

REIMAGINING COMMUNITY HEALTH SYSTEMS FOR EQUITY AND RESILIENT POPULATION HEALTH CARE



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REIMAGINING COMMUNITY HEALTH SYSTEMS FOR EQUITY AND RESILIENT POPULATION HEALTH CARE

*A Timor-Leste Perspective on Community, Dignity, Resilience, and
the Future of Health*

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First Edition, 2026

Dedication

To the people and communities whose lives give meaning to the idea of health.

To the families who care quietly, often without recognition.

To the community health workers who cross distances, listen to stories, and carry care from one home to another.

To the nurses, midwives, doctors, educators, and health professionals who serve not only with knowledge, but with courage, patience, and compassion.

To the communities of Timor-Leste—
in the sucos, aldeias, mountains, valleys, and coastal villages—
whose resilience continues to teach us that health is more than the absence of illness.

And to the generations yet to come:

May you inherit a health system that sees every person,
hears every community,
protects every dignity,
and leaves no one behind.

This book is dedicated to the possibility of a healthier future—
built not for communities alone, but with them.

Epigraph

“The health of a people is not measured only by how well its institutions respond to illness, but by how faithfully its society protects the dignity of human life.”

PREFACE

There are moments in the life of a nation when health can no longer be understood merely as a matter of hospitals, medicines, or clinical services. It becomes a question about how a society understands human dignity, how it responds to vulnerability, and how it chooses to care for those whose voices are often least heard. In such moments, health ceases to be only a technical concern. It becomes a moral, social, and human question.

This book emerges from that question.

Reimagining Community Health Systems for Equity and Resilient Population Health Care is written from a particular horizon: Timor-Leste, a young nation whose health system continues to evolve within a landscape shaped by geography, history, cultural diversity, limited resources, and the enduring strength of community life. Yet its concern reaches beyond Timor-Leste. The challenges faced by communities in small and resource-constrained settings are increasingly shared across a changing world: unequal access to care, fragile infrastructures, workforce limitations, demographic and epidemiological transitions, environmental pressures, emerging health threats, and the rapid expansion of digital technologies.

The central argument of this book is simple, yet demanding: health systems cannot become truly resilient unless the communities they serve are recognized as active participants in the creation of health.

For too long, health systems have often been imagined primarily through institutions—hospitals, clinics, ministries, technologies, budgets, and professional structures. These are indispensable. Yet health itself is lived elsewhere: in families, homes, villages, schools, workplaces, places of worship, landscapes, relationships, and everyday acts of solidarity. A health system may possess sophisticated infrastructure and still remain distant from the people whose lives it is intended to improve. Reimagining community health therefore requires more than reorganizing services. It requires a change in perspective. It asks us to move from patients to persons, from recipients to partners,

from fragmentation to integration, from equality to equity, and from crisis survival to collective resilience. It asks us to recognize that communities possess knowledge, memory, relationships, and capacities that cannot simply be imported, standardized, or replaced by institutional solutions.

Timor-Leste offers a particularly meaningful horizon for this reflection. Its communities have experienced profound historical transformations and have developed forms of solidarity and adaptation that remain important sources of social strength. The *suco* and *aldeia*, families, community leaders, health workers, and local networks are not peripheral to the health system. They are part of the living infrastructure through which care becomes possible.

At the same time, community strength should never be romanticized as a substitute for adequate public investment. Resilience must not become another word for asking communities to endure deprivation. A resilient health system is not one that merely teaches people how to survive scarcity; it is one that works to reduce the conditions that produce vulnerability in the first place.

This distinction is fundamental to the argument developed throughout these pages.

Equity means more than providing the same service to everyone. It requires attention to differences in geography, socioeconomic circumstances, vulnerability, cultural context, and access. Resilience means more than returning to normal after a crisis. It includes the capacity to anticipate, absorb, adapt, learn, and transform. Community participation means more than consultation. It means creating genuine spaces in which people can contribute to decisions that shape their health and their future.

The transformation of health systems is also occurring in the midst of a technological revolution. Digital health, telemedicine, data systems, and artificial intelligence offer extraordinary possibilities for extending access, strengthening decision-making, improving surveillance, and supporting health professionals. Yet technology alone cannot answer

the deepest questions of care. A technologically advanced system can still reproduce exclusion, deepen inequality, compromise privacy, or distance people from one another.

The challenge, therefore, is not simply to make health systems more digital. It is to make them more human while becoming more capable.

This book consequently places dignity, equity, participation, trust, community capacity, and human responsibility at the centre of its vision. Technology belongs within this framework, not above it.

The chapters that follow trace a journey from understanding community health systems to reimagining their future. The first chapter examines community health within the changing realities of Timor-Leste. The second turns to equity, dignity, and the right to health. The third explores resilience as a collective capacity rooted in primary health care and community life. The fourth considers the people, technologies, and digital possibilities shaping the future of community care. The fifth brings these reflections together in a proposed framework for a more equitable and resilient community health system.

The purpose is not to present Timor-Leste as a perfect model, nor to suggest that one country's experience can simply be transferred to another. Rather, Timor-Leste serves as a living context from which broader questions can be asked. What can communities teach health systems? How can limited resources become a stimulus for contextual innovation without becoming an excuse for structural neglect? How can global knowledge be adapted without erasing local knowledge? And how can health systems become simultaneously more equitable, more resilient, and more deeply human?

These questions matter because the future of population health will not be determined by institutions alone. It will be shaped by the relationships between institutions and communities, professionals and families, technology and human judgment, policy and lived experience.

Ultimately, to reimagine community health is to reimagine the meaning of care itself.

A health system is not truly resilient when it merely survives a crisis. It becomes resilient when it learns from vulnerability, protects those at greatest risk, strengthens collective capacity, and transforms itself so that fewer people are left behind.

And a health system is not truly equitable when everyone is offered the same pathway. It becomes equitable when every person has a meaningful opportunity to live, to participate, to be heard, and to receive care with dignity.

Perhaps this is where the deepest meaning of community health begins: not with the system looking toward the community, but with the system learning to see itself as part of the community.

This book is an invitation to make that shift.

It is an invitation to imagine health systems not only as structures of service delivery, but as expressions of solidarity; not only as mechanisms of intervention, but as relationships of responsibility; not only as institutions designed to respond to illness, but as collective commitments to human flourishing.

For Timor-Leste, and for communities beyond it, the question is ultimately not only how we can build stronger health systems.

It is what kind of society we wish those health systems to reveal.

And perhaps the answer begins with a simple conviction:

No community should be left behind, and no person should have to surrender their dignity in order to receive care.

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INTRODUCTION

Health is never created by hospitals alone. It is born long before a person enters a clinic and sustained long after a patient leaves one. It is shaped in homes where families make everyday decisions about nutrition, prevention, and care; in communities where people share knowledge, traditions, and mutual support; in schools and workplaces where health behaviours and opportunities are formed; and in the social, economic, cultural, and environmental conditions that influence how people live. Health, therefore, cannot be reduced to the treatment of disease or the provision of clinical services. It emerges from a complex web of relationships, resources, knowledge, responsibilities, institutions, and collective action. A health system should consequently be understood not simply as a collection of hospitals, clinics, programmes, and professionals, but as a living social system whose strength depends upon the connections between people, communities, institutions, and the environments in which life unfolds. The World Health Organization has increasingly emphasized people-centred and integrated approaches in which communities are not passive recipients of health services but active participants in shaping, implementing, and sustaining health systems (World Health Organization, 2007, 2016).

This perspective acquires particular significance in Timor-Leste. As a young nation continuing to consolidate its institutions and public services, Timor-Leste is building a health system within a landscape marked by geographical complexity, limited resources, evolving institutional capacity, and diverse community realities. Mountains, dispersed settlements, transportation difficulties, socioeconomic inequalities, and differences in access to infrastructure shape how health services are experienced across the country. The National Health Sector Strategic Plan 2011–2030 recognizes many of these realities by placing accessible primary and hospital care, community and partnership participation, human-resource development, infrastructure, and integrated health-system strengthening among its central priorities (Ministry of Health, Timor-Leste, 2011). The national vision therefore already contains an important principle: health development cannot be achieved through institutions alone. It requires

a system capable of remaining connected to the communities it is intended to serve.

Yet the existence of a health service does not necessarily mean that health care is genuinely accessible. Formal availability and meaningful access are not the same thing. A clinic may exist, but a family may still be unable to reach it. A service may be officially free, yet transportation, food, accommodation, lost working time, information gaps, and social or cultural barriers may make care practically unaffordable. Evidence from Timor-Leste demonstrates that rural households have been less likely than urban households to use hospital services, while poorer households encounter greater barriers to accessing more costly forms of care. Distance and indirect costs remain important determinants of health-care utilization even when services are formally free at the point of use (Guinness et al., 2018). These realities expose an essential dimension of health equity: equity cannot be measured simply by counting facilities, services, or consultations. It must also be understood through the question of whether people can realistically reach, use, trust, and benefit from the care that the system provides.

This is where the community assumes a deeper significance. The community is not merely the geographical destination toward which health services are delivered. It is part of the health system itself. Families provide care and continuity; community health workers connect formal services with everyday life; local leaders help cultivate trust and collective action; primary-care providers translate professional knowledge into locally meaningful practices; and community networks sustain people through vulnerability, illness, recovery, and crisis. These relationships generate forms of knowledge and social capital that cannot simply be manufactured within institutional structures. Community participation, therefore, should not be treated as an optional supplement to health-system development. It is one of the foundations upon which effective, equitable, and resilient systems are built (World Health Organization, 2016).

To reimagine community health systems is consequently to reconsider what we mean by a health system in the first place. It means moving beyond fragmented programmes toward connected systems; beyond

institutional boundaries toward relational networks; beyond passive recipients toward active partners; and beyond short-term service delivery toward long-term population health, equity, and resilience. Such a transformation requires attention not only to infrastructure and technology, but also to trust, participation, local knowledge, human relationships, accountability, and the capacity of communities to shape the conditions of their own health.

For Timor-Leste, this is not merely a technical or administrative challenge. It is also a social and ethical question. How can a nation build a health system that remains close to its people while responding to changing patterns of disease, demographic transitions, geographical barriers, socioeconomic inequalities, limited resources, and accelerating technological transformation? How can health systems become sufficiently resilient to withstand crises without losing sight of the dignity, voice, and lived realities of the people they are designed to serve?

These questions become increasingly urgent as the boundaries between community health, primary care, digital health, public policy, social protection, and population well-being become more interconnected. The future of health care will depend not only on stronger institutions, but on stronger relationships between institutions and the communities around them. Resilience will not be created solely through additional infrastructure or advanced technologies; it will also emerge from trust, participation, solidarity, adaptability, and the capacity to respond collectively when systems are under pressure.

This book begins from that conviction. Reimagining community health systems means imagining health not as something delivered to people, but as something built with them. It means recognizing communities not as the final point in a chain of service delivery, but as living partners in the creation of healthier and more equitable societies. It means asking not only whether health systems can reach communities, but whether they can listen to them, learn from them, adapt to them, and grow alongside them. The task, ultimately, is not to create a system that merely reaches communities. It is to create a system that grows with them—one in which equity becomes a practice, resilience becomes a

collective capacity, and health becomes a shared expression of human dignity.

CHAPTER 1

COMMUNITY HEALTH IN TIMOR-LESTE: FROM FRAGMENTED SERVICES TO LIVING SYSTEMS

1.1 Understanding Community Health Beyond the Hospital

Health does not begin at the hospital door. It begins much earlier—in the home, within the family, in the neighbourhood, at school, in the workplace, and in the everyday conditions through which people experience life. Before illness becomes a diagnosis, it is often shaped by nutrition, housing, education, income, sanitation, social relationships, cultural practices, and the capacity of families and communities to respond to vulnerability. For this reason, community health cannot be understood simply as the delivery of services beyond hospital walls. It is a broader social process through which individuals, families, communities, health professionals, institutions, and public systems participate in protecting, sustaining, and improving human well-being.

The traditional image of healthcare has often placed the hospital at the centre of the health system, with communities positioned primarily as recipients of professional knowledge and services. Community-oriented health care invites us to reconsider this arrangement. Primary health care shifts attention from institutions alone toward people, participation, prevention, continuity, and the social conditions that make health possible. The Alma-Ata Declaration established a foundational principle that health is a fundamental human right and that people have both the right and the duty to participate individually and collectively in the planning and implementation of their health care (World Health Organization, 1978). Decades later, the World Health Organization continued to emphasize the importance of people-centred and integrated health services capable of responding to the needs, preferences, and lived realities of individuals and communities (World Health Organization, 2019).

Such a perspective changes the meaning of a health system. A health system is not strong simply because it possesses hospitals, clinics,

medicines, technologies, and trained professionals. Its deeper strength lies in the relationships that connect these resources to the people for whom they exist. Health systems become more responsive when they are connected to the places where people live, work, learn, worship, raise children, grow food, care for relatives, and confront illness together. The community is therefore not merely the final destination of health services. It is one of the places in which health is continuously produced, negotiated, protected, and sometimes lost.

This perspective is particularly important in Timor-Leste. Across the country, geographical conditions, household circumstances, socioeconomic realities, cultural practices, and unequal access to services continue to shape people's experiences of health and illness. Mountains, dispersed communities, transportation difficulties, financial constraints, and differences in access to health facilities can transform a theoretically available service into a practically unreachable one. Research on healthcare utilization in Timor-Leste has shown that distance, socioeconomic conditions, and the costs associated with accessing services can influence whether people seek and receive appropriate care (Guinness et al., 2018). These realities remind us that access is not simply a matter of whether a facility exists. Meaningful access also depends on whether people can reach it, afford the journey, understand the service, trust the providers, and feel that the care they receive respects their circumstances.

Community health, therefore, is not simply about bringing hospitals closer to people. It is about bringing health systems closer to the realities of human life. It asks whether services are physically accessible, economically feasible, culturally meaningful, socially trusted, and responsive to local needs. It also asks whether communities possess the knowledge, relationships, confidence, and collective capacity to participate actively in protecting their own health.

This requires a different understanding of participation. Participation is not merely attending a health campaign or receiving information from professionals. It involves listening to community knowledge, recognizing local experience, involving people in decisions, and creating conditions in which communities can influence the priorities

and practices of the health system. Families and local networks often possess forms of knowledge that formal institutions cannot easily reproduce: knowledge of local geography, cultural practices, social relationships, patterns of vulnerability, and the everyday realities of caring for others.

A living health system, therefore, does not merely serve a community; it listens to it. It does not simply deliver knowledge; it learns from experience. It does not impose solutions from above; it develops responses through dialogue, partnership, and mutual responsibility. Such a system understands that health is not an object to be delivered but a human condition to be cultivated collectively.

In this sense, community is not the periphery of the health system.

Community is where health begins. And when health systems learn to begin there, they become not only more accessible, but more human, more equitable, and more resilient.

1.2 The Geography of Health: Dili, Rural Communities, and Remote Areas

Health is also a geography. It is shaped not only by biology, medicine, and individual behaviour, but also by the places in which people are born, grow, work, age, and seek care. Where people live can determine how far they must travel to reach a health facility, how long they must wait before receiving treatment, what resources are available to them, and whether healthcare becomes a practical reality or remains a distant promise. Geography, therefore, is not merely a physical characteristic of a health system. When combined with poverty, transportation limitations, infrastructure gaps, and unequal distribution of services, geography can become a powerful social determinant of health.

In Timor-Leste, the geographical contrast between Dili, rural communities, and remote areas makes this reality particularly visible. Dili functions as the country's principal administrative, economic, educational, and institutional centre, and health services, specialized

professionals, infrastructure, and other resources are consequently more concentrated there. For populations living in or near the capital, proximity can create opportunities for earlier consultation, greater choice of services, easier referral, and more immediate access to specialized care. Yet these advantages cannot be assumed to exist equally across the country.

For communities living farther from major health facilities, geographical distance may interact with transportation difficulties, household income, terrain, road conditions, seasonal weather, and the availability of accompanying family members. A journey that appears short on a map may become long and difficult in lived experience. The cost of transportation, the time required to travel, the loss of income associated with seeking care, and the uncertainty of reaching an appropriate facility can all influence whether individuals decide to seek healthcare at all. Research on healthcare utilization in Timor-Leste demonstrates that distance and socioeconomic circumstances can shape patterns of healthcare use, revealing that formal availability does not necessarily translate into meaningful access (Guinness et al., 2018).

Yet rural and remote communities should never be understood merely through the language of distance, deficiency, or absence. To describe a community only by what it lacks risks overlooking what it already possesses. Rural communities carry their own forms of knowledge, social memory, family networks, cultural practices, mutual support, and collective resilience. Families often become the first responders to illness. Local leaders can mobilize participation and trust. Community health workers can serve as bridges between formal institutions and everyday life. These resources are not peripheral to health-system development; they are part of its existing social infrastructure.

The challenge, therefore, is not simply to bring an urban model of healthcare into every remote community. It is to build connections between formal health services and the capacities that already exist within communities. Primary health care was conceived around precisely such a principle: essential health services should be accessible to people as close as possible to where they live and work,

while communities should participate actively in maintaining and improving their health (World Health Organization, 1978). Accessibility, in this sense, is inseparable from participation.

The geography of health consequently calls for more than the construction of additional facilities. It requires a system designed around movement, continuity, adaptability, and local capacity. Community health workers, mobile and outreach services, effective referral systems, transportation support, communication technologies, and appropriately distributed health professionals can help connect geographically dispersed populations with the wider health system (World Health Organization, 2016; Abimbola, 2021). Digital technologies may further reduce certain forms of distance, but technology cannot eliminate geography altogether. Connectivity must therefore complement—not replace—the human presence that remains essential to care.

A resilient community health system must also recognize that geographical inequity can accumulate over time. When distance repeatedly delays diagnosis, interrupts treatment, or discourages preventive care, geographical disadvantage can become a cycle of avoidable illness. Conversely, when health services are organized around continuity, local participation, and timely referral, communities can become more capable of responding to both everyday health needs and future crises.

For Timor-Leste, reimagining community health therefore means refusing to allow geography to determine whose health matters and whose suffering can remain unseen. It means designing a system capable of travelling beyond the centre—to the village, the *suco*, the *aldeia*, and ultimately the household. The measure of a resilient health system is not simply how advanced its central institutions become, but how faithfully its care reaches those who live farthest from them.

Geography should shape the way a health system travels—not determine who is left behind. Access to care must become not a privilege of proximity, but an enduring expression of equity, dignity, and shared national responsibility.

1.3 Family, Suco, Aldeia, and the Social Foundations of Care

Health is never an entirely individual experience. Before a person encounters a nurse, doctor, clinic, or hospital, health has already been shaped by the relationships, environments, beliefs, and resources that surround everyday life. Illness may appear in an individual body, but the experience of illness rarely belongs to that individual alone. It is interpreted within families, discussed among relatives, responded to by neighbours, and influenced by the social expectations and material conditions of the community. In many settings, the first response to illness does not come from a formal institution. It comes from those who live closest to the person in need.

This reality is particularly significant in Timor-Leste, where the family, *suco*, and *aldeia* remain important social spaces in which care is experienced, negotiated, and expressed. These spaces are more than administrative or geographical units. They are places of belonging, memory, responsibility, reciprocity, and everyday relationship. Within them, people often accompany one another through birth, illness, disability, ageing, loss, and recovery. Family members may provide food, transportation, financial assistance, medication support, personal care, and emotional reassurance. Neighbours and community networks may offer practical help when a household is unable to manage alone. Such relationships constitute an important part of the social infrastructure through which health is understood and sustained.

The significance of these relationships becomes especially visible when formal health services are distant, limited, or difficult to access. Families may become the first observers of changes in a person's condition and the first decision-makers regarding whether and when professional care should be sought. Community members may provide information, accompany patients to health facilities, assist with communication, or support adherence to treatment. In this sense, the pathway to healthcare does not begin at the clinic. It often begins within relationships of trust that exist long before a health professional enters the picture. This understanding resonates strongly with the principles of people-centred health care. Such approaches emphasize relationships, participation, continuity, dignity, and respect for the social contexts in

which people live (World Health Organization, 2007). A responsive health system therefore cannot view communities simply as geographical locations where services happen to be delivered. Communities possess their own knowledge, relationships, responsibilities, histories, and capacities. Recognizing these dimensions allows health systems to move beyond a model of service delivery toward a model of partnership.

Yet community solidarity should not be romanticized. Families and communities are not limitless sources of care. They may themselves experience poverty, unemployment, inadequate housing, limited health literacy, gendered caregiving responsibilities, geographical isolation, disability, or insufficient access to professional support. The expectation that families should absorb the responsibilities of an under-resourced health system can deepen rather than reduce inequality. Those with greater economic and social resources may be better able to compensate for gaps in formal services, while vulnerable households may carry the greatest burden of unmet need.

For this reason, community participation must complement—not replace—the responsibility of the health system to provide accessible, safe, effective, and equitable care. Accessibility is not achieved simply because families are willing to help. A just health system must ensure that professional support reaches people when community capacity alone is insufficient. The principle of equity therefore requires a careful balance: communities should be empowered to participate in health, while institutions remain accountable for providing the resources and services necessary to protect that participation from becoming an additional burden (Levesque et al., 2013; World Health Organization, 2016).

The future of community health in Timor-Leste depends partly on this meeting point between formal systems and lived relationships. The health system contributes professional knowledge, clinical expertise, medicines, technologies, standards, referral pathways, and continuity of care. Communities contribute trust, local knowledge, cultural meaning, social memory, relational support, and an intimate

understanding of everyday realities. Neither dimension is sufficient on its own. Their strength emerges through connection.

When these worlds encounter one another with humility and mutual respect, care becomes more than a transaction between provider and patient. It becomes a shared social responsibility. The health professional is no longer an outsider who simply delivers a service, and the community is no longer a passive recipient waiting to be served. Both become participants in a relationship through which health can be protected and strengthened.

