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Safeguarding Africa's Health

EMPOWERING COMMUNITIES, STRENGTHENING HEALTH SYSTEMS

Continental Community Health Program Investment Case

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An entity of the African Union

AfricaCDC
Centres for Disease Control and Prevention
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Africa Centres for Disease Control and Prevention,
Ring Road, 16/17, Haile Garment Square,
P.O. Box 3243, Addis Ababa, Ethiopia.

Africa CDC is a continental autonomous health agency of the African Union established to support public health initiatives of Member States and strengthen the capacity of their public health institutions to detect, prevent, control and respond quickly and effectively to disease threats.

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FOREWORD



H.E. Ahmed Bola Tinubu
President, Federal Republic of Nigeria and AU Champion for Human Resources for Health and Community Health Delivery Partnership

Community Health Workers (CHWs) have been integral to the delivery of primary health care, pandemic preparedness, prevention, and response (PPPR) in all Member States. This Continental Community Health Program Investment Case is therefore both timely and strategic. It directly responds to Africa's Health Security and Sovereignty (AHSS) agenda by enhancing national capacities to address public health threats through Africa-led solutions.

Member States have made commendable progress, with approximately half of the continental target of 2 million CHWs achieved by 2025 through expanded recruitment, training, and deployment. With about 4 years to 2030, achieving the monumental CHW target underscores the magnitude of the outstanding commitment, including in terms of resources. Millions of Africans, especially those living in rural, remote, fragile, and underserved communities, still face substantial barriers to accessing quality essential health services.

This Investment Case is built on continental and global commitments, such as the Lusaka Agenda, the African Union's 2 million decision on community health and human resources for health the Addis Ababa Declaration on Immunization, among others. It clearly demonstrates that investing in CHWs is not merely a social imperative; it is a sound economic decision. It is a testament to our collective resolve to move from fragmented interventions toward integrated, government-led systems and domestic financing mechanisms that achieve sustainable and equitable outcomes.

The report shows that recruiting, training, and deploying two million CHWs could cumulatively generate returns of up to US$19 for every US$1 invested by 2030, with positive returns extending through 2063. These returns arise from reduced deaths, reduced illness burden, and reduced pressure on higher levels of care attributable to CHWs. Investing in the CHW program is, therefore, critical to achieving health sovereignty, resilience, and shared prosperity.

Achieving these impressive outcomes will require substantial and sustained investment. This report estimates that approximately US$4.3 billion will be needed annually through 2030 to support the recruitment, training, deployment, supervision, and retention of CHWs. This investment must be viewed not as expenditure alone, but as strategic investments in human capital, economic productivity, and national development. Unfortunately, the continent faces significant funding gaps of approximately US$1.6 billion annually until 2030 to reach its two million CHW target.

Importantly, this investment case provides a practical roadmap for action. Domestic financing and country ownership must underpin efforts to institutionalize, professionalize, and sustain community health programs across the continent.

The findings of this report are a bold call to action for governments, development partners, financial institutions, civil society, the private sector, and communities. Stronger domestic financing, sustained country ownership, the institutionalization of CHWs, innovative financing mechanisms, enhanced coordination and accountability, and robust data systems are all essential to achieving the continent's health ambitions.

I hereby call upon all my colleagues, Heads of States, to embrace this guiding document and reflect it at the country level to ensure that community health programs are accorded with the needed attention as a key component of Africa's Health Security and Sovereignty agenda.

PREFACE



H.E Dr. Jean Kaseya
Director General
Africa CDC

Since the Alma-Ata Declaration, countries have continually pushed for stronger primary health care systems, which are the cornerstone of resilient and equitable health systems. The experience of recent pandemics, humanitarian emergencies, climate-related shocks, and persistent health inequities has reinforced the importance of delivering quality health services closer to communities. Many people in Africa continue to face geographic, financial, and systemic barriers to care, with community health workers (CHWs) playing a uniquely important role in bringing essential services closer to households and underserved populations.

Community health systems have long been central to Africa's public health interventions and form a core pillar of the Pandemic Preparedness Prevention and Response (PPPR) of the Africa's Health Security and Sovereignty agenda. Community health workers support maternal and child health, immunization, nutrition, disease prevention and control, health education, surveillance, referral systems, and emergency response. They are often the first, and sometimes the only, point of contact between communities and the formal health system. Their role has become even more critical as African countries pursue universal health coverage by also strengthening preparedness and response capacities for emerging and ongoing health threats.

In recognition of their importance, African Union Heads of State and Government adopted the 2017 Assembly Decision calling for the deployment of two million CHWs across the continent. Since then, notable progress has been made by Member States. However, as of 2025, only about half of this continental target had been achieved, highlighting the substantial gaps that remain.

This investment case, developed by the Africa Centers for Disease Control and Prevention, presents compelling evidence on the transformative human and economic value of investing in community health systems. The report finds that scaling up the recruitment, training, and deployment of two million CHWs could generate cumulative returns of up to US$19 for every US$1 invested by 2030, with benefits extending to 2063. These benefits are driven primarily by reductions in mortality, morbidity, referral, and treatment costs at higher levels of care.

However, the report acknowledges the scale of the required investment. Achieving the two million continental CHW target will require an estimated US$4.3 billion annually up until 2030, with major investments needed for salaries, supervision, commodities and supplies, and training. These investments are essential to ensuring that CHWs are not viewed as temporary or informal actors, but as a professional, adequately remunerated, and fully integrated cadre within national health systems.

The continent, however, faces significant financing gaps to achieve its two million CHW target by 2030. Relative to available fiscal space, the continent faces an average funding gap of US$1.6 billion annually between 2024 and 2030. This represents a substantial resource shortfall that threatens to derail the continent's goal of reaching the two million CHWs target.

Crucially, this report highlights the important need for domestic resource mobilization and country ownership of community health systems. This is critical for the sustainability and reliability of the resources needed, as well as for the strategic fit and alignment of programs and interventions with national priorities.

The timely report also demonstrates that the effectiveness and sustainability of community health programs depend on moving beyond fragmented, disease- and program-specific models toward a polyvalent approach that equips CHWs to address a broad range of health needs. Such an approach improves efficiency, continuity of care, and system resilience while better responding to the realities facing communities.

Beyond economics, this investment case is fundamentally about people. It is about mothers receiving antenatal care in remote communities, children accessing lifesaving immunization services, households receiving timely health information, communities responding rapidly to outbreaks, and vulnerable populations gaining access to dignified, equitable care. A well-capacitated community health workforce saves lives, relieves pressure on higher-level care, strengthens trust in health systems, promotes social cohesion, and contributes directly to economic growth and human development.

Africa's future health and prosperity depend in large part on the strength of its community health systems. Investing in CHWs is therefore not simply a health sector priority; it is an economic and developmental imperative.

Finally, this report reflects the commitment and collaboration of numerous stakeholders across the continent. We extend our profound appreciation to Member States, the consultant team, technical experts, development partners, civil society organizations, CHWs and community representatives whose contributions informed the development of this investment case. Their collective efforts underscore a shared vision for a healthier, more resilient, and more prosperous Africa.

I commend the leadership of H.E. President Bola Ahmed Tinubu (African Union Champion for Human Resources for Health and Community Health Delivery Partnership) and the AU Commission for elevating community health to the high-level political agenda. This stewardship has sparked renewed momentum towards meeting the continental target of 2 million skilled, trained, and remunerated Community Health Workers serving all communities in Africa.

ACKNOWLEDGMENT

The African Centers for Disease Control and Prevention (Africa CDC) expresses its profound appreciation to all individuals, institutions, and partners whose commitment, expertise, and collaboration made the development of this Continental Community Health Program Investment Case possible.

Profound appreciation to H.E Dr. Jean Kaseya, Director General of Africa CDC for his foresight and transformative leadership in advancing the agenda of community health programs at both the continental and global levels and for providing the resources needed for this work.

Additionally, within Africa CDC, we appreciate the strategic leadership of the Acting Deputy Director General, Dr. Raji Tajudeen, for his stewardship. We also commend the outstanding guidance and technical coordination of the Director of the Primary Health Care Centre, Dr. Landry Tsague, Dr. Fidele Ngabo Gaga, Head of Division Community Health Systems and Dr. Barnabas Kwame Yeboah, Senior Technical Officer (Focal Person) for the Division of Community Health Systems and Health Promotion (CHSHP) as well as the dedicated contributions of colleagues from the CHSHP (Dr. Mary Nyikuri, Thaddee Niyoyitugira, Veronica Massanja, Massengo Reiche, Dr. Idowu Clement Lateef, Dr. Vicotor Ochangu, Patrick Marshall Nkamedjie, Kalouch Alexander, and Godfrey Nsereko).

Special recognition is extended to members of the Continental Coordination Mechanism (CCM) for Community Health leadership (Dr. Richard Kabanda-Chair, Dr. Adjoba Kadja-Cote d'Ivoire, Mr. Olasford Wiah-Liberia, Mr. Richard Kintu-AFF, Drs. Fouzia Shafique, Maureen Kerubo Momanyi, Jennifer Barak, Dennis Muhoza of UNICEF, Dr. Lilian Nyamuda-IFRC, Dr. James Guwani-UNAIDS, and representatives of AU Member States and other partners, for providing a vital platform for dialogue, technical guidance, and partner alignment throughout the development process. Particular mention is made of the Republics of Botswana, Rwanda, Cote d'Ivoire, and Zambia for supporting the country consultation visits during the development process.

We also acknowledge the invaluable and professional execution of the consultants (Drs. John Ataguba-Lead and Chijioke Nwosu) within a very reasonable timeline.

Finally, we express our deepest appreciation to Community Health Workers across Africa, whose daily service, resilience, and commitment continue to safeguard the health and wellbeing of our communities. This Investment Case is ultimately dedicated to their work and to the millions of Africans they serve.

LIST OF ACRONYMS

ACTs	Artemisinin-based combination therapy
Africa CDC	Africa Centres for Disease Control and Prevention
AIDS	Acquired Immunodeficiency Syndrome
AROI	Annualized Return on Investment
AU	African Union
CH	Community Health
CHP	Community Health Program
CHWs	Community Health Workers
CMU	La couverture Maladie Universelle
CPI	Consumer Price Index
CSR	Corporate Social Responsibility
DALYs	Disability Adjusted Life Years
DIBs	Development Impact Bonds
GDP	Gross Domestic Product
HEP	Health Extension Program - Ethiopia
HIV	Human Immunodeficiency Virus
iCCM	Integrated Community Case Management
IHME	The Institute for Health Metrics and Evaluation
JMAK	Johnson-Mehl-Avrami-Kolmogorov
KPI	Key Performance Indicator
M&E	Monitoring and Evaluation
MTEFs	Medium Term Expenditure Framework
NGO	Non-governmental organization
ODA	Overseas Development Assistance
OPD	Outpatient Department
ORS	Oral Rehydration Solution
PHC	Primary Health Care
RDTs	Rapid Diagnostic Tests
ROI	Return on Investment
TB	Tuberculosis
UHC	Universal Health Coverage
UNESCO	Organization
UNICEF	United Nations Children's Fund
US$	United States Dollars
VSL	Value of Statistical Life
WHO	World Health Organization
YLD	Years Lived in Disability
YLL	Years of Life Lost

EXECUTIVE SUMMARY

This Continental Community Health Program Investment Case provides an evidence-based framework for strengthening community health systems across African Union Member States through sustained and strategic investment in Community Health Workers. The report responds to persistent health workforce shortages, high disease burden, and declining external assistance, while aligning with continental commitments to Universal Health Coverage, health security, and the deployment of two million CHWs by 2030.

Background: Community Health Workers are central to primary health care delivery, disease prevention, surveillance, and emergency preparedness in Africa. Since the 2017 AU Assembly Decision calling for the deployment of two million CHWs, Member States have made progress; however, by 2025, only about half of this target had been achieved.

Financing remains fragmented and donor-dependent, with limited institutionalization within national systems. This Investment Case was developed to address these gaps and position community health as a core pillar of Africa's health security and sovereignty.

Objectives: The report aims to:

Model alternative investment scenarios for scaling up CHW programs;

- Estimate the costs and benefits of CHW investments at continental level;
- Quantify the return on investment (ROI) of community health programs;
- Identify sustainable financing mechanisms;
- Provide policy and operational recommendations to strengthen institutionalization, financing, and performance of CHW programs.

Methodology: A comprehensive economic and epidemiological model was developed to estimate costs and benefits of CHW investments from 2024 to 2063. The model draws data from Member States, the 2024 Africa CDC-UNICEF Landscape Survey, and

international databases including the World Bank, UNESCO, WHO, and IHME.

Key features of the methodology include:

- Projection of CHW densities using nonlinear and exponential smoothing techniques;
- Valuation of mortality using Value of Statistical Life (VSL);
- Valuation of morbidity using Disability-Adjusted Life Years (DALYs);
- Estimation of savings from reduced primary health care (PHC) utilization;
- Scenario-based modelling (status quo, moderate, ambitious);
- Calculation of cumulative and annualized ROI.

Where country-level data were missing, regional averages were applied to ensure consistency.

Key Assumptions: The modelling framework is based on several core assumptions, including:

All 55 AU Member States are included;

- One-year post-secondary training period for CHWs;
- Gradual reduction in attrition rates from 20% to 10%;
- Average throughput rate of 77.7%;
- CHWs are trained domestically;
- A uniform discount rate of 4%;
- Government perspective on costing;
- Major benefits derived from mortality reduction, morbidity reduction, and reduced PHC referrals.
- The ambitious scenario is calibrated to ensure attainment of two million CHWs by 2030.

Modelling Scenarios: Three scenarios were analyzed as follows:

- Status Quo – Continuation of current investment trends;
- Moderate Scenario – Expansion to achieve 70% UHC coverage;
- Ambitious Scenario – Scale-up to achieve 100% UHC coverage and the two million CHW target.
- Target CHW densities range from 25.34 per 10,000 population under the moderate scenario to 36.20 under the ambitious scenario.

Investment Costs: The analysis shows that CHW programs require substantial but manageable investment:

- Status Quo: US$17.7 billion by 2030
- Moderate Scenario: US$24.8 billion by 2030
- Ambitious Scenario: US$28.2 billion by 2030

To achieve the two million CHW target by 2030, Africa must invest approximately **US$4.3 billion annually** between 2025 and 2030 under the ambitious scenario.

The modelling reveals that over 80% of total costs are driven by recurrent government expenditure, mainly salaries and operational support. Training costs peak before 2030 and decline thereafter.

Benefits and Averted Burden: Investments in CHWs generate substantial health and economic benefits:

1. **Mortality Reduction:** Avertable mortality accounts for over 75% of total benefits. By 2030: Status Quo: US$78.8 billion

- Moderate: US$307.7 billion
- Ambitions: US$428 billion

2. M**orbidity Reduction:** DALYs averted generate significant economic value: Status Quo (2030): US$15.2 billion

- Moderate (2030): US$49.8 billion
- Ambitious (2030): US$68.7 billion

3. **Reduced PHC Utilisation:** Strengthened CHW systems reduce facility referrals and outpatient visits:

- Moderate scenario: US$36.3 billion saved by 2030
- Ambitious scenario: US$72.5 billion saved by 2030

4. Total Benefits: By 2030:

- Status Quo: US$93.9 billion
- Moderate: US$393.8 billion
- Ambitious: US$569.3 billion

These benefits increase substantially over longer time horizons.

Return on Investment (ROI): The report demonstrates that CHW investments yield exceptionally high returns:

- Status Quo (2030): US$4.30 per US$1 invested
- Moderate (2030): US$14.90 per US$1 invested
- Ambitious (2030): US$19.20 per US$1 invested

By 2040, returns under the ambitious scenario rise to US$21.40 per US$1 invested. Even by 2063, returns remain high, exceeding US$9 per US$1 invested.

These findings confirm CHWs as one of the most cost-effective health investments available in Africa.

Key Implications:

- Investing in CHWs yields large health, social, and economic returns;
- Mortality reduction is the largest benefit driver;
- Recurrent government spending is the main cost driver;
- Donor dependence presents a major sustainability risk;
- Domestic financing is critical for long-term impact;
- Remuneration and professionalization are essential for retention and performance.

Key Recommendations: The Investment Case recommends that Member States and partners:

1. Strengthen Domestic Financing

- Establish protected budget lines for CHWs;
- Integrate CHWs into Medium-Term Expenditure Frameworks;
- Expand health insurance coverage for community services.

2. Institutionalize CHWs

- Formalize legal and regulatory frameworks;
- Integrate CHWs into national payroll systems;
- Establish career pathways and certification systems.

3. Adopt Blended and Innovative Financing

- Use blended finance facilities and pooled funding;
- Pilot impact bonds and performance-based financing.

