

Optimising our digital mental health, addiction and wellbeing ecosystem to improve equity and create impact in Aotearoa

JUNE 2022

OPTIMISING OUR DIGITAL MENTAL HEALTH, ADDICTION AND WELLBEING ECOSYSTEM TO IMPROVE EQUITY AND CREATE IMPACT IN AOTEAROA

ABOUT US

Digital Health Association (DHA)

The Digital Health Association, previously known as New Zealand Health Information Technology (NZHIT), was formed in 2002 as a not-for-profit, incorporated society that has grown to become the peak industry body for the New Zealand digital health sector. With 170+ members, we represent the majority of digital health companies and organisations operating in New Zealand, as well as a broad cross-section of healthcare providers, consultancies, legal, insurance, banking, government, regional agencies, and international companies with an interest in New Zealand's health sector. Our purpose is to provide an open environment that enables a coordinated, informed voice to maximise social and economic value for Aotearoa through digital technology.

Digital Wellbeing Industry Group (DWIG)

The DWIG is a DHA special interest group, representative of leading healthcare providers and health industry partners that provide or use software solutions for the delivery of digital mental health, addiction, and wellbeing services. It is a highly collaborative expert industry group that provides leadership, guidance and strategic advice to support the integration and optimisation of transformative technology to improve mental health, addiction and wellbeing outcomes across Aotearoa New Zealand.

The authors of this report

This report has been compiled following workshop and extensive engagement with the DHA, DWIG and other expert digital health stakeholders, as listed on page 7-8.

INTRODUCTION

The purpose of this document is to:

1. Share insights about the current barriers, and provide action points that will allow us to utilise technology to enhance our mental health and addictions system.
2. Propose a partnership with the Ministry of Health, Māori Health Authority, Health NZ/Hauora New Zealand, and other key central government organisations that play a vital role in working to improve mental wellbeing outcomes across Aotearoa New Zealand.

What problems are we facing?

The Mental Health and Wellbeing Commission's two most recent reports - *Te Huringa: Change and Transformation/Mental Health Service and Addiction Service Monitoring Report 2022*, and *Te Rau Tira Wellbeing Outcomes Report 2021* - identify a number of concerning, ongoing challenges that we need to work collectively to solve.

We continue to struggle to provide equitable access to effective mental health, wellbeing and addiction support across all of our communities. A disproportionately high number of Māori continue to experience poor wellbeing across multiple domains. Alongside other groups such as our Pasifika peoples, people with disabilities and our takatāpui and rainbow populations, Māori lack adequate levels of access to tailored services that meet their needs, and experience poorer mental and overall health.

Access to specialist mental health and addiction services is still poor, with long wait times and poor follow-up, particularly for our rangitahi. There is also a lack of current prevalence data to guide our development of future mental health, addiction and wellbeing services.

With concerns of growing need within our communities and the ongoing impacts of widespread health workforce shortages, we must work together to find innovative, future-proof solutions that allow us to improve our current situation and support us to do better.

What can digital solutions offer?

Digital technology is rapidly evolving around us, yet we are only starting to identify and take advantage of the opportunities it presents to transform our mental health and addiction sector. In 2020, COVID-19 created global disruption, requiring an unprecedented and rapid public health response that would also serve to protect our nation's psychosocial wellbeing. COVID was a catalyst that catapulted digital health into the forefront of service delivery, showcasing the level of agility, scalability, and flexibility that digital solutions can offer.

Digital health and wellbeing tools and services were quickly mobilised to provide accessible and tailored support directly to New Zealanders through apps, websites, and social media platforms. Evidence shows that New Zealanders turned to digital mental health and wellbeing solutions for support at substantially greater rates during COVID-19. Communities were able to stay in touch, and new digital peer platforms were created, allowing people to meet, connect and support each other through lockdowns. Despite the limitations the pandemic placed on service delivery, decentralised web-based client management systems allowed mental health teams to effectively work together to make a positive impact.

Beyond the clear benefits they provided during COVID, digital solutions directly allow us to deliver scalable, evidence based mental health and wellbeing treatments and interventions. Digital solutions have been successfully demonstrated in multiple peer-reviewed studies to be an effective treatment for people with comorbid mental health and wellbeing issues, including studies with indigenous and minority participant groups.