This perspective also changes the meaning of resilience. A resilient community is not one in which illness, poverty, ageing, disability, or vulnerability disappear. Vulnerability is part of human life. Resilience is found instead in the capacity to respond to vulnerability without allowing people to face it in isolation. It emerges when families are supported, communities are heard, and institutions remain present when their support is most needed.

Ultimately, the strength of community health may be measured not only by the number of facilities, professionals, or services available, but by the quality of the relationships connecting them to people's lives.

A healthy community is not one in which people never become vulnerable. It is one in which vulnerability does not have to be carried alone.

1.4 From Colonial Legacies to a National Health System

Every health system carries a history. No institution emerges from an empty space, and no system of care develops independently from the historical experiences of the society it serves. Institutions, professional practices, patterns of access, public expectations, and relationships of trust are shaped not only by contemporary policies but also by the political, social, cultural, and economic circumstances through which communities have travelled. To understand the present health system of Timor-Leste, therefore, is also to listen to the historical layers that continue to influence its institutions, communities, and possibilities.

Timor-Leste's health system has developed through profound and often difficult historical transitions. Colonial rule, periods of conflict, Indonesian occupation, the restoration of independence, and the subsequent construction of national institutions have each left different traces upon the organization and experience of healthcare. These periods cannot be understood simply as separate chapters in a political chronology. They also influenced the availability of services, the formation of health institutions and human resources, the distribution of infrastructure, and the ways in which communities experienced authority, vulnerability, and care. The health system that exists today is therefore partly the product of historical continuity and partly the result of deliberate reconstruction.

The restoration of independence created a particularly important moment in this history. Nation-building required the reconstruction of institutions while simultaneously imagining what those institutions should become. Health care became part of this larger national project: the creation of a state capable not only of governing territory, but of protecting human dignity and responding to the fundamental needs of its population. Building a national health system was consequently more than an administrative exercise. It was part of the broader work of transforming independence into lived social reality.

The National Health Sector Strategic Plan 2011–2030 reflects this continuing ambition by placing primary care, accessibility, equity, community participation, human-resource development, and health-system capacity within the long-term development of the national health sector (Ministry of Health, Timor-Leste, 2011). These priorities suggest an important understanding of what it means for a health system to become genuinely national. A national system cannot be sustained through hospitals and specialized services alone. It requires functioning relationships between households, communities, primary-care facilities, referral institutions, health professionals, local structures, and national authorities.

Such relationships are particularly important in a geographically diverse country. A policy formulated at the national level acquires meaning only when it can be translated into services that people can actually reach

and use. A health facility becomes part of a national system not merely because it appears within an administrative plan, but because it connects people to appropriate care with continuity and reliability. In this sense, national health-system development is simultaneously a process of institutional construction and relational construction.

The process, however, remains unfinished. Building and strengthening a health system in a young nation involves learning how to coordinate limited resources, respond to geographical and socioeconomic inequalities, strengthen human capacity, improve infrastructure, and maintain continuity between national policy and community realities. It requires institutions capable of learning from experience rather than simply reproducing established structures. Health-system strengthening is therefore not simply a matter of adding facilities, programmes, technologies, or services. It requires systems thinking: an understanding of how different components interact, how weaknesses in one part can affect the whole, and how institutional relationships can either reinforce or undermine health outcomes (de Savigny & Adam, 2009; Frenk, 2010).

This perspective also invites a more nuanced understanding of historical legacy. History is not merely something that belongs to the past. It can remain present through institutions, memories, expectations, inequalities, professional traditions, and patterns of trust. Some legacies may provide foundations upon which new systems can be built, while others may reveal structural challenges that require continued transformation. The task of national health development is therefore neither to erase history nor to become imprisoned by it. It is to learn from history while creating institutions capable of responding to present and future needs.

For Timor-Leste, this means that health-system development is inseparable from the wider question of national identity and collective responsibility. The aspiration for health equity is part of the aspiration to build a society in which every person can experience the benefits of independence in tangible ways. A functioning health system becomes one of the places where citizenship acquires practical meaning: where public institutions demonstrate that human life matters and where

communities can encounter the state not only through administration, but through care.

The history of Timor-Leste's health system, therefore, should not be understood only as a history of institutions, policies, facilities, or professional structures. It is also a history of aspiration—the continuing effort to transform experiences of vulnerability into structures of protection, historical dependence into greater national capacity, and fragmented access into a more coherent system of care.

The journey remains unfinished. Yet its direction is clear: from inherited structures toward greater capacity, from institutional fragmentation toward connection, and from formal independence toward a health system capable of making care tangible in everyday life.

A national health system becomes truly national when its promise of care is experienced not only within institutions, but across the everyday lives, communities, and futures of its people.

1.5 Reimagining Community Health for a Young Nation

To reimagine community health in Timor-Leste is to look beyond the familiar questions of how many health facilities exist, how many professionals are available, or how many services can be delivered. These indicators remain important, but they do not exhaust the meaning of a functioning health system. Beneath them lies a more fundamental question: What kind of health system does a young nation wish to build for its people, and what kind of relationship should that system establish with the communities it serves?

For Timor-Leste, such a question cannot be separated from the realities of nation-building. Geography, limited resources, socioeconomic inequality, cultural diversity, changing patterns of disease, and the continuing development of national institutions all influence the possibilities and limitations of health-system development. A health system designed for a young nation must therefore be more than technically functional. It must be socially responsive, geographically attentive, institutionally adaptable, and sufficiently close

to people's everyday realities to recognize forms of vulnerability that may remain invisible within national statistics.

The National Health Sector Strategic Plan 2011–2030 places accessibility, primary health care, community participation, human resources, infrastructure, and health-system development within the broader national health agenda (Ministry of Health, Timor-Leste, 2011). Yet the existence of these priorities does not automatically guarantee their equal realization. Evidence from Timor-Leste indicates that distance and socioeconomic circumstances can influence patterns of healthcare utilization, reminding us that formal equality of provision may coexist with substantial differences in people's actual capacity to benefit from health services (Guinness et al., 2018). Reimagining community health therefore requires attention not only to what the system provides, but to whom it reaches, under what conditions, and with what consequences.

This means moving from fragmented services toward a living system. Primary health care, community participation, professional capacity, referral networks, social protection, public institutions, infrastructure, and emerging technologies cannot achieve their full potential when they operate as isolated components. Their effectiveness depends upon the relationships connecting them. Systems thinking emphasizes precisely this point: health outcomes emerge from interactions among multiple actors, structures, environments, and processes rather than from individual interventions considered in isolation (de Savigny & Adam, 2009).

Such a perspective changes how health-system development itself is imagined. A new clinic may expand physical access, but without trained personnel, medicines, referral mechanisms, transportation, community trust, and continuity of care, its contribution may remain limited. A digital platform may improve communication, but without connectivity, digital literacy, institutional support, and attention to local realities, technological innovation may reproduce existing inequalities. A national policy may establish an ambitious vision, but its meaning ultimately depends on how that vision is translated into everyday practices within communities.

Reimagining community health therefore requires connection rather than simple expansion. It requires institutions to communicate with one another, professionals to work across boundaries, communities to participate in decisions, and national policies to remain responsive to local experience. Resilience emerges not from the strength of one institution alone, but from the capacity of the wider system to adapt, learn, coordinate, and continue functioning when circumstances change.

This task also requires intellectual humility. Timor-Leste does not need to reproduce models designed elsewhere simply because they have become established internationally. Global health knowledge can provide valuable evidence, frameworks, technologies, and lessons, but these must enter into dialogue with the country's own history, culture, geography, social structures, and aspirations. Reimagining community health is therefore not an exercise in rejecting external knowledge; it is an effort to transform knowledge through local meaning.

Health equity is especially important within this process. Treating everyone identically does not necessarily produce equitable outcomes when people begin from different circumstances. Differences in geography, income, education, social support, and access to infrastructure can create unequal opportunities to achieve health. Equity therefore requires attention to the conditions that shape people's substantive capabilities to live healthy lives (Sen, 2002; Commission on Social Determinants of Health, 2008). A community health system must be capable of recognizing these differences rather than allowing them to disappear behind the appearance of uniform provision.

For a young nation, however, institutional incompleteness should not be interpreted as an invitation to postpone imagination. Nations do not first become perfect and then begin to reform their institutions. They build while learning, strengthen while adapting, and develop capacity through participation and experience. The unfinished character of a health system can therefore become an opportunity for reflection: an invitation to ask what should be preserved, what should be transformed, and what new possibilities can be created.

The future of community health in Timor-Leste will depend partly on this capacity to imagine beyond existing structures. It will require a health system capable of learning from communities rather than simply instructing them; of recognizing local knowledge rather than treating it as secondary; and of combining professional expertise with the social relationships through which care becomes meaningful.

Ultimately, to reimagine community health is to reimagine the relationship between a nation and its people. The relationship need not be defined simply by provider and recipient, institution and beneficiary, or centre and periphery. It can become a relationship of partnership, mutual responsibility, participation, and shared commitment to human well-being.

A young nation does not build its health system only by constructing institutions. It builds it by creating relationships through which every person can experience that those institutions exist for them, with them, and alongside them.

CHAPTER 2

EQUITY, DIGNITY, AND THE RIGHT TO HEALTH

2.1 Health Equity in an Uneven Landscape

Health equity begins with a simple but profound recognition: people do not begin from the same place. Human beings live within different geographical, economic, social, cultural, and institutional circumstances, and these differences profoundly shape their opportunities to remain healthy, prevent illness, seek care, and recover from disease. Some people live close to health facilities, while others must travel long distances. Some households possess financial resources, transportation, information, and social support, while others must make difficult choices between seeking healthcare and meeting other essential needs. For this reason, treating everyone identically does not necessarily produce an equitable health system.

The distinction between equality and equity is therefore fundamental. Equality may mean providing the same service, resource, or opportunity to everyone. Equity asks a more demanding question: whether people, given their different circumstances, have a fair opportunity to benefit from what the health system provides. A uniform distribution may appear fair on paper while reproducing disadvantage in practice. If two communities receive the same service but one must travel several hours over difficult terrain to reach it, the formal equality of provision does not erase the inequality of access.

This distinction is consistent with Sen's (2002) broader understanding of justice and human capability. Health equity cannot be reduced to the equal distribution of inputs. It must also consider people's substantive opportunities to achieve health. What matters is not only whether a service exists, but whether individuals possess the practical freedom and capacity to make use of it. Such a perspective shifts attention from institutional provision alone toward the conditions that allow people to convert available resources into meaningful health outcomes. In Timor-Leste, this distinction has particular importance. Geographical distance,

household resources, transportation, socioeconomic circumstances, and the availability of appropriate services can influence healthcare utilization. Evidence from the country indicates that socioeconomic and geographical factors affect patterns of healthcare use, reminding us that access cannot be measured simply by counting health facilities or services (Guinness et al., 2018). A clinic may exist, yet remain practically distant for a household facing transportation costs, difficult terrain, limited income, competing caregiving responsibilities, or uncertainty about whether the necessary service will actually be available.

Health equity therefore requires attention to the social determinants of health. Income, education, housing, employment, social protection, environmental conditions, and social relationships influence people's health long before they encounter a health professional (Commission on Social Determinants of Health, 2008; Marmot et al., 2008). A person who grows up with inadequate nutrition, insecure housing, limited educational opportunities, or unstable income may enter the healthcare system carrying disadvantages accumulated over many years. Clinical treatment remains important, but treatment alone cannot fully compensate for the social conditions that repeatedly produce vulnerability.

This means that equitable health systems must be capable of looking beyond the immediate clinical encounter. They must ask why some populations experience greater exposure to illness, why certain groups delay seeking care, why some communities are repeatedly underserved, and which institutional arrangements allow these patterns to persist. Equity requires the health system to recognize difference rather than conceal it beneath averages.

Such recognition does not mean that every person should receive an identical intervention. Rather, it means that resources, services, and strategies may need to be organized according to the barriers and needs of different populations. Remote communities may require outreach services; vulnerable households may require additional social support; geographically isolated populations may need stronger referral

and transportation systems. Equity therefore involves responsiveness to context.

For Timor-Leste, this principle has implications far beyond the health sector. A country's commitment to equity is expressed through the extent to which people, regardless of where they live or the resources of their household, can experience meaningful access to the conditions necessary for health. The challenge is not simply to reduce differences in service provision, but to prevent geographical, economic, and social differences from becoming permanent differences in human possibility.

Health equity is therefore not an abstract ideal. It is fairness made attentive to reality. It asks the health system to see where people stand, what barriers they face, and what support is necessary for them to have a genuine opportunity to live healthy lives.

Equity begins when a health system recognizes that treating people the same is not always enough—and that fairness sometimes requires responding differently to different realities.

2.2 The Vulnerable and the Invisible

Every health system contains people who are visible and people who remain at its margins. Some individuals can reach services easily, understand how the system works, communicate their needs, and advocate for themselves. Others encounter barriers that make their needs less visible and their suffering more difficult to recognize. Vulnerability, therefore, should not be understood simply as an individual characteristic. It can be produced or intensified by poverty, geographical distance, age, disability, social exclusion, limited information, cultural barriers, or the absence of supportive institutions.

This distinction becomes ethically important when health systems measure success primarily through averages. National statistics can reveal broad improvements in coverage, mortality, utilization, or service availability while concealing persistent inequalities within particular communities. An average can describe a population while failing to reveal the experience of those who remain at the edges of that

population. Health equity requires attention precisely to these differences because population health cannot be fully understood when those who are hardest to reach disappear within aggregated numbers (Commission on Social Determinants of Health, 2008; Sen, 2002).

Vulnerability is also dynamic. A person may be relatively secure at one moment and become vulnerable after illness, disability, unemployment, displacement, bereavement, or loss of family support. A household that can ordinarily afford transportation may suddenly become unable to seek care when income is interrupted. An older person may become increasingly dependent when mobility declines. A child may become especially vulnerable when family resources are insufficient. Vulnerability is therefore not a permanent label attached to particular individuals; it is a condition that can emerge through changing relationships between people and their environments.

In Timor-Leste, geographical and socioeconomic conditions can influence patterns of healthcare utilization. Research has shown that poorer households and people living farther from major services may encounter greater difficulty accessing certain forms of healthcare (Guinness et al., 2018). Such findings are important because they shift attention away from interpreting healthcare utilization solely as a matter of individual choice. Decisions to seek or delay care are often made within structural circumstances. A family may postpone treatment not because it does not value health, but because transportation is expensive, income cannot be sacrificed, or the journey to a facility is difficult.

Yet invisibility is not always geographical. People may live physically close to a health facility and still remain distant from care. Cost, language, cultural expectations, disability, lack of information, previous experiences of discrimination, or lack of trust may prevent individuals from engaging effectively with services. Levesque et al. (2013) conceptualize access as a multidimensional process involving the ability to perceive a need, seek care, reach services, obtain appropriate care, and engage with that care. Physical availability is therefore only one part of accessibility. This has important implications for how health systems define their responsibilities. A system that evaluates itself only

by the number of people who arrive at its facilities may unintentionally reward accessibility for those who are already capable of reaching it. The people who never arrive may become statistically quiet precisely because their barriers prevent them from appearing in service-use data.

A people-centred system must therefore learn to ask difficult questions: Who is absent? Who cannot easily speak? Who does not know how to navigate the system? Who waits the longest? Whose condition is discovered late? Which communities repeatedly experience unmet needs? And which forms of vulnerability remain invisible because they are not adequately measured?

Listening becomes a form of institutional responsibility. Community health workers, local leaders, families, and community organizations can help identify needs that formal indicators may not capture. Participatory approaches can reveal barriers that remain hidden within administrative data. Qualitative experiences can complement quantitative measures by showing how policies and services are actually lived.

The purpose is not to portray vulnerable people only through their deficits. Communities possess strengths, knowledge, relationships, and capacities that can contribute to health-system resilience. Recognizing vulnerability should therefore be accompanied by recognizing agency. People may be constrained by circumstances without being defined by those constraints.

Ultimately, the ethical task of a health system is to ensure that invisibility does not become abandonment. Those who are difficult to reach still belong to the moral and institutional community of care.

The measure of a health system is not only how well it serves those who can reach it, but how faithfully it searches for those whom distance, poverty, exclusion, or silence have placed beyond its ordinary field of vision.

2.3 Dignity, Culture, and the Meaning of Being Cared For

To receive healthcare is not merely to receive a clinical intervention. It is to encounter another human being at a moment when life may be marked by pain, uncertainty, dependence, fear, or profound vulnerability. At such moments, the technical quality of care matters enormously, but so does the manner in which a person is seen, heard, addressed, and treated. Medicine may act upon the body, but care always encounters a person. The difference is important because human beings do not experience illness as biological events alone; they experience it through relationships, memories, identities, values, hopes, and fears.

Dignity begins with refusing to reduce a person to a diagnosis, a number, a bed, a laboratory result, or a clinical problem. Illness may alter a person's body and independence, but it does not diminish the person's worth. A patient remains a person even when unable to speak, work, walk, decide independently, or care for themselves. A people-centred approach to healthcare therefore requires attention not only to clinical outcomes but also to relationships, communication, preferences, values, privacy, and the social worlds through which people understand illness and healing (World Health Organization, 2007, 2016).

Culture is inseparable from this understanding of dignity. People do not encounter illness in culturally empty spaces. They interpret suffering, healing, family responsibility, disability, ageing, birth, and death through systems of meaning inherited and transformed across generations. These meanings can influence when people seek care, whom they trust, how they communicate symptoms, what forms of treatment they accept, and how families participate in decisions.

When health services fail to recognize these meanings, even technically appropriate care can become distant, confusing, or difficult to accept. Cultural responsiveness therefore should not be regarded as an optional addition to healthcare. It is part of making care accessible and meaningful. Cultural competence involves more than learning customs; it requires an attitude of listening, humility, curiosity, and

willingness to understand the patient's world without immediately reducing it to professional categories.

For Timor-Leste, this principle is particularly significant. Family relationships, community structures, local traditions, collective responsibilities, and social networks remain important dimensions of everyday life. A patient's experience of illness may involve not only the individual but also parents, children, spouses, relatives, neighbours, and community leaders. Decisions about care may therefore be relational rather than purely individual. Recognizing this social context can strengthen communication and continuity, provided that the patient's own dignity and agency remain central.

Trust is another essential dimension. Healthcare depends upon a relationship in which people are willing to disclose vulnerability and accept professional assistance. When people trust health professionals and institutions, they are more likely to communicate concerns, seek advice, follow treatment, and remain engaged with care. Conversely, experiences of disrespect, exclusion, poor communication, or institutional indifference can weaken trust over time. Gilson (2003) emphasizes trust as an important social dimension of health systems, linking relationships among people, institutions, and communities.

Dignity therefore cannot be separated from institutional behaviour. A respectful health professional working within a system that routinely denies access may struggle to provide genuinely dignified care. Conversely, a well-designed institution can still become dehumanizing if its routines leave little space for listening, explanation, privacy, or recognition of the individual. Dignity must therefore exist at both interpersonal and structural levels.

To care with dignity is to recognize more than the patient's illness. It is to recognize the person's history, relationships, vulnerability, voice, and worth. It means explaining rather than merely instructing; listening rather than assuming; accompanying rather than simply directing; and respecting difference without abandoning professional responsibility. This does not mean that every cultural practice must automatically be accepted or that professional standards should be

abandoned. Rather, it calls for dialogue between professional knowledge and lived experience. Safe and effective care requires clinical standards, while meaningful care requires sensitivity to the person who receives it.

Ultimately, being cared for means more than being treated. Treatment addresses disease; care addresses the person who lives through it.

A health system becomes truly human when the person standing before it is never allowed to disappear behind the illness being treated.

2.4 Community Participation and the Ethics of Belonging

A health system cannot become genuinely people-centred if people are only invited to receive what institutions have already decided for them. Participation begins when communities are recognized as legitimate partners in defining health priorities, identifying barriers, shaping services, and evaluating whether those services respond to lived realities. In this sense, participation is not merely a technique of health promotion. It is an ethical recognition that people have a legitimate voice in decisions concerning matters that profoundly affect their lives.

The principle of community participation has deep roots in primary health care. The Declaration of Alma-Ata placed people's participation at the heart of primary health care, emphasizing that communities have both the right and responsibility to participate in the planning and implementation of their healthcare (World Health Organization, 1978). Decades later, people-centred approaches have continued to emphasize partnership, responsiveness, participation, and shared responsibility between health systems and the populations they serve (World Health Organization, 2016).

Participation becomes especially meaningful when it moves beyond consultation. A community may be asked for its opinion without being given any influence over the final decision. It may attend meetings, provide information, or assist with implementation while the central priorities remain predetermined elsewhere. Such participation risks becoming symbolic rather than transformative. Genuine participation

requires opportunities for communities to shape priorities, contribute knowledge, question institutional assumptions, and participate in evaluating outcomes.

In Timor-Leste, participation can be understood through the social relationships connecting individuals, families, *sucos*, *aldeias*, community leaders, health workers, local institutions, and national structures. These relationships can create important channels through which communities communicate needs, mobilize resources, support vulnerable households, and contribute to health initiatives. They can also provide forms of knowledge that may not be visible within formal administrative systems.

Yet community participation should not be romanticized. Communities are not internally homogeneous. Different voices may possess different levels of influence. Women, older people, persons with disabilities, poorer households, young people, or socially marginalized groups may not automatically have equal opportunities to participate. If participation is designed without attention to these internal differences, it can reproduce existing inequalities under the appearance of community involvement.

For this reason, participation requires intentional inclusion. It means creating spaces in which people who are often unheard can contribute to decisions that affect them. It requires accessible communication, appropriate language, respect for local knowledge, and mechanisms through which community feedback can influence institutional practice. Participation becomes meaningful when people can see a connection between what they contribute and what the system subsequently does.