4. Enhance Coordination and Accountability

- Leverage the Continental Coordination Mechanism (CCM);
- Institutionalize the CHW Scorecard;
- Strengthen monitoring and reporting systems.

5. Invest in Quality and Systems

- Expand digital reporting platforms;
- Improve supervision and supply chains;
- Strengthening training and continuous professional development.

6. Support Country Ownership

- Align partner investments with national plans;
- Develop transition strategies from donor to domestic financing.

Conclusion

The Continental CHW Investment Case demonstrates that sustained investment in community health systems is both a moral imperative and an economically sound strategy. With returns of up to US$19.20 for every US$1 invested by 2030, CHW programs represent a high-impact pathway to achieving UHC, strengthening health security, and realizing Africa's two million CHW commitment. Strategic implementation through strong financing, governance, and coordination mechanisms will be essential to translate these findings into lasting results.

INTRODUCTION

BACKGROUND

Primary health care (PHC) has long been recognized as an essential pillar of healthcare and universal health coverage (UHC), especially since the Alma-Ata Declaration. In this context, the African Union (AU) and key stakeholders, through the African Health Strategy 2016-2030, emphasize community ownership as a guiding principle for the continent's health systems (African Union Commission, 2016). Similarly, the Africa CDC Strategic Plan 2023-2027 recognizes strengthening primary health care, including community health systems, as an important action towards achieving the organization's objective of supporting AU Member States in implementing frameworks and policies for the prevention and control of high-burden communicable diseases (Africa CDC, 2023a). In recognition of the critical role of community health workers (CHWs) in maintaining an effective PHC system, the 2017 AU Assembly Decision

(African Union, 2017, Assembly/AU/Dec.649 (XXIX)) called on Member States to focus on training, hiring, and integrating CHWs into national health systems, with a continental target of deploying two million CHWs.

These initiatives and strategies aim to address the continent's critical shortage of health workers and improve health outcomes by empowering CHWs. This is seen as a veritable means of achieving UHC and advancing Africa's Agenda 2063. Moreover, Africa CDC has recognized the essential role of CHWs in pandemic management and control, especially in underserved contexts. It is in this context that Africa CDC and various stakeholders have called for measures to mainstream, strengthen, and integrate community health into national health systems, digitizing them, and ensuring adequate compensation and sustainable financing. This reflects wider efforts by Africa CDC to deepen an understanding of the importance of the health workforce, thereby making a case for health workforce investment (through its recently developed robust health workforce compact) as an important avenue towards achieving UHC on the continent (Africa CDC, 2025b). They also align with wider continental commitments such as the Africa Health Workforce Investment Charter, which represents a shared commitment to align health workforce investment with population health needs, particularly given the high burden of maternal, neonatal and communicable disease on the continent and the important role of CHWs in preventive, curative and promotive health interventions along these domains (World Health Organization, 2024a).

Community health workers, therefore, constitute an essential component of effective PHC provision in Africa. This is especially true given their familiarity with and belonging to local communities and health systems, as well as their ability to facilitate access to healthcare even in hard-to-reach areas. Consequently, in 2024, Africa CDC began a process of ascertaining, in consultation with Member States, a package of cost- effective CHW services comprising 110 interventions across 15 service categories. This also aligns with other notable efforts by Africa CDC to mainstream the scale-up of integrated institutionalized and sustainable community health systems across Member States, such as through its Community Health Workforce Strategic Priorities, 2023 – 2027 (Africa CDC, 2023c). It is in this spirit that the AU, in 2024, appointed the Nigerian President, H.E. Mr Bola Tinubu, as AU Champion for Human Resources for Health and Community Health Delivery Partnership, an initiative aimed at further mainstreaming community health as an essential ingredient of UHC.

Some key improvements observed with CHWs are summarized in Table 1.

Table 1: Summary of the key importance of using CHWs

Key importance of using CH	Potential improvements seen with the use of CHWs
Bridging the access gap	CHWs contribute to extending health services to remote, hard-to-reach, and underserved populations and communities, promoting health equity and UHC (Sommanustweechai *et al.*, 2016).
Reduced mortality & morbidity	Through CHWs, countries can lower the rates of child and maternal deaths (neonatal, under-5 mortality) and the management of major endemic diseases occurring in communities through timely management (Le Roux *et al.*, 2020).
Effective disease control	CHWs can lead to significant improvements in adherence to treatment (e.g., ART for HIV/AIDS), enhanced case finding (TB, Malaria), and delivery of very basic curative care, often accounting for a substantial burden of disease (Bigirwa, 2009, Ong'ang'o *et al.*, 2014).
Cultural competence & trust	CHWs are trusted community members because they are integrated within communities, leading to greater acceptance of health interventions and culturally appropriate health education (Doede *et al.*, 2017).
Task sharing & efficiency	By managing basic ailments at the community level, CHWs enable facility-based nurses and doctors to focus on complex cases (Hoeft *et al.*, 2018).
Stronger preventive focus	The uptake of preventive measures (vaccinations, bed nets, an sanitation) is often linked to strong involvement of CHWs (Mistry *et al.*, 2021). They also promote healthy behaviours, reducing the burden on clinics and hospitals. This is very much linked to their role in task sharing.
Effective epidemic/pandemic response	CHWs are known for mounting effective pandemic responses through measures such as engaging in health promotion and education, disease surveillance, contact tracing, risk communication and community engagement, and maintaining essential services during pandemics (Zulu *et al.*, 2025).
High return on investment (ROI)	There is evidence from a few countries in Africa that CHWs provide care at lower cost than facility-based workers, making them a highly cost-effective strategy for public health (Vaughan *et al.*, 2015).

While the continent has made significant progress in training and deploying CHWs, gaps remain. In 2017, AU Heads of State and Governments made a strategic commitment to strengthen the continent's health workforce by training and deploying 2 million CHWs to help close the gap in health care provision. However, only about 50 per cent of this target has been achieved as of 2025. Moreover, the recent Africa CDC- led Health Workforce Compact highlighted significant deficits in CHW training and deployment across the continent, with country ownership of CHW-related strategic policies, training and deployment capabilities unevenly distributed across Member States. For instance, among the 20 Member States with a standalone/ dedicated health workforce strategy document, only 4 have specific targets or Key Performance Indicators (KPIs) for CHW training (Africa CDC, 2025b).

Box 1: A summary of AU's 2 million CHWs' commitment

- In 2017, AU Heads of State and Government endorsed a CHW initiative to recruit, train, and deploy 2 million CHWs across the continent to improve health service delivery and contribute to the end of epidemics and the strengthening of health systems.
- The 2 million CHW target is integrated into continental health strategies. It is tied to achieving universal health coverage and addressing diseases such as HIV, TB, and malaria, as well as maternal and child health, and other public health needs.
- As of 2025, around 1 million CHWs have been trained and deployed, meaning about half of the target has been achieved with several years left toward the 2030 goal.

Source: Africa CDC (2025a)

Noting the 2024 Continental Community Health Landscape in Africa survey (Africa CDC, 2023b), one realizes that, while significant efforts are being made to achieve the 2 million CHW deployment by 2030 agreed upon by AU Heads of State and Government, more still needs to be done to actualize this goal. Areas in dire need of bold action include strengthening legal and regulatory frameworks, given that only 30 per cent of AU Member States offer career advancement pathways for CHWs, despite 70 per cent having formally recognized CHWs as part of the health workforce (Africa CDC, 2024b).

Recognizing these gaps, the Africa CDC – through its Division of Community Health Systems and Health Promotion – is developing this Continental Investment Case for Community Health Workers, making a compelling case for investment in community health workforce programs across African Union Member States. This is essential given the important role these programs play and the sharp, significant decline in development assistance to the continent. As noted by United Nations Conference on Trade and Development (2025), Africa is projected to experience a 70 per cent decline in development assistance between 2021 and 2025 – from US$80 billion to US$24 billion – over the period, a development that will undoubtedly have significant implications for PHC on the continent, especially for countries relying significantly on overseas development assistance (ODA). There is a need for justification for the sustainable, long-term financing of CHW programmes in Africa, positioning community health as the cornerstone of PHC, UHC, and the continent's broader health security architecture.

Rationale for the continental community health program investment case

Box 2 lists some of the names by which CHWs are referred to on the continent. CHWs constitute a proven, cost-effective workforce cadre for expanding service coverage and access, improving health outcomes, and enhancing the resilience of health systems, especially in resource-constrained settings. Moreover, they play a critical role in epidemic and pandemic preparedness and response through health promotion and education, surveillance, contact tracing, and maintaining essential services during pandemics (Zulu *et al.*, 2025).

Box 2: Names often used in different countries for Community Health Workers in Africa

- Activista
- Community health agent
- Health extension worker
- Community health promoter
- Community health volunteer
- Community resource person

- Rural health motivator
- Village health helper
- Community health volunteer
- Community health extension worker
- Agents de santé communautaire
- Health promoter
- Community health representative

Source: Expanded based on Bhattacharyya *et al.* (2001)

Evidence from Kenya, for instance, demonstrates that CHW programmes yielded nontrivial economic and social returns (Kenya Ministry of Health, 2018). In South Africa, significant returns were observed in terms of lives saved and disability-adjusted life years (DALYs) averted across different health interventions associated with a well- functioning CHW platform (South African Medical Research Council, 2021).

Table 2: Summary of key challenges facing CHWs in Africa

Key HW challenge	The impact of the challenge
Lack of a formal status and Inadequate remuneration	CHWs are often not integrated into the formal health system. They have very limited career pathways and professional recognition, preventing them from being fully recognized and managed as a formal cadre within the health system. Often, this results in high attrition (dropout) due to unpaid volunteerism or minimal, irregular stipends, which can demotivate volunteers.
Donor dependency	In many countries, community health programs are often donor-dependent and project-based. Financial instability and lack of long-term sustainability occur when programs are not integrated into permanent national government health budgets. The recent developments with donor cuts heighten the challenge.
Weak supervision & support Insufficient training	CHWs are often isolated and unsupported due to infrequent, non- supportive supervision from clinic staff, affecting the quality and consistency of their work. In many cases, there are no strong formal training opportunities for CHWs. Knowledge and skill gaps are caused by short initial training and a critical lack of continuous professional development or refresher courses.
Program verticalization and lack of coordination	In some instances, community health programs operate in silos, address program-specific needs, and are often NGO- or donor- funded. This makes it difficult to coordinate their activities and integrate them into a well-functioning primary health care system, leading to duplication. Moreover, such donor dependence adversely affects the sustainability of such programs after NGO/donor exit (Chen *et al.*, 2021).

Logistical shortages	CHWs are often unable to perform basic tasks effectively due to a lack of essential supplies (medicines, consumables), basic diagnostic equipment, and reliable transportation, particularly in hard-to-reach areas.
Lack of formal status	CHWs have very limited career pathways and professional recognition. This prevents them from being fully recognized and managed as a formal cadre within the health system.

Unfortunately, CHW financing across the continent remains fragmented, heavily donor- dependent, and often project-based. As shown by the 2024 Africa CDC-UNICEF CHW Program Landscape Survey Report, 51 per cent of community health budgets in Africa are primarily funded by external sources, with only 6 countries funding over 80 per cent of CHW programs domestically (Africa CDC, 2025b). Many national CHW programs lack institutionalization within government budgets, leading to uneven remuneration, inadequate supervision, and limited career pathways. This fragmentation undermines efficiency and sustainability, constraining CHWs' potential to contribute to UHC and pandemic preparedness. Some of these challenges are summarized in Table 2. Therefore, it is important to assist Member States in building integrated, institutionalized, and financially sustainable community health systems as the foundation of PHC and a critical pathway toward achieving UHC and health security on the continent.

Objectives

The broad objective of this report is to develop an evidence-based continental investment case for CHWs that enables the Africa CDC and AU Member States to advocate for increased domestic funding and sustainable, strategic investment in CHW programs.

Specifically, this report aims:

- To model different investment scenarios (e.g., moderate and ambitious) and their expected costs and benefits to help national decision-makers choose scalable, context-appropriate solutions
- To quantify the return on investment of CHWs for each scenario in delivering health services and preventing diseases.
- To outline feasible and diversified financing mechanisms (domestic, donor, and private sector) for long-term CHW program sustainability in a bid to address donor dependency and promote country ownership.
- To provide policy recommendations, including advocating for formal recognition, training, fair remuneration, and integration of CHWs into national health systems to ensure CHWs are not treated as volunteers or temporary workers but as an essential health workforce cadre.

Structure of the report

The investment case report provides a detailed overview of the costs and benefits of the CHW program investments, with results for the African continent. The report begins by outlining the key objectives. The next section, detailing the methods, provides an overview of the model built to support the investment case, including the valuation of benefits and costs. The methods section also contains the modelling assumptions and the data sources for many indicators used in the model. The results section provides detailed results on the costs and benefits of investing in the CHW program in Africa. The last sections provide specific recommendations and the report's conclusion.

Methods

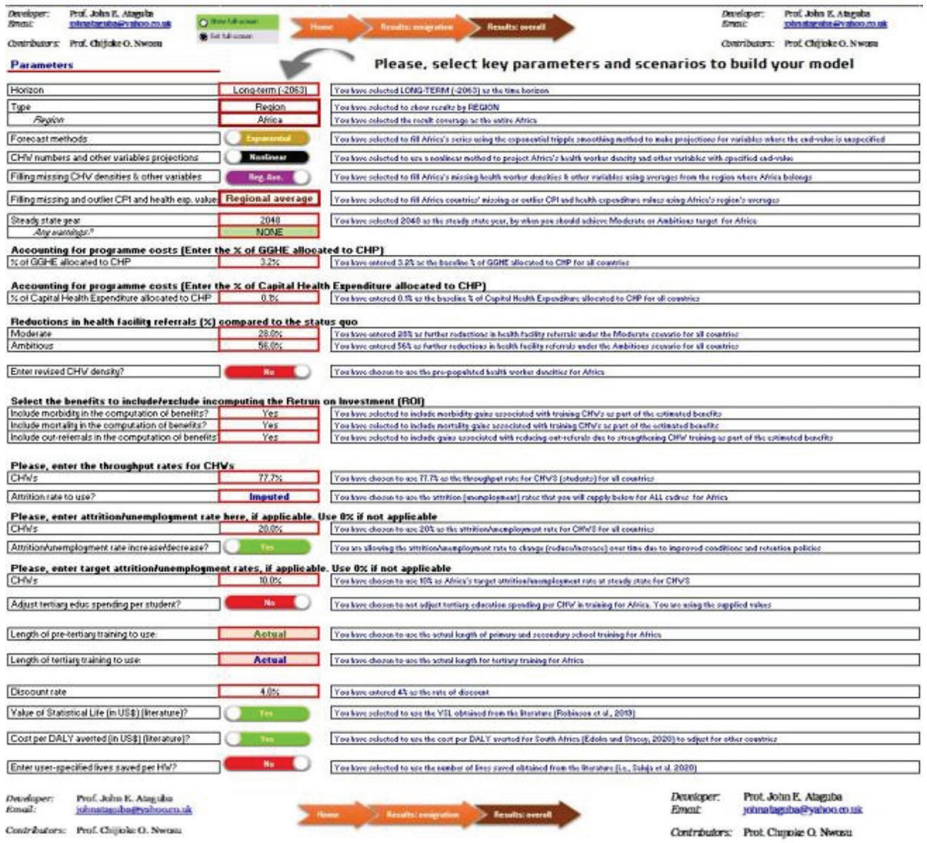
An overview of the continental CHW program investment case model

A model was developed to assess the costs and benefits of investing in the CHW program in Africa (Figure 1). The model inputs data from various sources, including data supplied by countries during the 2024 Africa CDC-UNICEF CHW Program Landscape Survey consultations. A snapshot of the model's landing page, shown in Figure 1, requires the user to specify key parameters. For instance, in the first entry, the user specifies the model's horizon. There are three options: short-term (until 2030), medium-term (until 2050), and long-term (until 2063). This time horizon allows the user to visualize results for each term. The model also allows the user to specify the region for the potential results. Results can be displayed for each of the five regions, the entire continent, or individual countries as needed. It is important to note that country-level results are not presented in this report; however, the model may generate them. The primary reason is that the investment case focuses on the entire continent. The model allows the user to specify the algorithms (whether linear or nonlinear) to use for making projections based on past values for variables such as CHW density, real and nominal per capita GDP, GDP per capita at purchasing power parity, real and nominal GDP, Consumer Price Index (CPI), population, health expenditure variables, and CHW training costs at post-secondary school level. The projection of CHW density was nonlinear via a function based on the Avrami equation or the Johnson-Mehl-Avrami- Kolmogorov (JMAK) equation (Fanfoni and Tomellini, 1998). Projections for the other variables, including population, GDP, CPI, health expenditure, and training costs, were based on exponential triple smoothing.

