2025 Digital Mental Health Roundtable

Towards A Sustainable and Scalable Digital Mental Health Ecosystem Through Accreditation and Activation

MOHT
MOH OFFICE FOR HEALTHCARE TRANSFORMATION

eMHIC
eMental Health International Collaborative

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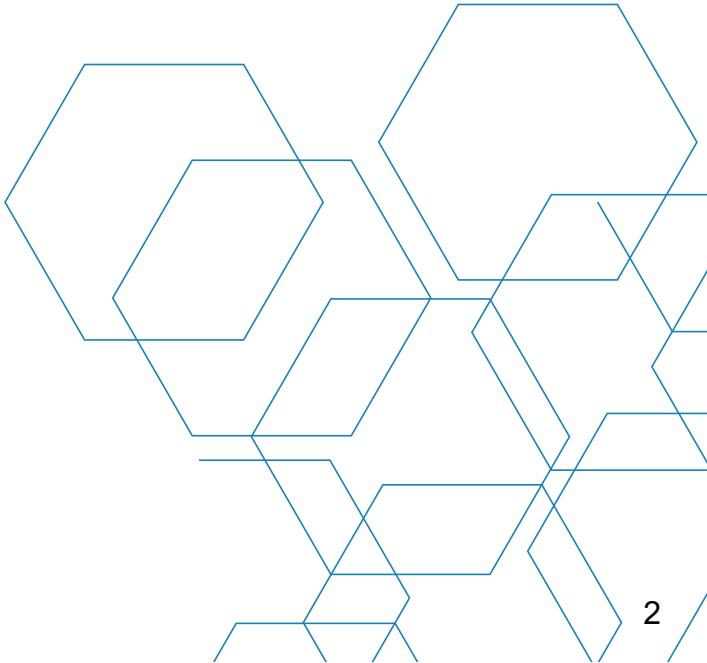


Executive Summary

Singapore faces growing demand for accessible mental health support. The digital transformation of mental healthcare offers immense potential to enhance access, improve outcomes, and reduce costs. Realizing this potential demands a strategic approach to building sustainable and scalable digital mental health ecosystems. This report, drawing insights from the Digital Mental Health Roundtable, highlights two critical enablers: accreditation and activation.

The current digital mental health landscape is characterized by rapid technological proliferation, with many solutions lacking robust quality assurance. Globally, only a fraction of mental health applications meet baseline quality criteria, underscoring the urgent need for effective governance. The roundtable discussions identified five foundational quality domains crucial for a sustainable ecosystem: Accessibility, Appropriateness, Acceptability, Safety, and Effectiveness.

Accreditation is pivotal for driving quality and trust. It acts as a gatekeeper, filtering out unsafe tools, building consumer confidence through transparent standards, and fostering continuous improvement. Effective accreditation frameworks address clinical effectiveness, data privacy, usability, crisis response, and ethical considerations.

Activation strategies are essential for translating vision into reality, addressing systemic barriers and enabling widespread adoption. These strategies enhance accessibility through simplified navigation, ensure appropriateness via user-centered design, foster acceptability through stigma reduction and lived experience integration, maintain safety through trauma-informed approaches, and drive effectiveness through outcome measurement and continuous improvement.

Integrating accreditation and activation creates a synergistic framework, transforming digital mental health from fragmented tools into a coherent, trustworthy ecosystem. For Singapore, this approach offers a pathway to establish global leadership in digital mental health while addressing its diverse population's unique needs. Strategic recommendations include developing a comprehensive national framework, implementing dynamic accreditation schemes, prioritizing user-centered co-design, enhancing mental health literacy, fostering interoperability, strengthening stakeholder collaboration, and investing in workforce capability-building.

This report provides a roadmap for stakeholders to collaboratively build a digital mental health ecosystem that is technologically advanced, human-centered, culturally responsive, and sustainably effective.