Technology provides us with multiple opportunities to deliver transformative solutions that align with the recommendations and directions outlined in:

- He Ara Oranga: Report of the Government Inquiry into Mental Health and Addiction
- Te Rau Tira Wellbeing Outcomes Report 2021
- Te Huringa: Change and Transformation. Mental Health Service and Addiction Service Monitoring Report 2022
- Protecting and promoting mental wellbeing: Beyond COVID-19
- Kia Manawanui Aotearoa, the Long-term Pathway to Mental Wellbeing and;
- the evolving Mental Health and Addiction System and Service Framework 2022-2032 priorities.

Digital tools and solutions can help to remove barriers to mental health and addiction support for the diverse group in New Zealand, including Māori, Pasifika peoples, people with disabilities and our takatāpui and rainbow populations. Technology can enable the development and customisation of fully responsive digital services to support the needs of many communities.

We do not deny the significant challenges ahead to ensure equitable access and services across populations who are currently digitally excluded. We also recognise that a lot of work is required to enhance the level of digital literacy and awareness across our workforce and optimise the interoperability of our current data and digital systems. However, we believe that with thoughtful, collaborative strategic planning, we can build a digitally enabled, inclusive mental health and addiction system that allows consumers access, autonomy, and choice when it comes to their healthcare.

Upholding the Te Tiriti o Waitangi to improve Māori wellbeing

Māori leadership and co-governance is vital to establish digital health as a core solution to improve mental health outcomes and health equity across Aotearoa New Zealand. By taking a co-governance approach, we can provide significant opportunities to meet our obligations under Te Tiriti o Waitangi, as articulated by the five principles recommended in the Waitangi Tribunal 2019 Hauora Report: guarantee tino rangatiratanga; commit to achieving more equitable outcomes; active protection in our actions, options of kaupapa Māori interventions; and true partnership, starting from shared leadership. Digital solutions developed in partnership with Tāngata Whenua, must actively protect Māori data sovereignty as outlined in the guiding principles and frameworks of Tūtohunga (Te Mana Raraunga – Māori Data Sovereignty Network charter).

Design a responsive, digitally enabled mental health, addiction and wellbeing service model

Truly transforming our mental health and addiction system means ensuring that it provides equitable, effective and accessible care for all New Zealanders. This is particularly important for our digitally native rangitahi. We must build a fully digitally enabled model of service delivery. New Zealanders should be able to easily select and engage with a range of tailored digital, and digitally enabled services, delivered at a time, place and by a workforce that suits their needs. Digital tools and solutions can be seamlessly blended into in-person care delivery, supporting a diverse range of workforce to offer currently hard-to-access evidence-based psychological treatments, including our growing and essential peer workforce. This will support a stepped-care approach and allow for top-of-scope practice, protecting our specialist services to support people who have the greatest needs.

Digitally-enabled service delivery will significantly reduce regional access barriers, allowing New Zealanders to engage in highly specialised, tailored support wherever they are, whatever their needs may be. Technology will provide us with the means to support communities and people - such as our rangitahi - to lead, develop and deliver their own solutions. This provides valuable opportunities for our healthcare system to learn from the people we directly service, continue to innovate and provide highly responsive solutions, and to help grow a diverse range of future leaders embedded in our communities.

Intersectoral digital collaboration to address the determinants of health and wellbeing

A fully digitally enabled mental health, addiction, and wellbeing system could open up greater levels of access and support to New Zealanders utilising services across the education, justice, social services, correctional and housing systems. Intersectoral digital collaboration can help us to ensure the allocated Budget for Mental Health goes further, whilst supporting the government and public sectors to better address the range of social determinants of health and mental health for New Zealanders.

Utilising our digital health ecosystem to support industry growth

We want to ensure that Aotearoa's growing digital mental health, addiction and wellbeing ecosystem supports our essential digital health industry. We want to provide new digital health companies with a space to develop, evaluate and launch new products and solutions in Aotearoa New Zealand, and support them to further expand into the international market.

We are offering immediate action

Our wider digital mental health, addiction, and wellbeing community are able, willing, and waiting to offer the level of expertise, skill and passion that will help us to actualise New Zealand's digital health potential. We are working on the ground within service and clinical delivery, development, research, policy and planning, and industry. We know and understand the challenges, gaps, and want to share the potential solutions to help build an equitable, responsive, and effective digital mental health, addiction and wellbeing ecosystem within Aotearoa New Zealand that will grow to be a leading example across the world.

