



Leadership Development Pathways in Public Health through HR Initiatives

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Abstract

In today's rapidly evolving health landscape, effective and adaptable leadership is absolutely vital across all levels of public health, not just at the top. Leadership responsibilities have become distributed throughout health systems, making it imperative to nurture these skills broadly. This paper examines the crucial role of human resource (HR) strategies in fostering sustainable leadership within public health organizations.

Drawing on a broad review of peer-reviewed literature, institutional reports, and case studies published through 2023, the analysis identifies several key HR initiatives: strategic workforce planning, ongoing professional development, robust mentorship programs, and rigorous performance management systems. The evidence indicates that leadership development achieves the best outcomes when HR efforts are closely aligned with broader organizational goals and deeply embedded in the workplace culture.

Notably, interventions such as competency-based training, equitable advancement frameworks, and structured succession planning demonstrate tangible benefits—including improved health system performance, higher staff retention, and greater equity in leadership representation. Still, there are clear disparities in leadership capacity between regions, particularly in low- and middle- income countries, highlighting the importance of contextually tailored HR interventions.

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Introduction

Public health systems across the globe continually grapple with a range of complex and evolving challenges—think infectious disease outbreaks, rising rates of chronic illness, environmental hazards, and widening health inequities. These issues are particularly acute in low- and middle- income countries, where fragile infrastructure, limited financial resources, and fragmented care networks severely limit the ability to deliver equitable health outcomes. The COVID-19 pandemic, in particular, exposed significant vulnerabilities in both national and global health systems, underscoring the urgent need for adaptive, resilient, and forward-thinking leadership.

Leadership is, without exaggeration, a critical determinant of health system performance. Effective leaders are responsible for orchestrating coordinated responses across sectors, translating evidence-based policy into practical action, motivating the workforce, and sustaining quality improvements over time. Yet, in practice, leadership in public health is often inconsistent and underdeveloped, especially in regions burdened by high disease prevalence and weak institutional frameworks.

As illustrated in Table 1, the specific leadership challenges vary by context, but recurring themes include resource shortages, political instability, and the migration of skilled professionals to other countries.

Human resource initiatives—such as workforce planning, systematic performance management, targeted training, and structured mentoring—represent a profoundly important but frequently underutilized avenue for strengthening leadership capacity within health systems. This paper proposes a conceptual framework that demonstrates how targeted HR interventions, ranging from formal education to experiential learning and system, level support, can systematically build leadership competencies.

The objective of this paper is to examine the strategic role of human resources in developing public health leadership, to identify both challenges and opportunities across diverse regions, and to offer practical recommendations for embedding leadership development into broader workforce planning and policy. By explicitly connecting HR practices

to leadership outcomes, this analysis aims to contribute meaningfully to both scholarly debate and the pragmatic improvement of health systems worldwide.

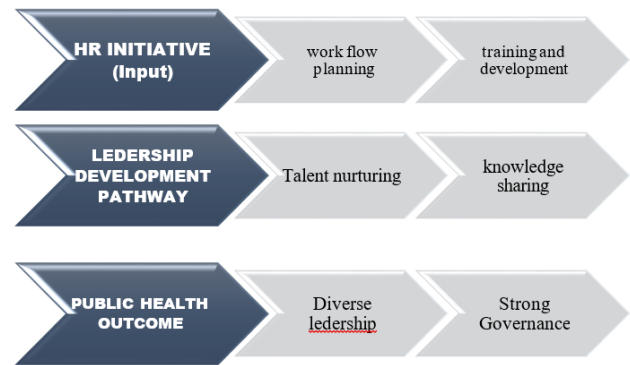


Fig 1: Conceptual framework: Linking HR initiatives to leadership development pathways

Table 1: Key public health leadership challenges by region (based on existing literature)