1. Introduction

The convergence of mental healthcare and digital technology marks a pivotal moment in global health. Digital Mental Health (DMH) solutions, encompassing mobile apps, online platforms, telehealth, and AI-powered tools, offer unprecedented opportunities to expand access, enhance treatment efficacy, and promote mental well-being on a population scale. This evolution is particularly relevant given increasing mental health burdens, workforce shortages, and geographical disparities in traditional services.

However, the rapid proliferation of DMH technologies also introduces significant complexities. Concerns regarding the safety, quality, and equitable delivery of these digital interventions necessitate a strategic and coordinated response. Without robust governance and implementation frameworks, the potential benefits of DMH risk being undermined by issues such as unregulated tools, data privacy breaches, and a lack of clinical effectiveness.

This report synthesizes critical discussions and insights from the Digital Mental Health Roundtable, co-organised by the MOH Office for Healthcare Transformation (MOHT) and the e-Mental Health International Collaborative (eMHIC). The roundtable, held on 18 July 2025 convened diverse stakeholders to address the theme: "Towards a Sustainable and Scalable Digital Mental Health Ecosystem through Accreditation and Activation."

Our objective is to provide a comprehensive overview of the roundtable proceedings, exploring the envisioned future state of the DMH ecosystem, delineating the indispensable role of accreditation in ensuring quality and fostering trust, and outlining strategies for effective activation. By integrating collective wisdom with global learnings and best practices, this report aims to contribute meaningfully to establishing a DMH ecosystem that is technologically advanced, fundamentally safe, effective, and accessible to all.

2. The Current Digital Mental Health Landscape

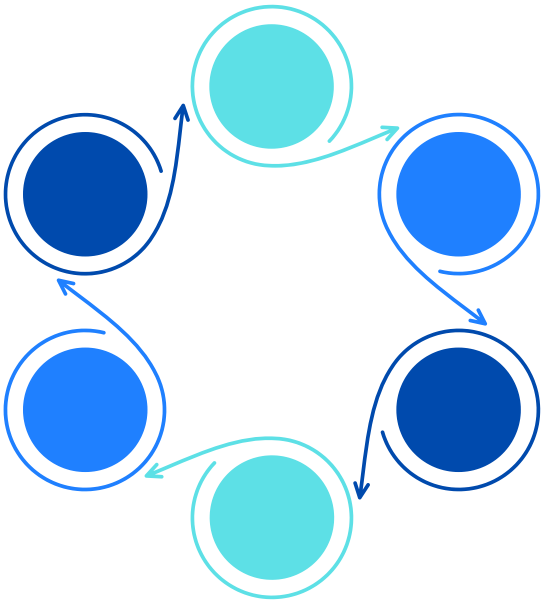
The contemporary digital mental health landscape presents both immense promise and significant challenges. Rapid technological advancement has led to a surge in DMH solutions, with estimates suggesting more than 10,000 mental health applications available globally (Torous et al., 2025). This proliferation reflects technology's potential to bridge gaps in traditional mental healthcare, particularly in the areas of accessibility and scalability. However, this expansion has largely outpaced the development of robust regulatory and quality assurance frameworks. A critical concern, echoed in the roundtable and indicated in global reports, is the variable quality and clinical efficacy of many digital tools.

Research indicates that a substantial majority (approximately 80%) of these applications do not meet baseline quality criteria for data privacy, security, usability, or clinical effectiveness (World Economic Forum, 2022). This creates a fragmented and confusing environment for consumers and clinicians, making it difficult to discern evidence-based, safe, and effective solutions.

Key characteristics of current landscape

Fragmented Ecosystem:
Lack of interoperability and integration leads to disjointed care pathways.

Limited Literacy:
Consumers and professionals often lack knowledge to critically evaluate and utilize DMH solutions.



Rapid Unregulated Growth:
Many DMH tools lack oversight or validation, posing risks to user safety and privacy.

Ethical Dilemmas:
AI and data analytics introduce new ethical considerations related to bias, autonomy, and accountability.

Variable Quality and Efficacy: Effectiveness varies widely, with many lacking a strong evidence base.

