

PATHWAYS FOR SUSTAINED BEHAVIOURAL AND ORGANISATIONAL CHANGE FOR HEALTH WORKER RESILIENCE

Word Count: 3204

Page Count: 40

Group: MAN B

Kevin Alvaro Handoko

Muka Ofomata

Mohini Patel

Nana Dansoah Nuamah

Shraavani Akundi

In collaboration with:



The George Institute
for Global Health

MSc Global Health Management

Healthcare Sector Project

Final Report

TABLE OF CONTENTS

EXECUTIVE SUMMARY	3
INTRODUCTION	4
METHODOLOGY AND APPROACH.....	5
Research methods utilised	6
Behavioural and systems frameworks included	6
Country focus	6
THEORY OF PROBLEM.....	7
COMMUNITY PROCESS FOR VALIDATING THE ToC	11
Behaviour journey map	13
Stakeholder analysis.....	14
RACI matrix	15
Impact–complexity–feasibility analysis	16
TRC ORGANISATIONAL DESIGN AND STRATEGIC ROADMAP	18
Current TRC structure.....	18
Proposed TRC structure	18
Strategic roadmap	20
RECOMMENDATIONS AND LIMITATIONS	22
Short-term priorities (immediate, high-impact actions)	22
Long-term systemic shifts	22
Limitations and risks	23
BIBLIOGRAPHY	25
APPENDIX	27
1. Methodology and Approach.....	27
2. Country and Regional Focus (PESTEL).....	30
3. Mapping Pain Points	33
4. COM-B Analysis to Derive Activities	35
5. SWOT Analysis of TRC Stakeholder Roles	36
6. ToC Preliminary Test Data.....	38
7. References for the appendix	40

EXECUTIVE SUMMARY

Introduction

Healthcare workers (HCWs) across low- and middle-income countries (LMICs) face increasing pressures from operating in polycrisis contexts, resulting in high burnout rates and poor mental health. Since they are central to service delivery, systemic neglect for their wellbeing can threaten health system performance and workforce resilience. The Resilience Collaborative (TRC) and The George Institute for Global Health (TGI) have commissioned this project, with the **main objective of strengthening HCW resilience and wellbeing across the healthcare delivery value chain for sustainable care delivery and enhanced health system performance**. Our team collaborated with TRC as clients to address this issue by developing a framework to identify the drivers of low resilience and designing practical and scalable solutions for implementation.

Objectives and Deliverables

The project's key objectives included:

1. Developing a Theory of Change (ToC) for HCWs in LMICs
2. Providing a behaviour and action roadmap for healthcare value chain participants
3. Designing a strategic roadmap and organisational design for TRC as a community of practise
4. Research and analysis to validate our proposed interventions with frontline HCWs

Approach and Processes

To achieve the above objectives, the project was structured into three key phases:

- Phase 1: Theory of Problem
- Phase 2: Theory of Change
- Phase 3: Behaviour & Action Roadmap

Phase 1: Theory of Problem

We carried out a **political, economic, social, technological, ecological, and legal (PESTEL) analysis** across four LMIC archetypes including Indonesia, Nigeria, India, and Haiti, and identified common pain points and behavioural drivers including stigma, low pay, and unequal workload that were then mapped onto a **Fishbone diagram**.

Phase 2: Theory of Change

Leveraging the **capability, opportunity, motivation, and behaviour (COM-B) framework**, we determined resilience-building interventions for all three levels- micro, meso, and macro, which we then consolidated into a **ToC diagram and validated through preliminary testing** with frontline HCWs.

Phase 3: Behaviour and Action Roadmap

We created a **behavioural journey map and an impact-complexity- feasibility matrix to prioritise 'easy wins' for adoption**, which included stigma reduction campaigns and Psychological First Aid (PFA) training. This was then used to inform the **proposed TRC organisational structure and strategic roadmap, enabling it to become a community-led organisation**.

Recommended Solutions

Based on analyses conducted and discussions with TRC, we recommend:

1. Piloting the proposed strategic roadmap and organisational structure for TRC.
2. Implementing peer-led networks, trainings that have been adapted to local contexts, and policy integration to empower HCWs.

These recommendations can provide both **immediate benefits** (wellbeing activities and stigma reduction campaigns) and **long-term sustainability** (cross-sector partnerships, integration into HR policies and national workforce laws), **making HCW resilience a system-wide priority**. Nonetheless, the long-term sustainability of these **recommendations is contingent on systemic challenges being addressed**, including resource constraints, cultural barriers and contextual variability within LMICs

INTRODUCTION

Resilience is regarded as the act of coping, adapting, or thriving in the face of adversity, which is considered a protective factor against burnout ⁽¹⁾. TGI hosts TRC, a global learning community committed to reducing the emerging crisis of HCW burnout LMICs. Through partnerships with communities, organisations and governments, TRC efficiently co-develops and adopts evidence-based interventions for scale to strengthen HCW resilience.

Many LMIC health systems face polycrisis and multiple diverse challenges, which can amplify HCW challenges ⁽²⁾. Burnout, stress and mental health risks can affect HCW well-being, work-life balance and decision-making abilities ⁽³⁾. These challenges, coupled with weak legal protection, further undermines patient care quality, HCW retention, and service continuity. Additionally, with the World Health Organisation projecting a shortage of 11 million HCWs by 2030 ⁽³⁾ primarily in LMICs, prioritising resilience-building is significant.

In this consulting project, our team worked with TRC as the client to support their objective of identifying actionable pathways to reinforce HCW resilience.

Key project objectives included:

1. Presenting a Theory of Problem into a Fishbone diagram
2. Proposing a ToC framework demonstrating how to achieve intermediate impacts and the ultimate goal of strengthened HCW resilience
3. Developing a strategic implementation roadmap to help TRC become community led

While we have showcased our detailed methodology including literature review, stakeholder engagement, and behavioural analysis in our presentation, we have prioritised the strategic takeaways, recommendations, and implications for TRC in this report based on our client's request. Additionally, we have included the detailed methodology, analytical frameworks, and validation processes in the **Methodology and Approach**.

METHODOLOGY AND APPROACH

We adopted a mixed-method approach to capture the complexity and interdependence of the various drivers related to HCW resilience in LMICs and produced five key deliverables. This section summarises the process, however the full methodology can be found in the **Methodology and Approach**.

Below is a flow diagram showcasing the three key phases and deliverables of our project.

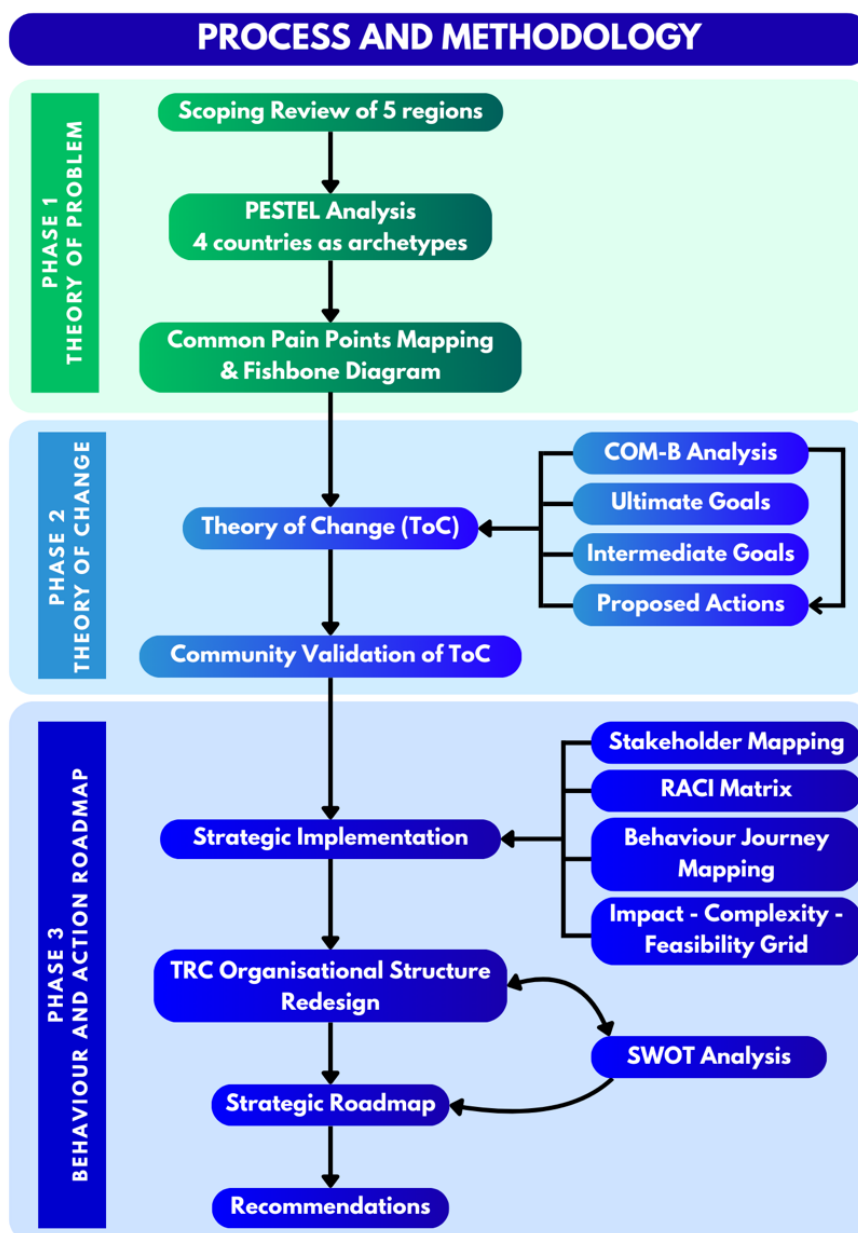


Figure 1: Project methodology

Research methods utilised

1. **Literature review:** Academic literature, reports, and global health policy documents helped to inform the behavioural and systems frameworks and intervention strategies.
2. **Country focus:** PESTEL analysis of four country archetypes.
3. **Stakeholder mapping:** A power-interest matrix helped to identify and classify stakeholders, and a responsible, accountable, consulted, and informed (RACI) matrix explored their roles in the implementation of resilience-building initiatives.
4. **Key stakeholder validation:** Frontline HCWs across several countries were sent surveys or were interviewed to reveal lived experiences and validate assumptions for the ToC.
5. **TRC stakeholder engagement:** Engagement with TRC for validation and a SWOT analysis on TRC stakeholders helped inform the proposed TRC organisational model.

Behavioural and systems frameworks included

- **COM-B Model:** Diagnosing the behavioural drivers and enablers
- **ToC framework:** Visualising the causal pathways linking activities to impact
- **Behavioural journey map:** Demonstrating how interventions can lead to behavioural change for improved resilience
- **Activity-impact-complexity-feasibility grid:** Prioritising interventions based on impact and feasibility to identify “easy wins”

Country focus

We concentrated on four archetypes to achieve a broad representation of various polycrisis contexts, using a PESTEL lens [**Country and Regional Focus (PESTEL)**]: Indonesia, Nigeria, Haiti, and India. This was used to then map common pain points into a Fishbone diagram and develop the ToC.

THEORY OF PROBLEM

To diagnose the problem, we mapped out the root causes for poor HCW resilience within LMICs, which was achieved through literature reviews on HCW resilience in polycrisis contexts, a scoping review of five regions (Southeast Asia, Western Pacific, Eastern Mediterranean, Sub-Saharan Africa and Latin America), and the PESTEL analysis of four chosen country archetypes.

