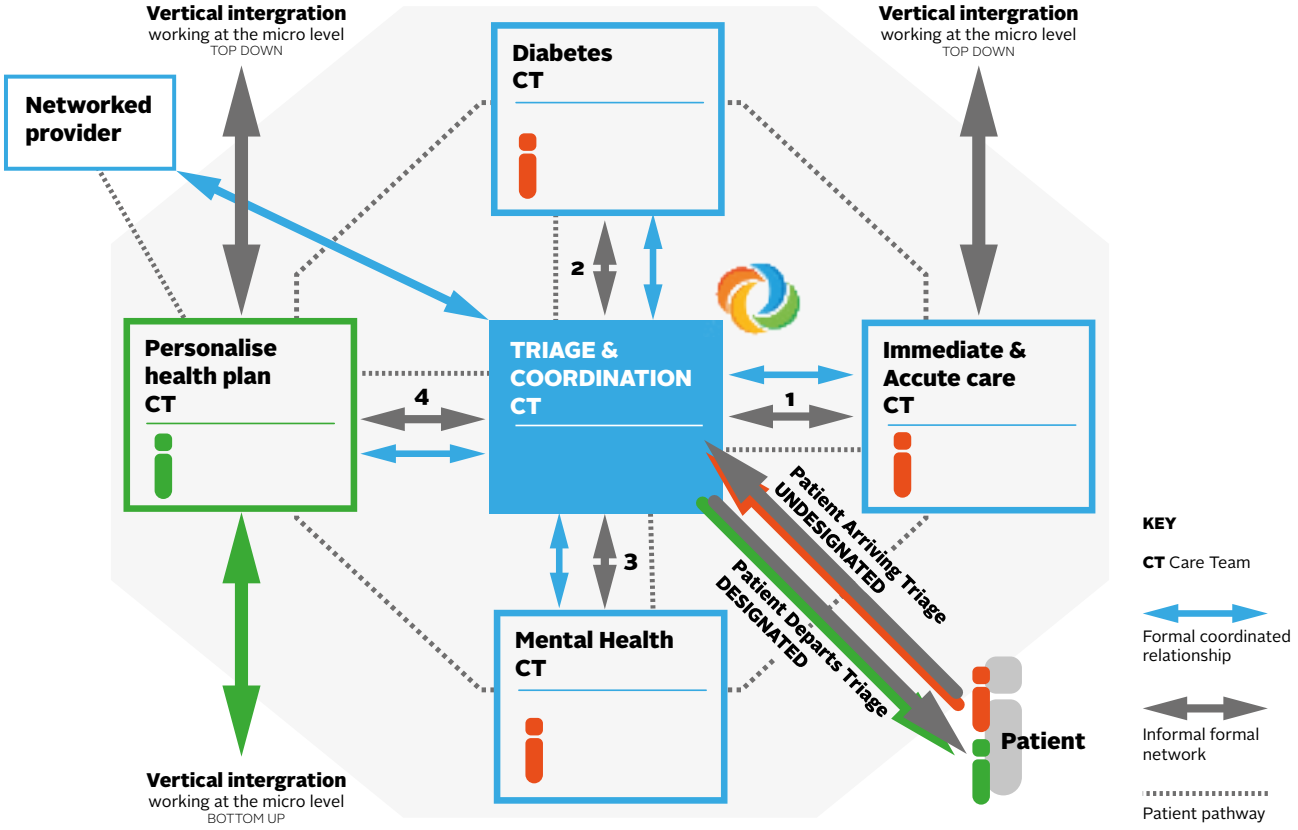
Our transdisciplinary teamwork approach

Our HHPNZ transdisciplinary clinical teams are central to our fully integrated, organisational design. We run three kinds of teams, which both nurses and doctors co-lead and co-ordinate:

- Acute clinical (Blue) teams treat patients with conditions and problems that need assessment and treatment immediately (or within 24 hours) and who otherwise might require ED treatment,
- Routine, non-urgent clinic teams attend to our patients who require routine actions such as immunisations, smears, medical reviews, travel advice, and WINZ medical certificates, and
- Long-term condition (Green) teams look after patients with on-going and chronic conditions such as: slow to heal injuries, diabetes, cardiac conditions, high blood pressure, and co-morbidities.

9 Author of *Reinventing Organizations: A Guide for Creating Organizations Inspired by the Next Stage of Human Consciousness (2014)*

THE HEALTH HUB PROJECT PATIENT JOURNEY
Patient Clinical teams at the micro level



As a TEAL organisation, our aim is to work collegially and collectively. The Green transdisciplinary teams are where we organise all the relevant care to move a patient into a positive health trajectory. In this treatment space, all team members work to speak a 'common language', one that the patient can understand. We have found this to be the most efficient and organised way of having a positive outcome (combining all the different healthcare disciplines) for a patient. Our transdisciplinary team's process is currently in its development and testing stage at our Palmerston North clinic laboratory.

Disrupting the hospital model of care - Transition Care Facilities

We strive to disrupt the traditional hospital-based model of care, bringing hospital-based doctors into our community healthcare space. We know that more doctors should be working in the community to help reduce burden of costs borne by hospitals - some 94% of our health spend goes into hospital funding, but 97% of patient care is done in the community (with just 6% budget).

We are actively planning for the introduction of transition care facilities (TCF) into our regional community, which will aim to accommodate 30-50% of current hospital-based care on short-term stays.

TCF are designed to promote the safe and timely passage of patients between illness and wellness and between levels of health care and across care settings. In our context, our planned TCF's would offer services such as:

- Emergency Medicine Services (EMS) - with the expertise, equipment and community-based care facilities that will be able to address low-acuity-demand issues of a hospital-based ED. The value proposition for having this form of EMS in our community are:
  - to increase the case type and acuity seen in the community and offload a significant number of patients currently attending ED into a community setting; and in doing so,
  - to improve the post-hospital discharge care provided, so that re-admission rates can be reduced, further offsetting future demand on the ED.

- Specialist Consultant transdisciplinary and multidisciplinary care services - this would include the sorts of services who are well-placed to work out of a collegial, community-based setting that the TCF would offer. Services such as elder health, ophthalmology, otolaryngology, nutrition, women's health, diabetes management and paediatrics (including child and adolescent mental health services), along with minor surgery sessions that would otherwise be done in the hospital.