CHW density was available from 48 out of the 55 countries. When a country's CHW density or numbers were missing, the average density for that region (e.g., Central Africa, East Africa) was imputed (see Appendix I for a list of countries). While the model provides for this imputation using the continent's averages, this was not done because regional averages better reflect conditions within a country. The same process of using regional averages was employed to fill in missing CPI, GDP, health expenditure, and post-secondary education costs. A one-year training period was assumed for the CHWs.

The model also allows users to specify different values for these parameters, as shown in Figure 1, and assess its robustness by varying the parameters they specify. The model also allows users to specify the proportionate reductions in out-referrals to the PHC level and other higher levels for the moderate and ambitious scenarios. The proportion of reductions used in the model is explained in the section on valuing benefits. The model can also be used to select the various "benefits" to include in return-on-investment calculations, with three options. The model also allows specification of CHW attrition and their throughput rate during training. These are detailed in the model's assumptions section below.

Figure 1: The CHW Investment Case model's landing page



Time horizon of
Country or region o
Algorith s for imputation and
When the "targets" must be achieved
Program recurrent costs
Program capital costs
Gains from out-referrals
Revising CHW densities
Benefits to include in the
Throughput and attrition rates
Adjust tertiary education spending
Length of training at different levels
Rate of discounting
Valuing ill-health, disability and death
Lives saved by health

Model scenarios

This Investment case is modelled using three broad scenarios: the status quo, also known as business, as usual, where countries maintain their current course of action, the moderate scenario and the ambitious scenario (Table 3).

Table 3: Modelled community health worker density needed to achieve UHC

	Density per 10,000 people to attain a target of 70% UHC service coverage (Moderate scenario)	Density per 10,000 people to attain a target of 100% UHC service coverage (Ambitious scenario)
CHWs	25.34	36.20

Source: Based on information from Ahmat et al. (2022)

Projecting community health worker densities for each scenario requires information on expected densities to meet countries' needs, especially in achieving universal health coverage. Also important is ensuring alignment with the African Union's commitment to deploy 2 million well-trained, compensated, and integrated CHWs by 2030. Following an extensive review of the literature and the comprehensive analysis by Ahmat et al. (2022), this investment case adapted the targets set in Ahmat *et al.* (2022). Ahmat *et al.* (2022) used data from countries in the World Health Organization Africa region to estimate the desired health worker densities for countries to reach at least 70% UHC service coverage. Although their study did not include North Africa (except Algeria), the investment case applied the same assumption to all countries on the continent, including those in North Africa, as they are considered African-centric "targets". Notably, these desired densities are used as "targets." The desired densities or "targets" reported by Ahmat *et al.* (2022) represent the moderate scenario in this report (see Table 4). The estimates were extrapolated to obtain the "targets" to achieve 100% UHC service coverage (i.e., the ambitious scenario), as shown in Table 3. The required densities for community health workers used in the model are shown in Table 3. Given the current number of CHWs on the continent and the 2 million targets for 2030, the current CHWs investment case calibrates the model to ensure 2 million CHWs are available and deployed by 2030 under the ambitious scenario, as this requires almost doubling current CHW numbers on the continent by 2030. The investment case considered three major time horizons for the model: short-term (up to 2030), medium- term (up to 2050), and long-term (up to 2063 and coinciding with the African Union's Agenda 2063).

Table 4: Assumptions for the different scenarios used in the model

	Modelling scenarios		
	Status quo	Moderate	Ambitious
UHC service coverage ("targets")	Current coverage	70%	100%

Key assumptions of the model

The investment case for the community health workers' program is based on many assumptions, as summarized below.

The model is based on the 55 member states of the African Union.

1. It is calibrated under the ambitious scenario to ensure that the continent has 2 million CHWs by 2030. Africa CDC notes the need for the continent "to rapidly recruit, train and deploy 2 million community health workers in Africa" (African Union Commission, 2017, p.1).

2. The model begins by enrolling students in post-secondary education, drawing from primary and secondary school graduates in all countries. Therefore, a country incurs the cost of training CHWs at the post-secondary education level.
3. The length of CHWs' training is assumed to be fixed at 1 year, and class repetition is not accounted for.
4. Attrition among CHWs is reported to range from 11.6% to 20.1%. This was drawn from the *Uzazi Uzima* program (a program aimed at improving general and maternal and newborn health outcomes) in the Simiyu Region, Tanzania.
5. Community health worker attrition in this program was due mainly to "relocation to other places because of marriage or agricultural activities and inadequate time to do the voluntary job" (Ngilangwa and Mgomella, 2018 p.4). In another study, attrition rates for CHWs ranged from 3.2% to 77% across selected countries in Asia and Africa, predominantly due to volunteerism associated with employment (Bhattacharyya *et al.*, 2001). In Côte d'Ivoire, 82% of trained CHWs were retained in year 1, while about 78% completed their training (Ministère de la Santé de l'Hygiène Publique et de la CMU, 2024). Data on CHW throughput are scarce for other countries. Based on statistics from Côte d'Ivoire and the Africa CDC's overall investment case for the health workforce, the model used a 77.7% throughput rate, consistent with the reported overall average throughput rate for health workers (World Health Organization, 2024b).
6. Also, the attrition rate for CHWs was modelled to decrease from 20% to 10%, in line with the study in Tanzania and the reported retention rate in Côte d'Ivoire. It is important to note that the number of CHW intakes per country will increase to accommodate potential attrition and maintain the required CHW density for the moderate and ambitious scenarios, including the 2 million CHWs by 2030 assumed under the ambitious scenario.
7. The model also assumes that all CHWs are trained within their countries of origin. In reality, regional training programs may enroll students from catchment countries. Although this was not directly accounted for in the model, the analysis and aggregation of results by regions (East Africa, Central Africa, West Africa, North Africa and Southern Africa) or the entire continent will capture the effects of potential cross-country or regional training. Note that regionally aggregated results are shown in Appendix II (Cost) and Appendix III (Benefits).
8. The model's time horizon spans from 2024 to 2063. Students enrolled in 2024 are assumed to be 20 years or younger. Therefore, they are expected to be younger than 60 by 2063 and still be in active employment. Based on this, retirement was not built into the model, as the trained and employed CHWs are modelled to retire after 2063.
9. When data on CHW density are unavailable for a country, the model assigns the regional average (e.g., West Africa, North Africa) to that country.
10. Based on guidance from Raju and Younger (2022) in their study of education spending, a 4% discount rate is used to estimate the cost of training CHWs.
11. Raju and Younger (2022) summarize that discount rates typically range between 3% and 5%, with 4% as the midpoint. A higher discount rate is often recommended for low-income countries. However, the model assumes a 4% discount rate for all countries, with a sensitivity analysis using a 6% discount rate showing the robustness of the estimates.
12. Although current practice does not fully remunerate CHWs, CHWs employed in the sector may be able to generate household incomes through salaries and remuneration; however, this model did not include other potential incomes generated in the investment case, primarily because they are private incomes to households.
13. The key benefits of investing in the CHW program were avertable mortality and morbidity, including their monetized values, as these were considered the primary benefits of health workers' availability in countries, along with the monetized potential gains from reduced referrals to health centers and other health facilities.

Cost perspective used for modelling

The costing perspective used in this report was the cost to the governments of different African countries. Thus, the cost of training the CHWs was from the government's perspective.

Post-secondary training costs, recorded as government expenditure per student as a share of countries' GDP per capita, were obtained from the UNESCO database (Table 8). Because these data are not reported for the same year across all countries, an average of these shares was calculated for each country using UNESCO database data for 2000-2018. The ratios of post-secondary education costs were assumed to be constant across countries over time in the model. Because the model did not use the ratios directly but rather the product of these ratios and projected GDP per country, the actual cost per student at a public school will vary (i.e., increasing as GDP increases over time) from 2023 to 2063 across all countries.

The cost of remunerating CHWs and other recurrent expenditures was computed as 3.2% of each country's general government health expenditure, based on calculations from the WHO's Global Health Expenditure Database. Because the community health program (CHP) is not capital-intensive, capital costs were assumed to be less than 1% of countries' capital health expenditures, with results remaining robust across 0.1%- 0.5%.

Valuing mortality

The mortality value was based on the existing estimate from the Africa CDC (Africa CDC, 2024a), focusing only on the CHW component. Saluja *et al.* (2020) estimate that, on average, one physician saves 1.72 *maternal and under-5* lives per year in the WHO Africa region. Note that this covers the major services provided by CHWs, compared to those provided by other specialized health workers. However, CHWs' services go beyond preventing under-5 and maternal deaths to preventing child and selected adult-related mortality.

Table 5: Correlation coefficients between mortality and health worker density, including relative weights

Health worker cadre	Deaths (1)	Relative weight* (2)	Maternal and under-5 lives saved per health worker per year (3) = (2)*1.72
Physician density	-0.4614	1.00	1.72
CHW density	-0.2205	0.48	0.83

Source: Estimated from IHME data

Notes: * weights are calibrated around physician density fixed at one.

Lives (maternal and under-5 lives) saved per health worker were estimated from the figure obtained by Saluja *et al.* (2020) for physicians, using the relative weights.

The relative weights from the correlation coefficient between deaths and health worker density, as shown in Table 5, were used to compute the maternal and under-5 lives saved per CHW, as presented in Table 6, which were then used in the model. To determine the total avertable mortality attributable to CHWs for each country, the model computed an *expanded* avertable mortality that included maternal and under-5 mortality, and an allowance for other mortalities avertable by CHWs (Chou *et al.*, 2017), by doubling the under-5 mortality numbers. The share of maternal and under-5 mortality in the *expanded* mortality numbers was calculated for each African country, and the number of avertable deaths was adjusted accordingly. For instance, if maternal and under-5 deaths account for half of the *expanded* deaths in a country, it was estimated that one CHW saves 1.66 lives per year (i.e., 0.83 divided by half).

Table 6: Number of maternal and under-5 mortality saved per health worker as used in the model

Health workers	Number of maternal and under-5 lives saved
Community health workers	0.83

Note: Because this figure pertains to only maternal and under-5 mortality, it is adjusted based on the relative share of maternal and under-5 mortality in total mortality for each country to obtain the appropriate number of lives saved per CHW. Data from the IHME global burden of disease databases are used to obtain the relative share of maternal and under-5 mortality in the computed *expanded* mortality for each country.

Once the estimated avertable mortality is computed, the value of statistical life (VSL) data is used to value these avertable deaths. The 2015 value of statistical life (VSL) data for 49 African countries from Robinson *et al.* (2019) was then used to value them. Briefly, VSL represents how much people are willing to pay to reduce the risk of a statistical death. For example, in Cameroon and Eswatini, the VSL value indicates that people were willing to pay US$0.137 million and US$0.514, respectively, to avert the risk of a statistical death in 2015 (Robinson *et al.*, 2019). Each country's subsequent years' VSL estimates are based on projected consumer price indices to reflect future values.

Valuing morbidity: cost per DALY averted

Disability-Adjusted Life Years (DALYs) are used to measure the overall burden of disease. DALYs, which is a single index, combine the impact of both premature death (Years of Life Lost; YLL) and living with illness or disability (Years Lived with Disability; YLD). DALYs are understood as the sum of YLD and YLL. The DALY computed by the Africa CDC for the overall investment case in health workforce (Africa CDC, 2024a) was used in this model. Based on data from a base year (2015), subsequent estimates for other years were computed using the projected consumer price indices to reflect future values.

Valuing potential savings from reduced out-referrals to PHCs

In a systematic review that draws on small case studies from Rwanda, Tanzania and Ghana, using community-based diagnosis and case management of malaria, it was reported that strengthening CHWs could potentially reduce out-referrals by 97.8% in Tanzania, 92% in Uganda and 70.6% in Ghana (Paintain *et al.*, 2012). This translates to 71% to 98% of cases seen by CHWs not being referred upward or not being escalated to a health facility referral. In fact, they report that "interviews with the CHWs revealed that this low level of referral may be due to their having followed up severe cases in the patients' homes to monitor progress, rather than having immediately referred them to a health facility" (Paintain *et al.*, 2012, p.21). In another multi-country study of integrated community case management (iCCM) programs, CHW referral rates per child per year

ranged from 0.01 in South Sudan to 0.38 in Zambia (Collins *et al.*, 2014). This implied that between 62% and 99% of childhood cases were not referred to but managed at the community level. It is important to note that the Integrated Community Case Management (iCCM) program, which was formally endorsed by the WHO and UNICEF in 2012, trained and equipped community health workers to diagnose and treat malaria, pneumonia, and diarrhea in children under five in remote areas. Using tools like RDTs, antibiotics, ACTs, ORS, and zinc, it expands access to lifesaving care beyond facilities (Jarolimova *et al.*, 2018).

Also, in places where CHWs are not adequately strengthened, they fail to refer between 31% and 59% of eligible children, as found in Uganda (Lal *et al.*, 2016). This could eventually lead to complications that require higher levels of care.

Undoubtedly, strengthening community health programs provides an opportunity to reduce the burden on higher levels of care in Africa. In a study in Kenya, Njoroge *et al.* (2025) used a quasi-experimental design comparing an intervention sub-county (Nambale) to a control site to assess how digital tools and performance management improved iCCM in Busia County. They show that, with the Digitally enabled, Equipped, Supervised, and Compensated model, enhanced CHW reporting, timely service delivery, and improved com-

munity care-seeking led to better outcomes. Their study showed that digital tools, combined with strong performance management, amplified iCCM effectiveness and care-seeking for common childhood illnesses. They report a higher proportion of malaria patients using a formal health facility as their first point of care in the control county (69%) than in the intervention county (41%). Overall, 47% of patients in the intervention group, compared to 59% in the comparison group, used a formal health facility as their first point of care. In summary, strengthening the CHW program could reduce the first point of care to a formal health facility by between 12% and 28%. In their study, they conclude that it "reflects greater capacity among CHWs in the intervention area to diagnose and manage malaria at the community level, reducing the burden on primary health facilities" (Njoroge *et al.*, 2025, p.9).

Although not formally recommended, an estimate of 2-3 visits per person per year is considered for a well-functioning PHC system (Tarekegn *et al.*, 2025). There is a dearth of data on PHC utilization rates. Using OPD data (outpatient visits per person per year) from the IHME (Institute for Health Metrics Evaluation, 2018), and the PHC utilization rate for South Africa (2.2 PHC visits per person per year) (Alaba and McIntyre, 2012), it was estimated that PHC visits account for about 61.471% of OPD visits. This proportion (61.471%) from a detailed study in South Africa was used to adjust the OPD visits data from IHME for the other countries to obtain their PHC visits.

Table 7: Model adjustments for estimating reductions in OPD visits after strengthening the CHW program

Senario	Implications for the model
Status quo	No adjustments made[a]
Moderate	28% reduction in PHC visits
Ambitious 50% reduction in PHC visits[b]	

Source: Njoroge *et al.* (2025) based on an experiment in Kenya.

Notes: [a] The reported adjustments are relative to the status quo, and no further adjustments were made to the status quo because of interest in the benefits of investments compared to the status quo model.

[b] Given that this was ambitious, we assumed 50%, which was higher than the 28% for the moderate scenario.

To estimate the savings from reductions in PHC visits for the moderate and ambitious scenarios, we need the adjustments in Table 7 and the PHC visits per person per year obtained after scaling down the OPD visits from the IHME, and the unit cost of PHC visits from the WHO-CHOICE (World Health Organization *et al.*, 2021). These costs were adjusted for inflation using the consumer price index (CPI). Beyond these adjustments, the same proportionate reduction in out-referrals was maintained throughout the estimation period for both the moderate and ambitious scenarios.

Valuing the benefits of CHW program investments

The total benefits of investing in health workers in the model were based on avertable mortality and morbidity, valued in monetary terms and the potential savings from out- referrals to PHCs. The total monetary value of avertable DALYs and mortality from the CHW program investment, and the potential savings from reduced PHC visits, were

added to obtain the monetary benefits of investing in CHWs.

Computing the Return on Investment (ROI)

The cumulative return on investment was computed as follows:

$$\text{Cumulative } ROI_T = \frac{\sum_{t=1}^{T}(B_t) - \sum_{t=1}^{T}(C_t)}{\sum_{t=1}^{T} C_t}$$

where c_t represents the costs of investment in year t and B_t is the total monetized benefits in year t as detailed above. It is essential to note that the cumulative ROI calculated here represents the overall health system-wide return on investment in CHWs.

Annualized ROI can also be computed as an average, as shown below:

$$AROI_k = \frac{Cumulative\ ROI_k}{k}$$

where k = *2,3,* …, T is the number of years over which the cumulative ROI was computed at each point in time.

Data sources, key variables and parameters

The major source of data was countries. However, to ensure uniformity in analysis, some data were sourced from existing data repositories, including those of the United Nations. Some of the major data sources are listed in Table 8.