Data Privacy and Security Concerns:
Handling sensitive personal health information raises significant concerns regarding breaches and transparency.

This complex environment underscores the urgent need for a strategic approach that harnesses DMH's transformative potential while mitigating risks. The roundtable emphasized that moving towards a sustainable and scalable ecosystem requires establishing clear standards, building trust, and ensuring digital solutions genuinely contribute to improved mental health outcomes for all.

3. Foundations for a Sustainable Ecosystem: The Five Quality Domains

The success of any digital health ecosystem hinges on its ability to consistently deliver high-quality care. To ensure technological advancements genuinely enhance impact, reach, and integrity within the mental health landscape, five foundational quality indicators serve as guiding principles: **Accessibility**, **Appropriateness**, **Acceptability**, **Effectiveness**, and **Safety**. These domains, extensively discussed during the roundtable, provide a comprehensive framework for evaluating and developing a truly sustainable and scalable digital mental health ecosystem. The domains underpin both accreditation criteria and activation strategies proposed in subsequent sections. Further information can be found in the appendix.

Accessibility

Accessibility is the cornerstone of digital health equity. A digital platform is ineffective if inaccessible due to cost, geography, language, or connectivity factors.

Appropriateness

Appropriateness ensures care is precisely tailored to individual or population-specific needs. In a digital context, this implies leveraging real-time data, AI, and patient histories for relevant and personalized services.

Acceptability

Acceptability defines user comfort and trust in digital tools. A technically sound solution fails if it is culturally insensitive, difficult to navigate, or lacking privacy controls. A culturally safe and stigma-free experience is paramount, characterized by being judgement-free, fostering healthy communication and inclusivity.

Effectiveness

Effectiveness evaluates whether digital interventions lead to improved health outcomes. Digital innovation is meaningless if it does not reduce hospital readmissions, improve chronic disease management, or shorten recovery times.

Safety

Safety in digital health spans physical and psychological dimensions, safeguarding against medical errors, protecting patient data, and ensuring resilience to cyber threats. Psychological safety ensures patients feel secure, validated, and free from stigma.

4. Accreditation as a Driver of Quality and Trust

Accreditation is a fundamental pillar for a sustainable and scalable digital mental health ecosystem, serving as both a quality assurance mechanism and a trust-building instrument. It functions as a dynamic, multidimensional process that protects users, empowers consumers, guides clinicians, and drives continuous improvement. At its core, accreditation acts as a critical gatekeeper, filtering out unsafe, ineffective, or unethical digital mental health tools. This is vital given that approximately 80% of available mental health technologies fail to meet baseline quality criteria (World Economic Forum, 2022). Accreditation enforces rigorous minimum standards across clinical effectiveness, data privacy and cybersecurity, usability and accessibility, crisis response protocols, and ethical considerations, minimizing risks from unregulated tools.

Accreditation ensures accessibility by mandating the monitoring of outcomes like wait times and incorporating patient-reported outcomes. It integrates a multi-stakeholder perspective, centralizing voices of consumers and lived experience. Processes should mandate multi-lingual and inclusive design features, such as audio descriptions and culturally appropriate interfaces. Standards must be SMART (Specific, Measurable, Achievable, Relevant, Time-bound) and their intentionality clear, especially in relation to user requirements. The importance of appropriate accreditation levels (self-accreditation for low-risk, external for high-risk) and consequences for non-compliance were emphasized.

> **Accreditation is a multidimensional process that draws from clinical safety and efficacy at its foundation, layered by population and evaluation data, and finally driven by trust and adoption of the system**

- A/Prof Ong Say How
Senior Consultant Psychiatrist
Department of Developmental Psychiatry
Institute of Mental Health

Accreditation is a powerful tool for embedding continuous improvement and robust data utilization. By setting clear benchmarks and establishing a common language, it facilitates digitalization and automation of quality checks, embedding effectiveness into service development. The process itself, through regular assessment, inherently drives continuous improvement.