An example of this in-action is our planning for the introduction of renal dialysis chairs into our community with the local renal specialist, and team, working with our HHPNZ teams, in-situ. In other words, the hospital-based renal team will follow the renal patient into their community.

Our real-world laboratory - the Palmerston North Clinical Hub

In essence, we are a population health innovation organisation who applies our research and our thinking to a real-world 'laboratory' (our Palmerston North clinical hub). Here we introduce new models of care, test and evaluate, and in real-time adapt and modify, so we can then replicate them for rollout regionally (and indeed nationally). When we established ourselves, we consciously used the word 'Project' in our name, to show that we constantly review how we can be better at what we do for our patient community - and this 'laboratory' is where we test the efficacy and impact of our processes.

HHPNZ is a place where we not only trial and continually refine our models of care, but also challenge the social norms of the medical hierarchy and include in our co-design conversations our community (including those who live in poverty), other professions (e.g. pharmacists and physio's), non-health policy makers, and businesses - all groups that would otherwise be excluded.

So, that's a bit about us and where we are coming from when we provide comment on the Bill.

Now to the details of our submission. Before we do, we'd like to share a couple of short stories with you.

STORIES FROM A HEALTHIER FUTURE

HEALTHIER FUTURE STORIES

These two stories (one patient, one hospital specialist) give a glimpse of the future and how the tools and conceptual approaches we are developing and starting to apply in our general practice, could influence our collective healthier futures.

Meet **BADEEDA** [10]

She's a 55-year-old post-menopausal woman who lives in the Palmerston North suburb of Highbury (a low-income locality), with her extended family in sub-standard rental housing.

Badeeda does not work, is a beneficiary, and has Type 2 diabetes and high blood pressure. She smokes, walks with difficulty and as yet, is still unvaccinated for COVID-19.

She is socially isolated, socially excluded but is part of a socially cohesive group (her extended family). A frequent attender at the Palmerston North Emergency Department, she is an infrequent attender to hospital, and an irregular medication-taker for her multiple co-morbidities.

When Badeeda comes to us as part of our new patient intake at the HHPNZ clinic in 2022, we process her data through our Swevnz ™ machine learning tool and allocate her a personalised ICE Qn™ score of 8, which is considered high risk. The key drivers for this high score being her smoking, her high cardiovascular risk, poor housing, poor diet, and the lack of diversity that we see in her immediate built environment (Highbury has limited public green space, native plantings, and domestic garden green space).

At her first assessment with our regular 'Familiar Faces' care team, we explain this index number to her, how she can access the information it represents, and how if she gives her permission, we can share it with our partners and other local agencies (such as the Palmerston North City Council (PNCC) who manage and develop our city parks and greenspace). We know that 80% of people we see in our general practice have not got health problems alone and this tool is critical to our ability to tailor support to an individual's specific life circumstances.

Behind the scenes, her ICE Qn™ score also helps our clinical team identify which condition is her primary morbidity (and its context), which in turn helps them to identify what resources are required, refine which clinical team members are best placed to work with her, and help forecast the funding we will need to allocate for her care - both in the short and long term.

On her second visit to us, as well as reviewing her medication and treatments, one of our team advise her on some of the non-health condition-related things she could easily do to improve her quality of life (such as helping out at the local community garden and becoming part of the multi-cultural community centred around that community space). She shows interest in this, and we get in touch one of our local contacts in Highbury who invites her along to the group, goes to pick her up (Badeeda does not drive) and takes her to the next community working bee. Here Badeeda quickly makes some new friends (the first in the 5 years she has lived in this suburb) over communal work in the garden and shared kai.

Through a partnership we have with PNCC, we share her ICE Qn™ number and home location data with them. Their planning department map and use her data along with others to help them plan for new parks across the city. It's very clear from their mapping exercise that there is a strong correlation between admissions to ED and the lack of parks and planted green space in Highbury. The PNCC are planning new parks for the area but also get a native planting scheme underway along the bare Mangaone Stream walkway, which within 6 months attracts more birdlife and more walkers, one of them being Badeeda and her 3-year-old granddaughter.

10 Badeeda is a fictional composite of many of the patients we see in our Palmerston North general practice.

We also share her data with local housing providers and Work & Income and in response to this, over the course of a couple of years Badeeda's rental property is upgraded and her benefit adjusted up. Despite her co-morbidities, this combined improvement to her housing, income, and local environment results in a massive change to her ICE Qn™ number dropping it from 8 to 7.

This drop equates to a significant improvement in Badeeda's quality of life and wellbeing - she can now walk along a section of the replanted river track with her granddaughter and not get out of breath, as well as play tag and catch with her. She is happier, more connected to her community, and she has only been once to the Palmerston North Emergency Department in the last 2 years. As part of her regular check-ups with her Familiar Faces care team at HHPNZ, she has improved her health literacy and is now taking a more active role in managing her own health (including getting the COVID-19 vaccine).

Just imagine.. how 1000s of people in situations just like Badeeda's across Aotearoa-NZ could enjoy a better quality of life, if our local and national policy makers had a tool like the ICE Qn™ at their disposal. One that allowed them to effectively direct funds to where they would have the greatest impact on people's health outcomes within a locality - which as we have shown here, may not be by simply directing it at addressing a healthcare issue.

This is ecosystem thinking at work!

Meet **DR BETH** [11]

She's a neurosurgeon at a New Zealand hospital.

Dr Beth is frustrated about how she cannot influence or guide, in her hospital-based role as a surgeon, any of the community care her patients receive post-operatively.

Approached by our HHPNZ team for her skills around brain injury pain management, Dr Beth comes to work for us for a day per week as part of the larger HHPNZ transdisciplinary clinical team.

Dr Beth works both directly with patients and in collaboration with each patient's personalised clinical team. In doing so, she seamlessly increases the scope and expertise of the HHPNZ clinical team members. Dr Beth does all her work via video consults with both her patients and our clinical team members. Like with all our patients, those who Dr Beth works with are allocated personalised ICE Qn™ scores, which Dr Beth uses to track both the interventions she's applied and the resulting wellness trends seen across her patient caseload.