Table 8: Summary of key data, variables and parameters

Key data and variab	Sources
CHW density	Member states provided this information through a detailed Landscape Analysis Survey (See Appendix I).
Country population data	World Bank Database (https://data.worldbank.org/indicator/)
Consumer Price Index	World Bank Database (https://data.worldbank.org/indicator/)
Total GDP, nominal and real GDP per capita, and GDP per capita (PPP)	World Bank Database (https://data.worldbank.org/indicator/)
Value of statistical life (VSL)	VSL information was obtained from a published study by Robinson *et al.* (2019)

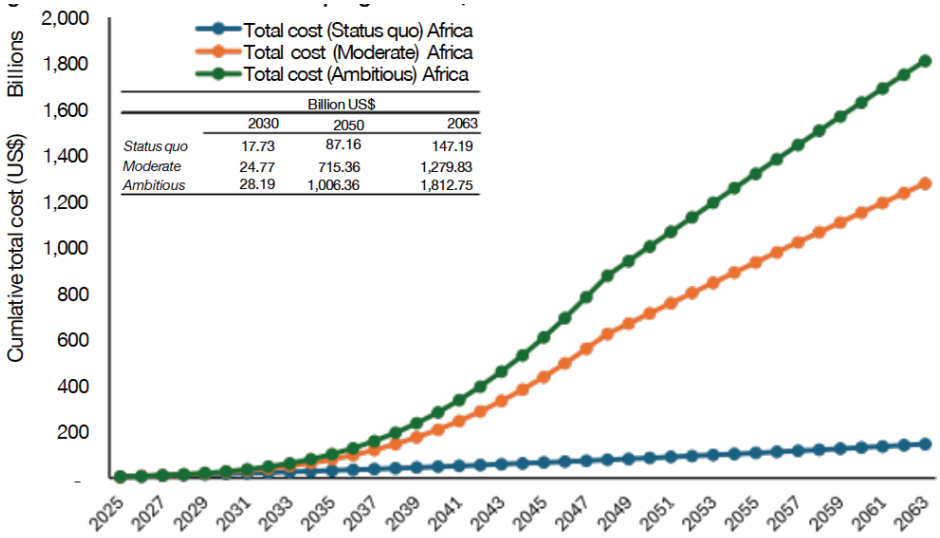
Capital and recurrent health expenditure	World Bank Database (https://data.worldbank.org/indicator/)
Government expenditure per post-secondary student	UNESCO database (https://data.uis.unesco.org/) provided data on the ratio of such spending to GDP,
Discount rate	Summary extracted from Raju and Younger (2022).
Cost per DALY averted	Original data were drawn from a published study in South Africa (Edoka and Stacey, 2020). The cost for other countries was estimated using this as the reference. This was reported in Africa CDC's Investment Case (Africa CDC, 2024a).
Throughput rates for different cadres	Throughput rates were obtained from an external study conducted by the World Health Organization (World Health Organization, 2024b) and supplemented with data from Côte d'Ivoire (Ministère de la Santé de l'Hygiène Publique et de la CMU, 2024).

Results

Costs/investments

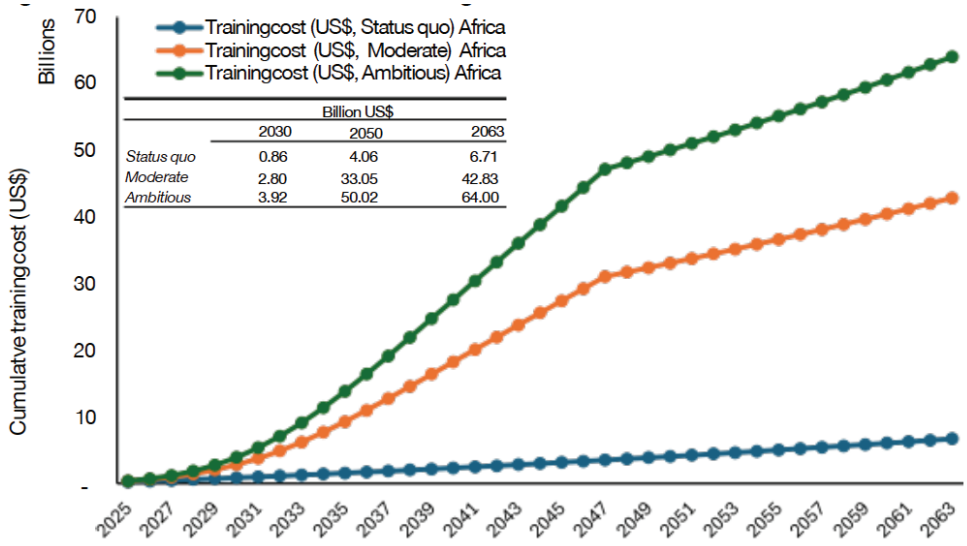
Deploying adequately trained community health workers requires incurring costs for training, remuneration, and general government expenditures, among others. The cumulative total cost of the CHW program under the various scenarios is presented in Figure *2*.

Figure 2: Cumulative total CHW program cost, Africa



As shown in Figure 2, maintaining the status quo means the cumulative total cost of the CHW program will reach US$17.7 billion by 2030, rising to US$87.2 billion and US$147.2 billion by 2050 and 2063, respectively. Under the moderate scenario, consistent with the target of achieving 70% UHC service coverage, the cumulative cost of the CHW program will increase from US$24.8 billion by 2030 to US$715.4 billion by 2050 and US$1.3 trillion by 2063. The cumulative total cost is higher under the ambitious scenario, estimated at US$28.2 billion by 2030, US$1.0 trillion by 2050, and US$1.8 trillion by 2063.

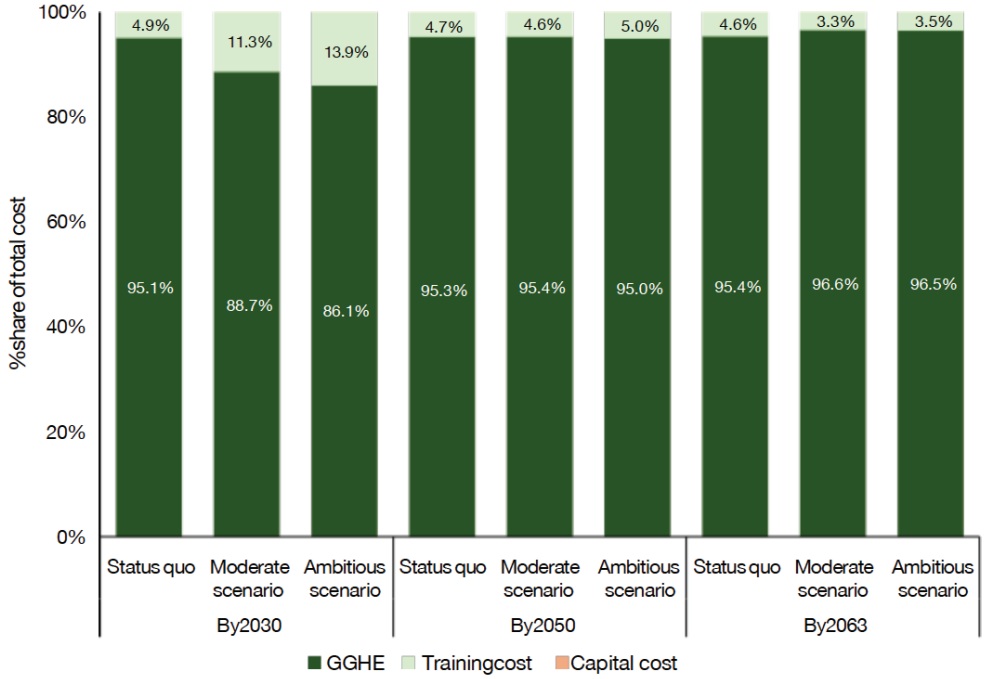
Figure 3: Cumulative total CHW training cost' Africa



The cumulative total training costs shown in Figure 3 indicates that Africa needs to invest US$0.86 billion by 2030, US$4.1 billion by 2050 and US$6.71 billion by 2063 under the status quo. The cumulative training cost under the moderate scenario will increase significantly from US$2.8 billion by 2030 to US$42.8 billion by 2063. The ambitious scenario that aligns with what is needed to attain the 100% UHC service coverage target shows that Africa needs to spend US$3.9 billion on CHW training by 2030, US$50.0 billion by 2050, and US$64.0 billion by 2063. Irrespective of the

scenario, as shown in Figure 4, CHW training costs will represent a larger share of total costs by 2030 than in subsequent years. This is significant because of the need to attain the 2 million adequately trained CHWs by 2030. Beyond 2030, training costs as a share of total costs will reduce drastically under the moderate and ambitious scenarios.

Figure 4: Various cost components for the CHW program as a share of total cost

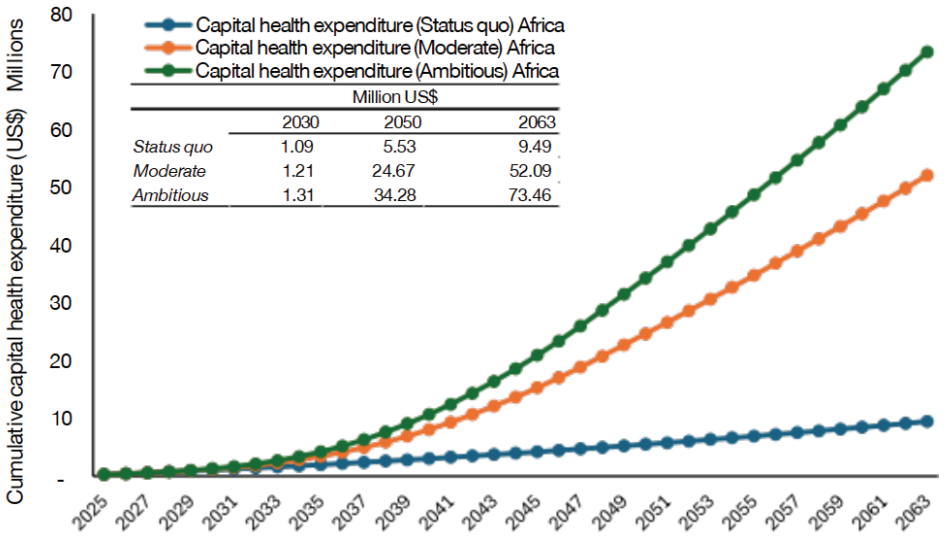


* GGHE = General government health expenditure

Capital costs comprise a very small share of total CHW program costs, as shown in Figure 4, with shares <0.01% in all scenarios. Cumulatively, capital expenditure under the status quo will be US$1.1 million by 2030, rising to US$9.5 million by 2063. Under the moderate scenario, cumulative capital expenditure will increase from US$1.2 million by 2030 to US$24.7 million by 2050 and US$52.1 million by 2063. Even though capital expenditure accounts for a small share of total costs (Figure 4), cumulative capital expenditure is higher under the ambitious scenario, mainly due to the increased investments required to attain universal health coverage. Cumulative capital

expenditure under the ambitious scenario is estimated at US$1.3 million by 2030, rising to US$73.5 million by 2063.

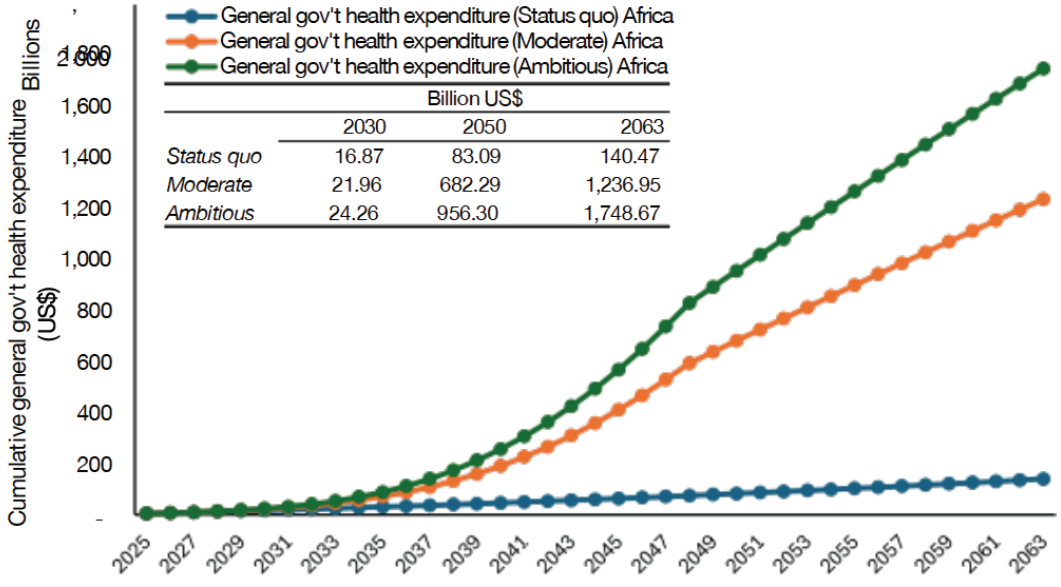
Figure 5: Cumulative total capital health spending associated with the CHW program, Africa



General government health expenditure accounts for the largest share of total costs, as shown in Figure 4, significantly exceeding 80% across all scenarios. As shown in Figure 6, the cumulative general government health expenditure associated with the CHW program in Africa will increase from US$16.9 billion by 2030 to US$140.5 billion by 2063 under the status quo. Under the moderate scenario, this will increase from US$22.0 billion by 2030 to US$1.2 trillion by 2063. The cumulative amounts for the ambitious scenario are significantly higher, ranging from US$24.3 billion by 2030 to US$1.7 trillion by 2063.

Overall, investing in the CHW program in Africa involves high cost outlays, mainly general government health expenditure, including salaries and other recurrent spending. To train, deploy, and adequately remunerate and equip 2 million CHWs by 2030, Africa needs to invest US$4.3 billion annually between 2025 and 2030 in the ambitious scenario, US$3.7 billion in the moderate scenario, or US$2.6 billion under the status quo.

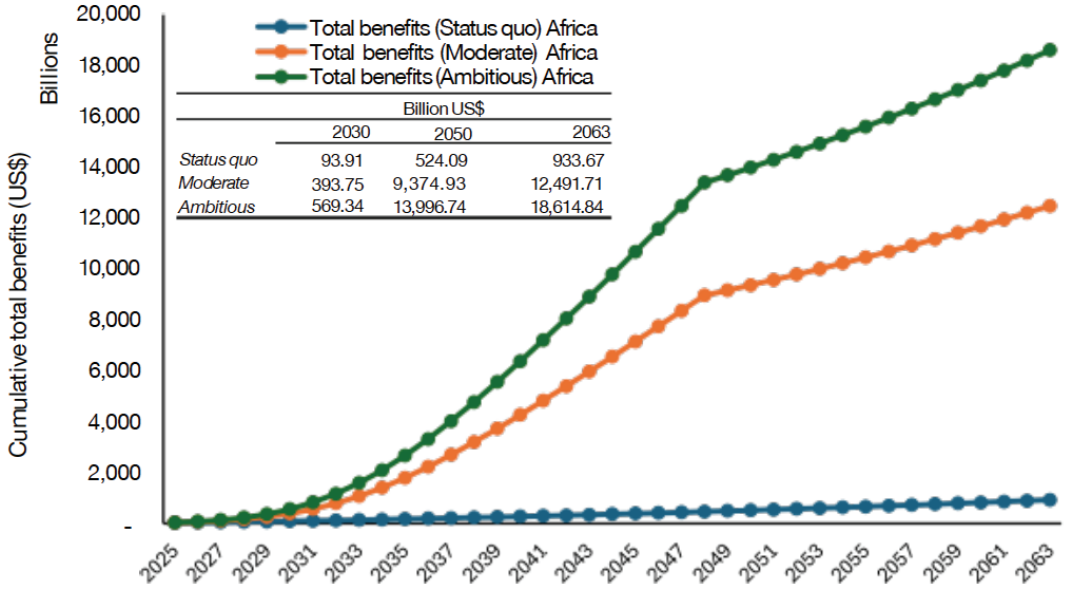
Figure 6: General government health expenditure associated with the CHW program, Africa



Investments in CHWs will yield significant benefits in terms of avoidable mortality and morbidity, as well as reductions in PHC service utilization at clinics and community health centers. Overall, as shown in Figure 7,

investments in Africa's CHW program will yield about US$93.9 billion in cumulative benefits by 2030 under the status quo. This will increase steadily to US$933.7 billion by 2063. Under the moderate scenario, cumulative total benefits will increase from US$393.8 billion by 2030 to US$9.4 trillion by 2050 and US$12.5 trillion by 2063. Cumulative total benefits are largest for the ambitious scenario, corresponding to US$569.3 billion by 2030, US$14.0 trillion by 2050 and US$18.6 trillion by 2063 (Figure 7).