Topp et al. (2015) highlight the importance of understanding participation as a process shaped by relationships, power, context, and institutional arrangements. This is crucial because participation is never simply a neutral technical procedure. It concerns who is invited, who speaks, whose knowledge is recognized, who makes decisions, and who remains accountable. The ethics of participation is therefore closely connected to the ethics of belonging. People are more likely to engage with institutions when they experience those institutions as part

of their social world rather than as distant structures imposed from outside. A health system that listens communicates something more profound than information: it communicates recognition. It tells people that their experience matters and that their knowledge has a legitimate place within public decision-making.

Belonging also strengthens resilience. Communities that have established relationships with health institutions before a crisis are often better positioned to communicate needs and mobilize collective responses during periods of disruption. Participation therefore contributes not only to democratic legitimacy but also to the practical capacity of health systems to adapt.

At the same time, institutions retain responsibility. Participation should never become a strategy for transferring institutional obligations onto communities. Governments and health organizations remain responsible for providing adequate resources, professional standards, infrastructure, and accountability. Communities should participate in health governance without being expected to compensate for systemic failures.

Participation is therefore best understood as partnership. Professionals contribute clinical knowledge and institutional responsibilities; communities contribute lived experience, local knowledge, values, and social understanding. When these forms of knowledge meet respectfully, health systems become capable of learning rather than merely delivering.

Participation is not simply allowing people to enter the health system. It is allowing their voices, knowledge, and experiences to help shape the system itself—and in doing so, allowing them to belong within the future of their own health.

2.5 From Equality to Equity: Building Justice into Health Systems

A just health system cannot be built simply by distributing the same resources to everyone. Justice begins when a system recognizes that people experience different needs, different vulnerabilities, and

different barriers to care. Equality asks whether everyone receives the same; equity asks whether everyone has a fair opportunity to achieve health. The distinction may appear subtle, but its consequences for health-system design are profound.

Uniform provision can sometimes conceal unequal conditions. Giving the same service to two populations does not necessarily produce the same benefit when one population is geographically isolated, economically disadvantaged, or socially excluded. A health facility located in a central urban area may be easily accessible to one population and practically inaccessible to another. A health-information campaign delivered through digital platforms may reach connected households while leaving communities with limited connectivity behind. Equal inputs can therefore produce unequal outcomes when the circumstances surrounding those inputs are unequal.

The Commission on Social Determinants of Health (2008) emphasizes that health inequities are shaped by the conditions in which people are born, grow, live, work, and age. Income, education, employment, housing, social protection, physical environments, and political and social relationships all influence health opportunities. Health policy consequently becomes an instrument of justice when it addresses these underlying conditions rather than responding only to disease after it appears.

For Timor-Leste, building equity requires particular attention to populations experiencing geographical isolation, socioeconomic disadvantage, limited service availability, or reduced opportunities to participate in health decisions. Evidence on healthcare utilization demonstrates that socioeconomic and geographical conditions can influence people's ability to access care (Guinness et al., 2018). These differences mean that a health system committed to equity must be capable of adapting its strategies to different circumstances rather than assuming that a single model will serve every population equally well.

Equity also requires attention to the entire pathway of care. Access is not achieved simply when a person reaches a facility. People must be able to recognize a health need, seek assistance, reach appropriate

services, obtain quality care, and remain engaged with treatment and follow-up. Levesque et al. (2013) demonstrate the multidimensional character of access, reminding health systems that barriers can emerge at multiple points. Equity therefore requires attention to both the characteristics of services and the capabilities of the people attempting to use them.

Justice also has an institutional dimension. A health system may expand coverage while leaving decision-making centralized. It may increase the number of facilities while failing to ensure adequate staffing. It may introduce new technologies while neglecting people who lack connectivity or digital literacy. Equity requires these dimensions to be considered together. Resources, quality, accessibility, participation, and dignity cannot be treated as unrelated objectives.

This is why equity should be understood as a systems principle rather than a single programme. It must influence how resources are allocated, how services are located, how professionals are distributed, how communities participate, how data are collected, and how outcomes are evaluated. A system that measures only overall improvement may miss persistent disadvantage. Equity-sensitive measurement therefore requires disaggregated attention to geography, socioeconomic circumstances, age, gender, disability, and other relevant conditions.

The movement from equality to equity is ultimately a movement from uniformity toward attentiveness. It asks institutions to recognize difference without allowing difference to become exclusion. It does not mean that every person receives something different simply because they are different. Rather, it means that health-system decisions should be responsive to the barriers that prevent people from having a meaningful opportunity to achieve health.

For a young nation such as Timor-Leste, this principle has particular significance. Building a national health system is not only an exercise in expanding infrastructure or increasing coverage. It is also an exercise in defining what kind of society the health system will help create. If geography, poverty, disability, or social circumstance

systematically determine who can obtain timely and appropriate care, then formal equality has not yet become substantive equity.

Justice in health therefore requires more than good intentions. It requires institutional design capable of recognizing unequal starting points and responding to them transparently and responsibly. It requires resources to follow need, services to remain connected to communities, and policies to be evaluated according to their real effects on people's lives.

Equity is justice made attentive to circumstance: not simply giving everyone the same path, but ensuring that differences in circumstance do not prevent people from having a genuine opportunity to live, recover, participate, and flourish.

CHAPTER 3

RESILIENCE FROM WITHIN: COMMUNITY, PRIMARY HEALTH CARE, AND COLLECTIVE CAPACITY

3.1 What Makes a Community Resilient?

Resilience is often described as the capacity to withstand disruption, recover from crisis, and continue functioning under pressure. Yet when resilience is considered at the level of communities, this definition is not sufficient. Communities are not machines that simply return to their previous state after being disturbed. They are living social systems whose experiences of crisis can alter relationships, expectations, institutions, and collective capacities. A resilient community therefore does not merely survive disruption or return to what existed before. It can learn from disruption, adapt to changing circumstances, mobilize its own strengths, and transform the conditions that made it vulnerable in the first place.

This distinction is particularly important in health. A community may continue to receive basic services during a crisis, but resilience involves more than maintaining operations. It concerns the capacity of people, institutions, and networks to anticipate challenges, absorb shocks, adapt responses, and continue protecting health and well-being under changing conditions (Kruk et al., 2015; Blanchet et al., 2017). Resilience is therefore not a single resource possessed by a hospital, ministry, or community. It emerges through relationships among multiple parts of a system.

At the community level, these relationships may include families, local leaders, community health workers, health facilities, civil society organizations, religious and social networks, schools, and government institutions. Each may possess different resources and responsibilities, but their interaction can create capacities that no single actor could produce alone. Trust can facilitate communication. Local knowledge can help identify vulnerable households. Community networks can mobilize assistance. Health workers can connect local experience with

professional services. Government institutions can provide resources and coordination. Together, these relationships can become a form of social infrastructure.

This dimension is especially significant where formal resources are limited. A community with fewer material resources may nevertheless possess strong networks of solidarity, practical knowledge, and collective organization. Such capacities can help people respond rapidly when formal services are disrupted. During health emergencies, for example, neighbours may assist older people, families may share information, community leaders may support public-health communication, and local workers may help connect households to professional care.

Yet resilience should never be confused with the romantic idea that communities can endure anything. A community's capacity to adapt does not eliminate its need for functioning institutions. When communities repeatedly compensate for inadequate infrastructure, insufficient staffing, unavailable medicines, or weak referral systems, what appears to be resilience may actually conceal structural inequity. Sustainable resilience requires institutions that recognize local capacities while providing the resources, coordination, professional support, and protection necessary to strengthen them (World Health Organization, 2021a, 2022).

For Timor-Leste, resilience must therefore be understood within the lived experience of communities that have encountered profound social and historical disruption while maintaining strong forms of relationship and mutual support. These experiences may contribute to collective capacities, but they should not become an expectation that communities must continuously carry burdens that properly belong to institutions.

A resilient health system must also possess the ability to learn. Crisis should generate reflection: What failed? What worked? Which communities were reached? Who remained invisible? Which local solutions emerged? What relationships proved essential? Without this

process of learning, resilience risks becoming merely repetitive endurance.

The deepest meaning of resilience is consequently not the ability to endure everything. It is the ability to endure without losing the capacity to care, learn, adapt, and change. It is the capacity to transform disruption into knowledge and uncertainty into preparedness.

For communities, resilience is therefore relational before it is technical. It lives in the connections among people, institutions, knowledge, and resources.

A resilient community does not merely survive the storm; it learns how to build differently after the storm has passed.

3.2 The Memory of Survival and the Strength of Community

Communities carry memories. They remember not only moments of suffering, disruption, loss, and uncertainty, but also the ways in which people protected one another, shared scarce resources, rebuilt relationships, and continued living when circumstances offered few guarantees. Such memories can become a form of collective knowledge—a quiet but powerful resource through which communities interpret new challenges and develop ways of responding to them.

Memory, in this sense, is not simply a record of the past. It can become part of a community's capacity for the future. Experiences of crisis teach people where vulnerabilities lie, which relationships can be relied upon, what resources are available, and how collective action can be organized. When such experiences are remembered, discussed, and transmitted across generations, they can contribute to a practical form of preparedness.

In Timor-Leste, the history of communities cannot easily be separated from experiences of conflict, displacement, scarcity, reconstruction, and social change. These experiences have influenced family structures, community relationships, patterns of mutual assistance, and understandings of collective responsibility. Yet resilience should not be

interpreted simply as an ability to endure hardship. Endurance alone can become a dangerous measure if suffering is normalized. The deeper value of collective resilience lies in the capacity to transform difficult experience into knowledge, relationships, preparedness, and a stronger capacity to respond.

Health-system resilience similarly depends on capacities that exist both within institutions and beyond them. Research on resilient health systems emphasizes adaptation, coordination, learning, and the ability to respond to changing conditions (Kruk et al., 2015; Nuzzo et al., 2019). Communities contribute to these capacities through local knowledge, social networks, informal support, and collective action.

Such community strength becomes especially important when formal resources are constrained. Families may become the first source of assistance when illness appears. Neighbours may support households experiencing hardship. Community health workers may connect people with formal services. Local leaders may help communicate public-health information and mobilize collective responses. These relationships create pathways through which health systems remain connected to everyday life even when formal institutions cannot immediately reach everyone.

However, community strength should never be used as an excuse for institutional absence. There is an important ethical difference between recognizing community capacity and expecting communities to compensate indefinitely for weaknesses within the formal health system. A family that supports an ill relative is demonstrating solidarity; it should not thereby become responsible for replacing unavailable professional care. A community health worker who travels long distances to reach households demonstrates commitment; that commitment should be accompanied by appropriate training, remuneration, supplies, supervision, and institutional support.

The World Health Organization (2022) emphasizes the importance of strengthening health-system capacities so that resilience becomes sustainable rather than dependent upon extraordinary effort. This

principle is especially relevant in resource-constrained settings, where informal networks may carry substantial responsibilities.

The memory of survival therefore has two directions. It looks backward, preserving knowledge of what communities have already endured. But it also looks forward, asking what should be done differently so that future generations do not have to endure the same burdens in the same way.

Memory can become a form of institutional learning when communities are given opportunities to communicate their experiences. Stories of what happened during previous crises can reveal weaknesses that statistics alone may not capture. They can identify barriers to transportation, communication, trust, or service access. They can also reveal local practices that strengthened collective response.

In this sense, memory is not merely remembrance. It is a resource for wiser action.

Resilience becomes strongest when memory becomes wisdom, solidarity becomes capacity, and that capacity is supported by institutions that refuse to abandon the people whose strength has sustained them.

3.3 Primary Health Care and Community Health Workers

Primary health care is where the health system encounters everyday life. It brings prevention, health promotion, treatment, continuity, and community engagement closer to the places where people live, work, learn, and raise families. Rather than waiting for illness to become severe before people enter hospitals, primary health care creates opportunities to identify needs earlier, prevent avoidable disease, support healthy behaviours, and maintain continuity over time (World Health Organization, 1978, 2019).

Its significance therefore extends beyond being the first level of contact with formal healthcare. Primary health care represents a different way of organizing the relationship between health systems and

communities. It asks institutions to move closer to people's realities rather than requiring people to travel increasingly farther into institutional structures. In this sense, primary health care is both a service strategy and a philosophy of proximity.

Within this landscape, community health workers can become a vital bridge between formal health institutions and local communities. Their importance extends beyond the specific tasks assigned to them. Because they work close to households and communities, they may understand local realities, identify emerging needs, support health education, encourage preventive practices, and facilitate connections with professional services. Their presence can strengthen both access and continuity of care (Abimbola, 2021).

The community health worker can therefore occupy a distinctive position within the health system. They may understand the language and social relationships of the community while also possessing knowledge of formal health practices. They can translate health information into locally meaningful communication and, equally importantly, communicate community concerns back to health institutions. This two-way movement of knowledge is essential for a people-centred system.

For communities in Timor-Leste, this connection is particularly important where distance, transportation, limited resources, and uneven distribution of services can create barriers to formal healthcare. Community-based health workers can help reduce some of these gaps by bringing health knowledge and selected services closer to households while connecting communities with the wider health system. Their role can be especially important in prevention, maternal and child health, chronic disease support, health education, referral, and follow-up.

Yet community health workers should never be viewed as substitutes for adequately resourced professional health services. Their effectiveness depends upon appropriate training, supervision, remuneration, supplies, transportation, referral mechanisms, communication, and institutional recognition. Without these foundations,

the language of community empowerment can unintentionally become a justification for transferring systemic responsibilities onto local workers (Abimbola, 2021).

This distinction is crucial. Asking communities to participate in their own health is empowering; asking them to compensate for institutional failure is inequitable. Sustainable community health requires partnership rather than substitution.

The same principle applies to the relationship between community health workers and other health professionals. Community workers should not be positioned outside the formal system as an inexpensive alternative to professional care. They should be integrated into clear referral pathways and supported through communication with nurses, physicians, public-health professionals, and other relevant services. The wider system must recognize their knowledge while ensuring that responsibility remains clearly distributed.

Systems thinking reinforces this point. Health outcomes are produced through relationships among multiple components rather than through isolated interventions (de Savigny & Adam, 2009). A community health worker can be highly effective only when the system surrounding that worker functions adequately. If referral facilities are unavailable, medicines are absent, transportation is impossible, or communication with professionals breaks down, the capacity of community-based workers becomes severely constrained.

Primary health care is therefore strongest when it forms a bridge rather than a boundary. It connects prevention with treatment, household experience with professional knowledge, and community realities with institutional responsibility.

For Timor-Leste, strengthening primary health care and community health workers offers an opportunity to make the health system more visible in everyday life. It can help shift the centre of gravity from crisis response toward prevention, continuity, and relationship. Primary health care is not simply the lowest level of healthcare. It is the place where

prevention becomes relationship, access becomes proximity, and the health system becomes present in the ordinary lives of people.

3.4 Learning from Crisis, Scarcity, and Adaptation

Crisis reveals what ordinary times can conceal. When resources become scarce, institutions are disrupted, communication networks are strained, or communities face sudden threats to health, the strengths and weaknesses of a health system become more visible. Routines that normally appear sufficient may suddenly prove fragile, while relationships and capacities that previously seemed ordinary may become essential. Crisis can therefore expose vulnerability, but it can also create a moment of learning.

Health-system resilience depends not only on the capacity to absorb shocks but also on the capacity to reflect upon them. A resilient system asks what happened, why it happened, who was affected, what responses worked, which failed, and what should change before the next disruption. Learning transforms crisis from an isolated event into a source of institutional knowledge. Resilience is therefore a dynamic process rather than a fixed characteristic possessed by an institution (Blanchet et al., 2017; World Health Organization, 2021a).

For resource-constrained settings, this capacity for adaptation is particularly important. Scarcity can impose severe limitations on what health workers and institutions are able to do. Yet scarcity can also encourage creative use of locally available resources, new forms of cooperation, flexible service delivery, and practical problem-solving. Health workers may redesign workflows, communities may establish informal support mechanisms, and institutions may develop alternative pathways for communication and referral.

However, adaptation born from necessity must be understood carefully. Innovation should never become an argument for accepting inadequate systems as inevitable. If health workers continually compensate for insufficient staff, equipment, medicines, transportation, or infrastructure through personal sacrifice, the resulting adaptation may hide structural

weakness rather than resolve it. Resilience should strengthen systems, not normalize deprivation.

Timor-Leste's health system continues to develop within a context in which geographical realities, human-resource constraints, infrastructure, and unequal access remain important considerations. Learning from experience therefore requires mechanisms through which local knowledge can travel upward into institutional decision-making. Community experience should not disappear when a crisis ends. It should become part of the knowledge from which future policies, preparedness strategies, and resource allocations are constructed.

This requires a culture of learning across the health system. Data, professional experience, community feedback, operational lessons, and scientific evidence should inform continuous improvement rather than remain separated within institutional boundaries. Berwick (2008) emphasizes the importance of learning systems capable of using experience to improve care, while the World Health Organization (2022) underscores the need for health systems to develop capacities that allow them to prepare, respond, adapt, and learn.

Learning also requires institutional humility. A system that assumes it already knows what communities need may miss valuable information during crisis. Local populations often perceive changes in health conditions before formal indicators register them. Community health workers may recognize emerging patterns because of their proximity to households. Families may identify barriers that administrative data cannot explain. Listening therefore becomes part of preparedness.

Adaptation should also occur at multiple levels. Individuals adapt their behaviours; families reorganize care; communities mobilize resources; health workers change practices; facilities reorganize services; and national institutions adjust policies. These levels are interconnected. Failure to communicate across them can weaken the overall response.

The goal of learning from crisis is ultimately not to become better at surviving the same crisis. It is to become better prepared for what

comes next. This requires preserving useful innovations while also correcting structural weaknesses. It requires asking not only how the system survived but why certain people were protected while others were left behind.

Crisis can therefore become a teacher, but only if institutions are willing to listen.

A resilient health system does not merely remember that it survived. It remembers what survival revealed—and transforms that knowledge into wiser, more equitable action.

3.5 From Surviving to Transforming

Survival is necessary, but survival alone cannot be the final horizon of a health system. A community may endure crisis, recover from disruption, and continue functioning, yet remain exposed to the same structural conditions that produced vulnerability in the first place. If every crisis is followed only by a return to the previous state, then resilience becomes a cycle of repeated endurance rather than a pathway toward a better future.

Resilience becomes more meaningful when it creates the possibility of transformation. Transformation means changing not only how a system responds when crisis arrives, but also how it understands health, organizes resources, distributes responsibility, learns from experience, and relates to communities. It moves resilience from a defensive capacity—the ability to withstand disruption—toward a constructive capacity: the ability to adapt, learn, and create conditions that reduce future vulnerability (Blanchet et al., 2017; World Health Organization, 2022).

This distinction matters greatly for Timor-Leste. A health system should not be designed merely to manage scarcity or respond after communities have already entered crisis. It should progressively strengthen the foundations that make health possible: primary health care, human resources, community participation, infrastructure, information systems, referral networks, institutional coordination, and

equitable access. The National Health Sector Strategic Plan 2011–2030 similarly places accessible services, primary care, community participation, and health-system strengthening within the long-term development of the national health sector (Ministry of Health, Timor-Leste, 2011).

Transformation also requires a different understanding of community. Communities are not simply populations waiting to be protected by institutions. They are holders of knowledge, relationships, experience, memory, and practical capacities that can contribute to shaping healthier futures. Their participation can help institutions identify priorities, understand barriers, design more appropriate interventions, and evaluate whether services correspond to lived realities.

This does not mean transferring institutional responsibilities to communities. Transformation requires stronger institutions as well as stronger communities. Professional expertise, public financing, regulation, infrastructure, medicines, trained personnel, and accountability remain essential. The goal is not to replace formal systems with informal ones, but to create stronger relationships between them.

The movement from surviving to transforming is therefore a movement from reaction to anticipation. Instead of waiting for crisis to expose weaknesses, systems can identify vulnerabilities in advance. Instead of rebuilding exactly what existed before, institutions can ask what should be redesigned. Instead of treating communities as recipients after decisions have been made, they can participate earlier in defining what resilience should mean.

Transformation also requires courage to question inherited assumptions. Some institutional arrangements may have developed for historical reasons but may no longer respond adequately to contemporary needs. Some patterns of resource distribution may appear normal while reproducing inequity. Some technologies may promise efficiency while creating new exclusions. Reimagining resilience requires the willingness to examine these patterns critically. For Timor-Leste, this process can be understood as part of the broader

unfinished work of nation-building. A resilient health system is not only one that survives emergencies; it is one that contributes to a society in which fewer people are placed in avoidable situations of vulnerability. Its success should therefore be measured not only by how effectively it responds to crisis, but by whether it gradually reduces the conditions that make crisis more damaging.

Transformation is also generational. The decisions made today shape the health possibilities of people who have not yet entered the health system. Investments in primary care, community capacity, professional education, infrastructure, and equitable access therefore represent more than immediate interventions. They are commitments to future citizens.

The journey from surviving to transforming is ultimately a journey from endurance toward possibility, from fragmentation toward connection, and from dependence toward shared capacity. It does not reject the lessons of hardship; it carries those lessons forward while refusing to allow hardship to define the future.

The goal of resilience is not simply to return to where we were. It is to learn from where we have been and become capable of building what we have not yet imagined.

CHAPTER 4

PEOPLE, TECHNOLOGY, AND THE FUTURE OF COMMUNITY CARE IN TIMOR-LESTE

4.1 The Human Infrastructure of Community Health

Every health system has a visible infrastructure: hospitals, clinics, roads, laboratories, medicines, equipment, communication networks, digital platforms, and information systems. These are the structures through which healthcare becomes materially possible. Yet beneath this visible architecture lies another infrastructure that is less easily measured, less frequently displayed in national statistics, and nevertheless equally essential—the people who make care possible. Health systems are ultimately sustained not only by buildings and technologies, but by human beings who bring knowledge, judgment, compassion, coordination, and responsibility into the everyday reality of care.