By working in this way in her community, her unique perspective and skillset are now being used to inform:

- how our HHPNZ clinical team undertake pain management with neurosurgery patients, and
- how we incorporate consults with physiotherapists and psychologists (and other practitioners) to support a patient's post-operative rehab.

Just imagine.. how 100s of hospital-based specialists like Dr Beth from across Aotearoa-NZ could contribute to their local community care settings. With specialist-guided aftercare like this being provided directly into their communities, as well as the positive effects on community clinical-team culture, and better care outcomes generated for neurosurgery patients; this approach also frees up more of each specialist's time to focus on conducting surgeries in their local hospital settings.

Another example of ecosystem thinking at work!

11 Dr Beth is a composite example of the sorts of conversations we routinely have with specialists about the untapped potential that new ways of working together could yield.

OUR SUBMISSION - HOW CAN WE ADD TO THE THINKING ON THE PAE ORA BILL?

Our position: at a glance

HHPNZ wholeheartedly supports the Bill, its purpose and intent and we have four key areas we wish to provide the committee with feedback on:

- The Bill **needs to take a broader ecosystem**[12] **thinking approach to the determinates of wellness**, and mandate that all aspects of the human context need to be examined in the health policy and planning that flows from it. The Bill should set out a framework to examine not only an individual's health condition and associated **social determinants**, but **also their community and context conditions**, and the **health of the environment** they live in.
- To support implementing a wider ecosystem view in the Bill, there needs to be an objective added to **direct greater convergence in the aims and collaboration between the government Ministries responsible for these different determinants** (i.e., by clustering together the Ministry for the Environment, Ministry of Social Development, Ministry for Housing etc.).
- **The consultation undertaken when giving effect to the Bill needs to be far-reaching and inclusive of diverse perspectives** (ethnic, cognitive, cultural, and sector) to limit the amount of unconscious bias built-in from the start, and
- **We offer our experience and expertise to add to future policy discussions that derive from enacting the Bill**, on how to drive the type of organisational change needed in the health sector to support these reforms. Lessons that we have learnt from implementing our own organisational-scale reform.

Our position: by issue

GENERAL COMMENTS

We are encouraged by the intent of the Bill to have the new NZ Health organisation do the heavy lifting when it comes to crafting and carrying out the policy needed to enact the reforms. However, we would like to see the intent of the Bill broadened (as per the issues we list off below), in order to make sure that any policy developed is also broad in intent and factors in all the determinants impacting on a community's health. We see this as a being the biggest gap in the Bill as it is currently proposed, and this narrow outlook could be interpreted as patronising in its approach by some groups in the community.

We also note there is no strong, aspirational vision set out in the Bill - one that paints a picture of where these proposed health reforms are taking the Aotearoa-NZ health sector.

TAKING A BROADER ECOSYSTEM VIEW OF THE DETERMINANTS OF HEALTH

RECOMMENDATION #1

We feel strongly, and our research supports that the Bill's outlook needs to broaden and **ecosystem thinking** needs to be applied to the reforms.
The narrowly focussed Health New Zealand objective (c) needs to be amended to include as well as **social**, both **environmental** and **housing/economic** factors as key determinants of health.
To support this wider ecosystem view, there needs to be an objective added to the Bill directing greater convergence in the aims and collaboration between government Ministries responsible for these different determinants (i.e., by clustering together the Ministry for the Environment, Ministry of Social Development, and Ministry for Housing etc.).

The Bill states that one of the key *objectives* of the new Health New Zealand[13] organisation is:

(c) *to promote health and prevent, reduce, and delay ill-health, including by collaborating with other social sector agencies to address the determinants of health.*

12 Hodgson, Ann. Spours, Ken. (2016) The evolution of social ecosystem thinking: its relevance for education, economic development and localities. *https://discovery.ucl.ac.uk/id/eprint/1537510/3/Spours_Ecosystem%20thinking%20Stimulus%20Paper.pdf*

13 Part 2, Subpart 2: Health New Zealand, section 13, objective c

We are encouraged to see such forward thinking included in the bill, as we know that some 80% of the problems that we see in our healthcare practice are nothing to do with a patient's health issues. At the same time, we are disappointed to see that the Bill only focusses on social services when looking to address the key determinants impacting on health, rather than taking a wider ecosystem view of the issue.

This is a key element from our perspective, and our recommendation to broaden this definition also applies to the other instances where similar wording is used in the Bill, i.e.

- Under the *Functions of Health New Zealand*, Section 14(1)(i): are to, "*collaborate with other providers of social services to improve health and wellbeing outcomes*;"
- Under the *Objectives of the Māori Health Authority*, Section 18(c): are to, "*promote Māori health and prevent, reduce, and delay the onset of ill-health for Māori, including by collaborating with other social sector agencies to address the determinants of Māori health*"
- Under the *Functions of the Māori Health Authority*, Section 19 (1)(d): are to, "*collaborate with other providers of social services to improve health and wellbeing outcomes for Māori*"
- Under the *Locality Plans*, Section 49(3)(b): In developing a locality plan for a locality, Health New Zealand must "consult social sector agencies and other entities that contribute to relevant population outcomes within the locality;"

We note that the purpose of the *Hazardous Substances and New Organisms Act* (1996) administered by the Ministry for the Environment is stated as:

... to protect the environment, and the health and safety of people and communities, by preventing or managing the adverse effects of hazardous substances and new organisms.[14]

So, this Act recognises importance of the environment and its effect and impact on the health of people, yet this health reform Bill does not recognise the implication of the environment on health or people!

We also recommend that the Bill should promote convergence in the aims and intent of the government Ministries responsible for different determinants, end encourage the clustering of entities such as the Ministry for the Environment, Ministry of Social Development, and Ministry for Housing. Placing all the responsibility on one Ministry (Health) and applying a monocular view of health so the Bill just focusses on health as an outcome, will not achieve the desired reforms. At HHPNZ we know that 80% of the people who come to see us in our general practice are for things that affect their health, rather than their health.

ENSURING WIDE-RANGING CONSULTATION IS UNDERTAKEN WHEN ENACTING THE BILL

RECOMMENDATION #2

As a health entity that contributes to population health outcomes in our locality, we put our 'hand up' to be involved in developing both the NZ Health Plan and the Locality Plan co-design process; and can offer our 12,000 strong Palmerston North patient community, and the voices of our community partners as a 'live' case study project to support this work.