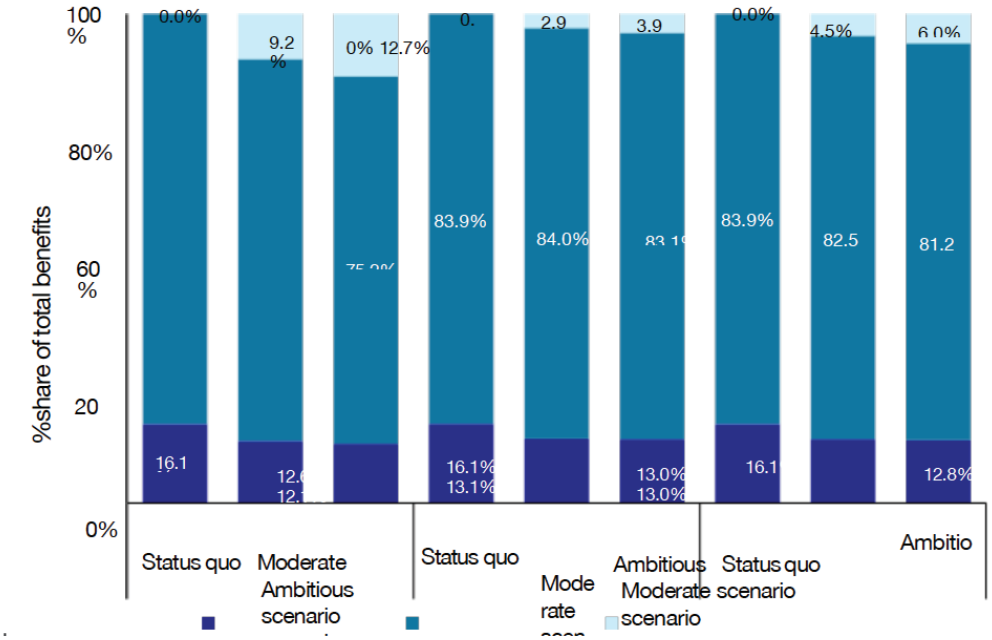
Figure 7: Total benefits from CHW investment, Africa



Avertable mortality is the major contributor to total benefits from investing in Africa's CHW program, as shown in Figure 8. Depending on the scenario, avertable mortality associated with CHW investments accounts for over 75% of total benefits. PHC

service utilization averted because of the strengthening of the CHW program was generally the least contributor to total benefits, while the contributions of averted morbidity to total benefits ranged between 12% and 16%.

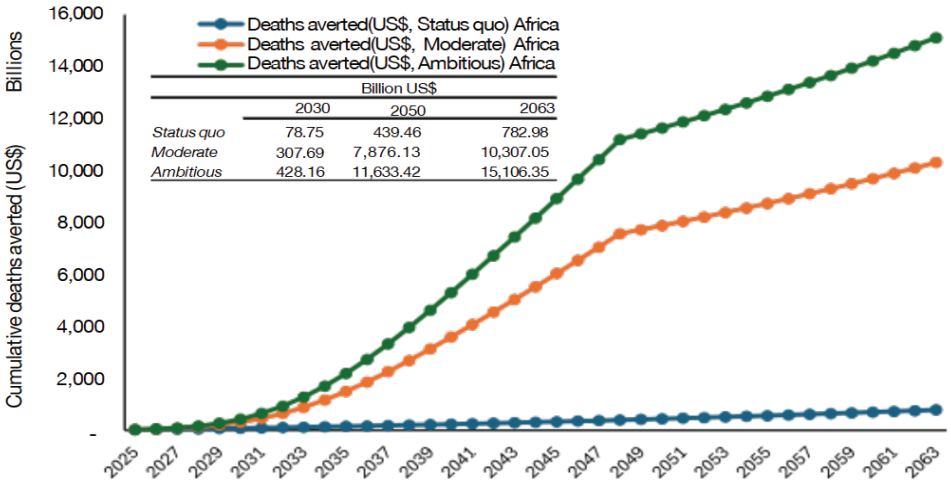
Figure 8: The various components of total benefits from CHW investment, Africa



Mortality reductions

As the largest contributor to total benefits from investing in the CHW program (Figure 8), cumulative avertable mortality would amount to US$78.8 billion by 2030, US$439 billion by 2050 and US$783.0 billion by 2063 under the status quo (Figure 9). Under the moderate scenario, cumulative avertable deaths are valued at US$307.7 billion by 2030, US$7.9 trillion by 2050 and US$10.4 trillion by 2063. The values of cumulative avertable mortality would be higher under the ambitious scenario, ranging between US$428 (under the status quo) and US$15.1 trillion (under the ambitious scenario). The amounts shown in Figure 9 represent substantial savings from investing in and strengthening Africa's CHW program.

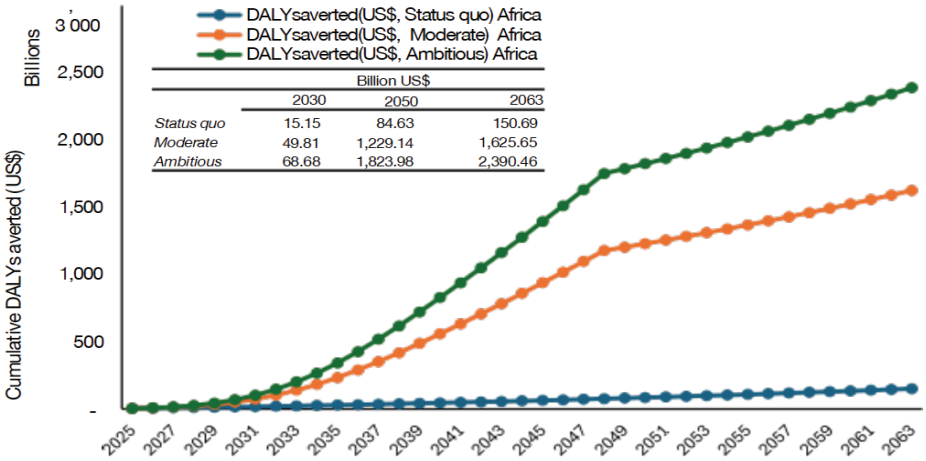
Figure 9: Cumulative value of avertable deaths associated with CHW investment, Africa



Morbidity reductions

Similar to gains in avertable mortality from CHW program investment, there are also significant gains in avertable morbidity from strengthening the CHW program on the continent. Under the status quo, the cumulative value of avertable morbidity was estimated at US$15.2 billion by 2030, increasing to US$150.7 billion by 2063 (Figure 10). Under the moderate scenario, the cumulative value of DALYs averted increases from US$49.8 billion by 2030 to US$1.2 trillion by 2050 and US$1.6 trillion by 2063. The cumulative value of DALYs averted under the ambitious scenario increased from US$68.7 billion by 2030 to US$2.4 trillion by 2063.

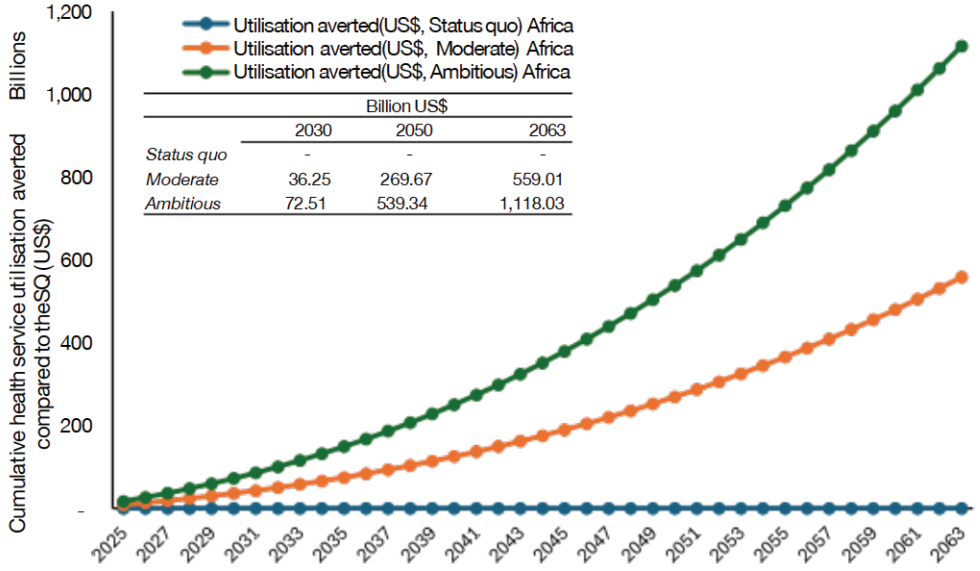
Figure 10: Cumulative value of avertable morbidity (DALYs) associated with CHW investment, Africa



Reductions in PHC service utilization

Substantial improvements in the CHW program are associated with reductions in PHC utilization, as adequately trained CHWs can handle many cases requiring maternal and child health services. As shown in Figure 11, compared to the status quo, about US$36.3 billion will be saved under the moderate scenario by 2030, rising to US$559.0 billion by 2063. Under the ambitious scenario, US$72.5 billion will be saved by reducing PHC utilization in 2030 compared to the status quo. By 2063, about US$1.1 trillion in PHC service utilization will be averted.

Figure 11: Cumulative value of reduced PHC utilization associated with CHW investment, Africa



Other unquantified social gains from investing in the CHW program

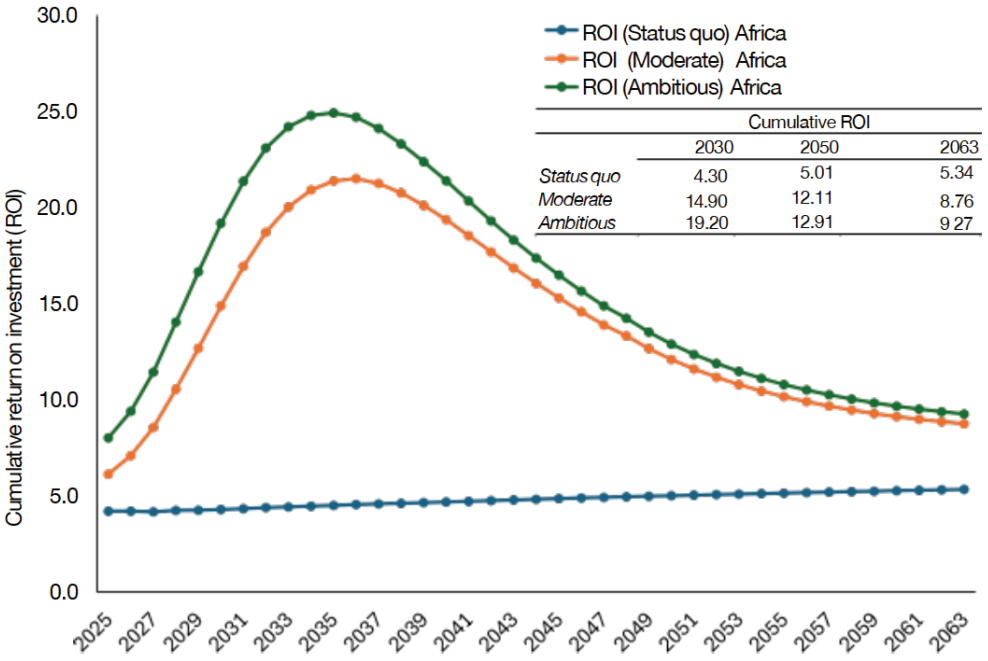
Gender and social equity: In many cases, most CHWs are female and are unremunerated. Based on the investment case findings, keeping these women employed and fairly remunerated is a way to reduce existing social inequities. This also increases female participation in local decision-making and reduces gender gaps in accessing health services. This is also important because women benefit more from most CHW services.

Reducing unemployment among youths is another unqualified gain from investing in CHWs. Trained CHWs are absorbed into jobs in rural and underserved areas. Through employment, youth remains gainfully employed and contribute to the economy through their labor market productivity.

Return on investment

The cumulative return on investment (ROI) for the continent is presented in Figure 12 based on the total cost and benefits of investments in the CHW program across all scenarios.

Figure 12: Cumulative return on CHW program investment, Africa



Under the status quo, investments in Africa's CHW program will yield a cumulative return on investment estimated at US$4.30 for every US$1 invested by 2030. The cumulative return on investment for the status quo will increase slightly to US$5.34 per US$1 invested by 2063.

By 2030, US$1 invested in the CHW program in Africa will yield US$19.20 in cumulative returns, under the ambitious scenario. Moderate investments (under the moderate scenario) will yield a return of US$14.90 per US$1. By 2040, US$1 invested in the CHW program in Africa will yield US$21.40 in returns, assuming a very significant level of investment (i.e., the ambitious scenario). Moderate investments in the CHW program will yield a cumulative return of US$19.39 for every US$1 invested. By 2050, investing US$1 in Africa's CHW program will yield US$12.11 under the moderate scenario, compared to US$12.91 under the ambitious scenario. By 2063, with a very high level of investment in the CHW program in Africa, the cumulative return is expected to be US$9.27 for every US$1 invested. With moderate investments in the CHW program, the cumulative return is estimated at US$8.76 per US$1 invested.

Insights and implications

The Continental Community Health Worker Investment Case, spearheaded by Africa CDC in robust collaboration with AU member States, AU organs and strategic partners, represents an important milestone towards achieving the Agenda 2063, "the Africa we want." This investment case serves as a cornerstone initiative aligned with the AU's commitment to deploying 2 million well-trained, compensated and integrated CHWs by 2030. Among other things, it aims not only to strengthen PHC and health security, but also to advance progress towards Universal Health Coverage. The key findings from the Investment Case analysis show that by 2030, coinciding with the Sustainable Development Goals' endpoint, Africa will benefit up to US$19.20 per US$1 invested in strengthening the continent's CHW program. This represents a significant return, given the high-cost outlays and numerous benefits associated with investing in the CHW program. The largest benefits are seen in mortality reductions, while the largest cost driver is recurrent health spending, including salaries and remuneration. It is important to highlight that currently, CHWs are largely not consistently and adequately remunerated in Africa. However, this investment case provides for the remuneration of CHWs as part of strengthening activities to achieve the 2 million targets by 2030.

By 2030, when Africa achieves the target of training and deploying, compensating, and adequately integrating 2 million community health workers, the continent will benefit by up to US 19.20 for every US 1 invested on strengthening its CHW program.

The 2024 Africa CDC-UNICEF Community Health Landscape survey shows that only 31 out of the 55 AU member states have allocated national budgets for community health, with an average per capita annual budget of US$4.77, which is very low. And with only half of community health budgets funded, most of these programs are supported by external sources, with only six countries financing over 80 per cent of their CHW programs domestically. This pattern highlights the unsustainable reliance on donors for community health financing across the continent. This state of affairs, among other things, motivated the need for a compelling investment case as an advocacy tool for local ownership of community health programs and to demonstrate the need for financing aligned with country priorities and needs.

achieve significant benefits, especially given the current external funding landscape and the dwindling of donor funds. While making the case for increased financing for community health programs, it is important to see domestic resource mobilization as an essential pillar of such financing, accompanied (where necessary) by the smart integration of development assistance to achieve effective, holistic community health programming. In this vein, especially in the current environment of unreliable global health aid, it is important to highlight the overreliance of community health programs on donor assistance as a systemic risk to community health care and UHC.

In the past, Africa CDC has also spearheaded an overall investment case for the health workforce on the continent (Africa CDC, 2024a). It is crucial to highlight three important differences in assumptions between the current CHW investment case and the overall continental investment case for the health workforce developed by the Africa CDC, which make direct comparison of the results difficult without adjustments. Firstly, the current CHWs investment case calibrates the model to ensure that the 2 million CHWs target is reached by 2030 under the ambitious scenario, requiring almost doubling current CHW numbers on the continent by 2030. Secondly, the valuation of mortality averted for the CHW program investment case is based on the services CHWs provide, excluding, for instance, surgeries and hospitalizations. As a result, CHWs do not have a full contribution to all-cause mortality, as used in the original continental investment case for health workers. Lastly, the return on investment ROI includes the valuation of benefits from reduced PHC service utilization, in addition to the traditional benefits of saving lives and reducing morbidity.