Nurses, doctors, midwives, community health workers, administrators, public-health professionals, local leaders, volunteers, families, and caregivers collectively constitute the human infrastructure of community health. They are not simply users of the health system; they are among the conditions that allow the system to function. Their relationships, communication, professional judgment, cultural understanding, and commitment determine whether formal structures become living institutions capable of responding to human needs. A clinic without trusted professionals may remain only a building. A referral system without people capable of coordinating it may remain only a policy. A digital platform without health workers who understand how to interpret and use its information meaningfully may produce data without improving care.

The quality of a health system therefore depends substantially on the quality of the human environment within which care is organized. The movement toward high-quality health systems emphasizes that effective healthcare requires competent providers, supportive

institutions, respectful relationships, appropriate processes, and systems capable of responding to people's needs (Kruk et al., 2018). Quality cannot be reduced to technical accuracy alone. It includes whether people are treated with dignity, whether services are responsive, whether professionals have the resources necessary to perform their responsibilities, and whether institutions create conditions in which good care can be sustained.

This understanding also requires attention to the people who provide care. The quadruple aim extends the traditional concern with population health, patient experience, and cost by emphasizing the well-being of healthcare professionals themselves (Bodenheimer & Sinsky, 2014). This is not a secondary concern. A health system that continually demands more from professionals while providing insufficient support risks weakening the very human capacity upon which care depends. Fatigue, isolation, inadequate supervision, excessive workload, limited opportunities for development, and unsafe working environments can gradually erode professional effectiveness and compassion.

In community settings, this human dimension becomes particularly visible because health workers often become the face through which people encounter the health system. For many individuals, especially those living far from referral hospitals, the community health worker, nurse, midwife, or primary-care professional may represent healthcare in its most immediate form. Their presence can reduce fear and build trust. Their absence can create distance even when a formal service technically exists. The quality of their communication may determine whether a patient feels welcomed or dismissed, understood or misunderstood, respected or overlooked.

Community health workers are especially important because they frequently occupy a position between formal institutions and everyday community life. They may understand local geography, family relationships, languages, cultural practices, patterns of vulnerability, and practical barriers to accessing care. Their knowledge cannot always be captured in an electronic record or clinical protocol, yet it can be indispensable to effective action. They help translate institutional

knowledge into forms that communities can understand and integrate into their lives, while also bringing community realities back into the health system.

For Timor-Leste, strengthening human infrastructure therefore means more than increasing the number of health professionals. Workforce expansion is important, but numbers alone do not create a resilient system. Investment must also include education, continuing professional development, supportive supervision, fair distribution, retention strategies, safe working environments, leadership development, professional recognition, and opportunities for continuous learning. A nurse working in a remote community requires not only clinical knowledge but also institutional support, communication pathways, referral mechanisms, essential supplies, and the assurance that the wider health system remains connected to their work.

Retention is particularly significant in geographically difficult environments. If health professionals repeatedly move toward urban centres because of better professional opportunities, infrastructure, educational possibilities, or living conditions, rural and remote communities may experience persistent shortages. This can create a cycle in which the communities that already face greater barriers to care receive less consistent professional presence. Strengthening human infrastructure therefore requires policies that recognize the specific realities of rural and remote service.

Yet human infrastructure extends beyond formally employed health professionals. Families and caregivers frequently provide substantial forms of health support: accompanying patients, helping with medication, recognizing changes in symptoms, providing emotional support, facilitating transportation, and participating in decisions about care. Community organizations, local leaders, volunteers, and social networks may also contribute to prevention, health education, emergency response, and social support. Recognizing these contributions does not mean transferring professional responsibilities to families. Rather, it means understanding healthcare as a shared social

endeavor in which formal services and community capacities must work together.

Such partnership requires boundaries as well as recognition. Communities should not be romanticized as endlessly resilient or expected to compensate for institutional weaknesses. When families repeatedly absorb the consequences of inadequate services, their contribution can become a hidden form of inequality. Human infrastructure must therefore be supported rather than exploited. Community participation is strongest when institutions recognize community knowledge while still assuming responsibility for providing the resources, professional standards, and protections necessary for equitable care.

Leadership is another essential component. Health workers need institutions capable of creating direction, coordinating action, listening to frontline experience, and learning from mistakes. Leadership should not be understood merely as authority. In community health, it is also the capacity to connect people, resources, knowledge, and responsibility. Strong leadership helps transform isolated individual efforts into coordinated system capacity.

Technology will increasingly transform how this human infrastructure operates. Electronic health records may improve continuity, digital communication may connect remote workers with specialists, and artificial intelligence may assist with information processing and decision support. Yet technological progress does not diminish the importance of people. In many respects, it increases it. As systems become more complex, health professionals need stronger interpretive skills, ethical judgment, digital literacy, and the capacity to distinguish useful information from misleading or incomplete outputs.

The future health worker will therefore need to inhabit two worlds simultaneously: the technological and the relational. Professional competence will increasingly involve knowing how to use digital tools while also knowing when not to rely upon them. It will involve interpreting data without allowing data to replace the person represented by that data. It will require the ability to work efficiently

while preserving attentiveness, cultural sensitivity, and moral responsibility.

A health system that invests heavily in technology while neglecting its workforce may become technically sophisticated but institutionally fragile. Conversely, a system that invests in people while refusing appropriate technological innovation may struggle to respond to emerging demands. The challenge is therefore not to choose between human and technological infrastructure, but to ensure that technology remains embedded within a strong human foundation.

Ultimately, community health is sustained through relationships. Infrastructure may provide the space, roads may provide the route, medicines may provide treatment, and digital systems may provide information. But people transform these resources into care.

Before health systems become digital, they must remain human.

4.2 Trust, Culture, and Relational Care

A health system can possess hospitals, technologies, medicines, professional expertise, and sophisticated information systems, yet still struggle to serve people when trust is absent. Trust is not an accessory added to healthcare after the technical work has been completed. It is part of the social relationship through which healthcare becomes possible. People seek care because they believe that someone will listen. They disclose their fears because they expect confidentiality and respect. They follow professional guidance because they have reasons to believe that the advice is intended to protect their well-being. They return to services because previous encounters have given them confidence that they will be treated with dignity.

Trust is therefore built through experience. Communities learn whether institutions listen, whether professionals keep their commitments, whether information is communicated honestly, whether services are available when needed, and whether people are treated consistently across differences of geography, socioeconomic position, gender, age, or social status. Gilson (2003) describes trust as an important

foundation of healthcare as a social institution, connecting individual encounters with broader relationships between communities and health systems. Trust exists simultaneously at the interpersonal and institutional levels: people must be able to trust the professional in front of them, but they also need reasons to trust the system behind that professional.

This makes trust cumulative but also fragile. A single respectful encounter may not immediately repair years of institutional disappointment, while a deeply negative experience may weaken confidence built over a long period. Trust grows through repeated experiences of reliability, fairness, competence, and respect. It is therefore not something that health systems can simply announce through policy documents. It must be practiced in everyday encounters.

Culture is deeply connected to this process. People do not enter healthcare as culturally empty individuals. They arrive with languages, histories, family relationships, traditions, beliefs, expectations, experiences of suffering, and understandings of illness and healing. These dimensions shape how symptoms are interpreted, when care is sought, whom people consult, how treatment is understood, and what forms of support are considered meaningful.

When healthcare recognizes these dimensions, services can become more responsive and comprehensible. When they are ignored, even technically effective interventions may encounter misunderstanding, hesitation, or resistance. Cultural responsiveness does not mean accepting every belief uncritically or abandoning professional standards. Rather, it means approaching people with sufficient humility to understand that professional knowledge is not the only form of knowledge present in a healthcare encounter.

In Timor-Leste, this relational dimension is particularly important because experiences of health and illness frequently occur within networks of family and community. The individual may remain deeply connected to relatives, *suco* structures, *aldeia* relationships, community leaders, and other social networks. Decisions about seeking care, accompanying patients, managing illness, and responding to

vulnerability can therefore involve more than the individual patient alone.

Recognizing these relationships does not diminish individual autonomy. Instead, it reminds us that autonomy can be exercised within relationships rather than only in isolation. A person may make decisions as an individual while remaining profoundly connected to family responsibilities and community belonging. People-centred healthcare must therefore learn to hold two realities together: respect for the individual and recognition of the relational world in which that individual lives.

This requires communication that goes beyond the transmission of clinical information. Health workers need to listen not only for symptoms but also for meanings. What does illness mean to this person? What fears accompany it? What family responsibilities shape the person's choices? What practical barriers make adherence difficult? What forms of language will make professional information understandable rather than intimidating? Such questions do not replace clinical assessment; they deepen it.

The World Health Organization's emphasis on people-centred care reinforces this broader understanding. Healthcare should recognize people as persons with values, preferences, relationships, and social contexts rather than reducing them to diagnoses or service users (World Health Organization, 2007, 2016). Respect, continuity, communication, dignity, and participation are therefore not peripheral qualities. They are dimensions of healthcare quality itself.

Relational care also requires cultural humility. Cultural humility differs from the assumption that professionals can simply master a fixed collection of cultural facts about different communities. Cultures are internally diverse, constantly changing, and shaped by individual experience. The goal is therefore not to memorize a culture but to remain willing to ask, listen, learn, and adapt. Such humility can prevent stereotypes from replacing genuine understanding. For community health workers, this may be especially important. Their proximity to communities can allow them to recognize forms of

communication, family dynamics, local concerns, and practical barriers that may remain invisible to distant institutions. Yet their knowledge should not be treated as informal or secondary. It represents a form of contextual intelligence that can strengthen the responsiveness of the wider health system.

Trust also has a structural dimension. People cannot be expected to trust a health system that repeatedly fails to provide essential medicines, leaves services unavailable, or requires unreasonable journeys for basic care. Relational trust cannot compensate indefinitely for institutional unreliability. A warm interaction cannot fully repair a system that consistently produces exclusion. Trust must therefore be supported by functioning structures.

This is particularly relevant in geographically dispersed communities. If people travel long distances only to discover that a service is unavailable, the experience affects more than convenience. It communicates something about how the system values their time, resources, and dignity. Repeated experiences of this kind may gradually weaken confidence in formal healthcare. Equity therefore requires not only interpersonal respect but institutional reliability.

Digital transformation introduces another layer to this question. Digital systems may accelerate the movement of information, improve communication, and increase access to professional knowledge. Yet digitalization can also create distance if people feel that healthcare has become impersonal or inaccessible. A message transmitted instantly is not necessarily a meaningful communication. A digital interface may be efficient without being welcoming. Technology can support trust, but it cannot manufacture trust automatically.

As healthcare becomes increasingly mediated by technology, the relational skills of professionals may therefore become even more important. Health workers must explain when technology is being used, what its limitations are, and how professional judgment remains involved. Patients need opportunities to ask questions and express concerns. Transparency about technological processes can reduce

uncertainty, while human presence can help preserve a sense of recognition.

This is particularly significant when artificial intelligence enters clinical or public-health decision-making. People may reasonably ask whether a decision was made by a professional, a digital system, or both. They may want to know who is accountable when an error occurs. Trust requires that responsibility remain intelligible. Technological complexity should never become an excuse for institutional ambiguity.

Relational care also requires continuity. Trust deepens when people encounter systems that remember them—not only through electronic records but through relationships. Continuity allows professionals to understand changes over time, recognize recurring concerns, and develop familiarity with families and communities. It transforms healthcare from a sequence of isolated transactions into an ongoing relationship.

For Timor-Leste, strengthening trust therefore involves more than improving communication campaigns. It requires reliable services, respectful professionals, culturally responsive practices, community participation, continuity of care, transparent institutions, and meaningful accountability. Trust grows where people repeatedly experience that the system sees them not merely as recipients of services, but as human beings whose lives matter.

Ultimately, the deepest strength of a health system may be found not in how impressive it appears from outside, but in how safe and respected people feel when they enter it.

Digital systems may make information travel faster, but trust still travels through human relationships.

4.3 Digital Health Across Distance and Geography

Distance has always been one of the enduring challenges of community health. Geography does not merely describe where people live; it can determine how easily they reach services, how quickly

professionals can respond, how often referrals can be completed, and whether continuity of care can be sustained. Mountains, islands, dispersed settlements, transportation difficulties, seasonal weather conditions, limited roads, and uneven infrastructure can transform what appears on a map as a short distance into a substantial barrier to healthcare. In such contexts, digital health introduces a new possibility: information, professional knowledge, and communication can travel where people and services cannot always move easily.

Teleconsultation, electronic health records, mobile communication, digital health education, remote monitoring, decision-support systems, and other technologies can create new connections between communities, health workers, health facilities, and institutions. Their importance lies not simply in their technical sophistication, but in their potential to reduce some of the consequences of physical distance. A health worker in a remote community may be able to communicate with professionals at a referral facility. Information about a patient's previous care may become more accessible across different levels of the health system. Health education may reach households beyond the walls of health facilities. Communication that once depended entirely upon physical movement may increasingly occur through digital networks.

For geographically dispersed populations, this potential is significant. Digital health can support communication between primary and referral services, facilitate access to professional knowledge, strengthen continuity of information, support public-health surveillance, and help health workers remain connected across distance. It can also create opportunities for continuing education and professional support, particularly where specialized expertise is concentrated in urban or referral centres.

The World Health Organization recognizes digital health as an important component of contemporary health-system development while emphasizing that digital technologies should be aligned with broader health priorities rather than treated as ends in themselves (World Health Organization, 2021c). This distinction is fundamental. Technology becomes meaningful in healthcare not because it is

technologically advanced, but because it helps address real health needs and strengthens the system's ability to respond to people.

In Timor-Leste, this possibility carries particular significance. The country's geography produces different experiences of access across Dili, rural communities, mountainous areas, coastal settlements, and more remote locations. Physical distance from referral services may influence how quickly people obtain professional attention and how consistently information follows them through the health system. Digital communication cannot remove mountains, shorten every road, or eliminate transportation barriers. Yet it may reduce some of the informational and professional distances that accompany geographical separation.

Electronic health information, for example, can contribute to continuity between different levels of care by allowing relevant information to accompany the patient rather than remaining isolated within one facility. Communication technologies may help health workers seek advice, coordinate referrals, or maintain contact with professionals elsewhere. Digital platforms can support health education and public-health communication, potentially extending reliable information beyond conventional service points. National health planning has recognized the importance of strengthening health information systems and digital approaches as components of health-system development (Ministry of Health, Timor-Leste, 2011).

Yet digitalization does not automatically create equity.

A digital health system can connect those who are connected while leaving others further behind. Unequal access to electricity, mobile networks, internet connectivity, smartphones or computers, affordable data, technical support, digital literacy, and appropriate language can create new forms of exclusion. The existence of a digital service does not mean that everyone can meaningfully access it. A platform that functions effectively in Dili may be difficult to use in a remote *aldeia* where connectivity is unstable, electricity is unreliable, or devices are shared among several family members. This creates an ethical question

that should accompany every digital-health initiative: Who is included when healthcare becomes digital, and who risks becoming invisible?

Digital transformation must therefore be assessed not only according to what technology can do, but according to who can actually benefit from it. A system may be technically successful while remaining socially unequal. If digital services primarily benefit populations with stronger infrastructure, higher digital literacy, greater purchasing power, and easier access to devices, technological innovation may unintentionally widen the inequalities that health systems are expected to reduce.

For this reason, digital health should be understood as an instrument of inclusion rather than a substitute for broader investment in health infrastructure. Connectivity matters, but so do health workers, functioning facilities, transportation, medicines, reliable electricity, community trust, and institutional capacity. Digital technology can strengthen these elements when it is carefully integrated into the wider health system. It cannot compensate indefinitely for their absence.

This principle is particularly important in resource-constrained environments because technological enthusiasm can sometimes conceal infrastructural realities. A digital platform may be launched successfully at the national level while remaining difficult to use in communities where connectivity is weak. A sophisticated electronic record may exist without adequate training for the people expected to enter or interpret the data. A telehealth programme may connect professionals but fail to address the patient's need for a private and reliable place in which to communicate.

Implementation therefore requires attention to the ordinary conditions of life. Technology must work within the realities of households, communities, health facilities, and professional routines. This means asking practical questions: Is electricity dependable? Is connectivity sufficient? Who maintains the equipment? Who pays for data? Who provides technical support? Can health workers use the system without creating excessive administrative burdens? Are patients able to understand and participate in digital encounters? What happens when the network fails?

These questions may appear mundane compared with the language of technological innovation, but they determine whether innovation becomes useful in practice.

The human dimension must also remain central. Healthcare is not simply an exchange of information. It is a relationship in which people seek understanding, reassurance, professional judgment, and recognition. A digital message can carry clinical information, but it cannot automatically reproduce the attentiveness of a health worker who understands a patient's circumstances. A teleconsultation can overcome distance, but it must still preserve privacy, communication, cultural sensitivity, and respect.

Digital health should therefore strengthen the human infrastructure described earlier in this chapter. It can help a community health worker obtain professional advice, allow a referral facility to communicate with a primary-care team, support a nurse's continuing education, and help a patient remain connected with a service. In this sense, technology becomes valuable precisely because it reinforces relationships rather than replacing them.

Governance is equally important. Digital health systems must protect confidentiality and privacy, ensure appropriate data management, maintain accountability, and provide safeguards for vulnerable populations. Communities and health professionals should have meaningful opportunities to participate in decisions about digital systems because those who use technology in everyday practice often understand its practical strengths and limitations better than those who design it from a distance.

For Timor-Leste, digital transformation therefore requires both ambition and realism. The country can benefit from technologies that help narrow professional and informational gaps, but implementation should be proportional to infrastructure, workforce capacity, community needs, and institutional readiness. Digital systems should be designed for actual communities rather than idealized technological environments. The goal should not be to create a health system in which every interaction becomes digital. Rather, it should be to create

a system in which digital tools are used when they genuinely improve quality, accessibility, and continuity of care. Technology should perform tasks that technology can perform well while allowing health professionals to remain responsible for the human dimensions of care that cannot be automated.

The deepest promise of digital health is therefore not that technology can make geography disappear. Geography will remain. Communities will remain dispersed. Physical journeys will still matter. But digital tools can help ensure that physical distance does not automatically become professional isolation, informational exclusion, or abandonment.

A bridge has value only when it connects people rather than simply connecting devices.

The promise of digital health is not that technology can erase distance, but that it can help people remain connected despite it.

4.4 Artificial Intelligence and Resource-Constrained Health Systems

Artificial intelligence is beginning to reshape how health information is interpreted, how risks are identified, how patterns are recognized, and how clinical and public-health decisions may be supported. Predictive analytics, decision-support systems, automated information processing, natural-language technologies, remote monitoring, and population-level surveillance offer possibilities that were once difficult to imagine. In resource-constrained health systems, these technologies can appear especially promising because they may help extend limited human capacity, organize complex information, support professionals, and connect dispersed populations with forms of expertise that may otherwise be difficult to access.

Yet technological possibility should never be confused with health-system readiness.

Artificial intelligence does not operate independently of the system around it. It depends upon data of sufficient quality, digital

infrastructure, reliable electricity and connectivity, appropriate hardware and software, professional capacity, digital literacy, institutional governance, and mechanisms of accountability. Where these foundations are weak, advanced technologies may not necessarily strengthen the health system. They may instead reproduce existing inequalities or create new ones.

This creates a fundamental challenge for resource-constrained settings. An AI technology developed in a highly connected health system may assume reliable electronic records, standardized data, strong institutional capacity, specialized professionals, continuous connectivity, and established regulatory mechanisms. When introduced into a different environment, those assumptions may no longer hold. The relevant question is therefore not simply whether an AI system technically works, but whether it works meaningfully, safely, fairly, and sustainably within the context in which it is being used.

For Timor-Leste, this distinction is particularly important. The country's health system continues to develop within geographical, infrastructural, financial, and human-resource constraints. Communities differ in their access to health facilities and digital technologies, while information systems and professional capacities continue to evolve. In such an environment, AI should not be treated as a shortcut around foundational health-system development.

The temptation to view technology as a solution to scarcity must therefore be approached carefully. AI may help a limited number of professionals manage large quantities of information, identify patterns requiring attention, support decision-making, or facilitate communication across geographically dispersed populations. Yet it cannot create health workers where there are too few, build roads where transportation is inadequate, provide electricity where infrastructure is unreliable, establish trust where relationships are weak, or replace the institutional foundations required for sustainable healthcare.

Technology can amplify capacity; it cannot manufacture the conditions upon which meaningful care depends. This principle matters because

technological systems are often presented as if their introduction automatically generates efficiency. In reality, AI may introduce new forms of work: data preparation, validation, maintenance, monitoring, staff training, technical support, cybersecurity, governance, and error management. A system that reduces one burden may create another. Health-system leaders must therefore consider the entire lifecycle of technology rather than focusing only on the moment of implementation.

The World Health Organization emphasizes that AI for health must be governed according to principles that protect autonomy, safety, transparency, accountability, equity, and human well-being (World Health Organization, 2021b). These principles become especially significant in resource-constrained settings. Where institutional capacity is limited, communities may have fewer opportunities to question technological decisions, challenge errors, understand how automated systems reach conclusions, or seek effective remedies when harm occurs.

Transparency is therefore more than a technical requirement. It is a condition of trust. People deserve to know, within appropriate limits, when AI is being used in decisions that affect their health and how responsibility is assigned when something goes wrong. A system should not appear objective merely because it is computational. Algorithms are created through human decisions about data, variables, objectives, thresholds, and acceptable forms of error. Their outputs therefore require interpretation.