Accreditation significantly enhances data utilization by requiring standardized language and criteria across users and funders, enabling comprehensive analysis of service effectiveness at scale.

To increase acceptability, accreditation criteria must address both technical and human elements for inclusive, person-centered care. Key criteria include robust informed consent, personalization, stringent data security, and seamless integration with existing healthcare systems. User experience is critical, requiring active involvement of people with lived experience in co-design for cultural safety and relevance. Accreditation must cover clinical safety, ethics, and evidence-based efficacy, while establishing effective feedback loops and continuous evaluation. Multilingual support and culturally sensitive approaches are paramount, as is transparency, ensuring users have visibility of their health information while balancing data privacy.

Safety considerations encompass psychological and physical dimensions, functioning as a comprehensive safety net. Beyond gatekeeping, accreditation builds trust, particularly for vulnerable individuals. The process should incorporate direct user experience and feedback, integrating psychological safety and satisfaction into evaluation. Accreditation drives industry standards and continuous improvement through monitoring, updates, and adaptive feedback. It promotes interoperability and integration with broader health systems, facilitating coordinated care while safeguarding against overreach through robust audit mechanisms.

This comprehensive approach aligns with Singapore's National Mental Health and Well-Being Strategy 2023 (Ministry of Health Singapore, 2023), which emphasizes an effective mental health ecosystem with accessible, good quality clinical care. The strategy's tiered care model provides a framework for risk-appropriate accreditation. Singapore's existing digital mental health initiatives, like mindline.sg and the upcoming Digital Mental Health Connect (DMHC) platform, demonstrate commitment to evidence-based solutions that can benefit from robust accreditation, ensuring quality, safety, and effectiveness.

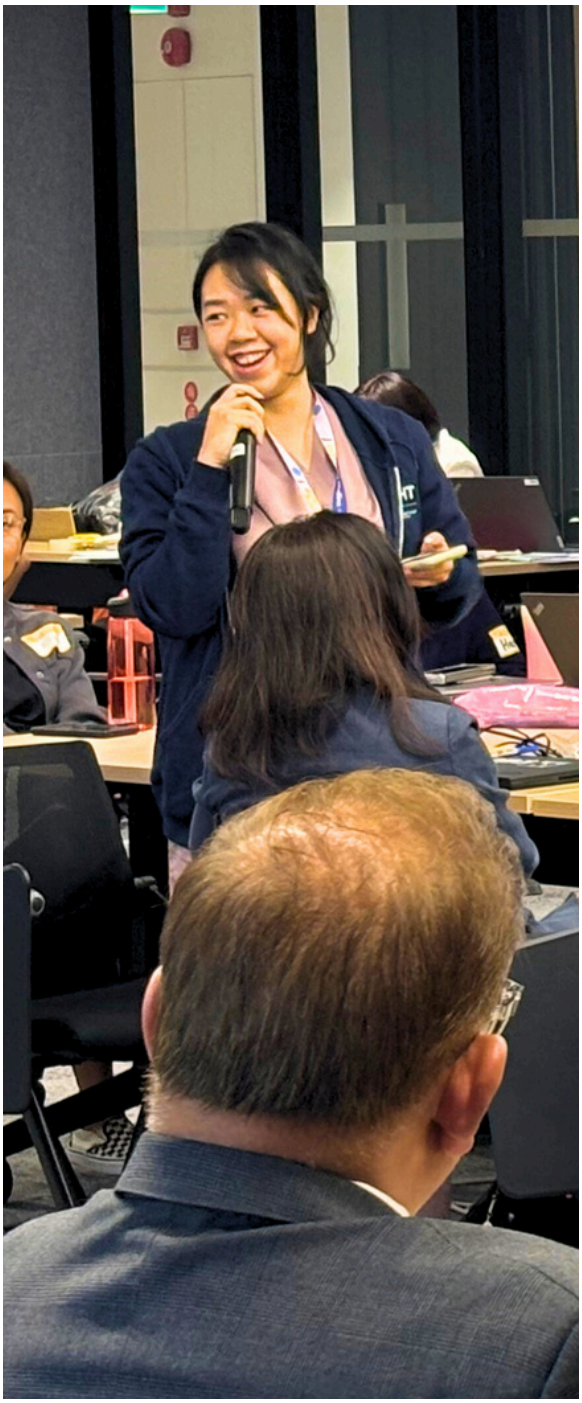
	Tier 1 Mental Well-being Promotion	Tier 2 Low Intensity Services	Tier 3 Moderate Intensity Services	Tier 4 High Intensity Services
Who will benefit?	Healthy individuals (i.e., coping well, no or minimal symptoms of mental health conditions)	Individuals with low mental health needs (e.g., some difficulties coping, mild symptoms of mental health conditions)	Individuals with moderate mental health needs (e.g., difficulties coping, moderate symptoms of mental health conditions)	Individuals with high mental health needs (e.g., major difficulties coping, showing severe symptoms of mental health conditions)
Objective	Promote and maintain mental well-being for all individuals, and preventdevelopment of mental health conditions	Facilitate coping and prevent the escalation of symptoms	Reduce severity of symptoms	Reduce severity of symptoms and stabilise chronic mental health conditions
Examples of interventions /resources provided	• School curriculum to build mental well-being and resilience • Public education and self-help (e.g., MindSG, SG Mental Well-Being Network) • Parenting/Peer/ Community support • Workplace mental well-being support	• Mental health needs detection • Counselling • Stress and anxiety management, social skills training, behaviour management	• Mental health assessment[1] • Psychotherapy (e.g., Cognitive Behavioural Therapy) • Medical treatment	• Psychiatric assessment[2] and diagnosis • Specialised and longer-term psychological interventions • Medical treatment Emergency services