Preparing for our future

We must also build a digital ecosystem to support the full range of mental health and addiction support services that are needed now, and in the future. The ecosystem will prepare our healthcare system for future population growth and needs. This is particularly pertinent in the face of our current pandemic and any future environmental disasters we may face as a nation and globally, given the current rate of climate change.

The catalyst

The DHA recently assisted DWIG to facilitate a workshop with a stakeholder network of diverse digital health experts. The goal of this discussion was to share knowledge, insights, and ideas on current challenges. We also explored potential future solutions that could expedite advancement of both our digital ecosystem and current healthcare system.

This document introduces the themes of discussion collated from this workshop, with an emphasis on the next steps for optimising the sector's impact for equity and health gains.

There was clear consensus that there is urgent need to create a partnership with the government to support the delivery of a fully interoperable digital health ecosystem, as outlined in Kia Manawanui Aotearoa, the Long-term Pathway to Mental Wellbeing. We believe that this will enable greater collaboration and transparency between stakeholders and encourage action that will help us expedite, shape, and support our future digital wellbeing ecosystem for the benefit of all New Zealanders.



Anna Elders, Chair of the Digital Wellbeing Industry Group, Clinical Lead, Just a Thought, Mental Health Nurse Practitioner, Tāmaki Health



Dr Terry Fleming, Associate Professor, and co-leader of the Digital Mental Health Lab, School of Health, Victoria University of Wellington



Ryl Jensen, CEO, Digital Health Association

PROJECT PARTNERS

This document has been contributed to and reviewed by the following stakeholders:

Shivani Thirayan, Solicitor, Hudson Gavin Martin

Dr Tania Cargo (Ngāti Maru, Ngāti Manu, Ngāpuhi), Clinical Psychologist and Senior Lecturer, Department of Psychological Medicine, University of Auckland

Professor Richie Poulton, Director, Dunedin Multidisciplinary Health & Research Unit, University of Otago

Hannah Hardy-Jones, CEO and founder of The Kite Program

Ben Blain, Director, Nothing is Obvious and founder of Wellstream

Andy Ellis, Digital Specialist, Te Hiringa Hauora - Health Promotion Agency

Mark Cox, Country Lead, Novari Health

Kate Rhind, CEO and founder of Health Point

Taimi Allan, Tumu Whakarae / Director, Ember Innovations

Philip Jones, General Manager, Customer Success at Whānau Tahī Limited

Denise Kingi-Uluave, Clinical Psychologist and Chief Executive, Le Va

Dr Grant Christie, Child and Adolescent and Addiction Psychiatrist and Senior Lecturer in the Department of Psychological Medicine, University of Auckland

Dr Liesje Donkin, dually qualified health and clinical psychologist and Senior Lecturer at Auckland University of Technology

Dr Elizabeth Berryman, Resident Medical Officer and CEO and founder of chnml

Dr Ruth Large, Chair NZ Telehealth Leadership Group and Chief Clinical Officer at Whakarongorau Aotearoa New Zealand

Cambrian Berry, Innovation Catalyst, Ember Innovations

Dr Rosie Dobson, Registered Psychologist and Senior Research Fellow based at the National Institute for Health Innovation at the University of Auckland and i3 at Waitematā District Health Board

Dr Yariv Doron, Child and Adolescent Psychiatrist and Founder of Space of Mind Solutions

Josh Forde, Director, Head of Business Development at Ackama

Siobhan Bulfin, CEO and founder of Melon

Marshall Couper, CEO and founder of Loffty

Scott Pearson, Founder and Chief Strategy Officer, Noted

Anil Thapliyal, CEO, HealthTRX Ltd, Executive Director at eMental Health International Collaborative

Alan Cox, Founder of EverYellow

Elliot Taylor, Founder and CEO of ThroughLine

Kate Reid, Partner of Digital Health Enterprise Technology and Performance, Deloitte

Dr Sarah Hetrick, Associate Professor, The University of Auckland, Principal Clinical Advisor, Suicide Prevention Office, Ministry of Health

Dr Sarah Fortune, Clinical Psychologist, Senior Lecturer and Honorary Research Fellow, The University of Auckland