Human oversight must remain present precisely because algorithms operate within human-designed systems. An AI model can generate a probability, classification, recommendation, or alert, but responsibility for how that output is interpreted and acted upon remains a human and institutional question.

Equity presents another central concern. AI systems learn from data, and data are shaped by the populations that are represented within them. If certain communities are poorly represented, their realities may be poorly recognized by the resulting system. In geographically and

socially diverse contexts, this raises a crucial question: whose health experience is visible in the data, and whose experience remains absent?

An AI system that performs well for one population does not automatically perform equally well for another. This does not mean that AI should be rejected. Rather, it means that technological systems must be evaluated in relation to the populations they are intended to serve. Local validation, contextual understanding, continuous monitoring, and professional oversight are essential if technological innovation is to contribute to rather than undermine health equity.

The issue of data scarcity also deserves careful attention. Resource-constrained systems may possess incomplete, fragmented, inconsistently recorded, or historically uneven datasets. Such limitations do not necessarily make AI impossible, but they affect what kinds of systems can responsibly be developed and how their outputs should be interpreted. A sophisticated model cannot compensate indefinitely for poor-quality data. Indeed, it may create an illusion of precision where the underlying information remains uncertain.

This is why investment in health information systems is foundational. Before asking whether AI can predict, classify, or optimize, health systems must ask whether they can reliably collect, protect, interpret, and govern the information upon which those functions depend. Data quality is therefore not merely a technical concern. It is part of health-system quality.

For Timor-Leste, AI should therefore be approached as part of a broader process of health-system transformation rather than as an isolated technological project. Investment in basic infrastructure, health information systems, workforce development, data governance, digital literacy, institutional capacity, and equitable access remains essential. AI can support these developments, but it cannot substitute for them. The foundation must come before the sophistication.

This perspective also changes how technological progress should be understood. Progress should not be measured simply by how quickly a country adopts advanced AI tools. A more meaningful measure is

whether technology contributes to better access, stronger continuity of care, more informed decisions, improved public-health capacity, and greater equity without compromising dignity or trust.

There is also a deeper ethical question that technology alone cannot answer: Who decides what the system should optimize?

An algorithm may be designed to maximize efficiency, predict hospital admission, classify risk, reduce waiting time, identify high-risk populations, or allocate limited resources. These objectives may be useful, but none is identical to the meaning of health itself. Human beings must determine which goals deserve priority and what trade-offs are ethically acceptable. A system that becomes highly efficient at achieving the wrong objective does not necessarily create better healthcare.

The ultimate purposes of health remain human: reducing suffering, protecting dignity, promoting equity, strengthening participation, preventing avoidable harm, and sustaining the capacity of individuals and communities to live well. These purposes cannot be generated by algorithms. They must be articulated, debated, protected, and continually reassessed by people and institutions.

This is why AI governance must remain connected to the broader ethics of public health. The question is not only whether a system is accurate, but whether its use is justified. Not only whether it is efficient, but whether its benefits and burdens are fairly distributed. Not only whether it can predict, but whether people remain respected when predictions influence decisions about their lives.

Resource constraints also create a distinctive ethical responsibility. Technologies should not be introduced simply because they are fashionable, externally funded, or available elsewhere. They should be evaluated according to their relevance to local priorities, feasibility, sustainability, and consequences for equity. Appropriate technology may sometimes be less spectacular than the most advanced technology, but more valuable because it can be maintained, understood, governed, and integrated into existing services.

Artificial intelligence may become a powerful instrument for community health. It may help extend expertise, support professionals, improve information systems, and strengthen population-level responses. But its value will ultimately depend not on how intelligent the technology becomes, but on how wisely human beings choose to use it.

For a resource-constrained health system, wisdom may therefore be more important than technological ambition. The future should not be imagined as a competition to acquire the most advanced systems, but as a responsibility to ensure that whatever technologies are adopted genuinely serve people, strengthen institutions, and contribute to a more equitable health system.

In a resource-constrained health system, the future of AI must begin not with technological ambition, but with human responsibility.

4.5 Technology Without Losing the Human Face of Care

Technology can extend the reach of healthcare, but it cannot by itself define what healthcare should mean. As digital systems, electronic health records, telehealth, artificial intelligence, mobile applications, remote monitoring, and virtual services become increasingly present in health systems, the central challenge is no longer whether technology should enter community health. It is how technology can enter without displacing the human relationship at the heart of care.

Healthcare has always been more than the delivery of information or the management of disease. It is an encounter between human beings, often occurring at moments of vulnerability, uncertainty, fear, pain, and hope. A patient does not enter a health system merely as a diagnosis, a case number, or a collection of clinical indicators. A person enters with a history, a family, a culture, a social position, a memory of previous encounters with healthcare, and a particular experience of suffering. Technology can help professionals understand some dimensions of that experience, but it cannot fully contain the person within the data.

People-centred healthcare therefore reminds us that health systems exist for people, not the other way around (World Health Organization, 2016). Technology should remain accountable to this fundamental purpose. Its role is to support professionals, improve access, strengthen continuity, facilitate communication, assist decision-making, reduce unnecessary burdens, and help health systems respond more effectively to population needs. It should not become a substitute for human judgment, relational presence, or ethical responsibility.

This distinction becomes especially important when technology is introduced into community settings. Digital tools can help connect remote communities with health professionals, improve the movement of information, support follow-up, strengthen surveillance, and reduce some of the barriers created by geographical distance. In a country such as Timor-Leste, where communities are distributed across mountains, rural areas, coastal settlements, and geographically difficult environments, these possibilities are significant. Digital health may allow knowledge and professional support to travel where physical services cannot always travel easily.

Yet connectivity alone does not create care.

A digital platform may transmit information instantly, but it cannot replace the reassurance of a trusted health worker. An electronic record may preserve a patient's clinical history, but it does not necessarily capture the meaning of that person's suffering. An algorithm may identify a pattern of risk, but it cannot by itself understand the cultural, familial, economic, or emotional circumstances surrounding that risk. A remote consultation may overcome distance, but it cannot automatically reproduce the intimacy and attentiveness of being physically present with another human being.

This is why efficiency, although important, cannot become the ultimate measure of technological progress in healthcare. A system may become faster while becoming less attentive. It may process more information while understanding less of the person. It may increase the number of digital interactions while weakening the quality of human

encounters. When this occurs, healthcare can become technically sophisticated while becoming relationally impoverished.

The danger, therefore, is not technology itself. The deeper danger is allowing technological logic to redefine the meaning of care. When efficiency, standardization, prediction, optimization, and measurable outcomes become dominant, aspects of care that are difficult to quantify may gradually become invisible. Listening, presence, compassion, cultural understanding, trust, patience, and moral responsibility may appear secondary precisely because they cannot always be represented through a dashboard, algorithm, or performance indicator.

For community health, this question is particularly important because trust is not an accessory to the system. It is part of the system. People are more likely to seek care, communicate openly, follow health advice, and participate in prevention when they experience health services as respectful and trustworthy. Technology must therefore strengthen, rather than weaken, the relationships through which trust is built.

This requires health professionals to become not merely users of technology, but critical and responsible interpreters of it. Digital information should inform professional judgment rather than replace it. Artificial intelligence may identify possible risks or patterns, but professionals remain responsible for determining what those findings mean in the context of a particular person. The human capacity to question, interpret, listen, contextualize, and exercise ethical judgment therefore becomes even more important as technological systems become more sophisticated.

This changing role of the professional is not a retreat from technology. It is a deeper form of technological responsibility. A nurse who uses a digital decision-support system must understand its purpose and limitations. A physician interpreting an algorithmic prediction must consider whether the recommendation fits the patient's actual circumstances. A community health worker using a mobile platform must recognize when local realities cannot be adequately represented

through standardized categories. In each case, technology becomes an aid to professional reasoning rather than its replacement.

The human face of care is also preserved through presence. Presence does not necessarily mean physical proximity alone. A remote consultation can still be deeply human when the professional listens attentively, communicates respectfully, protects privacy, and recognizes the person beyond the screen. Conversely, physical proximity does not automatically guarantee humane care. A professional may stand beside a patient while remaining emotionally or ethically distant.

Thus, the challenge is not simply to preserve face-to-face care at all costs. It is to preserve the qualities of human recognition wherever care occurs.

Governance is equally essential. Digital health systems must protect privacy, confidentiality, security, transparency, accountability, and inclusion. Artificial intelligence and other digital technologies should be developed and implemented in ways that respect human rights and prevent new forms of discrimination or exclusion (World Health Organization, 2021b, 2021c). A technological system that benefits only those with reliable connectivity, digital literacy, financial resources, or geographic access may unintentionally deepen the inequalities it was intended to reduce.

For Timor-Leste, this means that digital transformation should be pursued with both ambition and humility. Technology can contribute significantly to strengthening community health, but technological development must remain grounded in the realities of communities. Digital solutions should respond to actual needs, function within available infrastructure, accommodate local languages and patterns of communication where appropriate, and remain accessible to populations who might otherwise be left behind.

This also requires a different understanding of innovation. Innovation is not simply the introduction of something new. In health systems, innovation should mean the creation of better possibilities for people. A

technology that is new but inaccessible is not necessarily meaningful innovation. A sophisticated platform that increases administrative burden without improving care may represent technological change without health-system improvement. Conversely, a modest digital solution that enables a remote health worker to obtain timely advice may produce substantial value precisely because it responds to a real need.

Progress should therefore be evaluated through human outcomes. Do people receive better care? Are professionals better supported? Is continuity improved? Are remote communities more connected? Do patients understand the information they receive? Are vulnerable populations included? Does technology strengthen trust or weaken it? Does it create more time for meaningful care or simply accelerate the pace of work?

These questions move technological evaluation beyond novelty and toward purpose.

A truly modern health system is therefore not necessarily the system with the most advanced technology. Modernity in healthcare should be understood as the capacity to use appropriate technologies wisely while preserving the values that give healthcare its human purpose. The most sophisticated system can still fail if people no longer feel seen, heard, respected, or cared for.

The future of community health will undoubtedly be more digital. Yet digital transformation should not mean the disappearance of human presence. The challenge is to build systems in which technology creates more space for meaningful human care rather than less. Technology should carry information so that professionals can have more time to listen. It should reduce unnecessary administrative burdens so that health workers can be more present. It should connect distant communities without making them feel distant from the health system itself.

There is also a generational responsibility embedded in this transformation. The technologies introduced today will shape how

future professionals learn, how patients encounter services, how communities understand healthcare, and how institutions define quality. If technology is introduced without preserving dignity, future systems may normalize a form of healthcare in which efficiency is valued more highly than relationship. If technology is integrated wisely, however, it may create precisely the opposite possibility: a system in which machines handle what machines can do well, while human beings are given greater opportunity to do what only human beings can do—listen, interpret, accompany, comfort, deliberate, and care.

Ultimately, the question is not whether healthcare will become technological. It will. The deeper question is whether, amid this transformation, healthcare will remain recognizably human.

Technology may change the way care travels. It must never change the reason care exists.

CHAPTER 5

REIMAGINING TIMOR-LESTE'S COMMUNITY HEALTH FUTURE

5.1 From Imported Models to Contextual Health Systems

Health systems do not exist in a vacuum. They are shaped by history, institutions, geography, culture, political and social relationships, available resources, and, above all, the people they are intended to serve. A health system is therefore never simply a technical arrangement of hospitals, clinics, professionals, medicines, technologies, policies, and financing mechanisms. It is also a social and historical creation, continuously formed through the interaction between institutions and the people who inhabit them. For this reason, a model that functions effectively in one setting cannot simply be transferred to another and expected to produce identical results. Health systems are living arrangements of people, institutions, practices, expectations, and relationships. Their effectiveness depends not only on what is introduced, but also on how that intervention encounters the realities of everyday life.

This principle challenges a common assumption in global health: that successful interventions can be moved from one setting to another primarily through technical replication. A programme may demonstrate impressive outcomes in one country, yet produce more limited or unexpected results elsewhere. The difference does not necessarily mean that the original intervention was ineffective or that the receiving community was incapable of implementing it. Rather, it may indicate that health interventions are embedded within systems whose histories, capacities, relationships, and social conditions differ. What works is therefore not simply the intervention itself, but the interaction between the intervention and its context.

Global health knowledge nevertheless remains essential to this process. International frameworks, scientific evidence, technical standards, comparative experiences, and lessons from other countries can provide valuable guidance for strengthening health systems. No

country needs to develop its health system entirely from the beginning. Humanity possesses a substantial body of knowledge concerning primary health care, disease prevention, health promotion, workforce development, financing, governance, digital health, community participation, and health-system resilience. To ignore this accumulated knowledge would be both unnecessary and counterproductive.

Yet knowledge becomes meaningful only when it enters a particular social world.

Systems thinking reminds us that health interventions interact continuously with the institutions, relationships, resources, values, and social conditions within which they are introduced (de Savigny & Adam, 2009). An intervention designed as an isolated technical solution may therefore encounter feedback loops, institutional constraints, cultural expectations, resource limitations, and unintended consequences that were not visible in its original setting. A policy that appears straightforward on paper may become complicated in practice because people interpret it differently, institutions implement it unevenly, or communities encounter barriers that were not anticipated by its designers.

This is why contextualization should not be understood as an optional adjustment made after a model has already been selected. It should be considered part of health-system design from the beginning. Before asking whether a particular model can be implemented, health planners should ask what assumptions the model contains. What level of infrastructure does it require? What kind of workforce does it assume? What patterns of transportation, communication, literacy, financing, and institutional coordination are necessary? What expectations does it have about patients, families, and communities? And, perhaps most importantly, what does it assume about the relationship between individuals and the health system?

For Timor-Leste, these questions are particularly important. The country possesses a distinctive geography, a relatively young institutional history, strong family and community structures, diverse cultural traditions, uneven access to services, and continuing

constraints in human, financial, and infrastructural resources. The realities of health in Dili may differ considerably from those experienced in a remote rural community. Distance, transportation, household responsibilities, economic circumstances, language, trust, education, and familiarity with formal institutions may all influence whether and how people seek care.

These differences do not represent obstacles that should simply be overcome in order to make an imported model function. They are part of the context within which the health system exists.

A health system designed without attention to these realities risks becoming technically sophisticated while remaining socially distant. It may possess policies that are internationally aligned, technologies that are modern, and indicators that demonstrate progress, while still failing to address the practical experience of people whose lives do not fit the assumptions of the system. Contextualization therefore asks health systems to move beyond the question of whether a service exists toward the deeper question of whether that service is genuinely reachable, understandable, acceptable, and meaningful to the people for whom it was created.

The National Health Sector Strategic Plan already recognizes the importance of developing a health system responsive to national priorities while strengthening primary health care, accessibility, community participation, human resources, and system capacity (Ministry of Health, Timor-Leste, 2011). This orientation provides an important foundation for contextual health-system development because it places national needs and system capacity alongside broader health objectives. The relevant question is not simply, *What has worked elsewhere?* but also, *What does this community require? What resources does it already possess? What barriers shape its experience of health and illness? And what kind of system can realistically sustain the desired intervention over time?*

These questions are particularly important when resources are limited. Imported models may assume levels of staffing, financing, transportation, electricity, digital connectivity, laboratory capacity, data

quality, or institutional coordination that are not readily available. When these assumptions remain invisible, implementation gaps can easily be interpreted as failures of local institutions or communities. Yet the problem may lie elsewhere: in the distance between the assumptions of a model and the conditions of the setting in which it is expected to operate.

This distinction has ethical significance. When an externally designed intervention fails because its assumptions do not fit the local environment, responsibility should not automatically be placed upon the community. Communities should not be described as resistant, unprepared, or incapable simply because an intervention was poorly adapted to their circumstances. Contextualization creates a more honest understanding of implementation by recognizing that systems must be designed around real conditions rather than idealized ones.

Implementation research emphasizes the importance of understanding the interaction between interventions and the contexts in which they are implemented (Peters et al., 2013). This interaction is dynamic. Context is not merely the background against which an intervention occurs; it can shape the intervention itself. Institutions may adapt policies. Health workers may modify procedures in response to practical realities. Communities may reinterpret interventions according to local understandings. Patients may develop their own strategies for navigating services. Such adaptations are not necessarily signs of failure. They may represent the living process through which systems become workable.

For this reason, contextualization requires humility. It asks health planners, professionals, researchers, and policymakers to recognize that communities are not empty spaces waiting to receive externally designed solutions. Communities already possess knowledge, practices, relationships, coping strategies, and forms of solidarity that have developed through lived experience. These resources may not always appear in national statistics or international policy documents, but they can be essential to understanding how health systems actually function. Local knowledge can reveal barriers that formal indicators overlook. A statistical measure may demonstrate that a population has

low service utilization, but community experience may explain *why*. Perhaps the facility is physically distant. Perhaps transportation is costly or unreliable. Perhaps opening hours conflict with agricultural work, household responsibilities, or community obligations. Perhaps communication is difficult. Perhaps people do not feel sufficiently understood or respected within the service environment. Perhaps previous experiences have created uncertainty about whether seeking care will actually lead to meaningful assistance.

Numbers can identify a problem. Relationships often explain it.

This distinction is central to reimagining community health. A health system that sees only indicators may know *what* is happening without understanding *why*. A contextual system seeks both forms of knowledge. Quantitative data can identify patterns and disparities, while community dialogue can illuminate the meanings and mechanisms behind those patterns. Professional expertise can identify clinical priorities, while local experience can reveal whether those priorities are feasible and acceptable in everyday life.

This does not mean that local knowledge should automatically be treated as superior to scientific evidence. Such an approach would replace one form of absolutism with another. The task is instead to bring different forms of knowledge into constructive relationship. Scientific evidence can provide rigor, while local knowledge provides situated understanding. International standards can offer principles and safeguards, while community experience can reveal how those principles can become meaningful in everyday life. Professional expertise can identify what is clinically necessary, while families and communities can help explain how care can realistically be integrated into people's lives.

The most mature health systems are therefore not those that choose between global knowledge and local knowledge, but those capable of connecting them.

This also changes the meaning of evidence-based practice. Evidence should not be understood merely as something produced elsewhere

and subsequently delivered to a local population. Evidence must be interpreted in relation to context. A finding generated under particular demographic, institutional, technological, or socioeconomic conditions may provide valuable guidance, but its application requires judgment. The question becomes not simply whether an intervention has evidence behind it, but whether the evidence is relevant to the population, resources, institutions, and circumstances in which it is being considered.

Contextualization therefore requires a form of intellectual humility. It recognizes that no model contains the whole truth of a health system. Every model highlights certain dimensions while leaving others less visible. A financing framework may illuminate resource allocation but say little about trust. A digital-health strategy may strengthen information exchange while overlooking electricity access. A clinical protocol may improve standardization while failing to account for cultural communication. A performance indicator may measure service utilization without revealing whether people experienced care as respectful.

Health-system design must therefore resist the temptation to confuse what is measurable with what is most important.

Participation becomes essential within this approach. Community participation should not be reduced to consultation after decisions have already been made. Genuine participation means creating opportunities for communities to influence priorities, identify problems, shape interventions, monitor services, and evaluate whether health-system reforms are actually improving people's lives. Participation transforms contextualization from a technical adjustment into a democratic and ethical process.

This is particularly important because communities are not homogeneous. Within any community there may be differences of age, gender, socioeconomic position, geography, education, disability, family circumstances, and access to political or social influence. Listening to “the community” therefore requires attention to whose voices are being heard and whose experiences may remain hidden.

Otherwise, participation can reproduce existing inequalities by giving greater influence to those who already possess social power.

A contextual health system must therefore develop mechanisms for meaningful listening. Community meetings, local health committees, patient feedback, household-level engagement, community health workers, civil-society organizations, and other forms of participatory practice can provide channels through which experience enters institutional decision-making. Such mechanisms should not merely collect opinions; they should create pathways through which legitimate concerns can influence action.

For Timor-Leste, this perspective opens an important possibility. The country does not have to choose between following global models and preserving local identity. It can become a meeting place between them. International knowledge can be adapted rather than copied; local knowledge can be strengthened rather than romanticized; technology can be welcomed without being allowed to determine the meaning of care; and institutional reform can proceed without losing sight of the social relationships that make health systems function.

Such an approach also creates space for innovation. Contextualization does not mean adapting existing models indefinitely. Sometimes the local context reveals needs for which no imported model is entirely appropriate. In such cases, the task is not merely to modify what already exists, but to create something new. Innovation can emerge precisely because communities and health professionals encounter problems that existing frameworks do not adequately address.

This is particularly relevant to a young nation. Timor-Leste's health system does not need to define success exclusively through comparison with older and wealthier health systems. Comparative learning is valuable, but the ultimate goal is not to reproduce another country's institutional architecture. It is to build a system capable of serving Timor-Leste's population with dignity, equity, continuity, and resilience. This requires distinguishing between principles and forms. Certain principles may have broad relevance: equity, accessibility, quality, safety, participation, dignity, accountability, and respect for

human rights. Yet the institutional forms through which these principles are realized may legitimately differ. A principle can travel while its implementation must be locally shaped.

This distinction is especially important in the age of digital health and artificial intelligence. Technologies increasingly cross national borders with remarkable speed. A digital platform or algorithm may be developed in one environment and introduced into another with minimal physical movement. Yet technological portability should never be confused with contextual neutrality. Data, algorithms, interfaces, workflows, and assumptions carry the imprint of the environments in which they were created. Their introduction therefore requires the same contextual sensitivity as any other health intervention.

A contextual approach also strengthens resilience. Health systems inevitably encounter crises, resource shortages, demographic changes, technological disruptions, and emerging health needs. Systems that depend entirely on rigidly imported models may struggle when circumstances change. Systems that cultivate local capacity to learn and adapt may be better positioned to respond. Contextualization therefore becomes not merely a strategy for implementation but a long-term capacity for survival and transformation.