The analysis revealed both the opportunities and risks present in each archetype to give balanced insights, which highlight that resilience initiatives must be tailored to specific country contexts instead of assuming transferability. For instance, our findings revealed how decentralisation can act as an enabler as well as a hinderance in different LMIC contexts. In Nigeria, it resulted in weak implementation of resilience-building initiatives, but it also reduced bottlenecks in federal decision-making and increased flexibility in policy decision-making **[Country and Regional Focus (PESTEL)]**.

Additionally, we explored best practices in different countries, which allowed the discovery of successful resilience-building initiatives and their implementation into fragile and under-resourced systems. An example is Kenya's Continuous Professional Programme (CPD) accredited Healthcare Professionals' Emotional Wellness Initiative (HPEWI)⁽⁴⁾. This comparative approach showcases a deeper understanding on the reasons behind failed resilience initiatives in LMICs. From this, we synthesised the key findings into common pain points which are illustrated in the Fishbone (Ishikawa) diagram below:

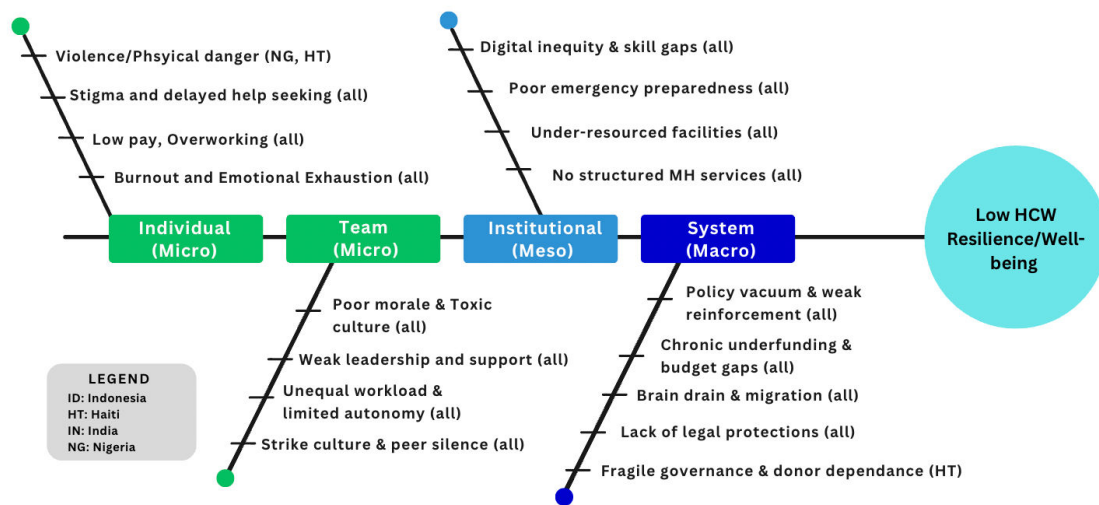


Figure 2: Fishbone diagram showcasing the interlinked drivers across all three levels contributing to low HCW resilience

We identified over 17 drivers of low resilience, of which prominent ones included stigma, low pay, and unequal workload. These were further confirmed to be major issues through our preliminary tests with frontline HCWs.

THEORY OF CHANGE FOR HCW RESILIENCE

The proposed ToC identifies behavioural changes necessary to improve HCW resilience through backward mapping- from desired impact (ultimate goals) to clear indicators for evaluation, to stakeholders' alignment and intervention activities. It is robust with interlinkages amongst activities and will remain strong even if one activity is not realised. Countries and health systems can prioritise their desired activities and combine individual / team interventions with organisational and structural level to achieve HCW adaptability during polycrisis.

Interlinkages provide direct, positive and reinforcement feedback that will not undermine other activities, outputs and outcomes. For example, at micro team level, a health system that does not implement PFA training can achieve “safer and supportive work culture” outcomes through institutional (meso) reform.

Across all levels, the ToC aims to reduce emotional distress in HCWs by promoting sustainable resiliency, team cohesion, institutionalised HCW wellbeing response, and system-level accountability for HCW protection. At micro individual level, training and stigma reduction campaigns can prompt changes towards resilience-building behaviours, create more supportive work environments, and improve stress management ^(5,6,7,8.). Additionally, the deployment of e-mental health tools is useful for mental health management, even though it lacks effectiveness in HCWs ^(9,10). These activities will achieve outputs, outcomes, and subsequently, intermediate impacts. Similarly, the interlinkages are mapped across different levels (**Figure 3**).

THEORY OF CHANGE

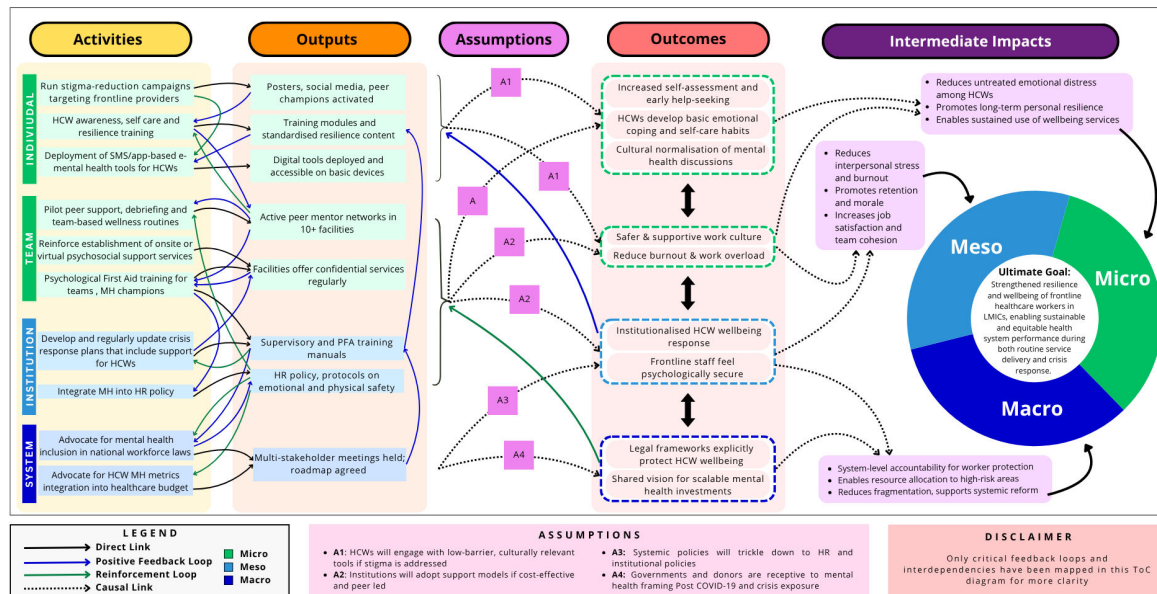


Figure 3: ToC Framework

Furthermore, the ToC assumptions and linear simplifications may be limited in complex health systems. For example, the assumption that systemic policies will trickle down into institutional ones (A3) ⁽¹⁰⁾ has mixed findings. However, research suggests combining multiple level interventions is associated with improved mental health improvement, although individual differences and recognisable universal effectiveness may vary ⁽¹¹⁾. Our robust ToC can be implemented and adapted in diverse health systems setting based on feasibility, which is elaborated in next sections.

COMMUNITY PROCESS FOR VALIDATING THE ToC

After formulating the ToC, we conducted preliminary tests to determine the need for refining recommended activities and outputs. This was achieved through a series of surveys and interviews with 21 HCW respondents across eight countries.

The survey served multiple purposes:

1. To verify if the underlying assumptions hold true in various contexts
2. To re-examine our understanding of the causal and balancing forces within healthcare system loops, as identified through secondary research
3. To assess the overlaps and similarities between our recommendations and the needs or concerns expressed by HCWs, determining where further refinement and adjustment is necessary

In addition, these preliminary tests allowed us to gather and review primary data essential for fully capturing system needs and identifying areas for improvement, thereby strengthening the foundation of interventions to encourage the desired change for improved HCW resilience.

Encouragingly, the findings broadly substantiated our ToC recommendations. For example, respondents' concerns about insufficient capacity training for HR personnel in addressing mental health issues directly aligned with one of the identified 'easy wins', namely, expanding PFA training for mental health champions and implementing peer support initiatives. This clear alignment underscores both the relevance of the proposed ToC and its potential for practical and immediate impact.

To ensure a robust analysis, we examined potential limitations of the data collection approach. Content validity was constrained by the absence of input from all system levels. For instance, perspectives from macro-level stakeholders involved in policymaking- whose decisions influence HCW and frontline staff working conditions- were not represented.

The inputs from surveys and interviews from diverse contexts provided us with a rich perspective. However, the absence of detailed geographic distribution data limited the external validity of the findings, especially since earlier research from our PESTEL analyses highlighted disparities in the challenges faced by HCWs in rural and urban areas, even within the same country [**Country and Regional Focus (PESTEL)**]. Recognising this limitation ensures

transparency and points to an opportunity for future testing to strengthen the generalisability of the results.

Based on the preliminary testing conducted, a proposed process for validation is recommended as shown in (Figure 4).

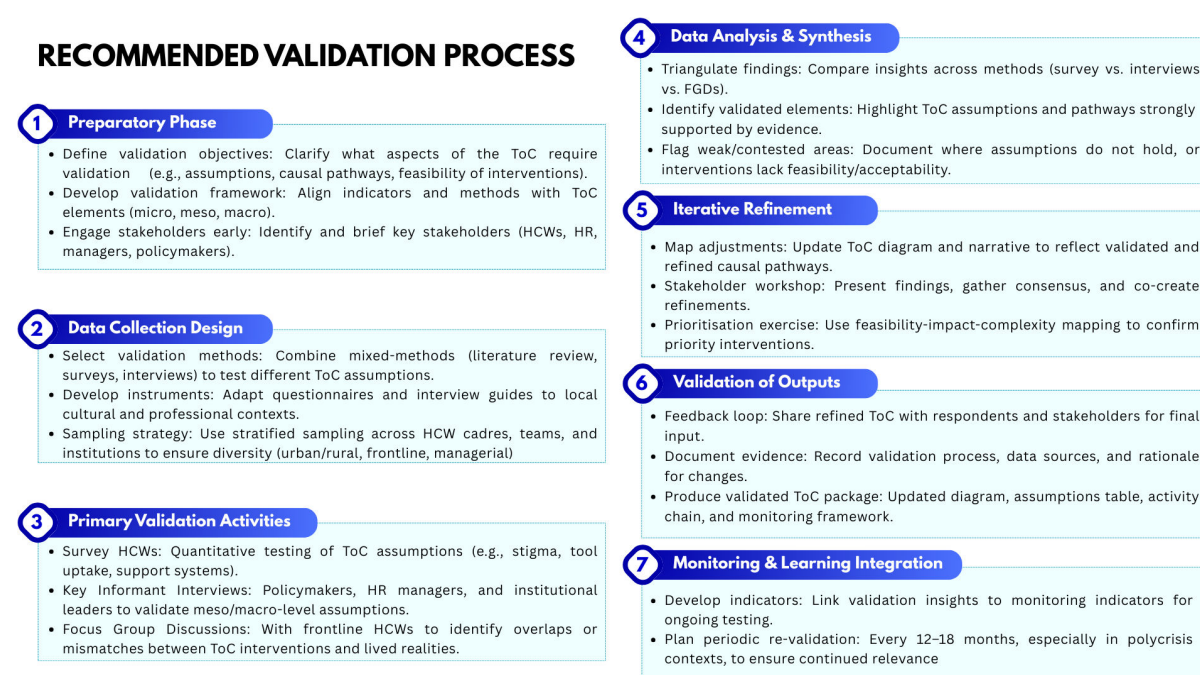


Figure 4: Recommended validation process

IMPLEMENTATION ROADMAP

Implementation of the 10 proposed ToC interventions to strengthen HCW resilience and well-being, though generic, is not one size fits all. Health system factors including stakeholders, infrastructure, and policies have significant influence, especially as the proposed interventions target the most fragile of settings.