Dr Robyn Whittaker, Clinical Director Innovation, Institute for Innovation and Improvement and Public Health Physician Research and Innovation, Waitematā District Health Board

Jess Shaw, Advisor Mental Wellbeing at Te Hiringa Hauora/Health Promotion Agency

Dr Karolina Stasiak, Senior Lecturer, Department of Psychological Medicine, University of Auckland

Dr Anna Serlachius, Senior Lecturer, Department of Psychological Medicine, The University of Auckland

Sylvia Yan, Associate Director Artificial Intelligence & Data, Deloitte

Nalei Taufa, Senior Researcher, Moana Research

Waima Roa, Service Development Project Coordinator, National Hauora Coalition
Akerei Maresala-Thomson, Director of Community Engagement, MyRIVR Technologies, and Director & Principal Consultant, A&K Thomson Ltd
Nick Kemp, Chief Executive, Wild Bamboo
Dr Helen Lockett, Strategic Policy Advisor, the Wise Group
Tony Lau, Founder, Digital Discipline

DWIG MEMBERS AND KEY PARTNERS



KEY THEMES AND ACTION POINTS

There are significant opportunities for technology to help us evolve our mental health and addiction system. Strong leadership, clear strategic direction and collaboration are crucial to achieve this.

The following action points are not exhaustive, but were agreed upon as being vital to success. The key themes are:

1. Put Te Tiriti and communities at the centre
2. Support strategic direction, leadership and governance
3. Understand and grow our ecosystem
4. Enhance implementation and integration
5. Optimise research and development

1. Put Te Tiriti and communities at the centre

a) Meet obligations under Te Tiriti o Waitangi through true partnership, collaboration, and power sharing.

Foster a culturally responsive ecosystem by supporting Tāngata Whenua in the development of Kaupapa Māori solutions informed by mātauranga Māori. This includes developing strong partnerships with Māori providers, communities, iwi, and the Māori Health Authority to ensure that digital tools and services become part of the solution to achieve equitable health outcomes.

b) Place the expertise of lived experience, whānau and communities at the centre.

- i. Create and maintain strong relationships with consumer groups, iwi, Kaupapa Māori and Pasifika services, diverse communities and whānau advocacy services to facilitate the co-design of user and whānau journeys within the ecosystem.
- ii. Design and develop individual tools and solutions that will meet the needs and perspectives of our communities through partnership and utilisation of human-centred design principles.

c) **Consult community service providers.**

Consult with a range of mental health and addiction service providers across the sector. These providers understand the current issues our communities are facing and should help to co-design our digital ecosystem to enable integration and successful workforce uptake.

2. **Support strategic direction, leadership and governance**

There is strong consensus that our greatest obstacles are a current lack of strategic direction and clear leadership within the digital mental health, addiction, and wellbeing ecosystem. Without an overarching digital strategy to guide us, we will struggle to optimise the technologies that can help us to transform service delivery and reform our system. This needs to be prioritised to support future actions.

We believe the following key actions need to be taken:

a) **Create a Digital Mental Health, Addiction, and Wellbeing Lead role within or across Health NZ, that can work with the Māori Health Authority and the Ministry of Health to help grow and support our digital ecosystem.**

We need to:

- (i) establish a clear role to liaise with key sector agencies and our digital community to grow our capabilities in this space
- (ii) locate our current implementation champions and digital leaders and explore the work they are doing
- (iii) identify and support regional gaps in activity and leadership across our regions.

b) **Build better transparency, collective thinking and clear leadership mechanisms within the digital mental health, addiction, and wellbeing sector.**

Encourage collaboration, knowledge, and resource sharing through the establishment of a partnership with DWIG and the Ministry of Health (later Health NZ and the Māori Health Authority) so that DWIG and key partners can act as an expert independent advisory group to provide advice, guidance, and support for key activities.

c) Develop a national digital mental health, addiction, and wellbeing strategy to support and guide growth.

Create a clear, collaborative, evidence-informed digital mental health, addiction, and wellbeing strategy that establishes how we will use and encourage the use of technology in Aotearoa New Zealand. This includes establishing protected funding and new procurement procedures, as outlined in the Digital Health Associations release opportunities report [Hauora, Mauri Ora: Enabling a healthier Aotearoa New Zealand](#), released in May 2021.

d) Engage directly with iwi, the Māori Health Authority and public service leads to create new avenues for strategic growth and funding.