Table 9: Summary of selected ROI results in Africa

Study / Repor	Country/setting	ROI Scenarios / Figures	Major drivers
Strengthening Primary Health Care through Community Health Workers (Investment Case) (Dahn *et al.*, 2015)	Sub-Saharan Africa (continental model)	The annual return (ROI) was estimated as follows: For every $1 invested, $10 is expected to be returned at full scale. Based on the annual benefits (~$21.7bn) and annual costs (~$2.2 bn) provided by the authors, the recomputed annual ROI was $8.86 per $1 invested in sub-Saharan Africa.	Increased productivity from a healthier population, potentially reducing the risk of epidemics such as Ebola, and the economic impact of increased employment.
Kenya Investment Case (Primary Health Care/CHW scale-up) (Ministry of Health, 2018)	Kenya	The cumulative financial ROI was estimated as follows: For every $1 invested in strengthening PHCs and scaling up Kenya's CHW program, $9.4 is expected to be returned. Based on the supplied total cost of a fully scaled-up CH program (US$2.5bn) and the total potential benefits (US$26.9bn), the recomputed cumulative financial ROI was $9.76 for every $1 invested.	Increased productivity from a healthier population resulting from the CH scale-up; increased employment from the fiscal multiplier effect of increased government expenditure in the CH Programs; and reduced risk of a global health crisis from scaling up the CH Programs and CHWs.
Ethiopia Health Extension Program (HEP) (Bowser *et al.*, 2023)	Ethiopia	Cumulative ROI (2008-2017) for the Health Extension Program in Ethiopia was estimated as follows: investing $1 yields between $1.59 and $3.71, depending on the model adopted and the components of the costs. After recalculating the cumulative ROI using the authors' costs and benefits, the ROI will range from $0.59 to $2.71 per $1 invested in the Health Extension program over the period. Note that this is the Health Extension Program and not the Community Health Program per se.	Included equity benefits, empowerment benefits, employment and productivity benefits.
Rwanda Community Health Program Investment Case (Ministry of Health Rwanda and Rwanda Biomedical Centre, 2021)	Rwanda CHP	Cumulative ROI (2020-2030) for the Rwanda CHP was estimated as follows: Status quo: investing $1 yields $8.78 in returns; Moderate scenario: investing $1 yields $11.05; and Ambitious scenario: investing $1 yields $23.90 in returns.	Health system-related gains, including reductions in training other health professionals

Note: the results shown here are not directly comparable to those reported in this report due to substantial differences in methodology, year of focus and the aim of the studies.

Also, while there have been a couple of investment cases for Africa's CHW program. As shown in Table 9, their results are not directly comparable with those in this report. There are many reasons for this lack of comparability, including differences in objectives, the period covered, the type of return on investment computed (e.g., annual vs. cumulative), the components of the costs and benefits, and the general methodological approach. As summarized in Table 9, the results from these countries are also varied, ranging from US$0.59 returned per US$1 invested (in Ethiopia) (Bowser *et al.*, 2023) to US$23.9 in Rwanda (Ministry of Health Rwanda and Rwanda Biomedical Centre, 2021).

Resource mobilization for strengthening Africa's CHW program

The significant return on investment shows that Africa's CHW program is a high-reward investment for improving population health and advancing universal health coverage, especially the predominantly rural African population. Results show significant reductions in morbidity and mortality, as well as in health system costs. Unfortunately, many countries in Africa face significant financing constraints, exacerbated by low economic growth and a large informal workforce. These limit the scale and sustainability of CHW programs. Many countries rely heavily on external donor funding, which exposes these programs to volatility and long-term sustainability challenges.

Addressing this challenge requires diversified, feasible financing approaches that mobilize predominantly domestic resources, strategically leverage donor support, and engage the private sector to ensure resilient, nationally led CHW programs over the long term. A continental strategy is also helpful, as many countries cannot achieve significant improvements on their own.

A multi-layered resource mobilization strategy is proposed based on findings, including domestic financing mechanisms, donor or development partner funding, and private- sector engagement mechanisms, including innovative financing mechanisms.

Domestic financing mechanisms

Strengthening domestic financing is central to achieving sustainable CHW programs in African countries. Relying on external funding exposes essential community health services to funding shocks and limits government stewardship over program design and scale. Mobilizing domestic resources enables governments to institutionalize CHWs within national health systems, align investments with local priorities, and improve financial predictability. This will help address some of the challenges countries have raised regarding the need to remunerate and retain polyvalent CHWs. Domestic financing mechanisms also enhance accountability to citizens and reinforce the role of CHWs as a core component on the path to universal health coverage. The approaches outlined below highlight practical options for generating and allocating domestic funds to support long-term CHW program sustainability.

Government budgetary allocation: In many countries, curative services account for a significant share of government health spending, with prevention and health promotion accounting for a small share. Given the positive returns on investing in Africa's CHW program, governments should consider options such as ring-fenced budget lines for CHWs in national health budgets (e.g., wage subsidies, commodities, supervision costs) to address challenges that drive high CHW attrition. Governments should commit to multi-year budgets to make funding predictable and embed CHW financing in medium-term expenditure frameworks (MTEFs).

National health insurance systems: Unfortunately, health insurance coverage in Africa is very limited (Barasa *et al.*, 2021), especially for predominantly rural, informally employed populations. One way to raise funds to finance CHW services is to integrate them into national health insurance benefit packages.

Unfortunately, many of the services provided by CHWs in Africa are outside the formal health insurance system, which contributes to the relegation of CHWs to the background. Such integration is critical to reducing fragmentation and to tapping public funds to expand access to community health services.

Health taxes, earmarked taxes and levies: Health taxes have gained prominence as a way to raise funds for health services. A country may decide to dedicate taxes on tobacco, alcohol, and sugar-sweetened beverages to finance CHW training or to cover community health services. A major concern with these taxes is their regressive nature, which places a heavier burden on poorer households than on richer households (Ataguba, 2012). Other innovative sources include mobile transaction levies, airline ticket taxes, or vehicle license surcharges, which can be ring-fenced for community health services.

Donor or development partner funding

Donor and multilateral financing, although declining, retain an important catalytic role in supporting CHW programs in Africa, particularly in low-resource and fragile settings. However, to promote long-term sustainability and country ownership, external financing must be designed to complement and progressively crowd in domestic resources rather than serve as a substitute. Strategic donor engagement can help bridge financing gaps and strengthen national systems through coordinated, predictable, and responsible support. Development partner financing must emphasize alignment with national priorities, harmonization across partners, and deliberate transition pathways that reduce dependency while sustaining efficient delivery of community health services. Effective development partner funding may entail:

Blended finance facilities: Blended finance facilities combine public, donor, and private capital to fund CHW programs through risk-sharing instruments such as guarantees and outcome-based payments. This approach lowers investment risk, and links returns to verified health outcomes (performance financing). These facilities can mobilize additional funds while supporting government-led, sustainable community health systems. Examples include *Health Impact Bonds and Development Impact Bonds (DIBs)*.

Pooling donor funds: Mechanisms that pool funds from donors provide an avenue to utilize the funds for national priorities. This includes harmonized reporting and reducing duplication (increased efficiency). Examples include sector-side approaches.

Private sector engagement mechanisms

Engaging the private sector is critical to expand and sustain financing for Africa's CHW programs beyond public and donor resources. Unfortunately, the private sector is not very well engaged on the continent to unlock significant funds for the CHW program and other health services. Private actors can contribute capital, innovation, and operational efficiencies that strengthen service delivery and reduce system costs. It is critical to ensure alignment with national health priorities and with clear governance frameworks, so that private sector engagement can complement public financing while preserving equity and accountability. Strategic partnerships, including corporate social responsibility initiatives, impact investing and public-private partnerships, can unlock new funding streams, support innovation, and enhance program performance. While this is not restricted to the CHW program, it is essential to avoid the exploitative aspects of the private sector and aim to adopt an integrated approach.

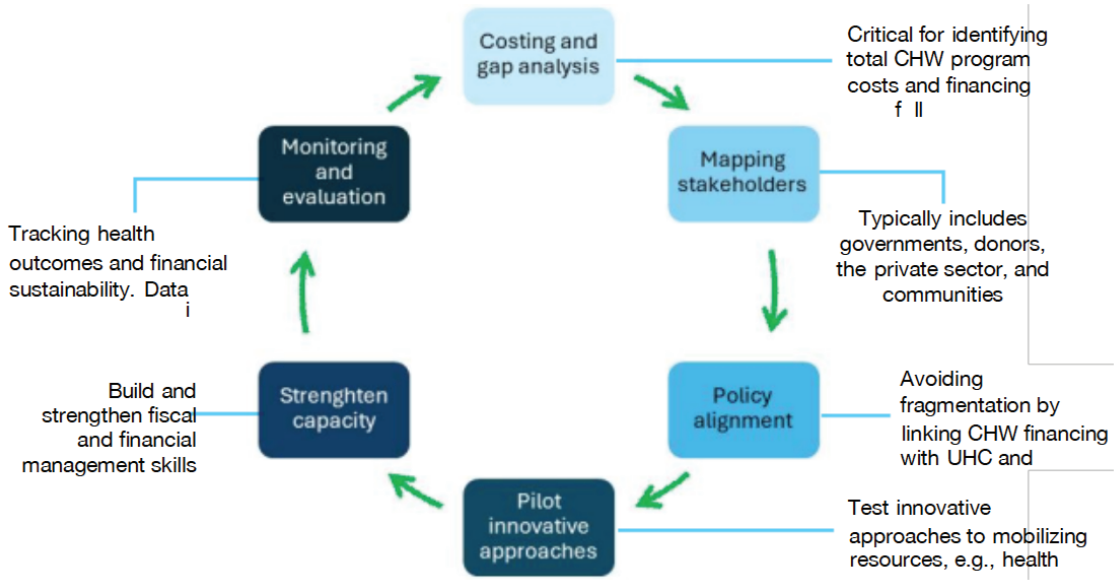
Corporate social responsibility: One way to unlock private-sector funds for the CHW program is to engage local and international companies to fund CHW initiatives as part of their corporate social responsibility (CSR) portfolios.

Public-private partnerships: This involves partnering with private entities for supply chain, logistics, mobile health payments, digital health platforms, and the like, with private partners sharing costs and bringing efficiency and technological innovation.

Implementation roadmap for ensuring CHW program sustainability in Africa

Translating financing strategies into sustainable CHW programs requires a clear, phased implementation approach or plan that helps countries sequence reforms, align stakeholders, and ensure they achieve key goals to reap the benefits of their investment. Figure 13 provides a structured pathway for operationalizing diversified financing mechanisms and embedding CHW programs within national health systems.

Figure 13: Implementation roadmap for long-term CHW program sustainability to reduce donor dependency and promote country ownership



Costing and gap analysis establishes the full financial requirements of CHW programs by estimating recurrent and capital costs (including training) and comparing them against available funding. This process is about identifying financing shortfalls and informing resource mobilization strategies, and supports evidence-based planning, prioritization, and advocacy for sustainable CHW investment.

Stakeholder mapping identifies and analyzes key actors involved in financing and implementing CHW programs, including government entities, development partners, private sector partners, communities and CHWs. This is helpful in clarifying roles, interests, and influence, supports coordination, reduces duplication, and enables effective collaboration in mobilizing and managing diversified financing for CHW sustainability.

Policy alignment ensures that CHW financing strategies are embedded within national health policies, universal health coverage plans, and broader development frameworks. This is about reducing fragmentation, especially in resource-constrained settings. This is critical for aligning investments with existing priorities and budget processes, strengthening government ownership, improving coherence across sectors, and increasing the likelihood of sustained, predictable financing for CHW programs.

Piloting blended and innovative financing approaches enables countries to test new mechanisms, such as outcome-based financing, public-private partnerships or health taxes, on a small scale before scaling up. The idea behind pilots is to assess feasibility, manage risk, generate evidence on effectiveness, and inform policy decisions to scale sustainable financing models for CHW programs. This is also an opportunity to learn and make necessary amendments to ensure the successful implementation of these funding approaches.

Capacity strengthening focuses on building the technical, managerial, fiscal and financial skills needed to plan, finance, and oversee CHW programs. Strengthening capacities at national and subnational levels improves budgeting, financial management, and accountability. This will help governments to effectively manage different financing mechanisms and sustain high-quality community health services.

Monitoring and evaluation are critical for tracking financial flows, service delivery, and health outcomes to assess the effectiveness and sustainability of CHW financing approaches. Robust M&E systems support accountability, inform course correction, demonstrate ongoing value for money beyond the initial investment case, and generate evidence to guide scaling and long-term investment in community health programs.

Limitations

Although a robust model was used to generate the results in this report, a few limitations are worth noting. In computing the number of lives saved by CHWs, the lack of comprehensive data on other causes of mortality beyond maternal and under-5 mortality meant that an assumption was made about the other services provided by CHWs (i.e., doubling under-5 mortality to account for the other mortalities that are unavailable), which was used to estimate the mortality averted by CHWs in countries. A sensitivity analysis was performed using twice the maternal mortality rate instead, but the results remained robust. Also, in computing PHC service utilization reduced by strengthening the CHW program, the model applied a uniform proportionate reduction throughout the model's time horizon (see Table 7). As the CHW program is further strengthened, there will likely be a more substantial decrease in PHC service utilization at clinics and community health centers. In the absence of any reliable estimate, the fixed proportions in Table 7 were used. Lastly, CHW density data were available from 48 of the 55 countries, and the model imputed density data for the missing countries (see Appendix I) using regional averages. A detailed look at the estimated CHW numbers shows consistency with the current stock of slightly over 1 million CHWs in 2025.

Recommendations

The investment case for the CHW program in Africa demonstrates significant benefits that outweigh the investment costs, as reflected in high return on investment. The following recommendations can be made based on the findings:

CHWs should be institutionalized within the national health workforce policy. This will involve aligning national health workforce strategies in Africa with the Africa CDC Community Health Strategic Priorities (2023-2027) (Africa CDC, 2023c). This involves formally integrating CHWs into health systems with clear roles, standardizing their training, and scope of practice, setting clear career pathways, and supervision structures. This institutionalization will convert the high ROI evidence in this report into sustained health system strengthening.

Relatedly, improving the working conditions of CHWs is important to increase the potential returns on investment. The current volunteerism model is unlikely to motivate CHWs and will worsen inequalities and poor population health outcomes. Also, the geographic distribution of trained CHWs is critical to consider. This also includes fairness in how different genders are treated.

It is imperative that countries utilize the Continental Coordination Mechanisms for resource mobilization. This involves bringing together AU Member States, donors, and private partners to co-finance CHW programs and support the continental roadmap to scale up to 2 million CHWs by 2030, as envisioned by the Africa CDC and the African Union. Some of the identified resource mobilization mechanisms in this report are critical to actualize resource generation and allocation.

Emphasis should be placed on strengthening domestic financing systems for CHWs in Africa. The continent relies heavily on donors for financing health services. Following the Lusaka Agenda, it is critical to support transitioning countries in becoming self-reliant on domestic resources. One way to make progress on this front is to prioritize the "One Budget, One Plan, One M&E Framework" principles to enhance predictability and transparency in domestic financing.

Fragmentation is the bane of a harmonized system. It is critical to integrate CHW Investments into universal health coverage, PHC policy and national health systems to reflect Africa CDC's emphasis on CHWs as essential frontline workers. Countries should take adequate steps to integrate CHW services into health benefit packages and provide these services equitably to all who need them and strengthen the continuum of service provision.

Regular re-evaluation of the returns on investment in the CHW program is necessary to reflect changing needs and priorities. This can be achieved by building the capacity of local government officials in data analytics and modelling. This is also an area with a significant personnel shortage across many African countries. Relatedly, data systems must be strengthened in countries to ensure that timely data are available for efficient, timely decision-making.

Conclusion

Investing in CHWs is critical in Africa, as they are essential frontline health workers.

Currently, there are slightly over 1 million community health workers on the continent who are not adequately deployed or remunerated and face poor working conditions, often on a volunteer basis. CHW services are generally more cost-effective than hospital services. Given the substantial gains from investing in the CHW program and the potential to reduce the health system's workload, it is crucial to prioritize this investment. It is also crucial to integrate them into the formal system to ensure service continuity. The African Union's vision to train, equip, deploy and integrate 2 million CHWs by 2030 can be actualized through significant investments as demonstrated in this report. Emphasis should be placed on raising domestic resources complemented by an efficient system to maximize the use of available funds. Africa's population health will improve tremendously through the strengthening of the CHW program and integrating this into the national health system. Community health worker program investment is non-negotiable in Africa to achieve Agenda 2063: The Africa We Want.