We support the concept of a *New Zealand Health Plan*, and note the requirements specified under Section 47:

"*In preparing the New Zealand Health Plan, Health New Zealand and the Māori Health Authority must engage with—*

- *the Ministry; and*
- *other health entities*[15]*; and*
- *individuals and organisations that Health New Zealand and the Māori Health Authority.*"

14 *https://www.legislation.govt.nz/act/public/1996/0030/latest/DLM382991.html*

15 S4 'Interpretation' of Bill states that these entities have a specific meaning i.e.: "'health entity" means Health New Zealand, HQSC, the Māori Health Authority, Pharmac, or NZBOS'

We also support the concept of *Locality Plans*, and note the requirements specified under Section 49 (3):

"In developing a locality plan for a locality, Health New Zealand must—

- *consult consumers or communities within the locality; and*
- *consult social sector agencies and other entities that contribute to relevant population outcomes within the locality; and*
- *consult—*
  - *the Māori Health Authority; and*
  - *iwi-Māori partnership boards for the area covered by the plan; and*
  - *any other individual or group that Health New Zealand considers appropriate."*

We urge the POL committee to ensure that the interpretation of 'other entities' mentioned here is a broad as possible, so that the input of many groups and differing perspectives are incorporated into the Locality Plan design.

At HHPNZ, we put our 'hand up' to be involved in the co-design process for these plans. Our research and community care work contributes to the population outcomes within our immediate Palmerston North locality, and this is a particular area of expertise for our teams. We can offer Palmerston North as a case study (and test laboratory - refer section **Our real-world laboratory clinic** on page 10) to demonstrate to the POL committee how these concepts can be applied on the ground. In our community we are already looking at the correlates between environmental and health outcomes[16]. We know that a less-diverse environment is one of the key contributors to over-representation of people from parts of our city with poorer health outcomes into our local ED.

Our **ICE Qn**™ project work described in previous sections above is an example of our work being culturally responsive - with a host of health determinants factored into this index number which is absolutely specific to an individual, their circumstances, lifestyle and environment.

We also work with many different research and community agencies in Palmerston North to deliver our holistic community health service, and we can assist the POL committee by ensuring people who would not necessarily be able to enter the conversation (such as business, local government, researchers and other nationalities/ cultures) have a voice through our collaborative involvement.

Our Transition Care Facilities conceptual planning and research, as described in the section **Working towards a new model - Transition Care Facilities** (page 9) is also a unique approach that we can offer up to inform the planning process.

APPLYING INNOVATIVE APPROACHES TO DRIVE ORGANISATIONAL AND CULTURAL CHANGE

RECOMMENDATION #3

As a health entity that is: a) is implementing innovative, self-managing (TEAL), team-based ways of working in our general practice and b) is also representative of the interests of both workers and many others in our wider health-care provider community; we put up our hand to be involved in the co-design process for the proposed NZ Health Charter (and can again offer our Palmerston North practice as a case study project to support this work).

Finally, we come to one of the biggest challenges underpinning these reforms: effecting genuine organisational and cultural change across the health sector. This is a challenge that we can really add to the POL committee's

16 This is a current research project underway with ecologist and evolutionary biologist, *Sam Hill* involving researching ecological factors such as the interrelationship between native vegetation biodiversity and avian biodiversity, and the effects of biodiversity on comorbidities of disease (health status index, HSI) in the realms of population health.

thinking on, as we have been implementing, trialling and refining this in our own clinical healthcare 'laboratory' setting for the past 3+ years.

We see there is intent in the Bill to create a *NZ Health Charter*, Section 50 (2):

"*The purpose of the charter is to provide common values, principles, and behaviours to guide health entities and their workers.*"

And in preparing this health charter, Section 52 (1), The Minister must engage with:

"*a) health entities;*
and
b) organisations that, in the Minister's opinion, are representative of the interests of workers who work for health entities;
and
c) Māori health professional organisations."

This single sentence in Section 50(2) appears to be the only part of the Bill that recognises the need to set down a new way of working for our health organisations that will drive organisational change, and disrupt the hierarchical culture that is embedded within our current health provider organisations.

We urge the POL committee to consult widely on this and seek input from many sources who are actively trying to disrupt current structures, for this lies at the heart of effecting change.

We note that the Bill lays out principles of change around engaging with Māori but we think it should look to be more courageous and explicit about addressing the major issues of inequity, such as systemic racism, inherent prejudices, and archaic system bureaucracy. We would also like to see the Bill examine all the drivers of inequity as part of the Health Charter the Minister has to produce.

We have considerable experience in how to redesign and implement new organisational models in general practice (refer to our organisational *Teal structure* (see Appendices), and have developed an organisational culture of collegiality, teamwork, innovation, entrepreneurship, and transformational consciousness.

On our journey to working in healthcare teams in a totally new way, we have discovered there are some important aspects to getting this right:

- For staff to be fully self-managing, they cannot do this well unless they have a high degree of emotional intelligence/self-awareness and understand both themselves and their own unconscious biases and prejudices. We have found that supporting staff on this learning journey is one of the hardest (and slowest) parts of this organisational change process.
- It is crucial to employ staff for both the cultural and cognitive diversity they bring to their work, and we practice co-design in our own work at the organisational scale to disrupt discrimination and inequity in our own practice systems.
- HHPNZ has locked into place organisation values and operational systems that enshrine the right to challenge the reasoning for any activity we carry out. We operate a *triple-down accounting system* (refer Appendices) for initiating all our activities.

APPENDICES

SUPPORTING INFORMATION / MORE DETAIL ON CONCEPTS PRESENTED:

Health Hub Project NZ: who are we?

HHPNZ - founded in 2015

In 2018 HHPNZ purpose-built our first health hub clinic[17] in Downtown Mall in Palmerston North's CBD. We're disruptors at heart and it all began with our built environment! This initial 500m² space was designed to look like no other health clinic - and feel like a mix of art gallery and shearing shed. We wanted both our provincial townsfolk to feel comfortable and safe when visiting us and experience a dose of humour as they walk into our healthcare environment. We also sought to make our multicultural community feel like this was a space more aligned with their own lived experiences, in the hope of reducing the many barriers to accessing healthcare.