Develop direct partnerships with iwi and public service leads to identify needs, increase innovation, and grow new funding pathways to create a more diverse, culturally responsive, and community-focused ecosystem.

e) Promote governance principles, standards, and process toolkits as adaptable guides for a code of ethics, regulatory standards, or simply as a kitemark of compliance.

Advocate the importance of governance and ethical practice in the digital mental health, addiction and wellbeing space, ensuring tools and solutions are well researched and endorsed by our global mental health and addiction technology governance communities. To help us achieve this, it will be important to utilise the [Global Governance Toolkit for Digital Mental Health](#), co-developed by Deloitte with the World Economic Forum and launched in April 2021, making adaptations that serve our jurisdiction and our cultural, legal, medical and clinical environments.

3. Understand and grow our ecosystem

Our growing digital mental health, addiction and wellbeing ecosystem is currently poorly defined and lacks the cohesiveness and strategic support it needs to flourish. The solutions and services within our ecosystem have poor visibility across the health system, limiting potential uptake by the workforce and integration into traditional service delivery. Our ecosystem must grow to meet the needs of Māori, and other important communities, such as our Pasifika peoples, people with disabilities, and takatāpui and rainbow populations.

To address and progress beyond these limitations, we need to:

(a) Define and map our ecosystem.

Develop a clear understanding and shared definition of what a digital mental health, addiction and wellbeing ecosystem is and what we want it to be. This can enhance alignments across the sector and guide our next steps forward. We also need to develop a living, evolving map of our ecosystem and stakeholders. This will enable us to insightfully design and plan for its necessary future growth, and to identify gaps and areas of strength. We can then have something to build upon to support effective investment.

(b) Demonstrate the value digital solutions provide to traditional services when delivered as part of a blended model of care.

Develop digital integration pathways for services, and provide case examples, evaluation data and research. These should dispel unhelpful myths about digital solutions, encourage engagement, and support the delivery of blended models of care within in-person mental health and addiction services.

(c) Foster growth and innovation and ensure high levels of accountability.

Explore new procurement processes that are built on transparent and collaboratively devised strategies to help grow an open and level playing field that supports innovation, integration, and high levels of accountability.

(d) Utilise the ecosystem to foster inter-sectorial integration.

Identify opportunities to leverage our ecosystem to foster inter-sectorial digital partnerships, strategy, procurement, and innovation to: (i) build holistic solutions that work across health, education, social, and criminal justice services, (ii) spend government investment wisely, and (iii) promote better inter-agency working.

4. Enhance implementation and integration

Technology provides immense opportunities to make critical shifts in the way we deliver mental health and addiction services and care. To actualise these opportunities, we must ensure that our workforce and communities know how to access and utilise digital solutions to support enhance and extend the care they provide.

We need a greater understanding of the current digital barriers facing the wider workforce and public so that we can capitalise on the extensive data and knowledge available regarding utilisation and engagement.

To enhance implementation and integration, we need to:

(a) Provide visible, highly accessible entry points for the public and the workforce.

Currently, messaging about digital tools can be confusing, and it can be hard for communities to know which tools to trust or to use for different purposes. Providing accessible, culturally tailored entry points into our digital services ecosystem could promote visibility, alignment, and integration across the sector and improved clarity for our workforce and communities.

(b) Work with communities and our workforce to determine current barriers and enablers.

Create networks that support collaborative discovery and development to enable equitable, accessible tools and service delivery pathways for our workforce and users.

(c) Provide leadership and policy to help advance implementation, engagement, and workforce digital literacy.

Establish clear leadership and strategic direction to help develop implementation pathways and policies to enhance digital service integration and grow a digitally capable workforce.

(d) Support data sharing to identify utilisation, adherence, and engagement trends.

Support platforms for research and collaboration that bring together our collective knowledge and insights about digital utilisation and adherence to expedite innovation.

(e) Prioritise, plan and fund marketing and promotional activities.

Identify essential funding required for marketing and promotion of digital tools and services. This should be incorporated into the budget for research and implementation contracts.