Tiered Care Model from Singapore's National Mental Health and Well-Being Strategy 2023

5. Activation Strategies for Ecosystem Implementation

Activation strategies are the critical bridge between visionary frameworks and tangible implementation, transforming digital mental health aspirations into accessible, effective, and sustainable realities for Singapore's diverse population. Successful activation requires a comprehensive, multi-faceted approach that systematically addresses barriers, fosters widespread adoption, and ensures seamless integration of digital solutions into existing care pathways while maintaining high standards of quality and safety across all five quality domains.

In addressing appropriateness, activation strategies must ensure DMH services align with Singapore's multicultural population, moving towards a "fit-for-purpose" ecosystem. This requires user-centered design and co-creation with individuals with lived experience, particularly from underserved groups, to tailor solutions to cultural nuances and unique challenges.



> **The roundtable was a really helpful and conducive space for conversations, learning and the exchange of ideas. Creating safe spaces for open dialogue - both online and offline - is key to building trust amongst the different groups and communities so that we can be better resourced and coordinated to move forward together.**
>
> ***- Ms Bettina Yeap***
> *Principal Counsellor, Head of INSIGHT Care Corner*

Activation requires comprehensive strategies to foster culturally safe and stigma-free experiences while embedding lived experience. Achieving cultural safety prioritizes multicultural competency training for all stakeholders, promoting localized case studies and empathetic, non-judgemental communication. Providing incentives for sharing experiences and fostering peer-to-peer support networks empowers individuals. Training AI systems with diverse user input, including caregivers and patients, ensures technological solutions align with real-world needs.

6. Learnings from Other Health Systems

The global landscape of digital mental health offers invaluable insights for Singapore's evolving strategy. Many countries and organizations grapple with similar challenges and opportunities in building sustainable and scalable DMH ecosystems. The overarching theme from global discussions aligns with the roundtable's focus: the imperative for robust frameworks, comprehensive accreditation, and effective activation strategies to ensure safe, quality, and accessible care.