Our purpose - everyone has a right to health care

To both introduce and continuously improve models of care that will ensure a future where New Zealand meets its obligation of everyone having a right to health.

We are a diverse group of people who are passionate about doing better in health care. Our organisational model is designed to challenge the status-quo, and we actively seek out staff and partners who disrupt our thinking. By reframing our healthcare work in this way, we upend the current 'sickness model' to focus on wellness, applying it via our community health centres, all supported by a range of innovative technologies and research programmes.

We believe and have embedded in our organisational culture that everyone has a right to health. We use this to inspire an organisational culture that is transformational, always conscious of how the pervading issues of race and ethnicity and their relationship to poverty, disadvantage, and reduced access to healthcare, impact on our patients. We actively work to challenge organisational management models and cultural inequity.

We place a huge emphasis on working with other agencies to address the range of determinants of poor health: political, financial, environmental and social, and we always start by asking the question:

How can we as healthcare professionals address the cause of poverty in a manner that will increase wellness with our patient population?

This approach is our attempt to respond to New Zealand's obligations as signatory to the Universal Declaration of Human Rights (1948)[18].

Our innovative use of technology

The application of technology to improve our patient service is a critical part of what we do. We research, develop and refine our own technology to improve our workflows and efficacy, and better utilise the increasingly limited health staff resources that our country has.

The key tools we currently have in development in our general practice are:

- Swevnz™ - this machine learning tool takes a one-dimensional patient consult to a multidimensional level, targeting our interventions to improve patient outcomes. It will provide a holistic, real-time health perspective that will include all data related to a patient and the context of the broader community they live in.

  When operative, Swevnz™ will allow our transdisciplinary patient teams to access data presented as a single index number that is a measure of their overall wellbeing (presented in the form of an Individual, Community, Environment Quantum Number or ICE Qn™). A broad, multivariate, multidimensional perspective like this is not yet available anywhere else in the world and offers a novel approach to providing digital health solutions. A key goal of this tool is to identify the impact of different interventions as viewed from medical, social, and environmental angles. Swevnz™ will provide live data that will improve medical management, with the ability to inform policy for social change, and environmental and ecological improvements that impact health.

17 HHPNZ Concept Brief (2015) *https://www.hhpnz.nz/sites/hhpnz.nz/files/upload/health_hub_concept_brief_working_doc_16.07.15_www.pdf*

18 *https://nzhistory.govt.nz/politics/universal-declaration-of-human-rights*

The novelty of Swevnz™ is that it provides holistic health perspectives that are inclusive of all data related to a patient, and the broader community they live in. Swevnz™ will seek to learn all possible connections, relevance, and understanding in relation to the patient, and importantly, is continuously updated. Swevnz™ will allow transdisciplinary patient teams access to data presented as a single number that captures their overall wellbeing.

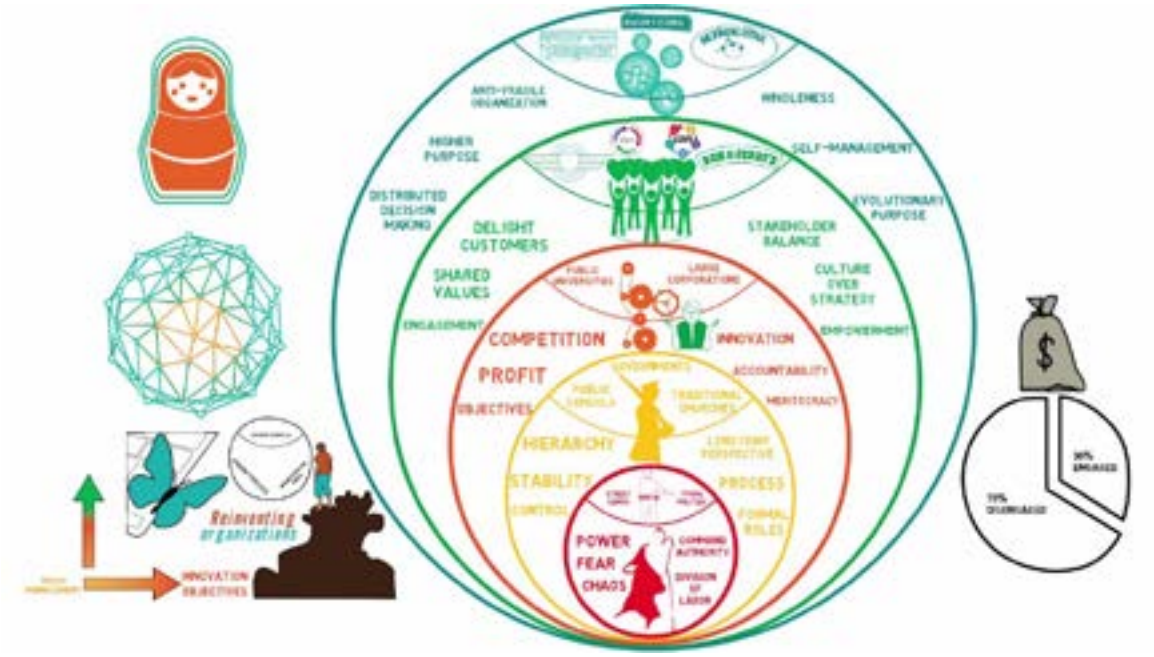
- Simeis 147™ - this prototype ICT system will operationalise the ICE Qn™ and allow us to identify high-needs clients. Simeis 147™ enables improvements to our patient recalls, various routine treatments, medicines reviews, and prescription renewals, along with automation of lab result reviews.
- Video-consults - our Simeis 147™ system already has the facility for video-medicine / online consults and we are currently developing algorithms for common conditions that can be treated via this media - with the aim of moving 70% of our patient care over to tele-video consults.

Health Hub Project NZ: how we work?

HHPNZ - a TEAL Organisation

We are constantly evolving the application of our TEAL management model, which sees us:

- implementing horizontal and vertical integrative organisation design features into our teams,
- running doctor / nurse-practitioner / clinical pharmacist co-lead, interdisciplinary, diagnostic practice teams and care practice teams,
- supporting the development of population health policy and effective practice research nationally and internationally,
- undertaking population segmentation to co-ordinate and deliver personalised - population health care, internally and in the community via partnership and outreach.