5. Optimise research and development

We have a community of researchers and developers in Aotearoa New Zealand, with fantastic links to international experts and digital champions across the globe. There is currently an identified disconnect between research and implementation that restricts the translation of findings into development and practice currently.

We need to ensure that research helps to address equity, and we need clarity about what outcomes to prioritise to support the paradigm shift from symptom reduction towards improving overall wellbeing. This can shape the way we research and build digital solutions.

To align our research, development, and implementation processes, we must:

(a) Foster stronger partnerships between developers, implementers, and researchers.

We need to create greater visibility of people within the sector, and to support partnerships and collective working. This ensures that the full process - from conceptualisation to development, through to evaluation - is cohesive and effective.

(b) Support a collaborative review of research focused on outcomes and equity.

We need to explore how we can translate the shift towards wellbeing into our research design and outcomes, focusing on partnerships with the diverse communities of users – especially Māori and Pasifika peoples - within Aotearoa New Zealand.

(c) Develop stronger relationships with international researchers and digital champions.

We can learn integral lessons from other countries and draw on wider international support to identify what can be translated and adapted to suit our specific needs.

(d) Work to support evidence-based solutions and understand how to retain the efficacy of amended evidence-based interventions.

We must work to ensure that our locally developed digital solutions are evidence-based to ensure safety, effectiveness and credibility for investment and utilisation by our workforce and population. We also need to identify how we utilise effective existing components of evidence-based international digital solutions, and how they can be adapted to the specific cultural needs of New Zealanders without losing efficacy.

(e) Ensure a clear connection between research and funding models to optimise evaluation.

Research and evaluation should be factored into funding models so that we can assess the effectiveness of digital solutions. This contributes to our knowledge and insights into what works in our digital mental health ecosystem. Additionally, research funders need support to take successful tools from the research ecosystem through to implementation so that the benefit to the wider population can be realised.

(f) Champion a 'fit for purpose' ethics and research framework that supports the rapid and safe evaluation of digital interventions

- (i) **Disruptive technology:** We need to address the challenges presented by disruptive technology in the mental health, addiction and wellbeing space. We can leverage the lessons from other global governance practices, such as the development and application of the Global Governance Toolkit for Digital Mental Health, now has evolved into the Digital Mental Health & Addition Tool (DMHAT).
- (ii) **Build trust:** Technology is in constant state of flux and changes in the field progress rapidly. We need to foster trust in digital mental health services and guide the sector by promoting toolkits that will enable stakeholders to embrace validated digital mental health services safely, strategically, and ethically.
- (iii) **Fit for purpose:** 'Fit for purpose' ethics processes that are responsive to the unique challenges of digital interventions – such as allowing for preliminary product launch as long as there is ongoing progressive evaluation of safety and efficacy - should be explored and promoted to ensure the timely delivery of safe and effective digital interventions.
- (vi) **Ethical research processes:** Our digital solutions should be supported by robust ethical research processes. These processes need to withstand the time and resource pressures present within technological development, so that we can ensure interventions launched into our digital ecosystem are safe, effective and supported by thorough evaluation processes.

WHERE TO FROM HERE?

There has been a consistent and unmet increase in demand for mental health and addiction services in our communities, and a parallel rapid advancement in relevant digital mental health, addiction and wellbeing solutions. It is very clear that we must leverage technology to enable us to reach more people within our communities that need support.

We need to build a digital ecosystem of tools and digitally enabled services that cater for:

- our populations diverse needs
- co-governance with Māori and strong partnerships with our communities
- solutions that help us address current inequities
- our shifting paradigm of care towards one that is truly person, whānau and community centered.

Without strong leadership and a clear strategy to guide us, there is risk of delay and ineffective investment. If we do not take action to address these risks, we will see further unnecessary and avoidable challenges and pressures for our services, the wider mental health and addiction system, and the population for years to come.

We urgently call on the Ministry, Health NZ and the Māori Health Authority to consider partnering with DWIG and our key partners as an independent expert group.

1. Partnership

As we move forwards, it is vital to establish a clear digital mental health, addiction, and wellbeing leadership group that will provide integral support and guidance to the Ministry of Health, the Māori Health Authority, and Health NZ/Hauora Aotearoa New Zealand.