The deeper question is consequently not whether Timor-Leste can implement models developed elsewhere. It certainly can, and international learning will remain important. The more important question is whether the country can develop the institutional confidence to determine what should be adopted, what should be adapted, what should be questioned, and what should be created anew.

Such confidence does not mean isolation. It means entering global knowledge as a participant rather than merely as a recipient.

For a young nation, this distinction carries particular significance. A health system is part of nation-building because it expresses how a society understands dignity, solidarity, vulnerability, responsibility, and the value of human life. To design health systems contextually is therefore to participate in shaping the social contract itself. It is to say

that health policies should not merely function administratively; they should make sense within the lived realities of the people whose lives they affect.

A contextual health system is therefore not one that rejects the world. It is one that learns from the world while remaining attentive to its own people. It asks what can be borrowed, what must be transformed, what should be protected, and what needs to be created anew. Its strength lies not in reproducing a model perfectly, but in developing the capacity to learn, adapt, and respond.

Ultimately, the movement from imported models to contextual health systems is a movement from replication toward relationship, from technical transfer toward situated learning, and from passive implementation toward shared creation. It recognizes that health-system reform is never simply the movement of policies from one place to another. It is a process of translation between knowledge and experience, between institutions and communities, between global aspirations and local realities.

For Timor-Leste, the future of community health will depend not only on what the country learns from the world, but on what it learns about itself. Its geography, history, communities, families, professionals, institutions, and experiences are not peripheral considerations. They are part of the knowledge from which its health system must be built.

A health system becomes truly contextual when it learns from the world without forgetting where its people stand.

5.2 From Recipients to Co-Creators of Health

For many years, health systems have been organized around a relatively simple relationship: institutions provide, professionals deliver, and communities receive. This arrangement has played an important role in the development of modern healthcare. It has enabled governments to establish institutions, train health professionals, organize services, distribute medicines, and create mechanisms for responding to population needs. Yet beneath this apparently functional

arrangement lies an assumption that deserves reconsideration: that health is something produced primarily by institutions and subsequently delivered to populations. When people are understood mainly as recipients, their knowledge, experience, relationships, and capacity to shape the conditions of health can remain largely invisible.

Reimagining community health therefore requires more than expanding services or improving their technical efficiency. It requires a transformation in the relationship between health systems and the people they exist to serve. Communities must be recognized not simply as beneficiaries of healthcare, but as co-creators of health. This does not mean abandoning professional expertise or transferring institutional responsibilities to communities. Rather, it means recognizing that health is produced through relationships among institutions, professionals, families, communities, and individuals. The health system is one part of that larger social ecology. It can provide essential resources and expertise, but it cannot create health independently of the people and communities whose lives it seeks to improve.

This shift begins with a different understanding of participation. Community participation is sometimes reduced to attendance at meetings, cooperation with health campaigns, acceptance of professional advice, or compliance with programs designed elsewhere. Such activities may be useful, but they do not necessarily constitute meaningful participation. Genuine participation requires a deeper redistribution of voice. People should have opportunities to identify problems, define priorities, shape interventions, monitor implementation, and evaluate outcomes. Participation becomes meaningful when communities can influence not only how a program is implemented, but also what problems are recognized as important and what forms of response are considered appropriate.

The Declaration of Alma-Ata placed community participation at the centre of primary health care, emphasizing that people have both a right and a responsibility to participate in the planning and implementation of their healthcare (World Health Organization, 1978). This principle remains highly relevant. Contemporary approaches to people-centred health systems likewise emphasize partnership,

participation, responsiveness, and shared responsibility as foundations of health-system transformation (World Health Organization, 2007, 2016). The movement toward people-centred care therefore represents more than a change in terminology. It reflects a deeper recognition that health systems become more legitimate and responsive when people are treated as participants in their own health rather than as passive objects of professional intervention.

The distinction is particularly important in Timor-Leste, where health is deeply embedded in family and community relationships. The *suco* and *aldeia* are not merely administrative spaces on a government map. They are living social environments in which people communicate, exchange knowledge, support one another, interpret illness, negotiate responsibilities, and respond collectively to everyday challenges. Health decisions may be influenced by family relationships, community expectations, cultural understandings, economic circumstances, geographical realities, and experiences with formal institutions. Consequently, a health system that seeks to work effectively in these settings must understand the community not simply as a geographical location in which a health facility happens to be situated, but as a living network of relationships.

This has important implications for the meaning of access. A clinic may exist within a particular community, yet its physical presence does not automatically guarantee that people can use it effectively. People must recognize a health need, perceive available services as appropriate, decide to seek care, reach the service, obtain care, and engage with the care they receive. Access therefore involves more than geographical proximity or the formal availability of services. Levesque et al. (2013) conceptualize access as involving the interaction between characteristics of health systems and the abilities of people to perceive, seek, reach, pay for, and engage with healthcare. From this perspective, communities possess knowledge that health systems need in order to understand where access succeeds and where it quietly fails.

A technically sound intervention may therefore produce disappointing results when it does not correspond to the realities of everyday life. A

service schedule may conflict with agricultural work or household responsibilities. A health message may be scientifically accurate yet communicated in language that people do not easily understand. A referral pathway may exist formally but become difficult to follow because of transportation costs, distance, family obligations, or unfamiliarity with institutional procedures. A program may appear accessible from the perspective of policy documents while remaining distant from the lived experience of those it is intended to serve.

Community co-creation creates a possibility of discovering these gaps before they become entrenched. People can identify barriers that may not be visible in national indicators or administrative reports. They can explain why a service is not being used, why a particular message is misunderstood, or why a seemingly reasonable intervention does not fit local routines. In this sense, participation is not simply a democratic ideal. It is also a source of practical knowledge for improving health-system performance.

Yet co-creation should not be romanticized. Communities are not homogeneous spaces of harmony, and local knowledge is not automatically correct. Communities can contain inequalities of gender, age, wealth, status, education, geography, and social influence. Some voices may be heard more easily than others, while vulnerable groups may remain excluded even within participatory processes. Local communities may also encounter misinformation, limited resources, or deeply established practices that create health challenges. For this reason, co-creation cannot mean replacing professional knowledge with community opinion. It requires creating conditions in which different forms of knowledge can meet critically and respectfully.

Professional expertise remains indispensable. Nurses, physicians, midwives, community health workers, public-health professionals, and other practitioners possess clinical, scientific, and technical knowledge that communities should not be expected to reproduce. At the same time, communities possess forms of knowledge that professionals cannot acquire solely through formal education. They know how people travel, how families organize responsibilities, which social relationships

create trust, which communication practices are meaningful, and how health decisions are actually negotiated in daily life.

Co-creation therefore depends on epistemic reciprocity: the recognition that different forms of knowledge have different contributions to make. Scientific knowledge provides analytical and clinical rigor. Professional expertise helps identify risks, diagnose conditions, and design appropriate interventions. Community knowledge provides situated understanding of the social and cultural environments in which those interventions must operate. When these forms of knowledge are brought into constructive relationship, health interventions can become both scientifically responsible and socially meaningful.

This also changes the meaning of professional authority. Community participation does not diminish the role of health workers. Instead, it invites a more relational understanding of expertise. The authority of the nurse, doctor, midwife, or public-health professional is not weakened when communities are invited into dialogue. It can become more trustworthy precisely because professional knowledge is exercised with humility, listening, explanation, and responsiveness.

Such a transformation is particularly important for nursing and community-based health work. The health professional often encounters people not as abstract cases but as persons embedded within families, livelihoods, histories, and communities. Listening becomes part of clinical knowledge. Understanding becomes part of intervention. The professional does not cease to be an expert; rather, expertise becomes something shared in relationship rather than imposed through hierarchy. This relational approach can strengthen the trust upon which sustainable health systems depend (Gilson, 2003).

Trust is particularly important because health systems are not sustained by infrastructure alone. People must believe that services are relevant, that professionals will treat them with dignity, that their concerns will be taken seriously, and that their participation can make a difference. Where communities repeatedly experience health programs as externally designed and externally controlled, participation may gradually become performative. People may attend meetings because

they are expected to attend while remaining disconnected from the decisions that actually shape their lives. Co-creation seeks to move beyond this symbolic participation toward meaningful involvement.

This requires institutional mechanisms. Community voices cannot depend solely on the goodwill of individual health workers. They must have legitimate places within health-system governance. Local health committees, community health structures, participatory planning processes, feedback mechanisms, community health workers, and routine opportunities for dialogue can create channels through which local experience reaches decision-makers. The purpose is not to make every decision collectively, which would be impractical, but to ensure that decisions affecting communities are informed by the realities of those communities.

For Timor-Leste, this direction offers an opportunity to connect national health-system development with the social resources already present within communities. The country's relatively young institutional history should not be interpreted only in terms of limitations. It can also create space for institutional learning and innovation. Rather than reproducing rigid models of service delivery, health institutions can develop forms of governance that recognize community relationships as resources for health-system strengthening.

This is particularly relevant to the role of community health workers. Their importance extends beyond the delivery of specific health messages or services. They can serve as bridges between formal health institutions and local communities, translating professional knowledge into locally meaningful communication while also bringing community experience back into the health system. When adequately supported, trained, respected, and integrated into health-system structures, community health workers can help transform participation from an occasional activity into an ongoing relationship.

Co-creation is also closely connected to resilience. A health system becomes more adaptive when the people within it are capable of identifying emerging problems, sharing information, mobilizing resources, and developing responses. Resilience is therefore not only

a property of institutions. It is also embedded in relationships among people and in their capacity to act collectively. Community participation can strengthen local ownership, communication, social networks, and collective capacity—resources that become particularly valuable during crises and periods of scarcity (Blanchet et al., 2017; Topp et al., 2015).

This becomes especially visible during emergencies. When formal systems are stretched by outbreaks, natural disasters, shortages, or disruptions in transportation and communication, communities often become critical spaces of response. Information moves through social networks. Families organize assistance. Local leaders help mobilize people. Community health workers identify needs. Neighbours support vulnerable households. Such capacities should not be regarded merely as temporary substitutes for formal institutions. They are part of the broader infrastructure through which societies sustain health.

A community that participates in shaping its health system is also more likely to understand that system as something belonging to the community rather than something imposed upon it. Ownership matters because sustainable health improvement cannot depend indefinitely on external motivation. Programs may begin through government initiative or international support, but their long-term legitimacy depends on whether people recognize them as relevant to their own lives and aspirations.

This raises an important distinction between service delivery and health creation. Service delivery asks whether institutions can provide a vaccine, consultation, medicine, referral, screening program, or health education session. Health creation asks a broader question: what conditions enable people to live healthier lives, and how can institutions and communities create those conditions together? The first question is essential, but the second determines whether the health system becomes deeply rooted in society.

The movement toward co-creation therefore changes the unit of analysis. Instead of looking only at facilities, programs, and professional outputs, health systems must also pay attention to relationships, capabilities, trust, local knowledge, participation, and

collective agency. These elements may be harder to quantify, but they are fundamental to whether services become meaningful in people's lives.

Participation also has an ethical dimension. To invite people into the production of health is to recognize their agency. It affirms that communities are not empty spaces waiting to be filled with professional solutions. They possess histories, relationships, memories, knowledge, and aspirations that deserve recognition. Participation can therefore become an expression of dignity: people are not merely cared for; they are listened to, respected, and taken seriously.

This is particularly significant in contexts where communities have historically experienced external interventions as something done to them rather than developed with them. The difference between these two approaches may appear linguistically small, but ethically it is profound. To do something to a community positions the community as an object of intervention. To work with a community recognizes the community as a partner in a shared project.

Yet partnership must also be honest about power. Co-creation does not mean pretending that institutions and communities possess equal authority in every decision. Governments remain responsible for ensuring equitable access, financing essential services, protecting public health, regulating quality, and fulfilling broader obligations to the population. Professionals remain responsible for clinical standards and patient safety. Communities should not be asked to carry responsibilities that properly belong to the state or health institutions.

The movement from recipients to co-creators is therefore not a movement from government responsibility toward community responsibility. It is a movement toward shared responsibility without displaced responsibility. The state remains accountable. Institutions remain responsible. Professionals retain their expertise. Communities gain meaningful voice and agency. The result is not less governance, but more intelligent governance—one that connects institutional capacity with community knowledge and professional expertise with lived experience.

For Timor-Leste, this offers a particularly important direction for the future. The question is no longer simply how the health system can deliver more services to communities. It is how communities can become active partners in designing, implementing, monitoring, and continually improving the health system itself. This means creating institutional spaces where local voices can influence policy; strengthening community health structures; supporting community health workers; developing responsive feedback mechanisms; and ensuring that local experience can travel upward into municipal and national decision-making.

Such an approach also requires patience. Co-creation cannot be built through a single workshop, consultation, or short-term project. Trust develops through repeated encounters in which people see that their contributions matter. Participation becomes credible when communities can identify moments in which their concerns changed a decision, altered an intervention, improved a service, or prevented a problem. In this sense, co-creation is not an event but a long-term institutional culture.

It also requires learning from failure. Not every participatory initiative will produce consensus. Some interventions may need to be redesigned. Some community expectations may be impossible to meet immediately. Some disagreements may reveal competing values or unequal interests. These difficulties should not be interpreted as evidence that participation has failed. They can instead become opportunities for institutions and communities to learn how to negotiate complexity together.

Ultimately, co-creation changes the imagination of what a health system is. It is no longer simply a network of hospitals, clinics, professionals, policies, technologies, medicines, and financing mechanisms. It becomes a social relationship through which a society expresses how it understands human well-being and how it chooses to care for its members. Within that relationship, communities are not passive endpoints. They are participants in defining what health means, what problems deserve attention, and what kind of future should be built. The transformation from recipient to co-creator is therefore both

practical and philosophical. Practically, it can make services more relevant, accessible, trusted, and adaptable. Institutionally, it can strengthen accountability, responsiveness, and resilience. Ethically, it recognizes human agency and dignity. Socially, it can connect health-system development with the relationships through which communities already sustain one another.

The deepest question is consequently not whether communities can contribute to health systems. They already do. The more important question is whether health systems are willing to recognize, organize, and learn from that contribution.

A reimagined health system does not ask only, “What can we do for the community?” It asks a more transformative question: “What can we build together?”

In that question lies a different vision of healthcare—one in which communities are not the final destination of health policy, but active participants in creating healthier futures. Health is no longer imagined as a product delivered from an institution to a population. It becomes a shared achievement, continually created through relationships among knowledge, responsibility, trust, and collective action.

For Timor-Leste, this vision offers more than a strategy for improving services. It offers a way of understanding health as part of the nation's social fabric: something strengthened when institutions listen, professionals accompany, families participate, and communities are trusted as partners in their own future.

Health is strongest when people are not merely served by the system, but recognized as authors of the health of their own communities.

5.3 From Fragmentation to Integrated Community Health

A health system can contain many services and still fail to function as a coherent system. Hospitals may operate separately from primary care, public-health programs may develop alongside rather than within existing services, community initiatives may remain disconnected from

formal institutions, and information may stop at the boundaries between organizations. A system may therefore appear comprehensive when viewed through the number of institutions, programs, facilities, or professionals it possesses, while remaining fragmented in the experience of the people who depend upon it. Fragmentation is not simply an administrative inconvenience. It can become a structural barrier to continuity, equity, efficiency, accountability, and trust.

The problem becomes most visible when the system is viewed from the perspective of the person rather than the institution. Organizations naturally divide responsibilities into departments, programs, levels of care, professional roles, budgets, and reporting structures. People, however, do not experience their lives in administrative categories. Illness does not remain inside the boundaries of a hospital department. Poverty does not stop at the entrance of a health centre. Maternal health cannot always be separated from nutrition, transportation, family responsibilities, or household income. Chronic disease does not disappear when a consultation ends. Human life is continuous even when institutions are organized in parts.

For communities, the consequences of fragmentation are therefore experienced as discontinuity. A person may receive one form of care at a health centre, another at a hospital, and further support from family or community structures, yet no one may possess a complete understanding of the person's journey. A patient may repeat the same history to different professionals, carry documents from one facility to another, or depend on family members to explain what happened during previous encounters. When services do not communicate, the burden of coordination is often transferred to patients and families—the very people who may have the fewest financial, educational, technological, or social resources to carry it.

Fragmentation can consequently transform a system-level problem into an individual burden. The patient becomes the messenger between institutions. The family becomes the coordinator between professionals. Community workers become informal intermediaries between programs. What appears from the institutional perspective as a

boundary between responsibilities may be experienced by the person as confusion, delay, repetition, cost, or abandonment.

Integrated health therefore begins with a simple but profound principle: people experience health as a whole, even when institutions organize it in parts. The health system must find ways to connect these parts around the needs of people rather than expecting people to navigate disconnected structures by themselves. Integration is thus not primarily about creating more organizations. It is about creating relationships among existing organizations, services, professionals, information systems, and communities so that the whole becomes more coherent than the sum of its parts.

Systems thinking provides an important foundation for this transformation. Health systems are complex arrangements in which different actors, institutions, resources, and processes interact continuously (de Savigny & Adam, 2009). A change in one component can generate consequences elsewhere, sometimes intended and sometimes unexpected. Strengthening primary care without functional referral mechanisms, for example, may increase the number of patients entering the system without ensuring continuity when more specialized care is required. Expanding digital records without interoperability may simply create another isolated information system. Increasing community participation without institutional mechanisms for responding to community priorities may create participation without influence.

This systems perspective challenges the assumption that isolated improvements automatically produce systemic improvement. A new clinic may increase geographical access but remain ineffective if medicines are unavailable. A hospital may acquire sophisticated equipment but struggle if referral pathways are weak. A community health program may mobilize volunteers but remain disconnected from professional services. Integration requires attention to the relationships among these components. The central question becomes not only whether each part functions, but whether the parts function together.

The principle of integrated, people-centred health services responds directly to this challenge by placing people's needs, experiences, and continuity of care at the centre of system design (World Health Organization, 2016). Integration does not necessarily mean that every service must be located in one institution or that every responsibility must be centralized. Rather, it means that different components of the health system are connected through shared goals, communication, referral pathways, information, accountability, and coordinated responsibility.

This distinction between integration and consolidation is essential. A health system can be integrated while remaining institutionally diverse. A community health worker does not need to work in the same building as a hospital specialist in order for their roles to be connected. A rural health centre does not need to become a miniature hospital to participate in an integrated system. What matters is whether people can move between levels of care without losing continuity, whether information can move appropriately with them, and whether professionals understand their respective roles within a broader continuum.

For Timor-Leste, this principle has particular significance because the health system must operate across markedly different geographical and social environments. The experience of seeking healthcare in Dili cannot simply be assumed to represent the experience of someone living in a remote rural community. Distance, transportation, infrastructure, workforce distribution, household responsibilities, economic conditions, language, and social relationships can shape the meaning of access differently from one locality to another.

Integration must therefore connect national institutions with municipal, district, facility, and community structures while allowing services to adapt to local conditions. A centrally designed referral system may require different operational arrangements in an urban environment and in a remote area where transportation is less predictable. A digital communication strategy may be useful where connectivity is stable but require complementary mechanisms where infrastructure remains

limited. Integration, in other words, must create connection without assuming uniformity.

The National Health Sector Strategic Plan 2011–2030 recognizes the importance of comprehensive primary and hospital care, accessible services, stronger support systems, and greater community participation (Ministry of Health, Timor-Leste, 2011). These priorities point toward a health system in which different levels of care are not isolated layers but connected elements of a broader continuum. The significance of such a continuum is not merely administrative. It concerns whether a person can experience the health system as one system rather than as a collection of unrelated institutions.

Primary health care should form an important foundation of this continuum. It can provide prevention, health promotion, early intervention, treatment, follow-up, and referral while maintaining relationships with individuals and families over time. When primary care is strong and connected to secondary and tertiary services, people can move through the health system with greater continuity rather than repeatedly beginning their journey from the beginning (Starfield, 1994; World Health Organization, 2019).

Continuity is particularly important for chronic and long-term conditions. A person living with diabetes, hypertension, chronic respiratory disease, or another long-term condition requires more than episodic treatment. Their health depends upon monitoring, education, medication management, behavioural support, family involvement, and timely referral when complications arise. If these functions are divided among disconnected services, the person may experience repeated interruptions in care. Integration allows different professionals to see their contribution as part of a longer story.

This longer story also includes prevention. When health systems become heavily organized around treatment, opportunities for early intervention can be lost. Community-level health promotion, screening, vaccination, nutrition support, maternal and child health, environmental health, and disease prevention may be managed as separate programs even though they influence the same population. Integrated

community health brings these functions into closer relationship, allowing prevention and treatment to reinforce one another rather than competing for institutional attention.

Integration must also include the social dimensions of health. Health cannot be separated neatly from education, nutrition, sanitation, housing, employment, transportation, social protection, and community development. The social determinants of health demonstrate that many of the conditions influencing health are located beyond the clinical sector itself (Commission on Social Determinants of Health, 2008; Solar & Irwin, 2010). A genuinely integrated approach therefore requires collaboration across sectors.

This is especially important for communities experiencing vulnerability. A family may be unable to access healthcare not simply because a clinic is unavailable, but because transportation costs are prohibitive, food insecurity takes priority, caregiving responsibilities make attendance difficult, or information about available services does not reach the household. These conditions interact. An integrated health system recognizes such connections rather than interpreting every barrier as an individual failure to seek care.

The distinction is ethically important. When structural barriers are treated as individual non-compliance, responsibility is placed on the person rather than on the system. A mother who cannot attend an appointment because she must care for several children, for example, may be labelled as failing to follow a health recommendation. Yet from a systems perspective, her situation may reveal a lack of flexibility in service design. Integration therefore requires health institutions to understand the social circumstances in which health decisions are made.