Frederic Laloux's model showing the evolution of four types of organizations (from red to amber, orange to green), and then the fifth TEAL iteration that is self-organising, with a structure based around flexible peer-to-peer relationships where work is accomplished through self-managed teams. Instead of reporting to single supervisors, people are accountable to the members of their teams for delivery of self-organised, collective goals - in other words, everyone is a manager, and all voices count. Image Source: *https://www.huffpost.com/entry/reinventing-management-pa_b_9387286*

The principles of spiral dynamics are also central to how we apply our TEAL organisational model. Spiral Dynamics (SD) is a model of the evolutionary development of individuals, organizations, and societies that has evolve from the work of Psychology professor Clare Graves (1974) and furthered by Don Beck. It describes eight levels, expressed in value systems each with their own colours. These levels climb from simple structure through to increasing complexity.

It is a model for describing the progression of organisations and institutions whose societal thinking is ahead of institutional thinking.

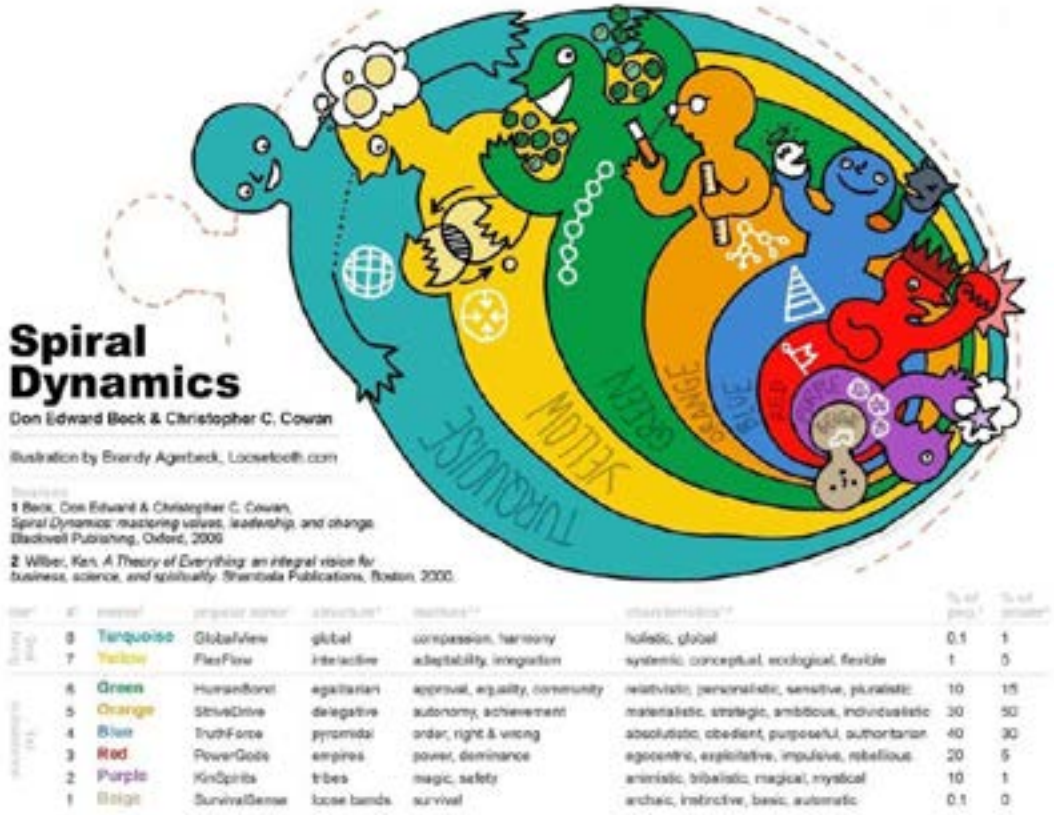


Diagram source: *https://www.scribd.com/document/41758988/Spiral-Dynamics*

HHPNZ QRS Triple-Down Accounting System

We have a triple-down accounting system for initiating all our activities as follows, and runs in this order:

- Quality = whatever is proposed must either maintain quality or increase it in this order – wellness and flourishing of the patient/client/person; worker/colleague; organisation
- Risk = whatever is proposed must either reduce and limit the risk in this order - the patient/client/person; worker/colleague; organisation; and
- Sustainability = whatever is proposed is financially, resource, and culturally sustainable in this order - the patient/client/person; worker/colleague; organisation

Additionally, the principal purpose, operating principles, and values of HHPNZ both determine and underpin all activities of HHPNZ:

- Principle Purpose: is to both introduce and continuously improve models of care that will ensure a future where New Zealand meets its obligation of everyone having a right to health.
- Operating principles in-action must equate to the following in this order – flourishing and wellness the i) individual, ii) community, and iii) environment
- The method and approach for all action must imbue the following values:

'**C**' stands for **Courage** – courage to break with convention and traditional practice; Courage to adopt and implement new and different, and better ways of working and relating to patients, workmates and colleagues, and others in the community we connect with day to day.

'**A**' stands for **Action** – Always to be active and proactive to make our plans and designs work in practice. Action also means, importantly, that we constantly reflect on, review and improve the ways we work and act, and our practice; and be steadfast in the face of any negativity we may encounter.

'**F**' stands for **Fairness** – Fairness means always be even handed in all our dealings – with staff, with patients, in fact with everyone to ensure that we always view and treat healthcare as fair field with no favours. In a nutshell, to us, Fairness means simply, that for everyone Health is a Right!

'**E**' stands for **Ethical** – And being ethical and acting ethically means honour everyone's Right to Health – That is to say, in all our work, day-to-day, always do the right thing – think and act.

BIBLIOGRAPHY

As a research organisation we maintain an extensive archival database of supporting references for the work we undertake - just a small selection of our key references are quoted here. Additional references for anything quoted in this submission can be supplied upon request.

HHPNZ Documents

HHPNZ Concept Brief (2015): *https://www.hhpnz.nz/sites/hhpnz.nz/files/upload/health_hub_concept_brief_working_doc_16.07.15_www.pdf* (p.11)

Publications

Baggs, J. G., Schmitt, M. H., Mushlin, A. I., Mitchell, P. H., Eldredge, D. H., Oakes, D., & Hutson, A. D. (1999). Association between nurse-physician collaboration and patient outcomes in three intensive care units. Critical Care Medicine, 2(9), 1991-1998

Bélisle, C. (2006). Literacy and the digital knowledge revolution. sous la direction d'Allan Martin et Dan Madigan. Digital Literacies for Learning, Facet Publishing, 51-67.