2. Collaboration

This team can:

- lead and support collaboration with communities and other key stakeholders
- identify opportunities for action
- define and map our current digital mental health, addiction, and wellbeing ecosystem

- identify digital gaps and current solutions
- integrate and plan for solutions within the current healthcare reforms
- support the development and implementation of a national mental health, addiction, and wellbeing strategy.

3. Immediate Action

Aotearoa New Zealand is in a unique position to innovate in this space. Technology provides us with the opportunity to provide highly scalable, effective, and preventative interventions that can help protect and promote the wellbeing of all New Zealanders. Action must be taken now to deliver solutions and evolve our mental health and addiction system. Effective action can only be achieved through collaboration, and strong, transparent partnerships with each other.

As a community of experts and stakeholders from a diverse range of settings, we are ready to engage now and look forward to progressing these conversations to contribute to the efforts of many who are trying to improve our country's collective wellbeing.

REFERENCES

- de Witte NAJ, Joris S, van Assche E, van Daele T. Technological and Digital Interventions for Mental Health and Wellbeing: An Overview of Systematic Reviews. *Frontiers in Digital Health*. 2021 Dec 23; 0:203.
- Digital Health Association. (2021) *Hauora, Mauri Ora: Enabling a healthier Aotearoa New Zealand*. Available from: <https://www.dha.org.nz/resources/dha-resources/16/hauora-mauri-ora-enabling-a-healthier-aotearoa-new-zealand->
- Fleming T, Dewhirst M, Haenga-O'Brien A, Chinn V, Ormerod F, Kafatolu D, Andreae H, O'Brien K, Haase A, Pine R, Da Rocha M, Sutcliffe K, Szabo A, Lucassen M, and Aspin C (2021). *Digital Tools for Mental Health and Wellbeing: Opportunities & Impact. Findings from the literature and community research*. Wellington: Te Hiringa Hauora | Health Promotion Agency.
- Fu Z, Burger H, Arjadi R, Bockting CLH. Effectiveness of digital psychological interventions for mental health problems in low-income and middle-income countries: a systematic review and meta-analysis. *The Lancet Psychiatry* [Internet]. 2020 Oct 1 [cited 2022 Feb 6];7(10):851–64. Available from: <http://www.thelancet.com/article/S221503662030256X/fulltext>
- Mahoney, A.E.J., Elders, A., Li, I., David, C., Haskelberg, H., Guiney, H., Millard, M. A tale of two countries: Increased uptake of digital mental health services during the COVID-19 pandemic in Australia and New Zealand, *Internet Interventions*, Volume 25, 2021, 100439, ISSN 2214-7829. Available from: <https://doi.org/10.1016/j.invent.2021.100439>.
- Menzies R, Gluckman P, Poulton R. *Youth mental health in Aotearoa New Zealand: Greater urgency required*. Koi Tū: The Centre for Informed Futures, University of Auckland; 2020. informedfutures.org
- Ministry of Health. 2021. *Kia Manawanui Aotearoa: Long-term pathway to mental wellbeing*. Wellington: Ministry of Health. Available from: <https://www.health.govt.nz/publication/kia-manawanui-aotearoa-long-term-pathway-mental-wellbeing>
- Mohr, D. C., Weingardt, K. R., Reddy, M., & Schueller, S. M. (2017). Three problems with current digital mental health research. and three things we can do about them. *Psychiatric Services*, 68(5), 427–429. <https://doi.org/10.1176/appi.ps.201600541>
- Moshe I, Terhorst Y, Philippi P, Domhardt M, Cuijpers P, Cristea I, et al. Digital interventions for the treatment of depression: A meta-analytic review. *Psychological bulletin* [Internet]. 2021 [cited 2022 Feb 6];147(8):749–86. Available from: <https://pubmed.ncbi.nlm.nih.gov/34898233/>

Muñoz RF, Chavira DA, Himle JA, Koerner K, Muroff J, Reynolds J, et al. Digital apothecaries: a vision for making health care interventions accessible worldwide. *mHealth* [Internet]. 2018 Jun; 4:18–18. Available from: <https://pubmed.ncbi.nlm.nih.gov/30050914/>

New Zealand Government (2018) He Ara Oranga: Report of the Government Inquiry into Mental Health and Addiction. Wellington, New Zealand: New Zealand Government. Available from: <https://mentalhealth.inquiry.govt.nz/inquiry-report/he-ara-oranga/>