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Appendix I: Countries and availability of CHW density

Country	Region	CHWdensity	
Burundi		Central Africa	Actual supplied
Central African Republic		Central Africa	Actual supplied
Cameroon		Central Africa	Actual supplied
Congo, Dem. Rep.		Central Africa	Actual supplied
Congo, Rep.		Central Africa	Actual supplied
Gabon		Central Africa	Imputed
Equatorial Guinea		Central Africa	Actual supplied
São Tomé and Príncipe		Central Africa	Actual supplied
Chad		Central Africa	Actual supplied
Comoros		East Africa	Actual supplied
Djibouti		East Africa	Actual supplied
Eritrea		East Africa	Actual supplied
Ethiopia		East Africa	Actual supplied
Kenya		East Africa	Actual supplied
Madagascar		East Africa	Actual supplied
Mauritius		East Africa	Imputed
Rwanda		East Africa	Actual supplied
Sudan		East Africa	Imputed
Somalia		East Africa	Actual supplied
South Sudan		East Africa	Actual supplied
Seychelles		East Africa	Actual supplied
United Republic of Tanzania		East Africa	Actual supplied
Uganda		East Africa	Actual supplied
Algeria		North Africa	Actual supplied
Egypt		North Africa	Actual supplied
Sahrawi Arab Democratic Republic		North Africa	Imputed
Libya		North Africa	Actual supplied
Morocco		North Africa	Imputed
Mauritania		North Africa	Actual supplied
Tunisia		North Africa	Imputed
Angola		Southern Africa	Actual supplied
Botswana		Southern Africa	Actual supplied
Lesotho		Southern Africa	Actual supplied
Mozambique		Southern Africa	Actual supplied
Malawi		Southern Africa	Actual supplied
Namibia		Southern Africa	Actual supplied
Eswatini		Southern Africa	Actual supplied

South Africa	Southern Africa	Actual supplied
Zambia	Southern Africa	Actual supplied
Zimbabwe	Southern Africa	Actual supplied
Benin	West Africa	Actual supplied
Burkina Faso	West Africa	Actual supplied
Coted Ivoire	West Africa	Actual supplied
Cabo Verde	West Africa	Imputed
Ghana	West Africa	Actual supplied
Guinea	West Africa	Actual supplied
Gambia	West Africa	Actual supplied
Guinea-Bissau	West Africa	Actual supplied
Liberia	West Africa	Actual supplied
Mali	West Africa	Actual supplied
Niger	West Africa	Actual supplied
Nigeria	West Africa	Actual supplied
Senegal	West Africa	Actual supplied
Sierra Leone	West Africa	Actual supplied
Togo	West Africa	Actual supplied

Appendix II: Cost of investing in the CHW program by regions

Figure 14: Cumulative capital cost, Central Africa

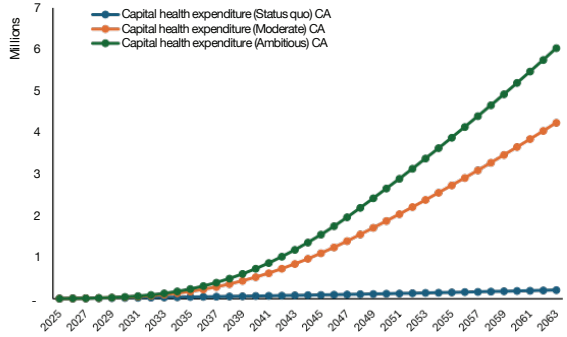


Figure 15: Cumulative capital cost, East Africa

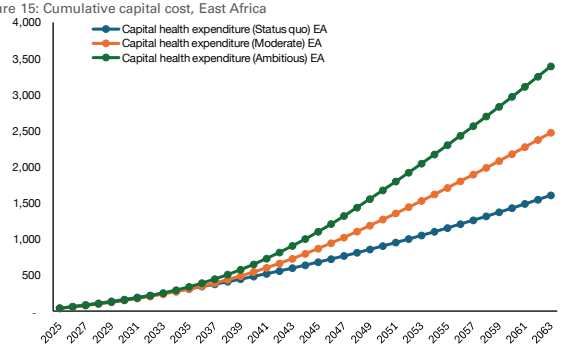


Figure 16: Cumulative capital cost , North Africa

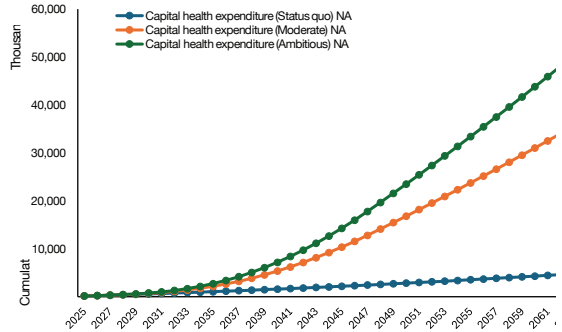


Figure 17: Cumulative capital cost, Southern Africa

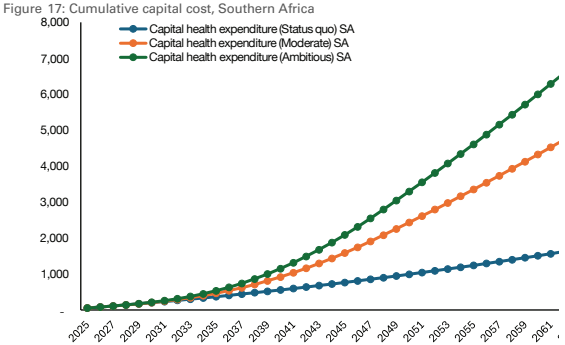


Figure 18: Cumulative capital cost, West Africa

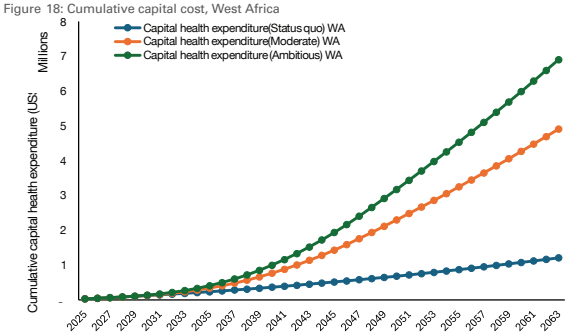


Figure 19: Cumulative general government health expenditure, Central Africa

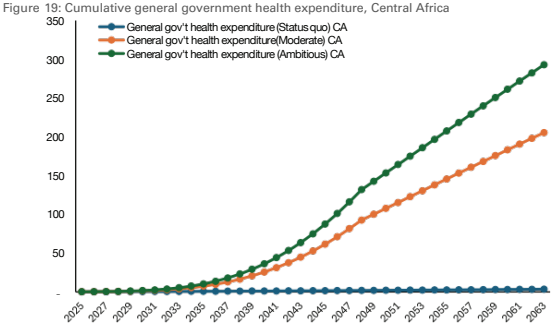


Figure 20: Cumulative general government health expenditure, East Africa

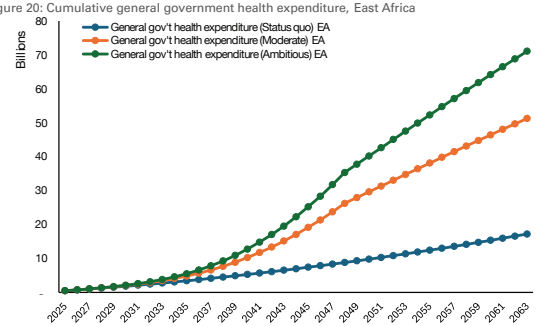


Figure 21: Cumulative general government health expenditure, North Africa

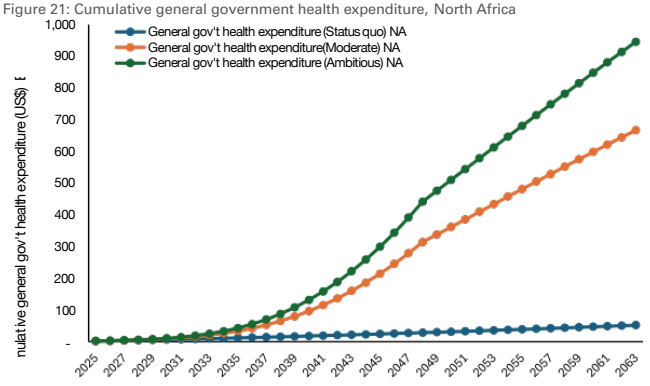


Figure 22: Cumulative general government health expenditure, Southern Africa

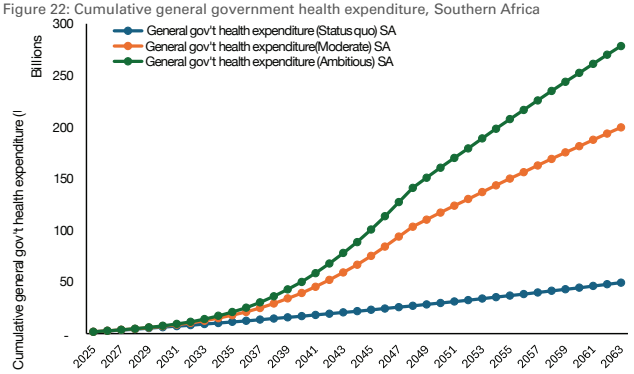


Figure 23: Cumulative general government health expenditure, West Africa

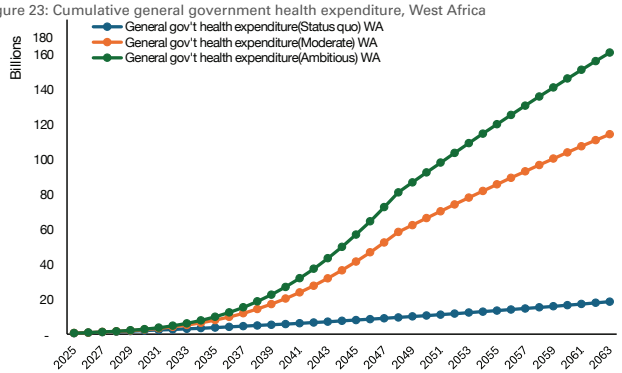


Figure 24: Cumulative training cost, Central Africa

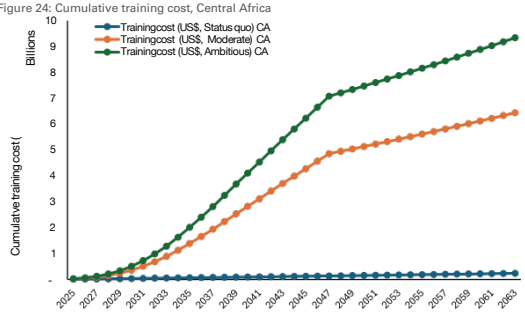


Figure 25: Cumulative training cost, East Africa

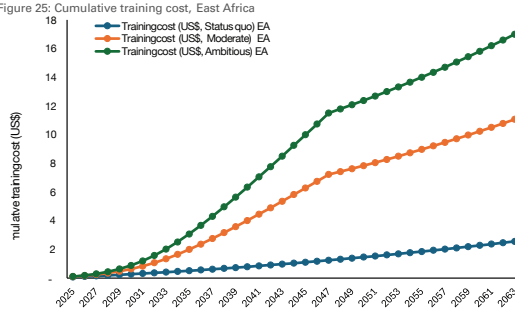


Figure 26: Cumulative training cost, North Africa

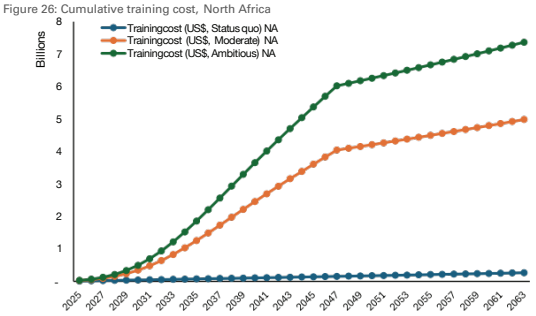


Figure 27: Cumulative training cost, Southern Africa

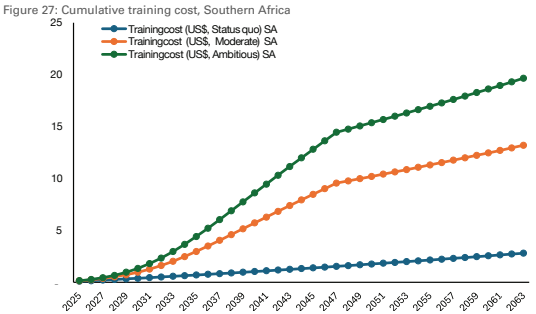


Figure 28: Cumulative training cost, West Africa

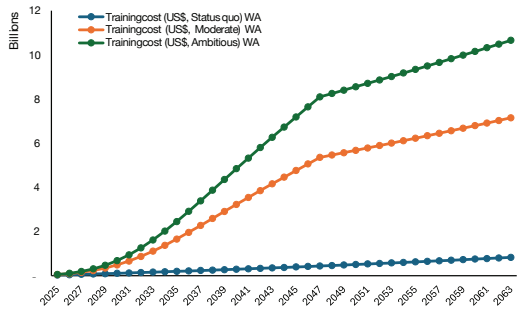


Figure 29: Cumulative total cost, Central Africa

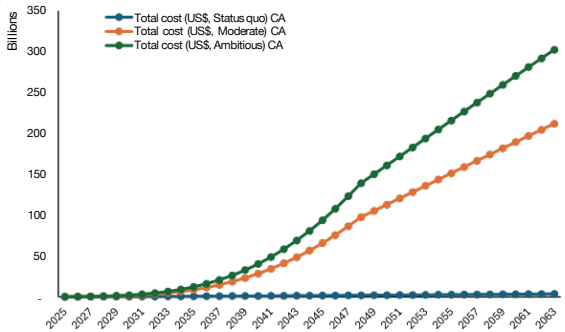


Figure 30: Cumulative total cost , East Africa

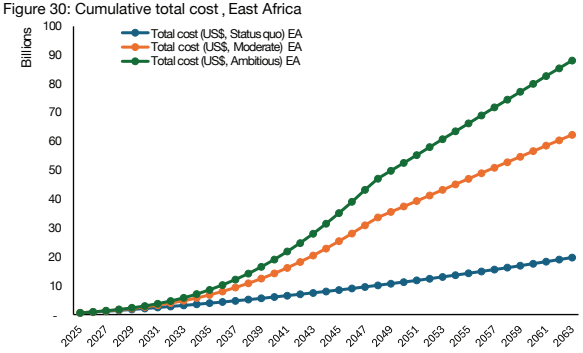


Figure 31: Cumulative total cost , North Africa

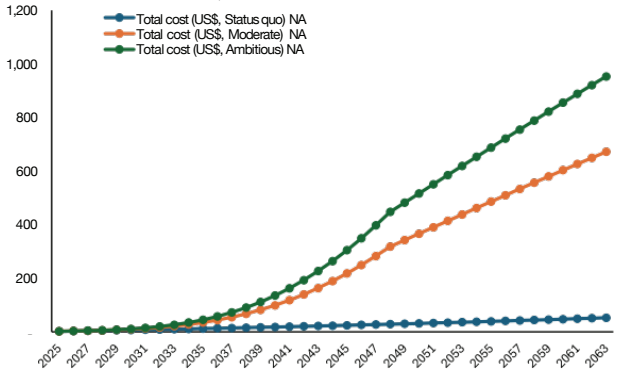


Figure 32: Cumulative total cost, Southern Africa

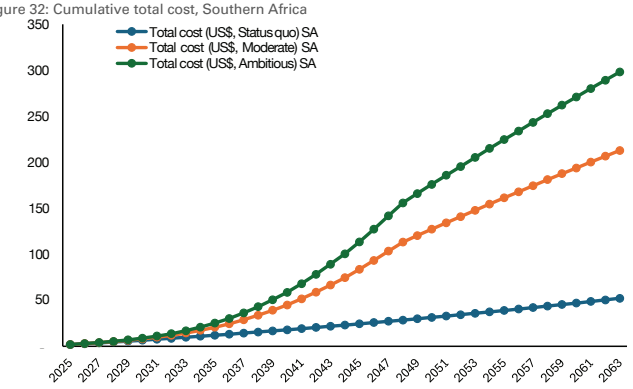
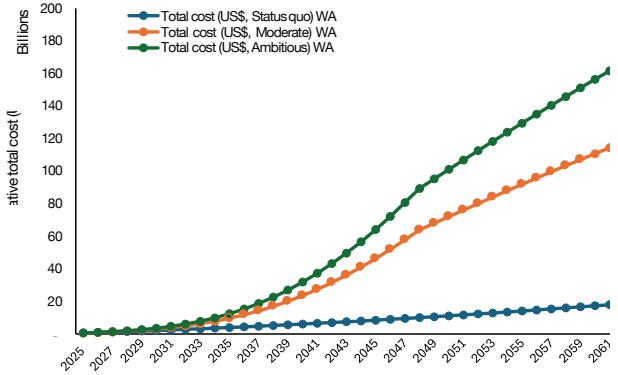