Behaviour journey map

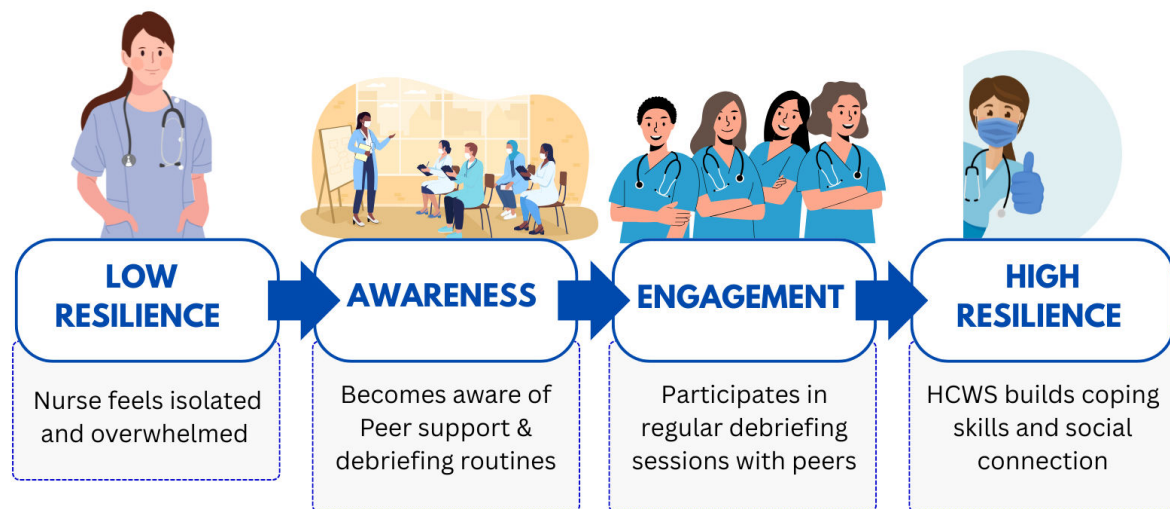


Figure 5: Behaviour journey map of peer support of a nurse

The successful implementation of the proposed interventions holds potential for transforming HCW behaviour for improved resilience. As exemplified by the journey map above, HCWs can nurture greater resilience above existing intrinsic levels via phases such as awareness and active engagement, in the case of peer support.

However, to achieve ultimate success, key periods of receptivity by HCWs and relevant stakeholders must be identified, which can include periods of onboarding, post crises debriefs, and performance reviews. These should be synchronised with trainings, screenings and supportive messaging. Additionally, anti-stigma components should not be a single campaign but woven into all implemented activities.

Stakeholder analysis

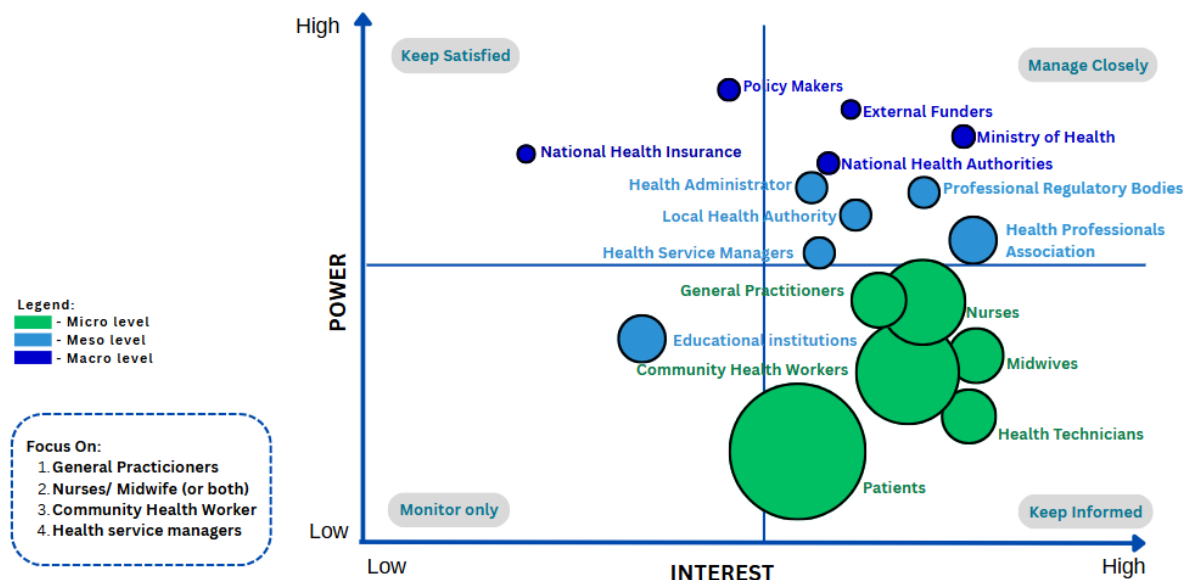


Figure 6: Stakeholder analysis map

The stakeholder analysis highlighted high-power and high-interest stakeholders like ministries of health, professional regulatory bodies, and professional associations who require sustained consultation and targeted messaging. Early engagement of such decision-makers will accelerate approvals and resource mobilization.

Key low-power and low-interest stakeholders like GPs, nurses, midwives, community health workers, and health service administrators are important in this context. Active efforts to ensure their buy-in is crucial. Identification of supportive, high-interest stakeholders provides potential champions for advocacy and peer influence.

RACI matrix

ACTIVITY	HCWS	Line Managers (Team Leads)	HR/ Training	Health Service Managers /Admins	Facility Directors	MOH
1: Run stigma-reduction campaigns targeting frontline providers	R/ C	R/ C	A/R	R	A	I
2: HCW awareness, self care and resilience training	R/ C	R/ C	A/R	R	A	I
3: Deployment of SMS/app-based e-mental health tools for HCWs	C	C	R	C	R	A
4: Peer support, debriefing and team-based wellness routines	R/C	AR	C	I	I	I
5: Psychological First Aid training for teams, MH Champions	R/C	R/C	R/A	R/C	A	I
6: Reinforce establishment of onsite or virtual psychosocial support services	C	C	R	C	A	I
7: Develop and regularly update crisis response plans that include support for HCWs (HT, ID)	C/I	C/I	R	C/ I	R	A
8: Integrate MH into HR Policy	C/I	C/I	R	C/A	A	A
9: Advocate for mental health inclusion in national workforce laws	R/C	R/C	I	C	A	C
10.Sustainable MH Financing enforcement	I	I	I	I	C	R/A

LEGEND

- Responsible: does the work
- Accountable: makes final decision
- Consulted: provides input
- Informed: kept up to date

* Accountability for activities may shift during crises

**Contextual adaptation is necessary during implementation

Figure 7: RACI Matrix

We developed a RACI matrix to clearly define roles, minimise confusion, and reduce duplication of effort. As seen in **Figure 7**, some stakeholders can have too many cross-functional tasks, which can potentially compound HCW burnout. To prevent this, we recommend redistributing responsibilities or provision of additional resources.

Once skilfully streamlined, communication during implementation is enhanced.

Impact–complexity–feasibility analysis

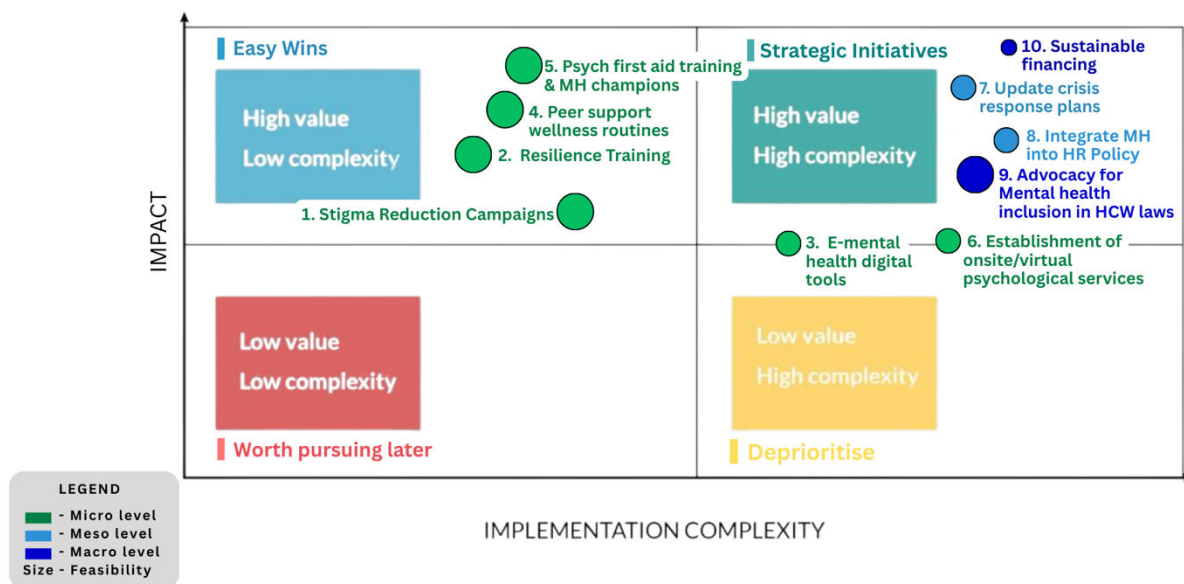


Figure 8: Impact-complexity-feasibility analysis

The proposed ToC interventions are linked and exist as packages but require prioritising during implementation due to the scarcity of resources in the defined settings. The impact-complexity-feasibility analysis prioritised ‘easy wins’ for adoption. These analytical outcomes may provide a form of ‘best buys’ for implementation with further cost effectiveness analysis.

‘Easy win’ interventions, namely stigma reduction campaigns, resilience training, PFA training, and peer support interventions hold value when they are included in initial rollout (Phase 1 in [Figure 9](#)) of the implementation roadmap. Early successes from these will help build momentum and stakeholder trust. This is strategically crucial to facilitate the success of high impact, high complex interventions like labour laws and policy amendments which are proposed for implementation (Phase 4 in [Figure 9](#)). The generic roadmap provided below seeks to avoid implementing groups being overwhelmed.

Given polycrisis volatility, shocks like political shifts and epidemic surges should be anticipated during implementation. As such, contingency plans must be made along with flexible budgets.