Ben-Tovim, D. I., Bassham, J. E., Bolch, D., Martin, M. A., Dougherty, M., & Szwarcbord, M. (2007). Lean thinking across a hospital: redesigning care at the Flinders Medical Centre. Australian Health Review, 31(1), 10–15

Berghan, G., Came, H., Coupe, N., Doole, C., Fay, J., McCreanor, T., & Simpson, T. (2017). Te Tiriti o Wāitangi-based practice in health promotion. Auckland, Aotearoa New Zealand. : STIR: Stop Institutional Racism. Accessed from: *https://trc.org.nz/treaty-waitangi-based-practice-health-promotion*.

Boyce, Niall, Godsland, Jane, Sonuga-Barke, Edmund. (2020) Institutionalisation and deinstitutionalisation of children: the Executive Summary from a Lancet Group Commission. 8(4), 562-563

Coghlan, D. & Casey, M. (2001). Action research from the inside: issues and challenges in doing action research in your own hospital. Journal of Advanced Nursing, 35(5), 674–682

Davey, S., & Gordon, S. (2017). Definitions of social inclusion and social exclusion: the invisibility of mental illness and the social conditions of participation. International Journal of Culture and Mental Health, 229-237.

Dechairo-Marino, A E., Jordan-Marsh, M., Traiger, G., & Saulo, M. (2001). Nurse/Physician Collaboration: Action Research and the Lessons Learned. Journal of Nursing Administration, 31 (5), 223-232

Donovan, G., Gatziolis, D.,'t Mannetje, A., Weinkove, R., Fyfe, C., & & Douwes, J. (2021). An empirical test of the biodiversity hypothesis: Exposure to plant diversity is associated with a reduced risk of childhood acute lymphoblastic leukemia. Science of the Total Environment, 768

Dutta, Mohan. (2018). Culture-centered Approach in Addressing Health Disparities: Communication Infrastructures for Subaltern Voices. Communication Methods and Measures. 12, 239-259

Dutta, Mohan et al. (2019). Critical Health Communication Method as Embodied Practice of Resistance: Culturally Centering Structural Transformation through Struggle for Voice. Frontiers in Communication. 4, 67

Flood, David. (2018). Indigenous languages and global health. The Lancet: Global Health, 2(6) E134-135.

Foucault, Michel. (1970) the Order of Discourse. Inaugural Lecture, College de France. Accessed online from: *https://www.kit.ntnu.no/sites/www.kit.ntnu.no/files/Foucault_The%20Order%20of%20Discourse.pdf*

Fyfe, C., Telfar-Barnard, L., Howden-Chapman, P., & Douwes, J. (2020). Association between home insulation and hospital admission rates: retrospective cohort study using linked data from a national intervention programme. BMJ-British Medical Journal. 371.

Godfrey, Morgan (ed.) (2016). The Interregnum: Rethinking New Zealand. BWB Texts

Gordon, D., Levitas, R., Pantazis, C., Patsios, D., Payne, S., & Townsend, P. (2000). Poverty and social exclusion in Britain. York: Joseph Rowntree Foundation.

Gray, J.A. Muir. (2007) How to get better value healthcare. Offord Press Ltd, ISBN 13: 978-1-90420-201-1)

Gray, J.A. Muir. (2013). The shift to personalised and population medicine. The Lancet, 9888(382), 200-201

Graves, Clare W. (1974) The Futurist: Human Nature Prepares for a Momentous Leap. pp. 72-87. Accessed from: *https://spiraldynamicsintegral.nl/wp-content/uploads/2013/09/Graves-Clare-Human-Nature-Prepares-for-a-Momentous-Leap.pdf*

Gröne, O & Garcia-Barbero, M (2002): Trends in Integrated Care – Reflections on Conceptual Issues. World Health Organization, Copenhagen, 2002, EUR/02/5037864

Groot et al (ed). (2017) Precarity: Uncertain, insecure and unequal lives in Aotearoa New Zealand. Massey University Press

Gurney et al (2021) Disparities in post-operative mortality between Māori and non-Indigenous ethnic groups in New Zealand. NZMJ 134, 15-28

Hibbard, Judith H., and Jessica Greene. (2013). What The Evidence Shows About Patient Activation: Better Health Outcomes And Care Experiences; Fewer Data On Costs. Health Affairs, 32(2), 207–214

Hodgson, Ann. Spours, Ken. (2016) The evolution of social ecosystem thinking: its relevance for education, economic development and localities. A stimulus paper for the Ecosystem Seminar - 22 June, 2016. Organised by the Centre for Post-14 Education and Work, UCL Institute of Education

Jani, A., Jungmann, S., & Gray, M. (2018 Feb). Shifting to triple value healthcare: Reflections from England. Z Evid Fortbild Qual Gesundhwes. 130, 2-7.

Jones, D., & Mitchell, A. (2006). Lean thinking for the NHS. (A report commissioned by the NHS Confederation). NHS Confederation, London, UK.

Kelly, A., Bryant, M., Cox, L., & Jolley, D. (2007). Improving emergency department efficiency by patient streaming to outcomes-based teams. Australian Health Review, 31(1), 16–21

King, D. L., Ben-Tovim, D. I., & Bassham, J. (2006). Redesigning emergency department patient flows: Application of Lean Thinking to health care. Emergency Medicine Australasia, 18, 391–397

Laloux, Frederic. (2015). Reinventing Organizations: A Guide to Creating Organizations Inspired by the Next Stage of Human Consciousness. Nelson Parker | Laoux

Leggat, S. G. (2007). Effective healthcare teams require effective team members: defining teamwork competencies. BMC Health Services Research, 7(17)

Lipsitz, L.A. (2012) Understanding Health Care as a Complex System. The Foundation for Unintended Consequences. JAMA, July 18, 2012, 308(3) (p.243).