Organizations like **ORCHA** (Organisation for the Review of Care and Health Apps) exemplify a robust approach to digital health accreditation. ORCHA, a UK-based organization, reviews and accredits digital health technologies against a broad set of clinical, data privacy, and usability standards, providing a critical gatekeeping function (ORCHA, n.d.). Their systematic approach to assessing, accrediting, deploying, and embedding digital health technologies into clinical pathways offers a strong model for ensuring quality and building trust.

The **Australian National Digital Mental Health Framework** and its **National Safety and Quality Digital Mental Health (NSQDMH) Standards** provide another comprehensive model for accreditation, emphasizing clinical safety, efficacy, data privacy, usability, and accessibility (Australian Government Department of Health, 2021). The Australian experience highlights the importance of a dynamic accreditation process with continuous monitoring and feedback loops, aligning with the roundtable's emphasis on continuous evaluation.

Canada's approach, exemplified by **Kids Help Phone (KHP)**, demonstrates effective activation strategies, particularly for youth. KHP's activation strategies include their 24/7 availability across multiple platforms (phone, text, online chat), removing traditional barriers to mental health support. Their multilingual capabilities and culturally responsive services directly address the roundtable's emphasis on ensuring equitable access across diverse populations. KHP's proactive outreach initiatives, including their "Feel Out Loud" campaign, demonstrate effective activation strategies for reducing stigma and normalizing help-seeking behavior. (Kids Help Phone, n.d.).

7. Lessons from Global Roundtables

Insights from other global digital mental health roundtables by eMHIC reinforce several critical lessons:

- **Co-creation is essential:** Consensus through co-creation with end-users and other stakeholders is paramount.
- **Integrated care:** Physical and mental health must be managed jointly; they are not separate entities.
- **Streaming data for rapid intervention:** Citizens need up-to-date monitoring and ability to access rapid intervention.
- **Evidence-based use-cases:** Never implement products without an evidence-based use-case.
- **Validated outcome measures:** Ensure that reliable, clinically validated outcome measures are in place
- **Stakeholder engagement:** Engage stakeholders to find out what end-users will accept and what service providers understand as useful.
- **Leverage existing infrastructure:** Avoid conventional electronic health records; capitalize on existing smart tech infrastructure.

> **When it comes to digital mental health, we must focus on the service user, their families and carers. If it does not work for them, then it does not work at all.**

- Prof Anil Thapliyal
Executive Director, eMHIC

8. Key Takeaways and Insights

Building upon these global insights and the comprehensive discussions from the Digital Mental Health Roundtable, Singapore is uniquely positioned to drive a sustainable and scalable digital mental health ecosystem. The collective insights from clients, carers, and clinicians consistently emphasize a future where digital mental health solutions are not merely accessible, but profoundly effective, person-centered, and inherently trustworthy. To achieve this vision, a multi-faceted approach is essential:

1. Develop a Comprehensive National Digital Mental Health Framework:

Singapore can consider establishing a clear, overarching framework that integrates policy, regulation, and implementation strategies for digital mental health. This framework must be agile, adaptable to rapid technological advancements, and responsive to the evolving needs of the population, ensuring coherence across all quality domains. This aligns with Singapore's National Mental Health and Well-Being Strategy 2023, which aims to create an effective mental health ecosystem comprising accessible and good quality clinical care within a supportive community and society.

2. Implement a Robust and Dynamic Accreditation Scheme:

Building upon global best practices, such as Australia's NSQDMH Standards and ORCHA's accreditation model, Singapore can consider developing and rigorously implementing a comprehensive accreditation scheme for digital mental health solutions. This scheme must meticulously cover all five quality domains: clinical effectiveness, data privacy and security, usability, accessibility, and ethical considerations. Crucially, it should incorporate continuous monitoring, regular updates, and iterative feedback loops to ensure ongoing quality assurance and adaptation. The National Mental Health and Well-Being Strategy 2023's tiered care model provides a natural framework for implementing risk-appropriate accreditation standards.