Figure 9: Proposed generic implementation roadmap

TRC ORGANISATIONAL DESIGN AND STRATEGIC ROADMAP

Current TRC structure

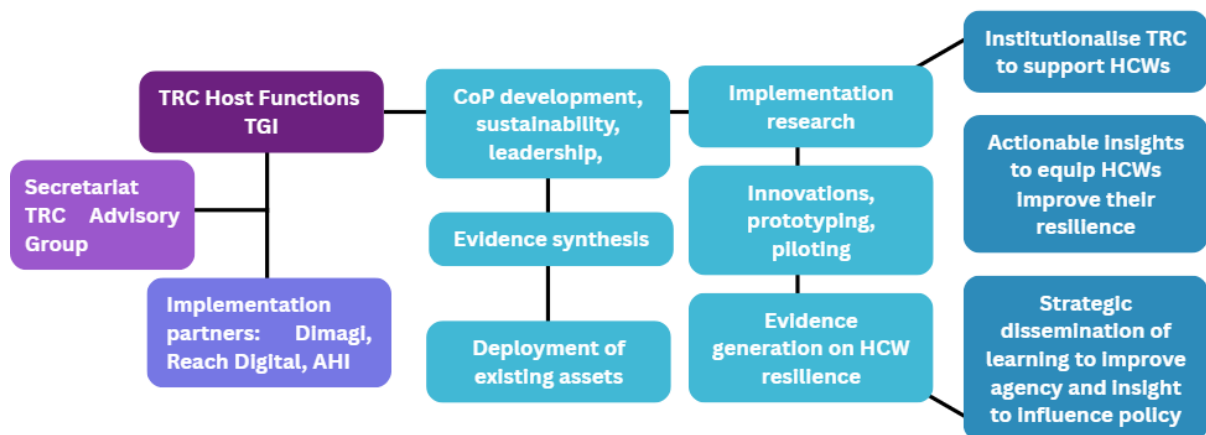


Figure 10: Current TRC organisational structure

Currently, TRC is hosted by TGI and collaborates with partners such as Dimagi to perform functions including evidence synthesis and implementation research, to improve HCW resilience (**Figure 10**). TGI's long-term goal is to transition TRC into a community-led organisation that operates independently from host institutions and grant-based funding. Based on discussions with the client to understand the current model, strategic objectives, and enablers for transition, we conducted a SWOT analysis and proposed a new structure to bridge the micro–meso scaling gap and empower HCWs at all levels (**Figure 11**).

Proposed TRC structure

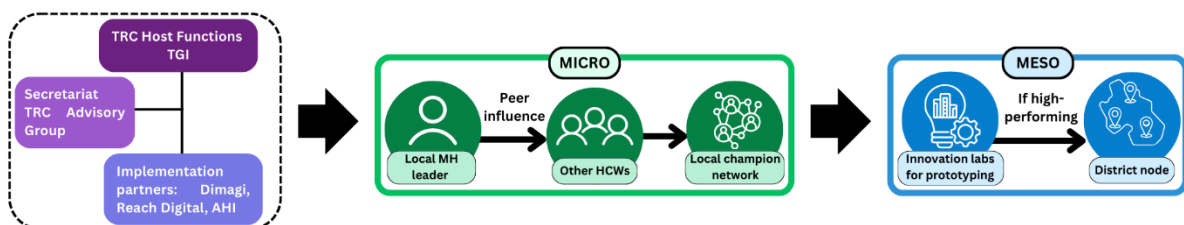


Figure 11: Proposed TRC Organisational Structure

1. Identify and train local mental health leaders

- Drawn from frontline HCWs who participated in TRC-organised leadership programs and field interactions
- Act as both beneficiaries and co-designers of interventions
- Impact: Creates sustainable local ownership and amplifies resilience through peer influence ⁽¹²⁾

2. Establish local champion networks

- Form supportive communities where HCWs encourage one another
- Normalises resilience-building behaviours at the micro level
- Impact: Encourages cultural change and shared responsibility for wellbeing

3. Develop innovation labs

- Champion networks within facilities act as hubs to test HCW-driven or corporate social responsibility (CSR)-supported solutions
- Impact: Provides a pipeline for scalable, frugal, and contextually relevant innovations

4. Scale into district nodes

- High-performing labs evolve into nodes which link multiple autonomous sites with shared resources and learning
- Impact: Decentralises authority, ensures knowledge transfer, and strengthens system-wide resilience ⁽¹³⁾.

This decentralised structure enables TRC to function as an independent, context-responsive organisation. Interventions can be low-tech, indigenous solutions or frugal innovations. By respecting diversity in HCW contexts and fostering a grassroot-led approach, the model circumvents systemic barriers like language differences, bureaucratic delays, and contextual misalignment. Importantly, it acknowledges that, for many HCWs- especially women in rural areas- work itself can be a source of identity and empowerment.

Current research largely evaluates resilience interventions at the individual or team level, leaving the micro–meso scaling gap underexplored. A systematic review ⁽¹³⁾ highlighted that resilience-building requires significant time, contextual adaptation, and sustained practice to be effective. However, evidence remains inconsistent, with studies showing varied outcomes across participant groups, intervention types, and delivery methods, underscoring the need for more robust and scalable approaches.

Strategic roadmap

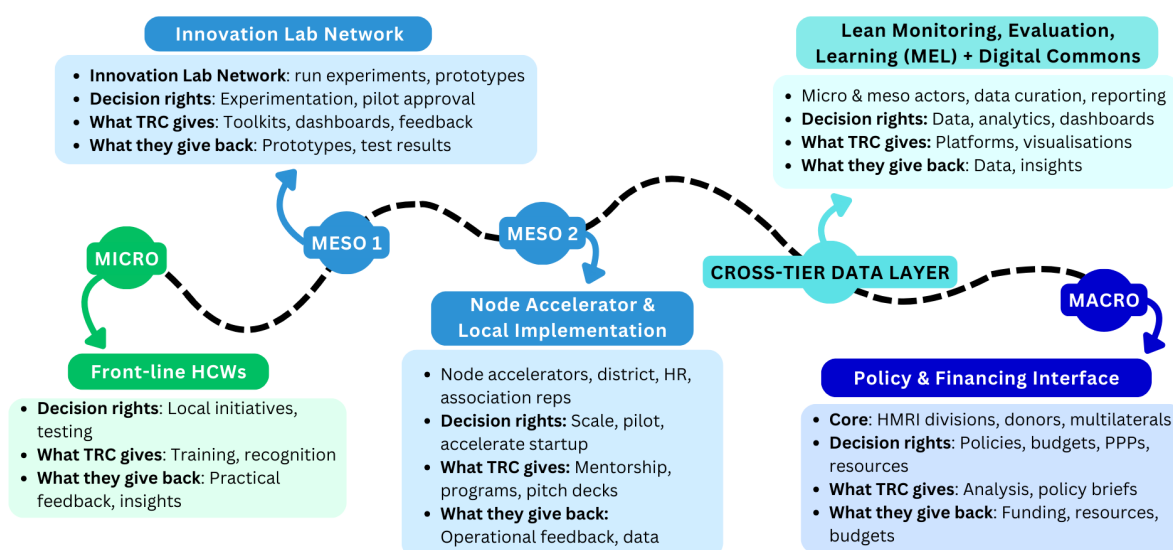


Figure 12: TRC Strategic Roadmap

The strategic roadmap translates TRC's organisational model into a practical pathway for action, enabling them to achieve their vision through structured partnerships, decentralised authority, and continuous learning. As shown in [Figure 12](#), the roadmap outlines what TRC provides at each level and what it receives in return.

Across all levels, TRC delivers targeted interventions such as leadership development, infrastructural support, and policy advocacy. In exchange, it receives insights, test results, and operational feedback from stakeholders. These outputs have both direct and indirect impacts within each level while acting as drivers and enablers for progress at subsequent levels, ensuring a continuous scaling effect.

A central feature is the cross-tier data layer, which integrates feedback from all levels into shared dashboards and analytics. This empowers TRC programme managers and executives to make evidence-based decisions, guiding resource allocation, refining interventions, and identifying scaling opportunities. Additionally, visualised data can be leveraged to attract sustainable funding, influence policy reform, and support more accurate budget planning.

The roadmap offers TRC a long-term framework that links interventions to feedback, enabling it to anticipate needs, adapt to challenges, and integrate learning into practice. Local insights shape higher-level strategies, while policy and resources reinforce grassroots action. A comparable approach was outlined in a mixed-model study ⁽¹⁴⁾ which identified 10 resilience

capacities relevant for translating resilience into practice across micro- and meso-level healthcare settings. The study highlighted two processes—contextual understanding and double-loop learning—as central to strengthening these capacities. Both principles are embedded in our roadmap through the cross-tier data layer and feedback mechanisms. Nonetheless, the absence of a unified resilience metric presents a limitation, requiring reliance on mental health questionnaires and qualitative data to evaluate effectiveness before and after implementation.

RECOMMENDATIONS AND LIMITATIONS

Short-term priorities (immediate, high-impact actions)

TRC should prioritise “easy win” interventions that deliver high impact with minimal resources. This should be launched alongside pilot schemes to test the modified strategic roadmap in the client’s chosen contexts.

Implementation should begin with interventions targeting individual HCWs, then gradually scaled up to broader system levels by leveraging peer influence and existing social structures within the healthcare facilities. Rather than designing entirely new processes, TRC should start by mapping and assessing indigenous wellness practices already in use, integrating these into formalised daily routines for HCWs to reduce resistance and increase adoption ⁽¹⁵⁾. Early pilots should focus on embedding peer-led wellness structures, resilience-building routines, and training modules (e.g., PFA) directly into the flow of work. These should be trialled in high-engagement settings to generate operational feedback to refine design and build proof-of-concept before scaling.

Long-term systemic shifts

To achieve lasting HCW resilience, TRC must focus on systemic changes that embed support structures deeply into the healthcare delivery system. TRC should utilise frugal, contextually relevant innovations, such as Zimbabwe’s Friendship Bench model, whose success has demonstrated the value of integrating indigenous community structures into mental health care delivery ^(16,17). Successful implementation requires training local champions, clear implementation blueprints, and strategies to address barriers like unclear ownership and fragmented accountability ⁽¹⁸⁾.

Further validation should begin with training mental health champions and HR personnel in frontline settings, creating a network of local champions to form Innovation Lab Networks. Over time, high-performing labs should transition into district-level nodes with operational autonomy while connected to a knowledge-sharing network- promoting decentralised decision-making, community ownership, and scalable, sustainable change. To assess effectiveness, TRC should define clear KPIs and conduct periodic surveys over an extended period.

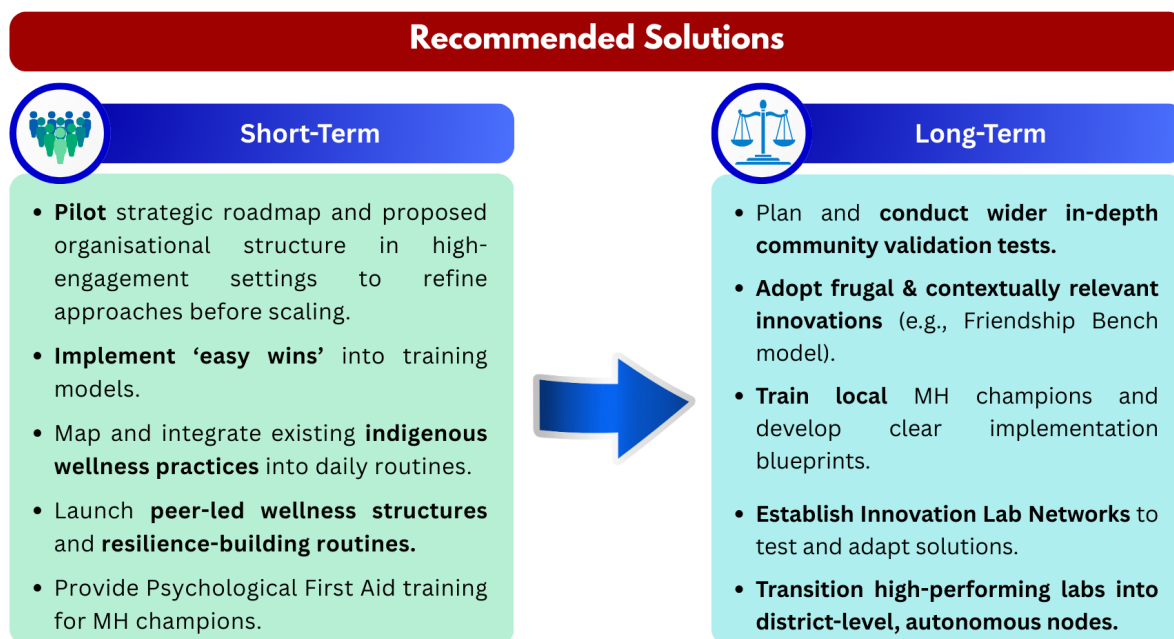


Figure 13: Recommended solutions

Limitations and risks

While the ToC assumptions were reinforced by preliminary validation testing, the ease of implementation will vary by context, and unmodified replication risks failure. For example, our fourth assumption that “governments and donors are receptive to mental health framing post-COVID-19” holds in many contexts but not universally.