Region	Leadership Challenges	Examples / Notes
Africa	- Limited leadership training opportunities - Brain drain of skilled professionals - Resource constraints	Weak HR systems hinder leadership pipeline development
Asia	- Fragmented health governance - Rapidly changing health needs - Balancing traditional and modern practices	Varied leadership capacity between urban and rural areas
Europe	- Aging workforce - Integrating digital health leadership - Managing multicultural teams	Focus on innovation but challenges in workforce diversity
North America	- Leadership burnout and turnover - Addressing health equity - Adapting to evolving public health threats	Emphasis on leadership in crisis management
Latin America	- Political instability impacting health systems - Limited formal leadership development programs	Emerging leadership models influenced by community engagement
Oceania	- Geographic isolation challenges - Indigenous leadership inclusion - Workforce retention	Efforts to integrate cultural competency in leadership

Literature Review

Theoretical Frameworks

Leadership in public health draws from several foundational theories that shape both scholarship and real-world application. Among the most notable are transformational, servant, and adaptive leadership frameworks. Transformational leadership, as outlined by Bass in 1999, focuses on motivating and inspiring health professionals to surpass their usual limits, often through fostering a sense of purpose and innovation. In contrast, servant leadership, rooted in Greenleaf’s 1977 work, emphasizes prioritizing the needs and development of individuals and communities, placing service at the core of leadership. Adaptive leadership, highlighted by Heifetz and colleagues in 2009, particularly during public health crises. Collectively, these theoretical perspectives significantly influence the design and evaluation

of leadership development initiatives within various health contexts.

Leadership Gaps

Even with considerable theoretical progress, glaring gaps in leadership remain across the globe especially when you stack high-income countries up against their low- and middle-income counterparts. High-income nations typically enjoy well-established leadership development pipelines, solid funding, and human resource systems that actually foster continuous professional growth. Meanwhile, countries with fewer resources grapple with chronic underfunding, skilled professionals leaving for better opportunities abroad, disjointed training efforts, and institutions that just aren’t up to the task (WHO, 2020).

Table 2: Comparison of Leadership Development Models Across Global Health Systems

Model	Region/Country Examples	Strengths	Limitations
Transformational	USA, UK, Canada	Inspires innovation, motivates teams	May overlook systemic barriers
Servant	Latin America, Africa	Focuses on community empowerment	Can be resource- intensive
Adaptive	Asia, Pacific Islands	Enhances flexibility and problem-solving	Requires strong institutional support

This table provides a comparative overview of key characteristics, notable advantages, and inherent drawbacks of widely adopted leadership development methods across various global regions.

HR Strategies

Addressing leadership gaps in healthcare isn't something that happens by chance; it requires integrating leadership development directly into workforce planning strategies. The World Health Organization has underscored the importance

of strengthening leadership as an essential component for achieving Universal Health Coverage and the Sustainable Development Goals (WHO, 2016). Real-world examples from countries like Rwanda, Thailand, and South Africa illustrate the effectiveness of these strategies through the implementation of comprehensive leadership programs that combine targeted training, mentorship, and policy reforms, these nations have demonstrated measurable progress in building leadership capacity within their health systems (Kruk *et al.*, 2018; Omaswa *et al.*, 2021).

Table 3: Notable HR-Based Leadership Programs

Country	Year	Institution	Program Description	Outcomes
Rwanda	2015	Ministry of Health	Leadership mentorship and training	Improved management skills, retention
Thailand	2018	Thai Public Health Institute	Competency-based leadership curriculum	Enhanced leadership competencies
South Africa	2020	University of Cape Town	Integrated HR leadership development	Increased leadership diversity



Fig 2: Bar Chart - Number of Leadership Training Programs by WHO Region

This bar chart illustrates the distribution of leadership training initiatives by WHO regions over the past decade, highlighting disparities in program availability and scale.

Methodology

In this study, I took a narrative review approach and combined it with policy analysis to explore how human resource (HR) initiatives actually shape leadership development in public health systems around the world. The narrative review method really fits the bill for tricky, interdisciplinary topics like this, since it lets you weave together evidence from all kinds of studies quantitative work, qualitative case studies, even policy evaluations (see Green *et al.*, 2006; Baumeister & Leary, 1997). Unlike systematic reviews, which stick to strict protocols and narrowly defined outcomes, narrative reviews let you look at the bigger picture spotting broader trends, digging into emerging themes, and considering the messy context that varies across health systems and regions.