New Zealand Mental Health and Wellbeing Commission (2021). Te Rau Tira Wellbeing Outcomes Report 2021 – Wellington: New Zealand. Available from: <https://www.mhwc.govt.nz/assets/Te-Rau-Tira-Wellbeing-Outcomes-Report-2021/Te-Rau-Tira-Wellbeing-Outcomes-Report-2021-FINAL-WEB.pdf>

New Zealand Mental Health and Wellbeing Commission (2022). Te Huringa: Change and Transformation. Mental Health Service and Addiction Service Monitoring Report 2022. Wellington: New Zealand. Available from: <https://www.mhwc.govt.nz/assets/Te-Huringa/FINAL-MHWC-Te-Huringa-Service-Monitoring-Report.pdf>

Pauley D, Cuijpers P, Papola D, Miguel C, Karyotaki E. Two decades of digital interventions for anxiety disorders: a systematic review and meta-analysis of treatment effectiveness. *Psychological medicine* [Internet]. 2021 [cited 2022 Feb 6]; Available from: <https://pubmed.ncbi.nlm.nih.gov/34047264/>
Poulton, Richie; Gluckman, Peter; Menzies, Rochelle; Bardsley, Anne; McIntosh, Tracey; Faleafa, Monique (2020): Protecting and Promoting Mental Wellbeing: Beyond COVID-19. The University of Auckland. Online resource. <https://doi.org/10.17608/k6.auckland.9932381.v1>

Poulton, Richie; Gluckman, Peter; Menzies, Rochelle; Bardsley, Anne; McIntosh, Tracey; Faleafa, Monique (2020): Protecting and Promoting Mental Wellbeing: Beyond COVID-19. The University of Auckland. Online resource. <https://doi.org/10.17608/k6.auckland.9932381.v1>

Taylor, C. B., Ruzek, J. I., Fitzsimmons-Craft, E. E., Sadeh-Sharvit, S., Topooco, N., Weissman, R. S., Eisenberg, D., Mohr, D., Graham, A., Jacobi, C., & Oldenburg, B. (2020). Using digital technology to reduce the prevalence of mental health disorders in populations: Time for a new approach. In *Journal of Medical Internet Research* (Vol. 22, Issue 7). JMIR Publications Inc. <https://doi.org/10.2196/17493>

Tuerk PW, Schaeffer CM, McGuire JF, Adams Larsen M, Capobianco N, Piacentini J. Adapting Evidence-Based Treatments for Digital Technologies: a Critical Review of Functions, Tools, and the Use of Branded Solutions. *Current psychiatry reports* [Internet]. 2019 Oct 1 [cited 2022 Feb 6];21(10). Available from: <https://pubmed.ncbi.nlm.nih.gov/31584124/>

Torous J, Bucci S, Bell I et al. The growing field of digital psychiatry: current evidence and the future of apps, social media, chatbots, and virtual reality. *World Psychiatry* 2021; 20: 318-35.
Waitangi Tribunal. 2019. Hauora: Report on Stage One of the Health Services and Outcomes Kaupapa Inquiry. Wellington. Waitangi Tribunal. pp. 163–164

Wasil, A. R., Gillespie, S., Shingleton, R., Wilks, C. R., & Weisz, J. R. (2020). Letters to the Editor Examining the Reach of Smartphone Apps for Depression and Anxiety. In *American Journal of Psychiatry* (Vol. 177, Issue 5, pp. 464–465). American Psychiatric Association.
<https://doi.org/10.1176/appi.ajp.2019.19090905>

Wasil, A. R., Weisz, J. R., & DeRubeis, R. J. (2020). Three questions to consider before developing a mental health app. In *World Psychiatry* (Vol. 19, Issue 2, pp. 252–253). Blackwell Publishing Ltd.
<https://doi.org/10.1002/wps.20757>

World Economic Forum and Deloitte (2021) Global Governance Toolkit for Digital Mental Health: Building Trust in Disruptive Technology for Mental Health. Available from:
https://www3.weforum.org/docs/WEF_Global_Governance_Toolkit_for_Digital_Mental_Health_2021.pdf
and <https://www2.deloitte.com/global/en/pages/life-sciences-and-healthcare/articles/global-governance-toolkit-for-digital-mental-health.html>