Nigeria, despite passing the National Mental Health Act 2021, faces entrenched cultural and traditional beliefs that can undermine adoption of new MH practices. In such cases, direct policy advocacy may be less effective without first embedding interventions within trusted community structures. Evidence shows that sensitisation and awareness campaigns led by respected community figures can overcome resistance by building on existing social capital and trust ⁽¹⁵⁾. This approach marries novel recommendations with indigenous practices, thus reducing friction and enhancing uptake. Contextual adaptation is not limited to cultural sensitivity, it also requires assessing technological capacity, governance stability, and resource constraints. Implementation strategies should therefore be iteratively modified, with pilots serving as test beds to fine-tune interventions for each unique context before scale-up.

While the recommendations presented are grounded in evidence and reinforced by preliminary validation, their success depends on careful, context-sensitive implementation. Without adaptation to local realities, there is a risk of cultural misalignment, where interventions may be met with low participation or outright resistance from HCWs. Similarly, if interventions are not aligned with the available resources and capacity (whether in staffing, funding, or technical infrastructure) momentum may quickly be lost, even for low-cost solutions.

At the policy level, poorly timed advocacy or messaging that fails to resonate with local priorities could close critical windows for reform and weaken donor engagement. In some cases, as with Nigeria, the legal framework may advance faster than cultural acceptance, requiring more community-led strategies to bridge the gap. Ultimately, the risk is that without continuous adaptation and iterative learning, the interventions may fail to generate the intended resilience outcomes, undermining TRC's long-term strategic objectives.

BIBLIOGRAPHY

1. Curtin M, Richards HL, Fortune DG. Resilience among health care workers while working during a pandemic: A systematic review and meta synthesis of qualitative studies. *Clinical Psychology Review*. 2022 May;95(1):102173.
2. McNamara C, Bambra C. The Global Polycrisis and Health Inequalities. *International Journal of Social Determinants of Health and Health Services*. 2025 Feb 16;
3. Building a resilient healthcare workforce: The George Institute for Global Health and ACCESS Health International partner up [Internet]. The George Institute for Global Health. 2025 [cited 2025]. Available from: <https://www.georgeinstitute.org/news-and-media/news/building-a-resilient-healthcare-workforce-the-george-institute-for-global-health-and-access-health>
4. Member Spotlight: Healthcare Professionals' Emotional Wellness Initiative (HPEWI) – The Resilience Collaborative [Internet]. The Resilience Collaborative. 2025 [cited 2025 Aug 18]. Available from: https://trc.community/news/member-spotlight-healthcare-professionals-emotional-wellness-initiative-hpewi/?utm_source=chatgpt.com
5. Kelly F, Uys M, Bezuidenhout D, Mullane SL, Bristol C. Improving Healthcare Worker Resilience and Well-Being During COVID-19 Using a Self-Directed E-Learning Intervention. *Frontiers in Psychology*. 2021 Dec 2;12.
6. Yi-Frazier JP, O'Donnell MB, Adhikari EA, Zhou C, Bradford MC, Garcia-Perez S, et al. Assessment of Resilience Training for Hospital Employees in the Era of COVID-19. *JAMA Network Open*. 2022 Jul 1;5(7):e2220677.
7. Hanisch SE, Twomey CD, Szeto ACH, Birner UW, Nowak D, Sabariego C. The effectiveness of interventions targeting the stigma of mental illness at the workplace: a systematic review. *BMC Psychiatry* [Internet]. 2016 Jan 6;16(1). Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4704270/>
8. Ramírez-Vielma R, Vaccari P, Cova F, Saldivia S, Vielma-Aguilera A, Grandón P. Interventions to reduce the stigma of mental health at work: a narrative review. *Psicologia: Reflexão e Crítica* [Internet]. 2023 May 22;36(1). Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10203079/>
9. Suffoletto B. Deceptively Simple yet Profoundly Impactful: Text Messaging Interventions to Support Health. *Journal of Medical Internet Research* [Internet]. 2024 Aug 27 [cited 2025 Jan 22];26:e58726. Available from: <https://www.jmir.org/2024/1/e58726/>
10. Kornfield R, Stamatis CA, Bhattacharjee A, Pang B, Nguyen T, Williams JJ, et al. A text messaging intervention to support the mental health of young adults: User engagement and

feedback from a field trial of an intervention prototype. Internet Interventions [Internet]. 2023 Dec 1;34:100667. Available from: <https://www.sciencedirect.com/science/article/pii/S2214782923000672>

11. Dussault G, Dubois CA. Human resources for health policies: a critical component in health policies. Human Resources for Health. 2003 Apr 14;1(1).
12. Anger WK, Dimoff JK, Alley L. Addressing Health Care Workers' Mental Health: A Systematic Review of Evidence-Based Interventions and Current Resources. American Journal of Public Health [Internet]. 2024 Feb 1;114(S2):213–26. Available from: <https://pmc.ncbi.nlm.nih.gov/articles/PMC10916736/>
13. Gray D. Developing resilience and wellbeing for healthcare staff during organisational transition: The salutogenic approach. DOAJ (DOAJ: Directory of Open Access Journals). 2016 Aug 1;
14. Cleary M, Kornhaber R, Thapa DK, West S, Visentin D. The effectiveness of interventions to improve resilience among health professionals: A systematic review. Nurse Education Today [Internet]. 2018 Dec;71(1):247–63. Available from: <https://www.sciencedirect.com/science/article/pii/S0260691718307597>
15. Lyng HB, Vincent C, Cecilie Haraldseid-Driftland, Guise V, Ellis LA, Braithwaite J, et al. A road map for the operationalization of resilience in healthcare - A mixed method study. Applied Ergonomics. 2024 Dec 13;125:104443–3.
16. Adekeye O, Ozano K, Dixon R, Elhassan EO, Lar L, Schmidt E, et al. Mass administration of medicines in changing contexts: Acceptability, adaptability and community directed approaches in Kaduna and Ogun States, Nigeria. Dutra WO, editor. PLOS Neglected Tropical Diseases. 2020 Nov 25;14(11):e0008857.
17. Centre for Global Mental Health. The Friendship Bench | Centre for Global Mental Health [Internet]. Centreforglobalmentalhealth.org. 2016. Available from: <https://www.centreforglobalmentalhealth.org/the-friendship-bench>
18. Chibanda D, Weiss HA, Verhey R, Simms V, Munjoma R, Rusakaniko S, et al. Effect of a Primary Care–Based Psychological Intervention on Symptoms of Common Mental Disorders in Zimbabwe. JAMA [Internet]. 2016 Dec 27;316(24):2618. Available from: <https://jamanetwork.com/journals/jama/fullarticle/2594719>
19. Chitiyo C, Verhey R, Mboweni SN, Healey A, Dixon Chibanda, Araya R, et al. Applying the Consolidated Framework for Implementation Research to Optimize Implementation Strategies for the Friendship Bench Psychological Intervention in Zimbabwe. Global Implementation Research and Applications. 2023 Aug 16;3(3):245–58.

APPENDIX

1. Methodology and Approach

Overview

We adopted a mixed-method approach to capture the complexity and interdependence of the various drivers related to HCW resilience in LMICs and produced five key deliverables. This provided us with a thorough understanding of the various interdependent challenges that affect HCW resilience within LMICs.

Research Methods

Our project utilised:

1. **Literature Review:** By extensively reviewing academic literature, reports and global health policy documents, this helped us to inform the behavioural and systems frameworks and intervention strategies. For instance, mental health stigma reduction, best practices, and resilience training effectiveness.
2. **Country Focus:** a PESTEL analysis was conducted on 4 LMIC archetypes which included: Indonesia, Nigeria, Haiti and India. We chose these countries as they represented a range of health system challenges, socio-economic contexts and governance structures faced within LMICs. This provided us with an in depth understanding of the macro-level elements that affect HCW resilience and how viable resilience building interventions are.
3. **Stakeholder Mapping:** A Power-Interest matrix helped to identify and classify stakeholders based on their roles within the different levels of healthcare systems and the level of influence they possessed. A RACI (Responsible, Accountable, Consulted, Informed) matrix explored various stakeholders' roles in the implementation of resilience-building initiatives. Together, this helped us identify who were the champions and enablers for designing resilience-building initiatives for implementation.
4. **Key stakeholder validation:** To validate our findings and assess the feasibility of our proposed resilience-building interventions, structured surveys were allotted to frontline HCWs, alongside interviewing 21 frontline HCWs and stakeholders across 8 different countries (including health service managers, GPs, nurses, midwives and community health workers). We were able to develop and refine our Theory of Change framework based on these lived experiences and proven assumptions.

5. **TRC stakeholder engagement:** Our team engaged with TRC to analyse the various stakeholders present across the micro, meso and macro levels (including frontline HCWs, district health officers, national policymakers, professional associations and donors). Following our stakeholder mapping, we conducted a SWOT analysis on TRCs stakeholders which helped propose a revised TRC strategic organisational model, transforming TRC into a community-led structure, from a hold-led model. The proposed model included local innovation labs, regional hubs, a tiered feedback system and data sharing platforms.

Behavioural and Systems Frameworks

By utilising various established frameworks, we were able to strategically develop interventions:

- **COM-B Model** (Capability, Opportunity, Motivation, Behaviour): This model was used to help us identify the behavioural barriers and enablers at the micro, meso and macro levels, thereby informing the designs of our proposed interventions including stigma reduction campaigns, digital tools for mental health and policy reforms.
- **Theory of Change (ToC) framework:** We designed a ToC framework in order to visual and map out the causal pathways that linked activities, outputs and intermediate outputs to intermediate impacts and the ultimate goal of increased HCW resilience. Moreover, key assumptions, feedback loops (positive and negative) and enabling conditions were incorporated.
- **Behavioural Journey Map:** We created a visual map demonstrating how awareness and engagement can result in behavioural changes amongst HCWs, transitioning from low resilience to high resilience.

Activity-impact-complexity-feasibility grid

We analysed 10 interventions in relation to their impact, feasibility and implementation complexity. Each intervention was visually mapped out into 4 quadrants which included: easy wins, strategic priorities, deprioritised items and items worth pursuing later. This grid was used to support our decision-making when it came to prioritising interventions as immediate or as long-term institutional reform. As explained above, TRC engages with stakeholders across three levels—micro, meso, and macro—each playing a distinct role in designing, implementing, and scaling HCW resilience initiatives. A SWOT analysis was conducted to

assess the strengths, weaknesses, opportunities, and threats facing stakeholders at each level, with the aim of informing strategic planning and operational alignment.