8. Key Takeaways and Insights (continued)

3. Prioritize User-Centered Co-Design and Lived Experience Integration:

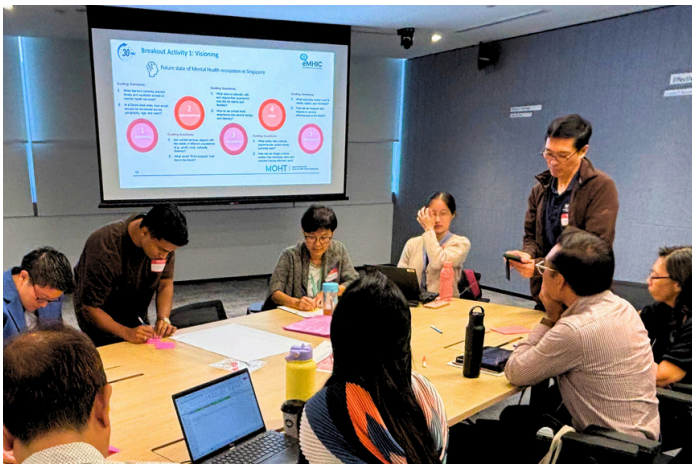
Actively and meaningfully involve individuals with lived experience, carers, and clinicians in every stage of the design, development, and evaluation of digital mental health tools. This collaborative approach is paramount to ensuring that solutions are culturally safe, stigma-free, and genuinely meet the diverse and nuanced needs of the population.

4. Enhance Mental Health Literacy and Drive Stigma Reduction:

Invest significantly in public education campaigns and targeted initiatives to elevate mental health literacy across all segments of society. These efforts should actively promote awareness of available digital mental health services and cultivate an environment where help-seeking is normalized, destigmatized, and viewed as a proactive step towards well-being.

5. Foster Interoperability and Integrated Care Pathways:

Develop and enforce clear standards and robust infrastructure to ensure seamless data exchange and coordinated care among disparate digital mental health platforms and with broader healthcare systems. This will facilitate truly integrated care pathways, reduce fragmentation of services, and aligns with the global lesson of managing physical and mental health jointly.



8. Key Takeaways and Insights (continued)

6. Strengthen Multi-Stakeholder Collaboration:

Cultivate strong, enduring partnerships among all key stakeholders: government agencies, technology companies, healthcare providers, non-governmental organizations (NGOs), academia, and funders. Collaborative efforts are indispensable for effective resource mobilization, fostering innovation, and ensuring the successful implementation and scaling of digital mental health initiatives across all domains.

7. Invest in Workforce Capability-Building and Trauma-Informed Care:

Provide comprehensive training and ongoing support for mental health professionals and frontline workers. This training should equip them to effectively utilize digital tools, deliver trauma-informed care, and provide culturally sensitive support within the evolving digital landscape.

8. Embrace AI's potential:

Recognize AI's potential as an assistive technology, not a replacement for human interaction. Invest in AI solutions that enhance monitoring and enable rapid intervention through streaming data, capitalizing on existing smart tech infrastructure rather than reinventing the wheel. Ensure all AI applications are built on evidence-based use-cases and incorporate clinically validated outcome measures.

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Appendix: Participants

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Appendix: Participants

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Appendix: Participants

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Appendix: The Five Quality Domains

Accessibility
Accessibility is the cornerstone of digital health equity. A digital platform is ineffective if inaccessible due to cost, geography, language, or connectivity. Roundtable discussions highlighted current barriers: healthcare system complexity, capacity misalignment, and insufficient professional capability building. A significant challenge is the lack of awareness and promotion of services, contributing to stigma. Outdated workflows and the artificial separation of physical and mental health lead to fragmented care, while public perception often limits mental health services to severe conditions. An ideal future state envisions enhanced coordination and cross-access among services, coupled with improved mental health literacy. The focus shifts to proactive promotion and prevention, with integrated care for associated illnesses. The system would offer proactive, personalized care with clear access points, expanding to basic needs. Personalized help, incorporating lived experience, and trauma-informed approaches for vulnerable populations are crucial. School-based interventions are vital upstream strategies to demystify and destigmatize mental health

Appropriateness
Appropriateness ensures care is precisely tailored to individual or population-specific needs. In a digital context, this implies leveraging real-time data, AI, and patient histories for relevant, personalized services. Roundtable discussions revealed significant misalignment between current DMH services and diverse population needs, including youth, elderly, sandwiched generation, children, postnatal individuals, persons with disabilities, those with addiction, and various ethnic groups. A one-size-fits-all approach is inadequate; cultural nuances and unique challenges require tailored solutions.