Here, the narrative approach made it possible to draw from a variety of fields, public health, HR management, systems strengthening, leadership theory—to see the patterns and, honestly, where the gaps still are. To add a practical layer, I also used policy analysis to look at the frameworks, both

global and national that guide leadership development, like the WHO's Global Strategy on Human Resources for Health and different countries' capacity-building policies (Walt & Gilson, 1994).

Data sources and search strategy

The literature search was carried out across multiple key databases—namely PubMed, the WHO Global Health Library, Scopus, and Google Scholar—chosen specifically for their relevance to global health research. Both scholarly and policy-focused works in areas such as public health, health systems, human resources, and organizational development were included.

Search strategies incorporated a range of keywords and MeSH terms (e.g., “public health leadership,” “capacity building,” “human resource development,” “workforce planning,” “mentorship programs”), which were strategically combined using Boolean operators to maximize both depth and precision. The review encompassed peer-reviewed publications as well as grey literature, including reports, policy briefs, and evaluative documents. Each stage of the search process was systematically recorded to maintain methodological rigor and support reproducibility.

Table 4: Search Terms, Databases, and Number of Records Identified

Database	Search Terms	Records Identified
PubMed	"public health leadership" AND "HR initiatives"	350
WHO Global Health Library	"health workforce" AND "leadership development"	220
Scopus	"human resources" AND "public health leadership"	275
Google Scholar	"leadership training" AND "health systems"	400

Data extraction and thematic synthesis

Data extraction followed a systematic approach, utilizing a detailed template to gather key elements such as study characteristics, HR initiatives, leadership frameworks, outcomes, and regional specifics (Thomas & Harden, 2008). The template underwent pre-testing and iterative refinement to ensure both accuracy and consistency across the included studies. Manual coding was applied to each study, with categories being continuously compared and updated as new insights emerged, supporting analytical rigor throughout the process. Thematic synthesis was employed to identify overarching patterns and themes within the literature, integrating qualitative and quantitative findings into a unified narrative (Thomas & Harden, 2008).

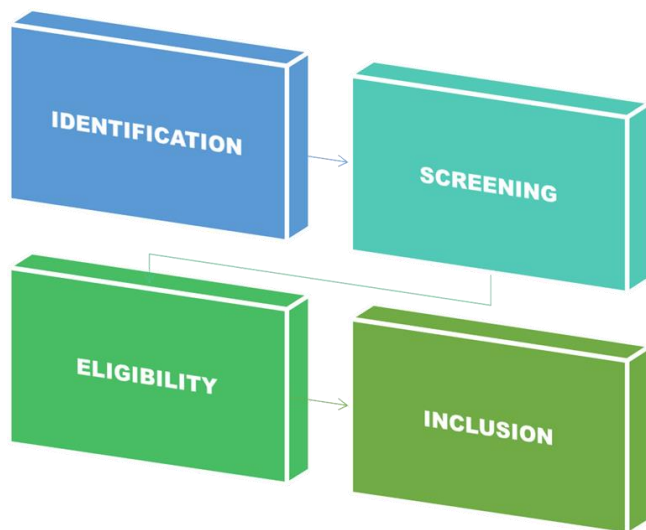


Fig 3: PRISMA Flow Diagram for Literature Selection

Ethical Considerations

This review exclusively utilized publicly accessible data, so, no human participants—no need for ethics approval (thanks, World Medical Association, 2013). Throughout the process, all proper research standards were respected: accurate citations, fact-checking, no cutting corners on data integrity. Intellectual property? Yeah, totally respected. Every source got its due credit—no plagiarism here. The whole thing’s transparent, so if someone wants to check or reproduce our work, they can. Any possible conflicts of interest? If they existed, they were clearly disclosed and handled. All in all, a

thorough and honest approach to synthesizing the current state of HR initiatives and leadership development in public health systems globally.