2. Country and Regional Focus (PESTEL)

We decided to focus on four LMIC archetypes that achieved a broad representation of various polycrisis contexts, using a PESTEL lens. We conducted a balanced PESTEL analysis on our 4 chosen archetypes, assessing the positive and negative aspects of each PESTEL domain. This fed into our Fishbone root cause analysis, whereby common systemic pain points of low resilience were mapped out, later guiding our intervention framework and recommendations. Our 4 LMIC archetypes included: Indonesia, Nigeria, Haiti and India.

A. INDONESIA PESTEL

PESTEL OF INDONESIA

- P**
- Decentralised system of governance allows provinces and districts to manage health budgets and implementation by an authority that knows what is best for their people. It also offers opportunities to empower and award HCWs at the grassroots level, enabling a bottom-up approach in human resource management. On the other hand, it also causes inconsistencies in preparation of healthcare budgets and healthcare delivery, and fragmented workforce management. Each district has authority over healthcare hiring and budgeting, which creates uneven employment conditions, workloads, and incentives, impacting job security and wages of HCWs^[1]
 - Policy focus misalignment- health priorities remain skewed toward curative care, with less emphasis on preventive and promotive services. Local political leaders often prioritise visible infrastructure over less-visible public health programs. This acts as a demotivator for public health workers such as social workers and community care workers, who feel their visibility is decreased and that their contributions are not valued in the care system^[2]
- E**
- The national health insurance scheme (Jaminan Kesehatan Nasional, or JKN) covers ~80% of Indonesians but has operated at a fiscal deficit for years. Late reimbursements and cost-control challenges threaten service continuity. Payment delays directly erode trust, financial security, and job satisfaction for frontline health professionals^[3,4]
 - Low health expenditure (3-4% of GDP), well below the WHO recommendation (5-6%). This limits capacity to improve infrastructure, hire personnel, or fund outreach services. Additionally, it also limits investment in workforce development, salaries, or continuous education. This leads to many doctors and nurses working multiple jobs or migrating abroad, causing high attrition rates, particularly in remote provinces^[2]
 - Economic inequality affects healthcare equity. Eastern provinces (e.g., Papua, Nusa Tenggara) suffer from poor funding, fewer facilities, and higher mortality rates, demotivating HCWs and impacting their mental health^[5]
- S**
- With over 270 million people, Indonesia faces rapid urbanisation, youth bulge, and a growing elderly population. These trends stretch health system resources and increase the burden of both communicable and non-communicable diseases (NCDs) which overwhelms GPs and nurses, resulting in emotional exhaustion, fear of litigation, and compassion fatigue^[4,6]
 - During COVID-19, healthcare workers faced discrimination from neighbors and landlords fearing contagion, resulting in psychosocial trauma and reduced willingness to serve in future health crises^[7]

PESTEL OF INDONESIA

- T**
- Health system digitisation is improving, but integration remains slow and adds to burden of staff, increasing workload for undertrained staff with limited digital literacy^[8]
 - Rural HCWs have limited access to e-learning platforms, diagnostic tools, or telehealth, due to which skills gaps persist, especially in emergency preparedness, digital tools, and infectious disease control^[8]
- E**
- Tropical climate, deforestation, and poor sanitation increase vulnerability to dengue, malaria, leptospirosis, and diarrheal outbreaks, affecting both patients and front-line HCWs- due to this, staff are often isolated, overworked, and exposed to both physical and emotional trauma^[9]
 - Frequent floods, volcanic eruptions, and landslides damage health facilities and disrupt supply lines. Many centers lack disaster plans, backup power, or structural integrity, compromising working conditions and causing fear, operational burnout^[5]
- L**
- Provincial governments oversee hiring and budgeting—but weak legal enforcement mechanisms hinder equitable delivery or penalty for underperformance^[2]
 - Weak HCW protections and oversight under the new Omnibus Health Law. Indonesia's Omnibus Health Law (2023) aims to streamline health governance and allow foreign medical practitioners, but has sparked concern over deregulation and quality control^[9]
 - Lack of formal mental health support programs for HCWs- burnout and PTSD are rarely formally addressed. Because of this, many HCWs self-manage stress or leave the profession altogether^[4]

B. NIGERIA PESTEL

P

- *Policy Gaps in Mental Health:* Lack of comprehensive national policy specifically addressing HCW mental health and resilience, mostly focus on patient rights and access ^[1]
- *Frequent Healthcare Strikes:* poor responsiveness to HCW concerns ^[2]
- *Insecurity and Violence:* Political instability in some regions (e.g. North-East due to insurgency) has led to violence against healthcare workers, severely hampering morale and resilience.

E

- *Underfunded Health Sector :* Nigeria spends less than 5% of its annual budget on health, well below the 15% Abuja Declaration target. This has caused poor infrastructure, overburdened worker, & low salaries
- *Brain Drain and Migration:* Many HCWs emigrate due to poor economic incentives. This exodus increases stress on remaining workers, creating a vicious cycle of overwork and mental burnout.

S

- HCWs face cultural stigma surrounding mental illness. This reduces help-seeking behaviours among HCWs and discourages health institutions from investing in visible support services. ^[2]
- Within many medical communities, there is a pervasive "tough-it-out" culture ^[1].
- Female healthcare workers often face gender-based discrimination, overwork, and lack of protection, which compounds stress and burnout
- *Urban-Rural Divide:* Rural HCWs face extreme isolation, insecurity, and lack of resources. Their resilience is tested with no formal mental health support, and they are rarely included in policymaking discussions.

PESTEL OF NIGERIA

T

- Most mobile health innovations are geared toward patients or disease surveillance.
- Rising interest among NGOs and startups to develop mental wellness apps for HCWs, but these remain underfunded and poorly integrated into mainstream public healthcare systems. ^[3]

E

- No structured debrief or support is offered after traumatic exposure. HCWs in conflict-affected areas face chronic trauma, insecurity, and threats of abduction ^[4]
- Many public health facilities lack ventilation, power, clean water, and sanitation, which erodes morale and adds daily physical stress
- HCWs responding to heatwaves, floods, and vector-borne disease outbreaks experience acute occupational stress

L

- The Mental Health Act (2023) lacks enforceable provisions for occupational mental health policies. ^[2]
- Healthcare workplace safety policies are underdeveloped and focus on physical safety (e.g. infection control) with no legal mandates for psychological safety ^[5]
- Healthcare unions not only face political pushback but never focus on mental health

C. HAITI PESTEL

PESTEL OF HAITI

P

- Political instability including recent crises such as the 2021 assassination of President Jovenel Moïse and ongoing gang violence. ^[1]
- Weak governance undermines health policy continuity planning, and investment.
Corruption and lack of accountability hinder health infrastructure development and equitable service delivery.
- Limited government capacity leads to heavy dependence on NGOs and international aid to deliver basic health services.

E

- Haiti is the poorest country in the Americas. About 60% of the population lives below the poverty line.
- Government health spending is extremely low (less than 5% of GDP), while out-of-pocket expenses remain high.
Underfunding results in poor pay and working conditions for HCWs ^[2], leading to brain drain and low morale.

S

- High rates of illiteracy, maternal and child mortality, and communicable diseases (HIV, TB, cholera).
- Cultural beliefs, language barriers (Kreyòl vs. French), and low health literacy affect health-seeking behavior.
- Inequity between urban and rural access is extreme: ~60% of rural residents lack access to basic healthcare. ^[3]
- Impact: The health workforce struggles to address both demand-side barriers (e.g., low literacy) and supply-side constraints (e.g. access to medicines, trained staff).

T

- Haiti lacks robust health IT infrastructure. Electronic medical records and data systems are limited to NGO-run facilities.
- Telemedicine is in early stages, with poor broadband and electricity coverage in rural areas.

E

- Haiti is highly vulnerable to natural disasters: earthquakes (2010, 2021), hurricanes, and floods regularly destroy health infrastructure and displace populations. ^[4]
- Deforestation and poor sanitation contribute to waterborne disease outbreaks, including repeated cholera epidemics.
- Impact: Environmental shocks repeatedly derail health system progress and demoralise the workforce.

L

- Labor protections for healthcare workers are limited, with few safeguards against overwork or harassment. ^[5]
- Task-shifting policies (e.g., for nurses or CHWs) are inconsistently applied or supported.
- Impact: The lack of robust legal protections contributes to low motivation, high turnover, and poor quality assurance in healthcare delivery.

D. INDIA PESTEL

PESTEL OF INDIA



P - State autonomy has enabled success stories (e.g., Kerala's investment in CHWs and primary care). - Political support for CHWs like ASHAs (Accredited Social Health Activists) is enshrined in national schemes - CHWs are often overburdened and underpaid despite their central role.^[1] - Politicisation of appointments or delayed disbursement of wages in some states affects morale.^[2]	T - Widespread use of digital platforms (e.g., ANMOL, eSanjeevani) boosts task efficiency and resilience. - Central support for data collection via mobile apps. - Tech overload without simplification can frustrate workers. - Limited localised support for troubleshooting tech problems.^[4]
E - India's large-scale schemes (e.g., NHM) provide performance-based incentives for ASHAs and auxiliary nurse midwives (ANMs). - Cost-effective use of CHWs in achieving national targets (e.g., immunisation, maternal health). - Incentives are often delayed, low, or inconsistent, undermining resilience.^[2] - High workload with little economic reward contributes to burnout.^[3]	E - ASHAs and ANMs have been crucial during natural disasters and environmental crises. - State programs often integrate CHWs into early warning and response systems.^[2] - CHWs often lack PPE or support for environmental exposures. - Long distances between homes and clinics in adverse terrain reduce retention.^[3]
S - CHWs play a vital role in behaviour change, health education, and trust-building.^[3] - ASHAs are seen as frontline warriors, especially post-COVID.^[2] - Stigma or violence against CHWs (especially women) still occurs, especially during outbreaks. - Rural isolation and lack of peer support networks add to emotional burden.^[1]	L - Frameworks exist under NHM for ASHA rights and grievances (though imperfect). - Some states are formalising CHWs into public systems.^[3] - Lack of formal employee status keeps ASHAs in limbo.^[1] - Labour rights debates remain unresolved despite decades of advocacy.