A "fit-for-purpose" DMH ecosystem will provide highly personalized and culturally sensitive care. This necessitates deep incorporation of lived experience into design, ensuring barriers to help-seeking are understood. A dual-pronged approach, combining broad initiatives with targeted support, ensures mental health support is integrated into daily lives and accessible where individuals are, rather than expecting them to seek out mainstream services that may not meet their specific needs.

Acceptability
Acceptability refers to the degree of user comfort and trust in digital tools. A technically sound solution fails if it is culturally insensitive, difficult to navigate, or lacking privacy controls. A culturally safe and stigma-free experience is paramount, characterized by being judgement-free, fostering healthy communication and inclusivity. It recognizes the importance of support circles and necessitates multicultural competency training for providers, alongside localized case studies. Lived experience is central, emphasizing empathy and understanding, with empathetic language that normalizes mental health discussions and avoids blame. Creating space for openness and curiosity is crucial.

Embedding lived experience involves active co-creation, empowering patients with autonomy, and valuing peer-to-peer care. Feedback focus groups and incentives for sharing experiences are important. Building trust and creating a non-judgemental environment are foundational, extending to supporting practitioners and training AI with user input. Family involvement is critical and reframing mental health discussions to be more acceptable and less stigmatizing is key. Transparency, allowing users visibility of their health information while balancing data privacy and security, is vital.

Appendix: The Five Quality Domains

Safety
Safety in digital health spans physical and psychological dimensions, safeguarding against medical errors, protecting patient data, and ensuring resilience to cyber threats. Psychological safety ensures patients feel secure, validated, and free from stigma. Current risks include licensing issues and unregulated wellness tools. The majority of DMH technologies (80%) fail to meet baseline quality criteria, leading to risks of misinformation, data breaches, and poor user experience. Social and system-level risks include care fragmentation and a large proportion of individuals not seeking help.

Designing a future system that minimizes harm and ensures trauma-informed care requires good organizational and clinical practices, such as trauma-focused training and the embedding of trauma-informed principles (safety, choice, trust, collaboration). Maintaining choice and flexibility in modalities is important. Human-centered and inclusive design, involving co-design with individuals with lived experience of trauma, is crucial. Technology and safety infrastructure should include verified or accredited app systems (digital "trustmarks") and ethical AI with transparent algorithms, real-time harm detection, and clear escalation to human support. Education and capability-building for both public and workforce are vital, balancing high-tech with high-touch.

Effectiveness
Effectiveness evaluates whether digital interventions lead to improved health outcomes. Digital innovation is meaningless if it does not reduce hospital readmissions, improve chronic disease management, or shorten recovery times. The roundtable highlighted that outcomes most important to clients involve clear guidance, positive care experiences, and successful reintegration. Carers prioritize emotional support, practical assistance, and empowerment through knowledge. Clinicians seek objective measures of intervention effectiveness, timely client data, and continuous professional development.

Measuring and responding to service effectiveness will require a multi-faceted approach. Key metrics include user feedback and satisfaction from clients and clinicians. Quality of life indicators and functional improvements are crucial. Tracking help-seeking rates and wait times provides insights into system efficiency. The emphasis is on a data-driven approach that incorporates diverse feedback for continuous improvement. Digital platforms must integrate evidence-based practices, enable outcome measurement, and support continuous improvement, potentially through dashboards or AI tools analyzing population trends.

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