Thematic analysis and findings

This section examines the central themes emerging from the narrative review and policy analysis, organized into five key domains critical for fostering leadership development in public health through human resource interventions. The analysis addresses strategic HR functions that align with core leadership competencies, professional development and training, coaching and succession planning, performance management, and the advancement of diversity, equity, and inclusion (DEI). Each domain is considered through the framework of evidence-based practices, with attention to the challenges and opportunities presented in varied global settings, including both high-income and low- and middle-income countries. Particular emphasis is placed on the contextual factors influencing the effectiveness of HR strategies in strengthening leadership capacity. These insights are intended to inform policymakers, practitioners, and researchers dedicated to enhancing leadership trajectories within public health systems on a global scale.

Workforce planning and role design

Strategic workforce planning and thoughtful role design are crucial if you’re serious about building leadership capacity in public health systems. You can’t just hope the right people step up; it takes actual forecasting, figuring out what kinds of leaders you’ll need down the road, and making sure your human resources line up with those goals. Task-shifting is a big part of this conversation: by moving certain responsibilities from highly specialized professionals to capable mid-level staff, organizations not only address workforce shortages but also carve out new leadership opportunities where there weren’t any before. HR processes like targeted recruitment, thorough job analysis, and mapping out clear career pathways are all fundamental for nurturing leadership, from entry-level all the way to senior roles. If you check out Table 5, it’s pretty clear how these HR functions tie directly to core leadership competencies such as strategic thinking, communication, and systems management. Aligning workforce skills with organizational needs isn’t just good practice, it’s what makes sustainable leadership development possible.

Table 5: HR Functions Aligned with Leadership Competencies

HR Function	Leadership Competency	Description
Recruitment & Selection	Strategic Thinking	Identifying candidates with vision and problem- solving skills
Job Design	Decision-Making	Defining roles to enable clear authority and responsibility
Training & Development	Communication	Building skills for effective information exchange
Performance Management	Accountability	Monitoring and evaluating leadership effectiveness
Career Development	Emotional Intelligence	Supporting self-awareness, empathy, and interpersonal skills
Succession Planning	Adaptability	Preparing future leaders to manage change and uncertainty
Mentoring & Coaching	Team Building	Fostering collaboration and motivation
Workforce Planning	Systems Thinking	Aligning human resources with organizational goals

Training and professional development

Training programs play a crucial role in developing leadership skills across different stages of a professional’s career. Early on, pre-service training introduces basic leadership concepts as part of initial education, aiming to foster a leadership mindset from the start (Frenk *et al.*, 2010). Effective training doesn’t just rely on theoretical instruction; it emphasizes hands-on, experiential learning to help participants translate knowledge into real-world action.

Robust leadership curricula blend academic theory with practical experience, covering key areas such as problem-solving, communication, and ethical decision-making (Kouzes & Posner, 2012). Approaches to training differ by context. Some countries adopt competency-based frameworks that align with international benchmarks, while others prioritize leadership models that are tailored to local needs and realities (WHO, 2016).

Table 6: Sample Public Health Leadership Curriculum Modules

Curriculum Module	Description
Health Policy & Systems	Understanding health policy formulation and health system structure and functions
Strategic Management	Planning, implementing, and evaluating health programs and initiatives
Ethics	Principles of ethical decision-making and public health practice
Communication Skills	Effective interpersonal, organizational, and community communication
Crisis Leadership	Managing emergencies and public health crises effectively
Stakeholder Engagement	Building partnerships and collaborating with diverse groups
Monitoring and Evaluation	Techniques for assessing program effectiveness and outcomes
Leadership Theories	Exploring transformational, servant, and adaptive leadership models