Figure 33: Cumulative total cost, West Africa



Appendix III: Benefits from investing in the CHW program by regions

Figure 34: Cumulative PHC utilization averted, Central Africa

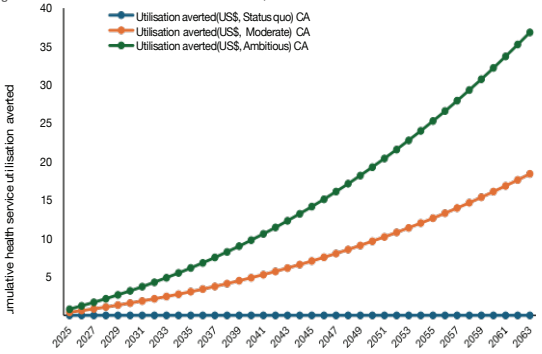


Figure 35: Cumulative PHC utilization averted, East Africa

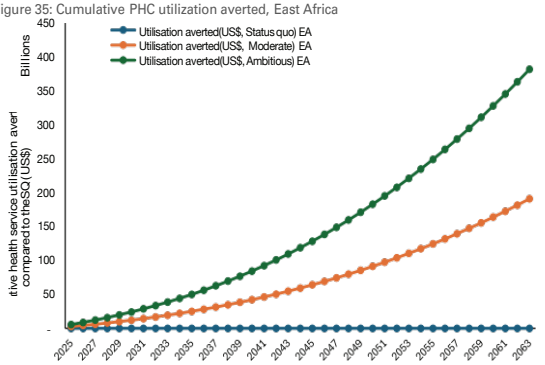


Figure 36: Cumulative PHC utilization averted, North Africa

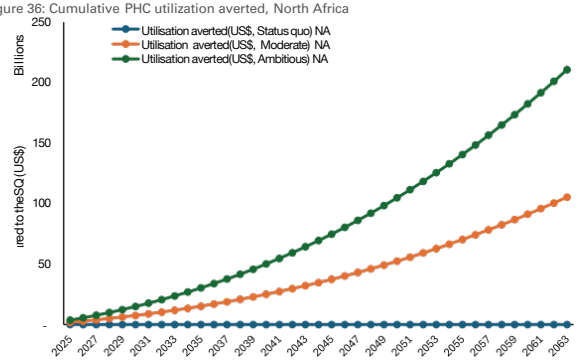


Figure 37: Cumulative PHC utilization averted, Southern Africa

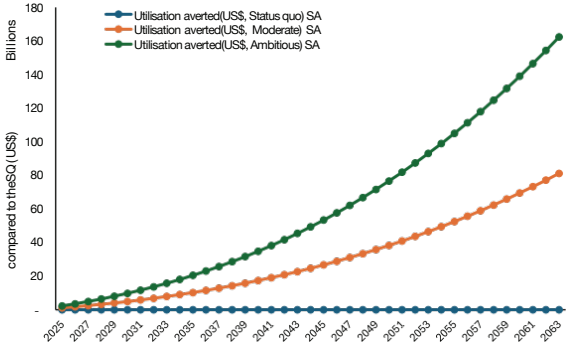


Figure 38: Cumulative PHC utilization averted, West Africa

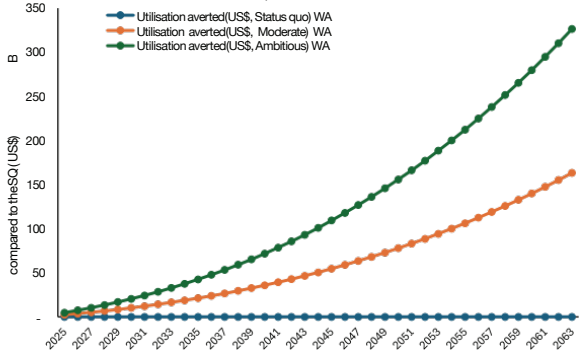


Figure 39: Cumulative DALYs averted, Central Africa

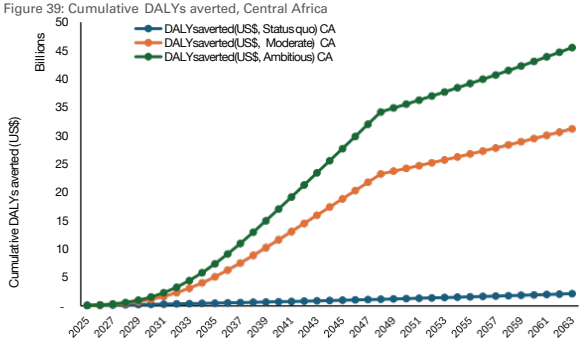


Figure 40: Cumulative DALYs averted, East Africa

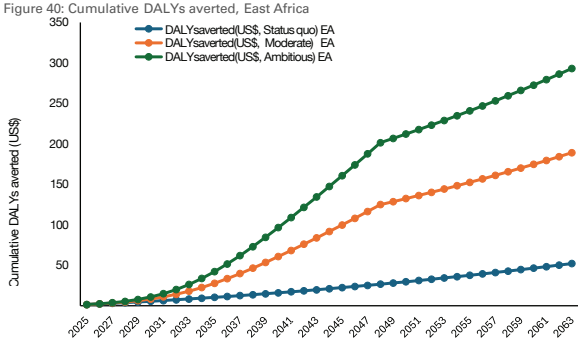


Figure 41: Cumulative DALYs averted, North Africa

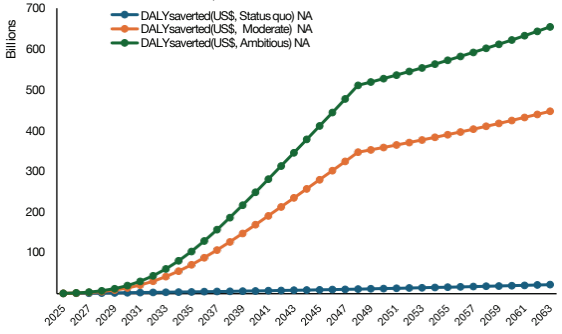


Figure 42: Cumulative DALYs averted, Southern Africa

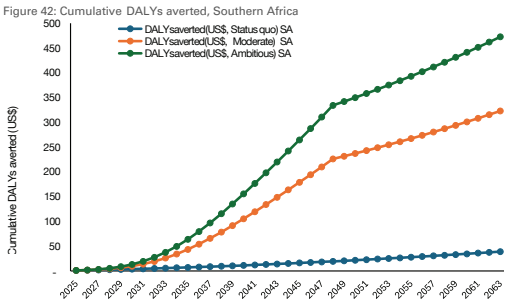


Figure 43: Cumulative DALYs averted, West Africa

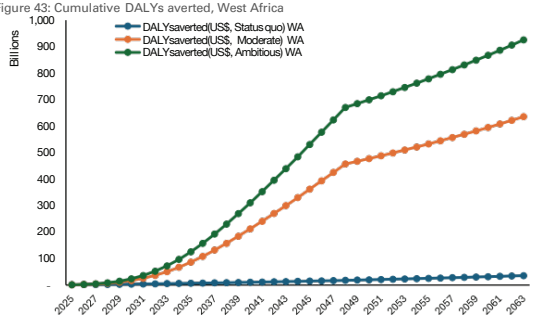


Figure 44: Cumulative mortality averted, Central Africa

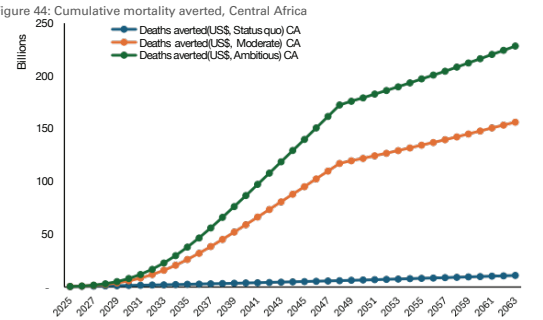


Figure 45: Cumulative mortality averted, East Africa

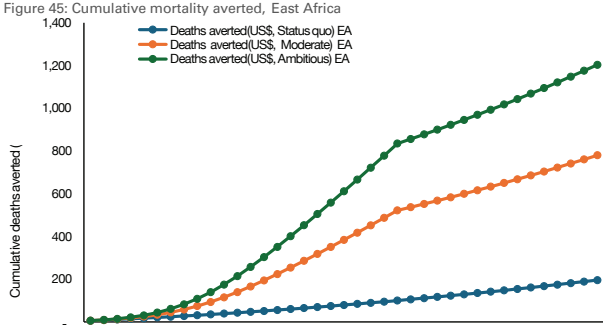


Figure 46: Cumulative mortality averted, North Africa

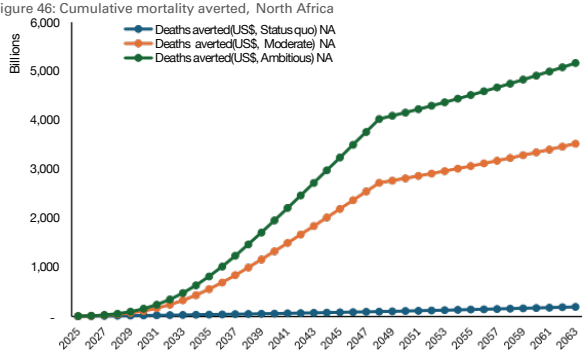


Figure 47: Cumulative mortality averted, Southern Africa

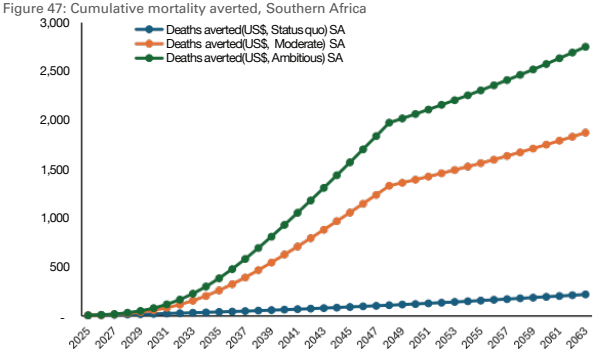


Figure 46: Cumulative mortality averted, North Africa

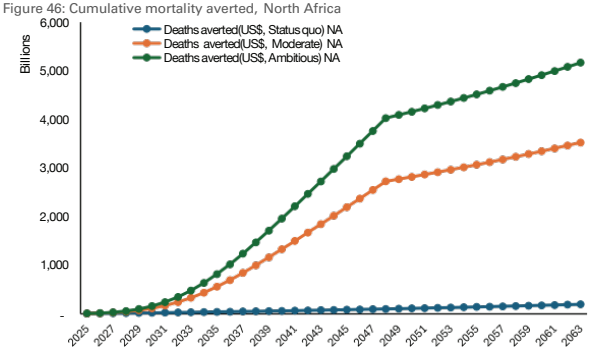


Figure 47: Cumulative mortality averted, Southern Africa

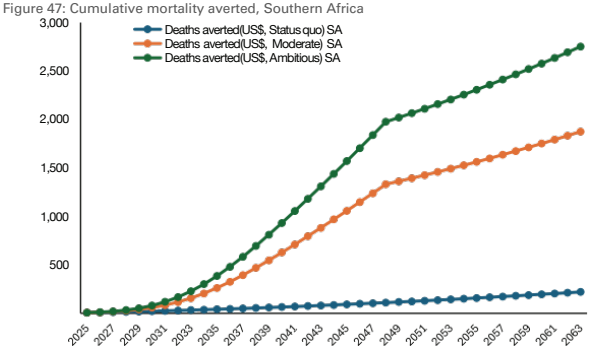


Figure 48: Cumulative mortality averted, West Africa

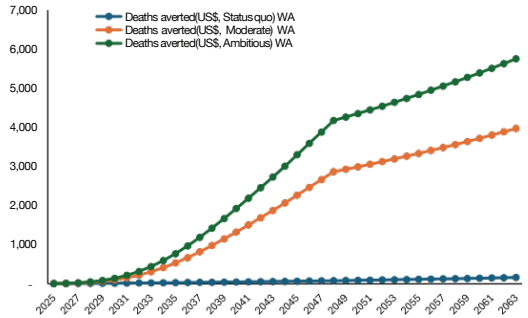


Figure 49: Cumulative total benefits, Central Africa

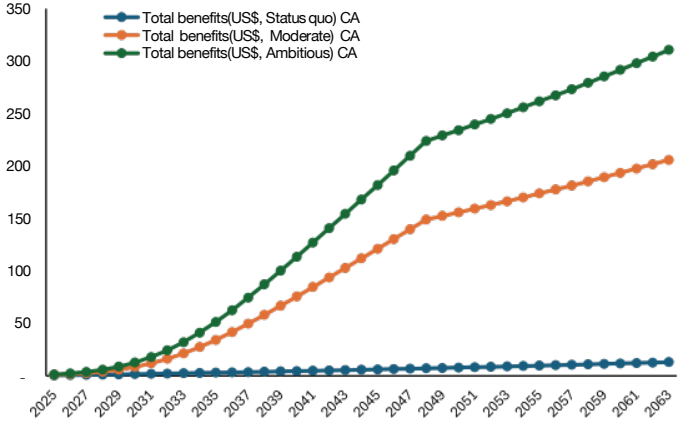


Figure 50: Cumulative total benefits, East Africa

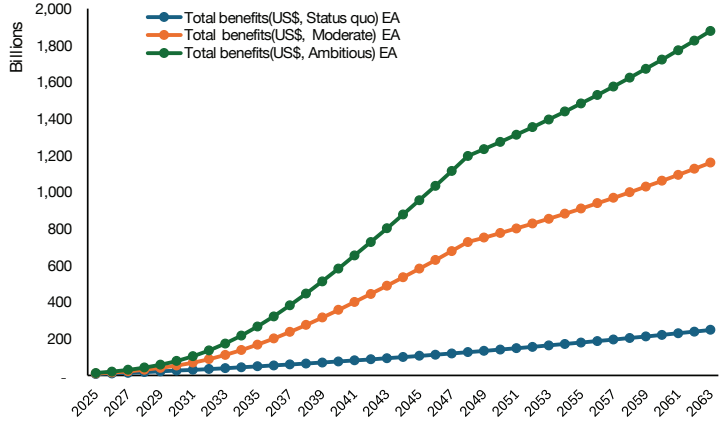


Figure 51: Cumulative total benefits , North Africa

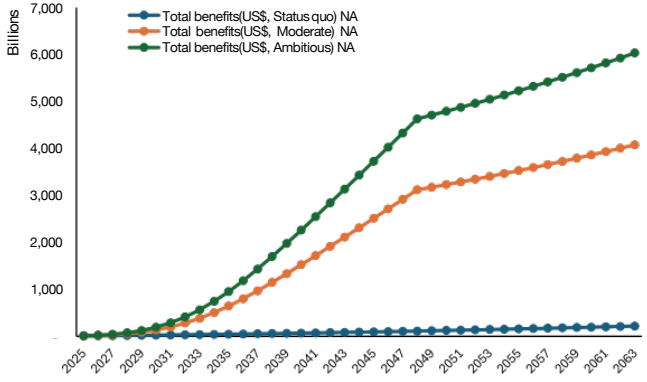


Figure 52: Cumulative total benefits, Southern Africa

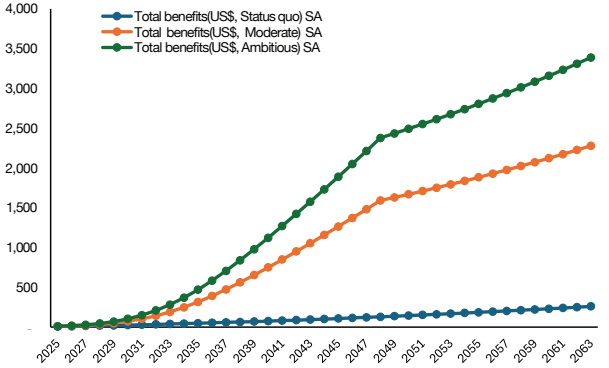
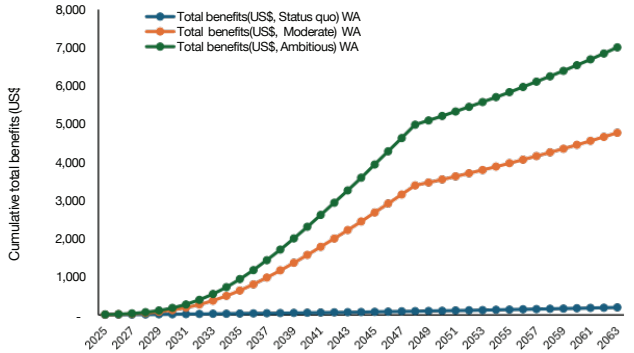


Figure 53: Cumulative total benefits, West Africa



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Centres for Disease Control and Prevention

An entity of the African Union

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Africa CDC Headquarters, Ring Road, 16/17,
Haile Garment Lafto Square,
Nifas Silk-Lafto Sub City,
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