E. COMMON PATTERNS FROM FOUR COUNTRY ARCHETYPES

From four country archetypes deep dives

P Political: - Decentralised systems - Fragmented health systems - Lack of HCW wellbeing protections - Inefficient and weak governance	T Technology: - Digital Divide - Lack of technology addressing HCW resilience - Health Transformations not followed by digital trainings for HCW (poor integration methods)
E Economics: - Chronic underinvestment in health - Poor health infrastructures - Low HCW salaries - Financing challenges (High OOPs healthcare expenditures, Late reimbursements, inequitable fundings, high reliance with international fundings)	E Environment: - Natural disasters and vulnerability (Earthquake, Hurricane, Floodings, deforestation) - Water, sanitation and hygiene (WASH) access disparity leading to outbreaks (Cholera, Leptospirosis, Vector-borne diseases eg. Malaria, Dengue, Zika) - Healthcare infrastructure lacks power, clean water, sanitation, ventilation
S Social: - Rampant poverty - Malnutrition still exists - Urban vs. Rural divide - Marginalisations and inequitable access - Brain-drain - Multiple jobs needed for HCW - Stigma around mental health	L Legal: Legal protection exists but weak enforcement

3. Mapping Pain Points

INDIVIDUAL (MICRO)

	Domain	Pain Point	Drivers	Impact on HCWs
 NIGERIA	- Mental Health - Safety & Stress	- Mental burnout, fear, isolation, stigma - Threat of physical danger or overwork	- Low pay, overwork, insecurity, stigma against mental health - Insurgency in the North East, immigration of HCWs	- Burnout, delayed care-seeking - Burnout, withdrawal
 INDONESIA	- Mental Health - Safety & Stress	- Compassion fatigue, fear of litigation pandemic trauma - Threat of physical danger or overwork	- NCD burden, public discrimination during COVID - Overwhelming case loads, multiple jobs	- Emotional exhaustion, avoidance behavior, burnout - Burnout, attrition
 HAITI	- Mental Health - Safety & Stress	- Stigma and silence around distress - Threat of physical danger or overwork	- Violence, trauma, no access to care - Gang violence, environmental disaster	- PTSD, burnout, emotional exhaustion - Trauma, abandonment of post

TEAM (MICRO)

	Domain	Pain Point	Drivers	Impact on HCWs
 NIGERIA	Team Culture	- Strike culture - Peer silence on stress - Lack of psychosocial support and peer networks	- Weak leadership response, poor support systems, "tough-it-out" culture - Absence of team-based mental health models	Poor morale, mistrust, toxic workplace culture
 INDONESIA	Team Culture	- Unequal workload, - Limited autonomy - Inconsistent supervision - Unclear escalation protocols	Top down hierarchy, poor feedback culture	Low job satisfaction, attrition, dual poor coordination
 HAITI	Team Culture	Weak support networks	No institutional team based models	Loneliness, miscommunication

INSTITUTIONAL (MESO)

	Domain	Pain Point	Drivers	Impact on HCWs
 NIGERIA	• Infrastructure	• Limited mental health services for HCWs in facilities	• Lack of funding, digital access, stigma	• No structured support, reliance on self-management
 INDONESIA	• Infrastructure	• Lack of upskilling and e-learning access • Poor institutional resilience planning	• Urban-rural divide, digital inequity • Natural hasard exposure, underinvestment	• Operational disruption • Limited preparedness, Stress in emergencies, emergency burnout
 HAITI	• Infrastructure	• Under-resourced health facilities, equipment shortages	• Chronic underfunding, aid dependency	• Safety risks, overwork, moral distress

SYSTEM/POLICY (MACRO)

	Domain	Pain Point	Drivers	Impact on HCWs
 NIGERIA	• Governance, • Law and regulation	• Uneven initiative adoption • No enforceable occupational mental health framework	• Decentralised 3tier health governance, budget gaps, mental health deprioritised • Weak implementation of 2023 Mental Health Act	• Policy vacuum, migration of HCWs, inequity
 INDONESIA	• Governance, • Law and regulation	• Fragmented health workforce policy, poor protections under new law	• Urban-rural divide, digital inequity • Natural hasard exposure, underinvestment	• Low trust in system, uneven care quality, HCW protests
 HAITI	• Governance, • Law and regulation	• No national HCW policy; • Labour law unenforced donor-driven agenda	• Chronic underfunding, • Fragile governance, donor conditionalityand dominance	• Mass resignations, skills drain • HCWs unprotected legally

4. COM-B Analysis to Derive Activities

We used a COM-B Behavioural Wheel to analyse each enabler and barriers of each level. Then, we conducted a literature search to arrive at the evidence-based proposed activities for various level.

COM-B Component	Barriers	Enablers	Proposed Activity
INDIVIDUAL (MICRO) LEVEL			
Capability	Emotional exhaustion, lack of MH literacy	Experiences handling wellbeing issues	HCW awareness, self care and resilience training [1-2]
Opportunity	Isolation, stigma on mental health seeking; lack of emotional support	Solidarity working together	Deployment of SMS/app-based e-mental health tools for HCWs; creating safe spaces [3-4]
Motivation	Stigma, fear of job loss, shame	Connections to peers and community	Stigma reduction campaign [5-7]
TEAM (MICRO) LEVEL			
Capability	Peer silence, Suboptimal Peer support networks	Knowledge about available resources	Basic MH awareness and PFA for peer responders [8-9]
Opportunity	Suboptimal team culture,	Supportive work environment, positive peer influence	Shared team debriefing sessions after critical events [10]
Motivation	Poor morale, avoidance norms,	Concerns about wellbeing and safety.	Peer recognition and informal morale boosting initiatives [11]
INSTITUTIONAL (MESO) LEVEL			
Capability	Inconsistent supervision skills among managers; absent mental health protocols	Availability of resources	Leadership and supervisory coaching on MH response [12]
Opportunity	Top-down hierarchy, lack of MH systems	Institutional norms supporting HCW resilience	Integrate MH into HR policy; embed psychological safety norms [13]
Motivation	Suboptimal MH incentives	Perceived benefits of resilient HCWs	Include MH in performance reviews; institutional MH champions[14]
SYSTEM (MACRO) LEVEL			
Capability	Absent HCW attrition rate measurement mechanisms & legal protocols [15]	Knowledge about benefit of improving HCW resilience	Conduct legal audit of existing protections for HCWs [15]
Opportunity	HCW MH is often not integrated into national health strategies [16]	Post-Covid/ crisis appreciation of HCW and their wellbeing	Create cross-sectoral task forces focused on health workforce wellbeing[16]
Motivation	Low political will & policy prioritisation of HCW MH & resilience [17]	Concerns about HCW resilience and wellbeing	Integrate HCW MH and resilience metrics into healthcare budget decisions [17]

5. SWOT Analysis of TRC Stakeholder Roles

As explained above, TRC engages with stakeholders across three levels—micro, meso, and macro—each playing a distinct role in designing, implementing, and scaling HCW resilience initiatives. A SWOT analysis was conducted to assess the strengths, weaknesses, opportunities, and threats facing stakeholders at each level, with the aim of informing strategic planning and operational alignment.

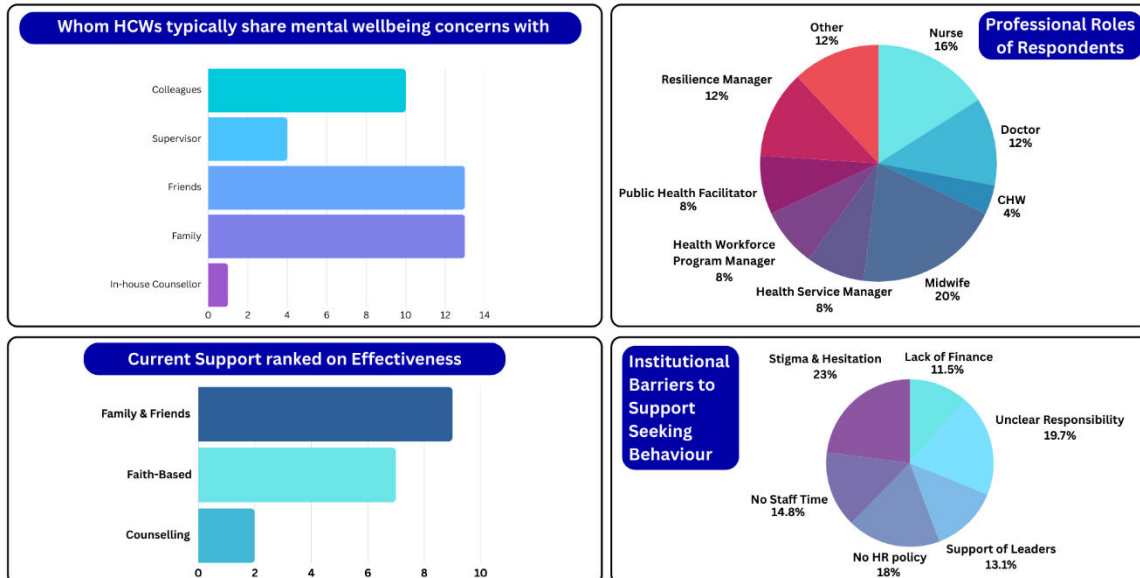
MICRO			
Front-line HCWs (nurses, midwives, community HCWs, Peer-support champions in facilities)			
S	W	O	T
• Deep contextual insight into day-to-day stressors & coping strategies. • High trust with patients & colleagues	• Limited time & bandwidth • Variable digital literacy • Internalised MH stigma	• Co-design status gives voice in toolkit updates • Peer testimonials / influence can drive viral adoption	• Tech or data costs may exclude rural HCWs. • Stigma surrounding MH may curb open engagement

MESO			
Facility managers & Matrons, District / regional HR or Quality Officers, Professional association representatives			
S	W	O	T
• Operational authority to allocate staff time for wellbeing activities. • Able to integrate TRC indicators	• Competing KPIs crowd out wellbeing agendas. • Budget constraints; wellbeing seen as “non-clinical cost”. • May lack technical expertise for MEL & digital analytics	• Access to TRC toolkits & Node resources to standardise resilience training (whilst making tweaks for local contexts) • Can broker cross-facility learning networks	• Leadership turnover or political reshuffles disrupt continuity. • If pilots fail, credibility with frontline staff erodes.

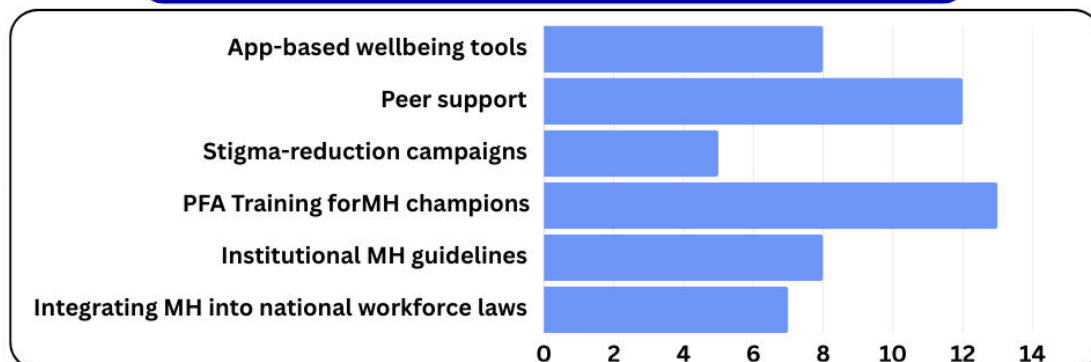
MACRO			
Ministry of Health HRH & Quality divisions, Donors & multilateral agencies (e.g., J&J, WHO), National professional councils / unions			
S	W	O	T
• Policy-making power to anchor HCW-resilience in national standards/CPD. • Can mobilise large-scale resources and visibility for TRC. • Ability to convene cross-sector alliances (tech, academia, NGOs).	• Slow bureaucratic cycles; long ethics & procurement timelines. • Agenda subject to political will or donor priorities. • Limited granular data to guide context-specific actions.	• Opportunity to embed TRC evidence in WHO or regional guidelines. • Public-private partnerships (PPP) to sustain scaling & finance endowment.	• Economic shocks or pandemics re-prioritise budgets away from wellbeing. • Donor fatigue or shift in funding themes could undermine TRC support.