Mannion, R., Konteh, F. H., & Davies, H. T. O. (2009). Assessing organisational culture for quality and safety improvement: a national survey of tools and tool use. Quality Safety Health Care, 18, 153–156

Marmot Michael, (2018). Inclusion health: addressing the causes of the causes. The Lancet, 10117 (391), 186-188

Ministry of Health. (2018). Achieving Equity in Health Outcomes: Highlights of important national and international papers. Wellington: Ministry of Health.

Mitchell, P. et al (2021). Pushing poverty off limits: quality improvement and the architecture of healthcare values. BMC Medical Ethics. 22: 91-104

Paremoer, Lauren, et al. (2021) Covid-19 Pandemic and the Social determinants of Health - BMJ 372: p.129

Porter, M. E., & Lee, T. H. (October 2013). The Big Idea: The strategy that will fix health care. Harvard Business Review, 50-71. Accessed from: *https://hbr.org/2013/10/the-strategy-that-will-fix-health-care*

Porter, M.E., Erika A. Pabo and Thomas H. Lee. (2013) Redesigning Primary Care: A Strategic Vision To Improve Value By Organizing Around Patients' Needs. Health Affairs, 32(3), 516-525

Razai, M.S. et al. (2021). Covid-19 vaccine hesitancy among ethnic minority groups. BMJ, 372:n513

Roter, D., Stashefsky-Margalita, R., & Ruddb, R. (2001). Current perspectives on patient education in the US. Patient Education and Counselling, 44(1), 79-86 *https://doi.org/10.1016/S0738-3991(01)00108-2*

Safran D. G., Miller, W., & Beckman, H. (2006). Organizational Dimensions of Relationship-centered Care Theory, Evidence, and Practice. Journal of General Internal Medicine, 21, (S1), S9-S15

Scott, T., Mannion, R., Davies, H. T. O., & Marshall, M. N. (2003). Implementing culture change in health care: theory and practice. International Journal for Quality in Health Care, 15(2), 111-118

Scott, T., Mannion, R., Davies, H., & Marshall, M. N. (2003). The Quantitative Measurement of Organizational Culture in Health Care: A Review of the Available Instruments. Health Services Research, 38(3), 923-945

Seren, S., & Baykal, U. (2007). Relationships between Change and Organizational Culture in Hospitals. Journal of Nursing Scholarship, 39(2), 191-197

Shortell, S. M., Marsteller, J. A., Lin, M., Pearson, M. L., Shin-Yi, W., Mendel, P., Cretin, S., Mayde Rosen, M. (2004).

The Role of Perceived Team Effectiveness in Improving Chronic Illness Care. Medical Care, 42(11), 1040-1048

Smith, S., Wallace, E., O'Dowd, T., & Fortin, M. (2016). Interventions for improving outcomes in patients with multimorbidity in primary care and community settings. Cochrane Database Syst Rev.3:CD006560.

Stark, Alastair, Head, Brian. (2019) Institutional memory, short term memory loss, memory decay and amnesia. Institutional amnesia and public policy. Journal of European Public Policy, 26(10), 1521–1539

Stokes, T., Tumilty, E., Doolan-Noble, F., & Gauld, R. (2017). Multimorbidity, clinical decision making and health care delivery in New Zealand Primary care: a qualitative study. BMC Family Practice, 18-51.

Tufano, J. T., Ralston, J. D., & Martin, D. P. (2008). Providers' Experience with an Organizational Redesign Initiative to Promote Patient-Centered Access: A Qualitative Study. General Internal Medicine, 23(11), 1778-83

Viggiano, T. R., Pawlina, W., Lindor, K. D., Olsen, K. D., & Cortese, D. A. (2007). Putting the Needs of the Patient First: Mayo Clinic's Core Value, Institutional Culture, and Professionalism Covenant. Academic Medicine, 82(11), 1089-93

Wagner, E. H., Bennett, S. M., Austin, B. T., Greene, S. M., Schaefer, J. K., & Vonkorff, M. (2005). Finding Common Ground: Patient-Centeredness and Evidence-Based Chronic Illness Care. The Journal of Alternative and Complimentary Medicine, 11(1), S7-S15

Whitehead, M. (1992). The concepts and principles of equity and health. The International Journal of Health Services, 23(3)2, 429-445.

Yeung, P., Severinsen, C., Good, G., & O'Donoghue, K. (2020). Social Exclusion and People with Type 2 Diabetes. NZ: School of Social Work, Massey University, School of Health Sciences, Massey University.

Yu, N. (2018). Consciousness raising: Critical pedagogy and practice for social change. London: Taylor and Fancis.

Websites

NZ Health Strategy: *https://www.health.govt.nz/publication/new-zealand-health-strategy-2016*

NZ Primary Health Care Strategy: *https://www.health.govt.nz/publication/primary-health-care-strategy*

NZ Research and evaluation of primary health care initiatives:
https://www.health.govt.nz/our-work/primary-health-care/research-and-evaluation-primary-health-care-initiatives

Rory O'Brien. (1998) An Overview of the Methodological Approach of Action Research:
http://www.web.net/~robrien/papers/arfinal.html and Action research (participatory action research):
http://en.wikipedia.org/wiki/Action_research

Articles

'Annual Variation in Bird Numbers across Kaipatiki, Auckland'. New Zealand Journal of Zoology, November 18, 2020, by Sam D. Hill, Matthew D. M. Pawley, and Craig D. Bishop:
https://www.tandfonline.com/doi/full/10.1080/03014223.2020.1833948

'Avian Biodiversity across Auckland's Volcanic Cone Reserves'. New Zealand Journal of Zoology, July 19, 2018, by Todd J. Landers, Samuel D. Hill, Miriam R. Ludbrook, Sarah J. Wells, and Craig D. Bishop:
https://www.tandfonline.com/doi/full/10.1080/03014223.2018.1491410

'Avian Diversity in the Coastal Wetlands of the Okahukura Peninsula'. New Zealand Journal of Zoology, December 6, 2014, by SD Hill, C Bishop, and TJ Landers:
https://www.tandfonline.com/doi/full/10.1080/03014223.2014.982662

'Dead because she was Indigenous': Québec coroner says Atikemekw woman a victim of systemic racism'. The Guardian, October 6, 2021:
https://www.theguardian.com/world/2021/oct/06/joyce-echaquan-coroner-indigenous-systemic-racism-death