Information represents another essential dimension of integration. Health information systems can support continuity by allowing relevant information to move appropriately with the patient across levels of care. Digital health may strengthen this process by connecting facilities and professionals across distance, reducing duplication, improving

communication, and supporting more informed decision-making. Yet information integration cannot be reduced to technology alone.

Digital connectivity without governance can reproduce or even deepen fragmentation. Different facilities may collect information using incompatible formats. Data may be incomplete or inaccurate. Professionals may lack clarity about who is responsible for entering or interpreting information. Privacy and confidentiality may be inadequately protected. Information may become abundant without becoming meaningful. For this reason, information integration requires governance, data quality, privacy protection, interoperability, and appropriate professional responsibility. Technology can connect information, but institutions must still determine how that information is interpreted and used responsibly (World Health Organization, 2021c).

The same principle applies to emerging technologies. Digital platforms, telehealth, electronic records, and artificial intelligence may create new opportunities for coordination, particularly across geographical distance. Yet technology should not be mistaken for integration itself. A connected platform does not automatically create connected care. Human relationships, institutional accountability, shared standards, and professional communication remain essential. Technology can provide the pathways; people and institutions must decide how those pathways are used.

Community health workers can also contribute significantly to integration by linking households with formal health services. Their position within communities allows them to identify needs early, support health education, facilitate referrals, follow up with families, and maintain continuity between community life and professional care. They can help translate institutional systems into forms that communities can understand and navigate while bringing community experiences back into formal services.

However, their contribution should not be taken for granted. Community health workers require appropriate training, supervision, remuneration, recognition, and institutional support if they are to function effectively as bridges between communities and health

services (Abimbola, 2021). Without such support, the health system risks depending on informal labour to compensate for structural weaknesses. Integration should strengthen community health workers rather than simply adding responsibilities to already demanding roles.

Integration further depends upon trust. People are more likely to move confidently through a health system when they understand where to go, believe that professionals communicate with one another, and experience continuity in their care. Fragmentation can weaken trust because people repeatedly encounter institutions that appear disconnected. A person may receive contradictory information from different services or feel that no professional understands the complete situation. Over time, such experiences can create the perception that the system does not recognize the person as a whole.

Integrated care can strengthen trust by making the health system feel more coherent and responsive (Gilson, 2003). Trust grows when people experience consistency between what institutions promise and what they actually do. It grows when referrals are completed, information is communicated, appointments are respected, and professionals demonstrate awareness of previous encounters. In this sense, integration is not merely a technical strategy. It is also a relational practice.

Yet integration should not mean centralization. A system can be integrated while remaining locally responsive. Indeed, excessive centralization may weaken community ownership by moving decision-making farther from the people affected by it. A highly centralized system may achieve administrative uniformity while losing sensitivity to local realities. The challenge is therefore to create connections across levels without erasing local autonomy, cultural knowledge, and community agency.

This balance is especially important for Timor-Leste. National leadership is necessary for standards, financing, workforce development, coordination, quality assurance, and accountability. At the same time, municipalities, health facilities, community health workers, families, and local communities need meaningful space to

identify priorities and adapt approaches to their circumstances. Integration should therefore connect rather than homogenize.

Such an approach requires clarity about roles. Integration does not mean that every actor should do everything. On the contrary, effective integration depends upon knowing who is responsible for what, how responsibilities connect, and what happens when a person's needs cross institutional boundaries. Clear referral pathways, communication protocols, supervision structures, shared objectives, and accountability mechanisms can help prevent gaps from emerging between services.

Integration also requires institutional memory. A person should not have to restart their health story every time they encounter a new professional. When appropriate information and continuity mechanisms are available, the system can remember enough to support the person without reducing them to a data record. This distinction matters. Information should serve the continuity of the human story, not replace it.

The deeper purpose of integration is therefore continuity. A person should not experience healthcare as a series of unrelated encounters but as a journey in which different parts of the system recognize one another and remain oriented toward the same human being. Families should not have to become the sole coordinators of disconnected services. Communities should not have to compensate indefinitely for institutional gaps. Professionals should not be left to work in isolation.

This principle is particularly important when people move between levels of care. A referral should not be understood merely as the act of sending someone elsewhere. It should represent a transfer of responsibility within a connected continuum. The sending professional remains concerned about what happens next, while the receiving professional understands the history and purpose of the referral. When this occurs, movement through the system becomes coordinated rather than fragmented.

Integration also creates opportunities for learning. When hospitals, primary care, public-health programs, community organizations, and

local health structures communicate effectively, information about problems and solutions can circulate across the system. Lessons from one community may inform another. Repeated failures may reveal structural weaknesses. Successful local innovations may be adapted elsewhere. The health system becomes capable not only of delivering services but also of learning from its own experience.

This learning function is essential for resilience. Fragmented systems often struggle to see patterns because information remains isolated within organizational boundaries. Integrated systems can recognize connections earlier and respond more adaptively. A cluster of community-level concerns, for example, may become visible to district authorities when local information can move effectively upward. Likewise, national policy can become more grounded when information from communities travels back through the system.

Integration can therefore be understood as a form of collective intelligence. No single institution possesses all the knowledge required to protect population health. Hospitals know certain dimensions of illness. Primary care understands continuity. Public-health programs see population patterns. Community health workers understand local realities. Families possess intimate knowledge of lived experience. National institutions understand policy and resource allocation. Integration creates the conditions under which these different perspectives can contribute to a more complete understanding.

The same principle applies across generations. A health system that connects prevention, primary care, hospital services, rehabilitation, community support, and social protection can better accompany people through changing stages of life. Health is not a sequence of isolated episodes but a trajectory. The system must therefore be capable of recognizing continuity across time as well as continuity across institutions.

For Timor-Leste, the future of integrated community health will depend partly on whether institutional development can move beyond organizational boundaries. The goal should not be to create a perfectly centralized structure, nor to eliminate all institutional diversity. The goal

is to cultivate a health system in which diversity becomes complementary rather than disconnected.

Such integration requires leadership capable of seeing beyond individual programs. It requires financing arrangements that do not unintentionally reward fragmentation. It requires information systems that communicate rather than isolate. It requires professionals who understand their roles within a broader continuum. It requires community structures that are recognized as legitimate partners. Above all, it requires a shared understanding that every organizational boundary is secondary to the human life that moves across it.

An integrated community health system ultimately brings together what fragmentation separates: prevention and treatment, hospital and community, professional knowledge and local experience, technology and human relationship, national policy and local reality. It does not erase differences among these domains. Instead, it creates pathways through which their differences can become complementary.

The movement from fragmentation to integration is therefore more than an organizational reform. It represents a different philosophy of health-system design. Fragmentation begins with institutions and asks how people can move among them. Integration begins with people and asks how institutions can organize themselves around their journeys.

This shift changes the fundamental question. Instead of asking whether each institution is performing its own function, the system asks whether the person is experiencing continuity. Instead of measuring only the output of individual programs, it considers whether those outputs collectively contribute to better health. Instead of assuming that institutional boundaries are natural, it recognizes them as structures that can either support or obstruct human well-being.

The strongest health system is not necessarily the one with the greatest number of facilities, programs, technologies, or professional categories. It is the one capable of transforming diversity into coherence. Its strength lies in the quality of the relationships

connecting its parts and in the degree to which those relationships remain oriented toward human need.

For communities, this means that integration should ultimately make the health system easier to understand, easier to navigate, more responsive to local realities, and more capable of accompanying people across time. For professionals, it means working not as isolated practitioners but as members of a wider network of responsibility. For institutions, it means accepting that their effectiveness depends partly on how well they connect with others. For policymakers, it means seeing health not as a collection of programs but as a living system.

The deepest measure of integration is therefore not institutional proximity, technological sophistication, or administrative coordination. It is whether a person feels that the system remembers, responds, and remains present throughout the journey of care.

A health system becomes integrated when its parts cease to compete for the centre and begin to organize themselves around the person at the centre.

Ultimately, the movement from fragmentation to integrated community health is a movement from isolated functions toward shared purpose. It connects prevention with treatment, institutions with communities, information with responsibility, and national policy with local experience. It recognizes that health is created across boundaries, even when institutions are not.

The strength of a health system is not found in how many parts it possesses, but in how faithfully those parts work together for the person at the centre.

5.4 A Timor-Leste Framework for Equitable and Resilient Community Health

Reimagining community health requires more than a collection of recommendations. Recommendations may identify what should be done, but a health system also needs a coherent way of understanding

why those actions matter, how they relate to one another, and how they can be translated into institutions, relationships, and everyday practice. What is needed, therefore, is not simply another list of interventions, but a framework capable of connecting principles, institutions, communities, knowledge, resources, and action.

For Timor-Leste, such a framework must emerge from the realities of its people. It must speak to a young nation with diverse communities, challenging geography, evolving institutions, limited resources, and a strong tradition of social relationships and collective responsibility. It must recognize both the aspirations of a modern health system and the realities of households, *sucos*, *aldeias*, health centres, hospitals, health workers, families, and communities. Above all, it must avoid the assumption that a health system becomes stronger merely by becoming larger. Strength is also found in relevance, trust, adaptability, connection, and the capacity to respond equitably to different human needs.

The proposed framework begins with a simple premise: community health is not a peripheral component of the health system. It is one of its foundations. Health systems become more equitable and resilient when they are designed around the places where people live and the relationships through which health is experienced. Community health is therefore not an additional layer placed beneath hospitals or formal institutions. It is part of the social and relational infrastructure through which prevention, care, recovery, and resilience become possible.

The framework can be understood through nine interconnected principles: dignity, equity, participation, strong primary health care, local capacity, trust and solidarity, integration, digital responsibility, and resilience and transformation. These principles should not be treated as isolated policy objectives. Together, they describe a way of thinking about how a health system can become more human, more locally grounded, and more capable of responding to changing circumstances.

Dignity as the Starting Point

The first principle is dignity. Every health policy, service, and intervention must begin with recognition of the person as a person. Dignity prevents healthcare from becoming merely technical. It reminds institutions that patients are not numbers, diagnoses, statistical categories, or service-utilization indicators. Behind every clinical record is a human life shaped by history, family, culture, vulnerability, responsibility, memory, and hope.

People-centred healthcare therefore requires respect, responsiveness, participation, and continuity (World Health Organization, 2007, 2016). These are not decorative ethical additions to an otherwise technical system. They are conditions of meaningful care. A service may be geographically accessible yet fail to be truly people-centred if individuals experience humiliation, indifference, discrimination, or exclusion when they enter it.

In Timor-Leste, dignity also has a relational dimension. People often encounter health institutions not as isolated individuals but as members of families and communities. The way a person is treated can therefore influence not only individual trust but also the perception of the health system within the wider community. A respectful encounter can strengthen confidence; a dismissive encounter can travel through social relationships and weaken it.

Dignity thus establishes the moral horizon of the entire framework. It asks every subsequent principle a fundamental question: Does this policy, institution, technology, or intervention strengthen or diminish the dignity of the people it is intended to serve?

Equity as the Measure of Justice

The second principle is equity. Timor-Leste's geographical and socioeconomic differences mean that equal distribution of services will not necessarily produce equal opportunities for health. Giving every community exactly the same resources may appear fair while leaving communities facing greater barriers permanently disadvantaged.

Equity therefore requires attention to differences in need. A remote community may require additional transportation support, workforce incentives, outreach services, community health workers, or communication mechanisms precisely because its circumstances are different. Equity is not about giving everyone the same thing. It is about ensuring that differences in social and structural conditions do not become permanent differences in the opportunity to live a healthy life.

This understanding is consistent with the broader recognition that health is shaped by social determinants such as education, income, housing, nutrition, employment, transportation, and social conditions (Commission on Social Determinants of Health, 2008; Sen, 2002). Health policy cannot therefore focus exclusively on clinical services. It must also recognize the conditions that make those services accessible—or inaccessible—in people's everyday lives.

Equity consequently becomes the framework's measure of justice. It asks not only how much the system provides, but who can actually benefit from what it provides.

Participation as Democratic Health Practice

The third principle is community participation. Communities must have meaningful opportunities to shape the health services that affect them. Participation includes identifying priorities, contributing local knowledge, influencing decisions, monitoring implementation, and evaluating outcomes. This principle is consistent with the foundational vision of primary health care and contemporary people-centred health systems (World Health Organization, 1978, 2016).

Meaningful participation is different from consultation. Consultation may involve asking communities what they think after major decisions have already been made. Participation involves creating opportunities for communities to influence the decisions themselves.

For Timor-Leste, this principle is particularly significant because community structures already represent important spaces of social organization. The *suco* and *aldeia* can become more than

administrative units within a health strategy. They can function as spaces in which local priorities are identified, health information is exchanged, community concerns are communicated, and local experience contributes to health-system learning.

Participation must nevertheless remain attentive to internal inequalities. Not every voice within a community carries the same social influence. Women, older people, people living with disabilities, poorer households, remote families, and other potentially marginalized groups must have meaningful opportunities to be heard. Community participation becomes equitable only when participation itself is inclusive.

Strong Primary Health Care as the Foundation

The fourth principle is strong primary health care. A resilient community health system cannot depend primarily on hospitals to respond after illness becomes severe. Hospitals remain essential, particularly for complex and specialized conditions, but a population's health cannot be sustained through hospital care alone.

Primary health care provides the foundation for prevention, health promotion, early intervention, treatment, continuity, and referral. Its strength depends upon accessibility, quality, community connection, workforce capacity, and integration with other levels of care (Starfield, 1994; World Health Organization, 2019).

For Timor-Leste, strengthening primary health care also means strengthening the relationship between formal services and everyday community life. A primary health centre should not be understood merely as a physical facility. It should function as a point of connection between health professionals, families, community structures, preventive programs, and referral pathways.

Strong primary care also allows health systems to shift their orientation from responding to illness toward preventing avoidable illness. It creates opportunities for early recognition, health education, maternal and child health, chronic disease management, vaccination, nutrition support, and ongoing follow-up. In this sense, primary care becomes

one of the principal spaces in which equity and resilience are translated into everyday practice.

Local Capacity as the Engine of Sustainability

The fifth principle is local capacity. Communities and local health workers should not be treated merely as implementers of nationally designed programs. They require knowledge, resources, training, supportive institutions, and opportunities to develop solutions appropriate to local realities.

Local capacity is important because external support, while valuable, cannot substitute indefinitely for locally embedded capability. A health system becomes more sustainable when communities and local professionals possess the confidence, knowledge, relationships, and institutional support necessary to respond to their own circumstances.

Community health workers can serve as important bridges between households and formal services, particularly where geographical and resource barriers remain significant (Abimbola, 2021). Their position allows them to recognize needs early, support health education, facilitate referrals, communicate with families, and help connect institutional knowledge with community realities.

However, local capacity should not become a justification for shifting institutional responsibility onto communities. Communities cannot be expected to compensate for inadequate financing, insufficient staffing, or weak infrastructure. Building local capacity means investing in people and institutions, not simply asking communities to do more with less.

Trust and Solidarity as Social Infrastructure

The sixth principle is trust and solidarity. A health system depends upon relationships that cannot be created by policy documents alone. Trust develops through consistent encounters, respectful communication, professional integrity, transparency, and responsiveness. When communities experience institutions as reliable

partners, health services become more socially sustainable (Gilson, 2003).

Trust is particularly important because health systems frequently ask people to act on the basis of professional knowledge. People must trust vaccination programs, health advice, diagnoses, referrals, medications, and public-health communication. Professionals, in turn, must trust that communities will communicate their concerns and participate honestly in care.

Solidarity extends this relationship beyond individual encounters. It expresses the recognition that health is a shared social concern. The health of one community affects the resilience of the wider society. Vulnerable populations cannot be treated as peripheral because the conditions that produce vulnerability are often connected to broader social structures.

In Timor-Leste, where family and community relationships remain important sources of social support, solidarity can become a significant resource for health-system resilience. Yet it must be complemented by institutional responsibility. Community solidarity should strengthen the health system, not compensate indefinitely for its weaknesses.

Integration as the Architecture of Connection

The seventh principle is integration. Community health cannot remain divided between separate programs, institutions, levels of care, and sectors. Primary care, hospitals, public health, community structures, social services, and health information systems must be connected through shared goals and coordinated responsibilities.

Systems thinking emphasizes that the performance of a health system depends upon relationships among its different components rather than on isolated interventions (de Savigny & Adam, 2009). A well-equipped hospital cannot compensate indefinitely for weak primary care. A strong community program cannot reach its full potential if referrals disappear at the facility boundary. A sophisticated information system

cannot create continuity if institutions do not use information collaboratively.

Integration therefore means creating pathways through which people, information, responsibility, and learning can move across institutional boundaries. It does not require complete centralization. Rather, it requires coherence.

For Timor-Leste, this means connecting national strategies with municipal and community realities, linking primary and hospital care, strengthening referral systems, supporting community health workers, and creating mechanisms through which local experience can inform national decision-making.

Digital Responsibility in the Age of Transformation

The eighth principle is digital responsibility. Digital health and artificial intelligence can strengthen access, information management, communication, surveillance, clinical decision support, and coordination. In geographically challenging settings, these technologies may create new possibilities for connecting people and professionals across distance.

Yet technology must remain accountable to human purposes. Digital transformation should therefore be guided by equity, privacy, transparency, safety, inclusion, and professional responsibility (World Health Organization, 2021b, 2021c). Technology should extend the reach of care without becoming a substitute for human relationships.

This principle is particularly important in resource-constrained settings. Digital innovation can create genuine benefits, but it can also reproduce inequalities when connectivity, devices, digital literacy, or institutional capacity are unevenly distributed. A digital service that works well in Dili may not function in the same way in a remote aldeia.

Digital responsibility therefore requires asking not simply whether a technology is available, but whether it is appropriate, accessible, safe,

understandable, and beneficial for the people who are expected to use it.

The essential question is not “Can technology do this?” but “What should technology do, for whom, under what conditions, and with what human safeguards?”

Resilience and Transformation as the Horizon

The ninth principle is resilience and transformation. A resilient system must do more than survive crisis. It must learn from disruption, adapt to changing circumstances, preserve what works, correct what fails, and transform structures that repeatedly produce vulnerability.

Resilience therefore requires institutional learning, community capacity, coordination, flexibility, and the ability to act under uncertainty (Blanchet et al., 2017; World Health Organization, 2022). A system that simply returns to its previous state after every crisis may survive without learning. A more transformative form of resilience asks what the crisis revealed about structural weaknesses and what should change as a result.

For Timor-Leste, this distinction is crucial. Resilience should not mean asking communities to endure scarcity indefinitely. It should mean building the capacity to reduce avoidable vulnerability. The goal is not simply to become better at surviving inadequate systems, but to create systems that make fewer people vulnerable in the first place.

The Framework as a Connected Pathway

These principles can be represented as a connected pathway:

DIGNITY → EQUITY → PARTICIPATION → PRIMARY HEALTH CARE → LOCAL CAPACITY → TRUST & SOLIDARITY → INTEGRATION → DIGITAL RESPONSIBILITY → RESILIENCE & TRANSFORMATION.

This pathway is not intended as a rigid sequence in which one principle is completed before the next begins. Rather, it represents a dynamic system of mutual reinforcement.

Dignity gives equity its human meaning. Without dignity, equity can become a technical exercise in distribution.

Equity creates the conditions for meaningful participation. People cannot participate equally when structural barriers prevent some voices from being heard.

Participation strengthens primary health care. Services become more relevant when communities can influence priorities and communicate local realities.

Primary health care develops local capacity. Strong community-based services create spaces in which people and local professionals can build knowledge and confidence.

Local capacity strengthens trust. People are more likely to trust institutions that understand and respond to local realities.

Trust supports integration. Cooperation across institutions depends upon relationships of reliability and accountability.

Integration creates a stronger foundation for responsible digital transformation. Connected institutions are better positioned to use technology coherently rather than creating additional isolated systems.

Together, these capacities contribute to resilience and transformation. The pathway therefore moves beyond the conventional idea that health-system strengthening means improving individual components. It proposes that the relationships among components are themselves a central object of reform.

Governance as the Connecting Practice

The framework also requires a different understanding of governance. Health-system governance should not be limited to administrative

control. It should include listening, coordination, accountability, transparency, learning, and the capacity to respond to changing community realities.

Governance becomes stronger when national institutions and local communities are connected through meaningful channels of communication and shared responsibility. National policy must be capable of hearing local experience, while local implementation must remain connected to national standards and resources.

This creates a form of governance that is neither purely centralized nor purely local. It is relational governance—a system in which different levels remain connected while retaining appropriate responsibilities.

For Timor-Leste, this means that national development and community development cannot be separated. A stronger health system is not created only through national strategies, institutional expansion, or new infrastructure. It is created when national priorities become meaningful in the lives of people in Dili, in rural communities, and in remote *sucos* and *aldeias*.

The distance between policy and lived experience must therefore continually be reduced.

Building with Scarcity, Not Merely Despite It

This framework also rejects the assumption that limited resources necessarily require limited imagination. Resource constraints make prioritization essential, but they can also encourage innovation, local adaptation, collaboration, and more thoughtful use of available capacity.

The objective should not be to reproduce the most expensive health systems in the world. Nor should Timor-Leste be expected to accept lower standards simply because its resources are more limited. The task is to identify which forms of investment generate the greatest contribution to equity, continuity, trust, and resilience under local conditions. This may mean strengthening primary care before expanding highly specialized services, investing in community health

workers alongside professional workforce development, improving referral pathways before adding isolated programs, strengthening information systems while protecting privacy, or supporting locally appropriate digital tools rather than importing technologies whose infrastructure requirements cannot be sustained.

Resource limitation can therefore become a stimulus for thoughtful design. The central question becomes not how to reproduce another country's health system, but how to construct a system that is appropriate, equitable, sustainable, and deeply connected to the people it serves.