6. ToC Preliminary Test Data

[LINK TO QUESTIONNAIRE](#)



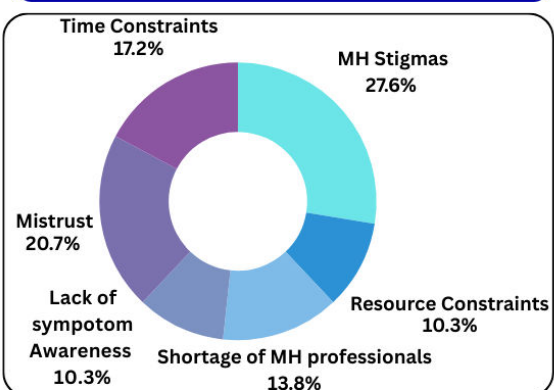
Desired Interventions for Workplace Implementation



Respondents Mapping



Barriers to Support Seeking Behaviour



KEY FINDINGS

- Data collated from 21 respondents in 8 countries
- Findings widely support and align with proposed ToC interventions.
- The most widely desired interventions were peer support and psychological first aid (PFA) training which align with proposed ToC recommended activities and outputs
- Critical facilitators for implementation from survey data:
 - Delegating responsibility and offering incentives for staff wellbeing
 - National-level funding for health worker resilience
 - More bottom-up decision-making that includes staff voices

7. References for the appendix

References for Appendices

Indonesia PESTEL

1. World Health Organization. WHO Indonesia: Country Cooperation Strategy [Internet]. Jakarta: World Health Organization; [cited 2025 Jul 30]. Available from: <https://www.who.int/indonesia/about-us/ccs>

2. World Health Organization. Global Health Expenditure Database [Internet]. apps.who.int. 2022. Available from: <https://apps.who.int/nha/database>

3. Made Karistawan. BPJS Kesehatan [Internet]. Bpjs-kesehatan.go.id. 2021. Available from: <https://bpjs-kesehatan.go.id>

4. World Bank. Documents & Reports - All Documents | The World Bank [Internet]. World Bank. Available from: <https://documents.worldbank.org/en/publication/documents-reports>

5. Climate and Health Alliance. Resources [Internet]. Climate Health Connect; [cited 2025 Jul 30]. Available from: <https://climatehealthconnect.org/resources/>

6. Burnout Among Nurses During the Covid-19 Pandemic. Manuju [Internet]. 2023 Apr 1 [cited 2024 Feb 22];5(4):1146–57. Available from: <https://typeset.io/papers/burnout-among-nurses-during-the-covid-19-pandemic-arv2hq0>

7. Kompas TH. Healthcare Workers Risk Their Lives on the Frontline [Internet]. Kompas.id. 2020 [cited 2025 Jul 30]. Available from: <https://www.kompas.id/baca/english/2020/04/20/healthcare-workers-risk-their-lives-on-the-frontline/>

8. Kementerian Kesehatan Republik Indonesia [Internet]. www.kemkes.go.id. Available from: <https://www.kemkes.go.id>

9. Loasana NA. Lawmakers pass omnibus health bill despite protests [Internet]. The Jakarta Post. 2023 [cited 2025 Jul 30]. Available from: <https://www.thejakartapost.com/indonesia/2023/07/11/lawmakers-pass-omnibus-health-bill-despite-protests.html>

Nigeria PESTEL

1. Ho SS, Sosina W, DePierro JM, Peres S, Khan A, Starkweather S, et al. Promoting Resilience in Healthcare Workers: A Preventative Mental Health Education Program. International Journal of Environmental Research and Public Health [Internet]. 2024 Oct;21(10):1365. Available from: <https://www.mdpi.com/1660-4601/21/10/1365>

2. Safaye T, Medo Gutú, Jakša Dubljanin, Stojanović TM, Draško Dubljanin, Andreja Kovačević, et al. Mentalising, Resilience, and Mental Health Status among Healthcare Workers during the COVID-19 Pandemic: A Cross-Sectional Study. International Journal of Environmental Research and Public Health. 2023 Apr 20;20(8):5994–4.

3. Koya J. Nguvu Health [Internet]. Nguvuhealth.com. 2025 [cited 2025 Jul 29]. Available from: <https://nguvuhealth.com/>

4. Okonkwo CC, Nwose EU, Beccaria G, Khanam R. VUCA in the present-day health workplace and the mental health and wellbeing of health care workers: a systematic scoping review. BMC Health Services Research. 2024 Nov 5;24(1).

5. Curtin M, Richards HL, Fortune DG. Resilience among health care workers while working during a pandemic: A systematic review and meta synthesis of qualitative studies. Clinical Psychology Review. 2022 May;95(1):102173.

Haiti PESTEL

1. Lederer, Edith, et al. "Haiti's Gangs Have 'near-Total Control' of the Capital as Violence Escalates, Un Says." AP News, AP News, 26 June 2025

2. Guly, C. (2004). Haiti emerging from chaos to face health care crisis. Canadian Medical Association Journal, [online] 170(9), pp.1379–1379. doi:<https://doi.org/10.1503/cmaj.1040541>.

3. World Bank Blogs. (2024). Resilient water systems are crucial in disaster-prone Haiti. [online] Available at: <https://blogs.worldbank.org/en/water/from-crisis-to-continuity--strengthening-the-resilience-of-water>.

4. Cdc.gov. (2025). Thirty Years of HIV – 1981–2011. [online] Available at: <https://www.cdc.gov/hmmwr/preview/mmwrhtml/mm6021a1.htm>.

5. PAHO (2024). Haiti - Country Profile. [online] Health in the Americas. Available at: <https://hia.paho.org/en/country-profiles/haiti>.

India PESTEL

1. Janani Shanithesh, Durbach A, Joshi R. Charting the Rights of Community Health Workers in India: The Next Frontier of Universal Health Coverage. Health and Human Rights [Internet]. 2021 Dec;23(2):225. Available from: <https://pmc.ncbi.nlm.nih.gov/articles/PMC6894295/>

2. Hari Sankar D, Joseph J, Benny G, Surya Surendran, Santosh Kumar Sharma, Nambiar D. The role(s) of community health workers in primary health care reform in Kerala, before and during the COVID 19 pandemic: a qualitative study. Frontiers in health services. 2024 Feb 29;4.

3. Mwenda M. Community Health Workers in Asia: Insights from the 2024 State of the Evidence Analysis [Internet]. CHW Central. 2024 [cited 2025 Jul 29]. Available from: https://chwcentral.org/community-health-workers-in-asia-insights-from-the-2024-state-of-the-evidence-analysis/?utm_source=chatgpt.com

4. Gandhi P A, Kathirvel S, Chakraborty S. Rural community health workers' readiness for mobile-phone based telemedicine uptake in India. Journal of Rural Medicine. 2022;17(3):166–70.

COM-B references

1. Kelly, F., Uys, M., Bezuidenhout, D., Mullane, S. L., & Bristol, C. (2021). Improving Healthcare Worker Resilience and Well-Being During COVID-19 Using a Self-Directed E-Learning Intervention. Frontiers in Psychology, 12. <https://doi.org/10.3389/fpsyg.2021.748133>

2. Yi-Frazier, J. P., O'Donnell, M. B., Adhikari, E. A., Zhou, C., Bradford, M. C., Garcia-Perez, S., Shipman, K. J., Hurtado, S. E., Junkins, C. C., O'Daffer, A., & Rosenberg, A. R. (2022). Assessment of Resilience Training for Hospital Employees in the Era of COVID-19. JAMA Network Open, 5(7). <https://doi.org/10.1001/jamanetworkopen.2022.20677>

3. Suffoletto, B. (2024). Deceptively Simple yet Profoundly Impactful: Text Messaging Interventions to Support Health. Journal of Medical Internet Research, 26, e58726. <https://doi.org/10.2196/58726>

4. Kornfield, R., Stamatis, C. A., Bhattacharjee, A., Pang, B., Nguyen, T., Williams, J. J., Kumar, H., Popowski, S., Beltzer, M., Karr, C. J., Reddy, M., Mohr, D. C., & Meyerhoff, J. (2023). A text messaging intervention to support the mental health of young adults: User engagement and feedback from a field trial of an intervention prototype. Internet Interventions, 34. <https://doi.org/10.1016/j.invent.2023.100667>

5. Hanisch, S. E., Twomey, C. D., Szeto, A. C. H., Birner, U. W., Nowak, D., & Sabariego, C. (2016). The effectiveness of interventions targeting the stigma of mental illness at the workplace: A systematic review. BMC Psychiatry, 16(1). <https://doi.org/10.1186/s12888-015-0706-4>

7. Ramirez-Vielma, R., Vaccari, P., Cova, F., Saldivia, S., Vielma-Aguilera, A., & Grandón, P. (2023). Interventions to reduce the stigma of mental health at work: a narrative review. In Psicología: Reflexao e Critica (Vol. 36, Issue 1). Springer Science and Business Media Deutschland GmbH. <https://doi.org/10.1186/s41155-023-00255-1>

8. Patel, V., Saxena, S., Lund, C., Thornicroft, G., Baingana, F., Bolton, P., Chisholm, D., Collins, P.Y., Cooper, J.L., Eaton, J. and Herrman, H., 2018. The Lancet Commission on global mental health and sustainable development. The Lancet, 392(10157), pp.1553–1598.

9. World Health Organisation (WHO). 2022. Mental health and psychosocial support in emergencies: What should humanitarian health actors know? Geneva: WHO.

10. West, C.P., Dyrbye, L.N. and Shanafelt, T.D. (2018). Physician burnout: contributors, consequences and solutions. Journal of Internal Medicine, [online] 283(6), pp.516–529. doi:<https://doi.org/10.1111/joim.12752>.

11. Shanafelt, T.D. and Noseworthy, J.H. (2019). Executive Leadership and Physician Well-being. Mayo Clinic Proceedings, [online] 92(1), pp.129–146. Available at: <https://pubmed.ncbi.nlm.nih.gov/27871627/>.

12. Harri, B.I., Ogunboye, I., Okonkwo, A., Yakubu, A., Kung, J.Y., Fofah, J., Masseyferguson, O.T. and Eboeime, E. (2025). Addressing the mental health needs of healthcare professionals in Africa: a scoping review of workplace interventions. Cambridge Prisms: Global Mental Health, 12. doi:<https://doi.org/10.1017/gmh.2025.19>.

13. NHS Employers (2024). Top Tips for Supporting the Psychological Safety of Staff | NHS Employers. [online] www.nhsemployers.org. Available at: <https://www.nhsemployers.org/articles/top-tips-supporting-psychological-safety-staff>.

14. National Academies of Sciences, E. (2019). Taking action against clinician burnout: A systems approach to professional well-being. [online] [nap.nationalacademies.org](https://nap.nationalacademies.org/catalog/25521/taking-action-against-clinician-burnout-a-systems-approach-to-professional). National Academy of Medicine. Available at: <https://nap.nationalacademies.org/catalog/25521/taking-action-against-clinician-burnout-a-systems-approach-to-professional>.

World Health Organisation (WHO). 2021. Guidelines on health worker education and training on mental health. Geneva: WHO.

15. Johns Hopkins University. Thriving Together: Supporting Resilience in the Healthcare Workforce [Internet]. Clinicaltrials.gov. 2025 [cited 2025 Jul 30]. Available from: <https://www.clinicaltrials.gov/study/NCT05321381?tab=table>

16. Centre of Excellence for Integrated Health Solutions. Second Edition [Internet]. 2025 Jan. Available from: https://www.thenationalcouncil.org/wp-content/uploads/2025/02/25.02.10_CHI-White-Paper.pdf

17. Friebe R, Wallenburg I. Politics in all policies: how healthcare is shaped by political (in)action. Health Economics Policy and Law [Internet]. 2024 Jul 1;19(3):289–91. Available from: <https://www.cambridge.org/core/journals/health-economics-policy-and-law/article/politics-in-all-policies-how-healthcare-is-shaped-by-political-inaction/4D10183003B78977303EE9A8E7BB4F41>