From Framework to Living System

A framework becomes meaningful only when it can live within institutions and communities. The nine principles must therefore be translated into practice through policies, budgets, workforce development, service organization, community participation, information systems, monitoring, and evaluation.

Yet implementation should not be understood as the mechanical application of a finished model. The framework itself must remain capable of learning. As Timor-Leste's population changes, as urbanization develops, as technology expands, as new health threats emerge, and as communities articulate new expectations, the framework must evolve.

This is why resilience and transformation stand at the end of the pathway. They do not represent a final destination. They return the system to learning.

A resilient system asks: What happened?

A learning system asks: What did we discover?

A transformative system asks: What must we now change?

In this sense, the framework is circular as much as it is linear. Transformation can generate new forms of participation. Participation

can reveal new dimensions of inequity. Inequity can require renewed attention to dignity. Digital transformation can expose new needs for trust and governance. Crisis can reveal weaknesses in integration. Each principle can therefore reactivate the others.

The framework becomes a living architecture rather than a fixed blueprint.

Toward a Timor-Leste Vision of Community Health

Ultimately, the Timor-Leste framework is not simply a technical model. It is an ethical orientation toward the future. It asks the health system to move from institutions toward relationships, from recipients toward participation, from fragmentation toward integration, and from survival toward transformation.

It recognizes that health is created not only inside hospitals and clinics but within homes, families, communities, workplaces, schools, villages, and the social relationships that connect them. It recognizes that professional expertise and community knowledge are not enemies. They become more powerful when placed in dialogue. It recognizes that technology can extend human capacity but cannot replace the human purposes that give healthcare its meaning.

Most importantly, the framework refuses to define Timor-Leste's health future exclusively through what the country lacks. It begins instead by asking what already exists: communities capable of solidarity, health workers who remain connected to local realities, families that participate in care, institutions that continue to develop, and a society capable of learning from its own experience.

This does not romanticize existing conditions. Inequalities remain real. Resources remain constrained. Geography continues to create barriers. Institutions require strengthening. Health workers require support. Communities require meaningful inclusion. But a future-oriented framework must be capable of seeing both vulnerability and possibility at the same time. The purpose of reimagining community health is therefore not to construct an idealized system in which every problem

disappears. It is to build a system capable of recognizing problems earlier, responding more fairly, learning more intelligently, and remaining connected to the people whose lives give the system its purpose.

The future of community health in Timor-Leste will not be determined only by what the health system can provide. It will also be determined by whether the system can listen, learn, include, adapt, and grow with its people.

A health system becomes equitable when it recognizes differences in need.

It becomes people-centred when it protects dignity.

It becomes participatory when communities have meaningful voice.

It becomes resilient when it learns from disruption.

It becomes transformative when it changes the structures that repeatedly produce vulnerability.

And it becomes truly sustainable when these qualities are not temporary projects, but part of the way the system understands itself.

The proposed framework therefore offers more than a strategy for strengthening services. It offers a different imagination of what a national health system can become: a system rooted in community, guided by dignity, organized around equity, strengthened through participation, sustained by trust, connected through integration, disciplined by responsible technology, and capable of transforming itself through learning.

The future of Timor-Leste's community health will not be built by choosing between the state and the community, between professional knowledge and local wisdom, or between tradition and technology. It will be built by creating the relationships through which these different forms of strength can work together.

In the end, the framework returns to its beginning. Health is not merely something a system delivers. It is something a society continually creates together. A resilient health system is not one that simply

survives every disruption; it is one that learns from disruption, protects human dignity, expands equity, and becomes more capable of caring for its people because of what it has learned.

5.5 A Future Beyond Survival: Toward a Healthier Timor-Leste

Every nation carries a vision of the future, but not every vision begins from the same place. For Timor-Leste, imagining a healthier future requires remembering the distance already travelled. The development of national institutions, the expansion of health services, the strengthening of primary health care, the growth of a national health workforce, and the continuing effort to improve access are part of a broader journey from vulnerability toward greater national capacity. These achievements matter because they represent more than institutional development. They embody the gradual construction of a society capable of organizing collective resources around the well-being of its people.

Yet the future of health cannot be defined simply by how much the country has survived. Survival is an important achievement, particularly for a nation whose modern history has been marked by profound disruption, scarcity, displacement, loss, and institutional reconstruction. But survival, by itself, cannot remain the horizon of national development. A society must eventually ask a different question: What kind of life are we trying to make possible?

A future beyond survival begins when health is understood not merely as the absence of disease, but as a condition shaped by dignity, opportunity, social relationships, environment, education, livelihood, security, and participation. The social determinants of health remind us that the conditions in which people are born, grow, live, work, and age profoundly influence their opportunities to achieve health (Commission on Social Determinants of Health, 2008; Solar & Irwin, 2010). Health is therefore not produced only within hospitals, health centres, or consultation rooms. It is produced across the social landscape in which people build their lives. A child who has access to education, nutritious food, safe water, a secure home, and supportive relationships begins life with opportunities that are fundamentally different from those

available to a child who lacks these conditions. An older person who can access transportation, social support, medicines, and respectful care experiences ageing differently from someone isolated by poverty or distance. A mother who has access to information, transportation, skilled care, and supportive family structures encounters pregnancy differently from one who must negotiate these challenges alone.

A healthier Timor-Leste therefore cannot be created by the health sector alone. It requires a society in which health becomes part of the broader project of human development. Education policy, social protection, food systems, transportation, housing, environmental management, employment, infrastructure, and community development all influence the conditions within which health becomes possible.

This perspective places equity at the centre of the future. Progress should not be measured only by national averages or aggregate improvements. National indicators may show that a country is improving while particular communities remain excluded from those gains. A rising average can conceal a persistent distance between those who can reach opportunities easily and those who encounter structural barriers at every step.

Health equity therefore requires continuous attention to differences in opportunity and to the structural conditions that produce unequal outcomes (Sen, 2002; Marmot & Bell, 2010). The central question is not simply whether health services exist, but whether people possess a genuine opportunity to benefit from them.

For Timor-Leste, this means looking beyond the visible centres of development. Progress must be experienced not only in Dili and other major urban areas, but also by people living in rural communities, remote sucos and aldeias, mountainous regions, and households facing economic and social constraints. A health system becomes nationally meaningful when its benefits can be felt across these different realities.

Geography will remain an important part of this challenge. Mountains, dispersed settlements, transportation difficulties, seasonal conditions,

and differences in infrastructure can make access uneven. Distance can translate into financial costs, delayed referrals, missed appointments, limited continuity, and reduced access to specialized services. Yet geography need not become destiny.

Strong primary health care, community health workers, referral networks, appropriate digital technologies, mobile or outreach services, and locally responsive models can help connect communities across distance. The objective is not to eliminate geographical difference, which is neither possible nor necessary. The objective is to ensure that geographical difference does not become a permanent sentence of unequal access.

This distinction matters. A remote community does not need to become identical to Dili in order to receive equitable care. Equity does not require sameness. It requires that different circumstances receive appropriate responses. The future of community health in Timor-Leste therefore depends upon the ability to design systems that are nationally coherent while remaining locally adaptable.

A future beyond survival also requires a stronger relationship between communities and institutions. Communities should not encounter the health system only when illness occurs. They should be present in health planning, prevention, education, monitoring, and evaluation. Their knowledge should contribute to policy, and their experiences should help institutions recognize what formal indicators may fail to reveal.

This principle returns the health system to the idea of co-creation developed earlier in this chapter. Participation, when meaningful, transforms health from something delivered to people into something created with them (World Health Organization, 1978, 2016). A community that participates in shaping its health system is not simply a beneficiary of development. It becomes one of its authors.

Such participation also changes the meaning of accountability. Institutions should not be accountable only upward—to ministries, donors, regulations, or administrative structures. They should also be

accountable outward—to the people whose lives are affected by their decisions. This requires mechanisms through which communities can express concerns, provide feedback, monitor services, and see how their experiences influence decisions.

Participation becomes meaningful when people can recognize its consequences. If communities repeatedly speak but never see change, participation can become symbolic rather than substantive. If, however, their knowledge contributes to redesigning services, improving communication, strengthening referral pathways, or identifying barriers to access, participation becomes a source of institutional learning.

This transformation also depends upon trust. Institutions cannot command trust into existence. It must be cultivated through consistent action. People need to experience health services as respectful, reliable, transparent, and responsive. Health workers need environments in which they themselves are supported, valued, protected, and able to provide quality care.

High-quality health systems require not only technical competence but also relationships capable of sustaining confidence between professionals, institutions, and communities (Gilson, 2003; Kruk et al., 2018). Trust is therefore both an outcome and an infrastructure of health-system development.

When people trust a health worker, they may be more willing to disclose sensitive information, follow treatment recommendations, return for follow-up, seek preventive care, and participate in community health initiatives. When health workers trust their institutions, they may be more able to communicate problems, propose improvements, and remain committed to their communities. When institutions trust communities, they become more willing to recognize local knowledge and share responsibility.

Trust is consequently not a soft or secondary dimension of health-system performance. It is part of the infrastructure through which the system functions. The future will also be increasingly shaped by technology. Digital health, electronic records, telehealth, data systems,

decision-support tools, and artificial intelligence may create new possibilities for Timor-Leste, particularly where distance and limited specialist capacity remain significant challenges. Digital technologies can help connect professionals, extend access to information, support continuity, improve communication, and create new possibilities for learning across geographical boundaries.

Yet technological progress should never be confused with human progress. A system can become more technologically sophisticated while remaining inequitable, inaccessible, or disconnected from human needs. Digital transformation must therefore remain connected to equity, privacy, accountability, inclusion, and human dignity (World Health Organization, 2021b, 2021c).

This is particularly important because technologies can reproduce the inequalities already present in society. Those with reliable connectivity, digital literacy, appropriate devices, and confidence in digital platforms may benefit first, while others may remain excluded. A digital health system can therefore create a new geography of inclusion and exclusion if its development is not deliberately guided by equity.

Responsible digital transformation requires investment not only in technology but also in infrastructure, education, digital literacy, governance, workforce capacity, cybersecurity, and institutional readiness. The question should never be simply, “Can this technology be introduced?” It should also be, “Who will benefit, who may be excluded, and how can the system protect those at risk of being left behind?”

This principle is particularly important for artificial intelligence. AI may assist diagnosis, decision support, data analysis, surveillance, planning, and resource allocation, but its value depends upon the quality of the data, infrastructure, governance, professional judgment, and ethical safeguards surrounding it. Technology can amplify institutional capacity; it cannot manufacture trust, dignity, equity, or responsibility.

The future of Timor-Leste's health system should therefore not be imagined as a choice between human care and technological

innovation. The challenge is to ensure that technology remains embedded within a human-centred system. Digital tools should make care more accessible, connected, and informed without making human relationships less visible.

Resilience must likewise become more than a language of endurance. Timor-Leste has considerable experience with survival and adaptation. But a future-oriented health system should not merely become better at responding to crises. It should become better at anticipating them, learning from them, adapting to them, and transforming the conditions that make communities vulnerable.

Resilient systems are capable of absorbing shocks while maintaining essential functions, but they are also capable of learning and changing (Kruk et al., 2015; Blanchet et al., 2017). This distinction is essential. A system that repeatedly returns to the same vulnerabilities after each crisis may demonstrate endurance without transformation.

A more meaningful form of resilience asks what a crisis reveals.

Where did the system fail to connect?

Which communities were left behind?

Which services proved essential?

Which institutional assumptions were incorrect?

Which forms of community knowledge became unexpectedly valuable?

And what should change before the next crisis arrives?

These questions transform resilience from a language of survival into a language of learning.

For Timor-Leste, this is especially significant because future challenges may not resemble previous ones. Emerging infectious diseases, climate-related pressures, changing patterns of chronic illness, demographic shifts, economic uncertainty, technological disruption,

and changing expectations of healthcare will create new forms of complexity. A health system designed only for yesterday's problems will gradually become less capable of responding to tomorrow's realities.

The future therefore requires institutional memory. Policies should learn from implementation. Health workers should have opportunities to communicate lessons from practice. Communities should have mechanisms for sharing their experiences. Data should inform decisions, but data should remain connected to human stories.

A health system that forgets its own experience risks repeating the same weaknesses. A system that remembers can transform experience into institutional knowledge.

Institutional memory also means preserving what works. Development does not always require replacing existing practices with new ones. Some local practices, relationships, and community mechanisms may already contribute significantly to social resilience. The task is to identify what should be protected, what should be improved, what should be connected to formal systems, and what should be transformed.

This requires a form of institutional humility. Not everything new is necessarily better, and not everything inherited is necessarily obsolete. A mature health system learns to distinguish between the two.

The future also requires a different understanding of development. Development should not be measured only through buildings constructed, technologies introduced, health workers trained, or services counted. These are important achievements, but they are means rather than ends.

The deeper question is whether people experience greater security, dignity, access, participation, and capacity to live healthy lives.

A new health facility matters because it can bring care closer to people. A digital system matters because it can improve continuity and

communication.

A trained health worker matters because knowledge becomes meaningful through practice.

A national strategy matters because it can align institutions around shared priorities.

The value of each investment ultimately depends upon what it makes possible in human lives.

In this sense, a healthier Timor-Leste is not simply a country with more healthcare. It is a country in which health becomes part of the social fabric.

Families are supported rather than overwhelmed.

Communities are listened to rather than merely instructed.

Health workers are valued rather than treated as instruments.

Institutions are accountable rather than distant.

Technology serves people rather than defining them.

Such a vision also requires recognizing that health is relational. A person's health is influenced by the health of the household, the community, the environment, and the institutions surrounding them. The health of the community, in turn, depends upon the well-being of individuals and families.

The relationship is reciprocal.

A healthy community supports healthier individuals, while healthier individuals contribute to stronger communities.

This is why community health should not be regarded as a lower level of healthcare. It is one of the places where the relationship between individual well-being and collective well-being becomes most visible.

The journey toward a healthier Timor-Leste will not be simple. Resources will remain limited. Institutions will continue to evolve. New diseases, demographic changes, climate pressures, economic uncertainties, and technological disruptions will create new demands.

Some reforms will succeed; others will reveal unexpected weaknesses. Some policies will need to be revised. Some innovations will prove unsustainable.

But uncertainty does not eliminate the possibility of direction.

A society can choose to build systems that are more equitable, more participatory, more resilient, more locally grounded, and more deeply rooted in human dignity.

This choice does not require certainty about the future. It requires a commitment to learning.

A future-oriented health system must therefore possess the courage to experiment responsibly, the humility to recognize failure, and the institutional capacity to transform experience into improvement. It must be willing to ask difficult questions about who benefits, who remains excluded, and which structures continue to reproduce vulnerability.

For Timor-Leste, the most important resource in this journey may therefore be neither technology nor infrastructure alone. It is the capacity to imagine health as a shared national responsibility.

Shared responsibility does not mean that everyone carries the same burden. Government remains responsible for policy, financing, regulation, quality, and equitable provision. Health professionals remain responsible for safe and ethical practice. Communities contribute knowledge, participation, solidarity, and local capacity. Families remain important partners in care. Schools, workplaces, civil-society organizations, and other institutions contribute to the conditions in which health can flourish.

Shared responsibility means connecting these responsibilities rather than leaving them isolated.

It also means understanding that the future of health is inseparable from the future of the nation itself. A country cannot fully realize its social and economic potential when large segments of its population

remain unable to access the conditions necessary for healthy lives. Health is therefore not simply a sectoral concern. It is part of national development, human dignity, and the meaning of citizenship.

The future of community health begins when the question changes from “How can we survive the next challenge?” to “What kind of society do we want to become?”

That question opens a larger horizon.

It transforms health from a service into a social commitment, resilience from endurance into transformation, and community from a recipient of policy into a partner in shaping the future.

It also changes the meaning of progress. Progress is no longer simply the expansion of what the health system possesses. It becomes the expansion of what people are able to experience: greater dignity, greater opportunity, greater participation, greater security, and greater capacity to shape the conditions of their own lives.

This is ultimately what makes the idea of a future beyond survival so important. Survival asks whether a society can endure. Flourishing asks whether people can live meaningful, dignified, and healthy lives.

The distinction is profound.

A society may survive without flourishing. It may endure scarcity without eliminating it. It may build institutions without fully connecting them to communities. It may introduce technologies without ensuring inclusion. It may expand services without resolving inequity.

To move beyond survival is therefore to transform the question of health itself.

The aspiration is not merely to survive illness, crisis, distance, or scarcity.

It is to build conditions in which people can live, participate, belong, contribute, and flourish.

A healthier Timor-Leste will ultimately be built not in one institution, one hospital, one health centre, or one policy document, but across countless relationships of care—within households, communities, health centres, hospitals, schools, workplaces, civil institutions, and public institutions.

These relationships may appear small when viewed individually. Together, they form the human infrastructure of national health.

A nurse who listens carefully, a community health worker who crosses a difficult distance, a family that supports an older relative, a teacher who promotes healthy knowledge, a local leader who helps a community respond to a crisis, a policymaker who listens to remote communities, and an institution that learns from its own failures all contribute to the same larger project.

Health is built through such ordinary acts of responsibility.

The future is therefore not something waiting somewhere beyond the present. It is being constructed through the decisions, relationships, institutions, and values that a society chooses to cultivate today.

For Timor-Leste, this means that the next chapter of health development need not be defined primarily by what the nation has endured. It can be defined by what the nation chooses to become.

Beyond survival lies the possibility of flourishing.

And that possibility begins when a people decide that the health of each person is inseparable from the future of the whole.

CONCLUSION

Caring for a People, Building a Future

A health system is ultimately a reflection of how a society understands human life. It reveals whom society chooses to protect, whose suffering it is willing to see, whose voice it is prepared to hear, and how it responds when people become vulnerable. To reimagine community health in Timor-Leste is therefore not simply to redesign services, institutions, or policies. It is to reconsider the relationship between people, community, institutions, and the future they are collectively trying to build.

This book has argued that health begins beyond the hospital. It begins in households, families, *sucos*, *aldeias*, schools, workplaces, and the social environments in which people live their everyday lives. It is shaped by geography and opportunity, by culture and trust, by education and livelihood, by participation and dignity. Illness may eventually bring a person to a health facility, but the conditions that shape health are already present long before that encounter. A resilient health system must therefore reach beyond institutional boundaries and become meaningfully connected to the realities of communities.

The journey developed throughout this book has also shown that equity and resilience are not separate ambitions. Equity gives resilience a moral direction by asking who is protected and who remains vulnerable. Participation gives resilience social strength by recognizing communities as partners rather than passive recipients. Primary health care provides a practical foundation through prevention, early intervention, continuity, and accessible care. Local capacity gives communities and institutions the ability to respond without depending entirely on distant structures. Trust gives the system legitimacy, while integration allows its many parts to work together rather than leaving individuals and families to navigate fragmentation alone. Responsible digital technology can extend these possibilities, but only when technology remains accountable to human purposes. For Timor-Leste, these principles acquire particular significance. The country continues to build its institutions while carrying the memory of a difficult history

and the aspirations of a young nation. Its geography, cultural diversity, dispersed communities, evolving infrastructure, and resource constraints create distinctive challenges. Yet these realities should not be understood only as limitations. They can also become sources of knowledge about what a health system must become: adaptive rather than rigid, connected rather than fragmented, participatory rather than paternalistic, and locally grounded while remaining open to global learning.

Timor-Leste therefore does not need simply to reproduce models developed elsewhere. Global evidence, international standards, technological innovation, and comparative experience remain valuable. But knowledge becomes meaningful only when it is interpreted through the realities of the people for whom health systems exist. The future requires a dialogue between what the world has learned and what Timor-Leste itself has experienced. The task is neither isolation nor imitation, but thoughtful transformation.

The challenges ahead will be complex. Digital health, artificial intelligence, climate pressures, demographic change, economic uncertainty, and emerging health threats will continue to test institutional capacity. Technology may alter how health information is generated, how decisions are supported, and how services reach distant communities. Yet technological progress should never be confused with human progress. A more sophisticated system is not necessarily a more humane one. Innovation matters only when it expands access, protects dignity, strengthens trust, reduces avoidable inequities, and helps professionals and communities care for one another more effectively.

The deepest task of community health is therefore not simply to extend life, but to protect the conditions in which life can be lived with dignity. Health is inseparable from the ability to belong, participate, learn, work, care for others, and imagine a future. For this reason, building a healthier Timor-Leste cannot be the responsibility of the health sector alone. It requires relationships among families, communities, health workers, educators, institutions, civil society, and national leadership. It

requires policies that listen to lived experience and institutions capable of learning from the people they serve.

A healthier future will emerge when communities are not merely recipients of services, but co-creators of health; when health workers are not merely providers, but trusted partners; when institutions are not merely administrators, but listeners and accountable stewards; and when technology does not replace human care, but strengthens its reach. Resilience, in this sense, is not simply the capacity to survive disruption. It is the capacity to learn from disruption, adapt without losing purpose, and transform vulnerability into greater collective capability.

The ultimate measure of a health system, therefore, cannot be found only in the number of facilities constructed, technologies introduced, services delivered, or indicators improved. These achievements matter, but they are means rather than the final horizon. The deeper question is whether people experience greater dignity, greater opportunity, greater security, greater participation, and greater confidence that they will not be forgotten when they become vulnerable.

This is the future toward which community health must point.

To care for a people is to recognize that every life matters, that every community possesses knowledge and dignity, and that institutions exist not above society but in service of it. To build a future is to create systems capable of listening, learning, connecting, adapting, and caring across generations.

To care for a people is to build a future with them.

And perhaps this is the most enduring meaning of community health: not simply keeping people alive, but creating the social, institutional, and human conditions in which every person has a fairer possibility to live, belong, participate, and flourish. Beyond survival lies the possibility of flourishing. And that possibility begins when a people understand that the health of each person is inseparable from the future of the whole.

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