Coaching, mentoring, and succession planning

Establishing sustainable leadership pipelines goes well beyond standard training modules; it demands intentional, ongoing mentorship and coaching rooted in genuine engagement (Ramaswamy *et al.*, 2018). Effective mentorship is central here, providing tailored learning, cultivating self-assurance, and connecting emerging leaders with established professionals who can offer meaningful guidance. This mentorship directly addresses the experiential gaps and delivers candid feedback that is essential for navigating the unpredictable landscape of public health leadership. Succession planning plays an equally crucial role by

systematically identifying and preparing future leaders. This isn’t just bureaucratic box-checking, it’s a proactive approach to organizational continuity, helping to safeguard institutional memory and ensure that leadership transitions aren’t disruptive (Day *et al.*, 2014) ^[14]. Organizations that normalize these processes within their structures nurture cohorts of leaders who are adaptable and resilient in the face of evolving challenges. Embedding formal evaluation mechanisms into these programs is critical for monitoring outcomes and driving ongoing improvement. Furthermore, collaborative networks between institutions facilitate the sharing of resources and best practices, further strengthening leadership capacity across the sector.



Fig 4: Leadership Pipeline Model for Public Health

Performance management and evaluation

Effective performance management systems form the backbone of strong organizational leadership. You can’t just rely on vague ideas of what makes a good leader, it’s about setting KPIs that actually tie back to leadership skills like vision, team building, communication, and ethics. Seriously, a good competency framework lays it all out: what’s expected, how to measure it, and where someone might need

a nudge (or a shove) to do better. When performance appraisals are done right, meaning, not just a box-ticking exercise, they give leaders honest feedback and a real shot at professional growth. And let’s not kid ourselves: connecting performance to actual rewards or recognition? That gets people motivated. Suddenly, those leadership behaviors everyone talks about aren’t just words, they’re visible in daily operations.

Table 7: Performance Appraisal Criteria in Leadership Roles

Criterion	Description
Strategic Planning	Sets and drives long-term goals
Stakeholder Engagement	Builds strong partnerships
Innovation	Applies new ideas, solves problems
Ethical Leadership	Leads with integrity and transparency
Communication Skills	Communicates clearly and effectively
Team Building	Builds and motivates teams
Resource Management	Uses resources efficiently
Adaptability	Responds well to change

Diversity, equity, and inclusion

Ensuring diversity, equity, and inclusion (DEI) within public health leadership is not just ethically necessary, it’s fundamental for building health systems that genuinely serve diverse populations (Combs *et al.*, 2009). Ongoing disparities tied to gender, geography, and ethnicity continue to shape

who gets access to leadership positions, often to the detriment of institutional effectiveness. These inequities are symptomatic of broader societal and organizational biases, which require direct intervention through thoughtfully designed policies and practices.

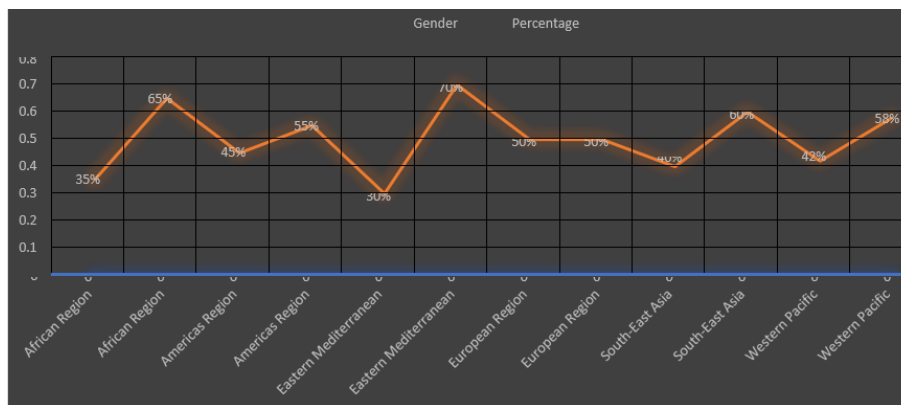


Fig 5: Gender Distribution in Public Health Leadership by Region

The multifaceted impact of HR initiatives on the development of public health leadership is evident. Leadership capacity isn’t cultivated through isolated interventions; rather, it requires sustained and integrated strategies, including workforce planning, intentional mentorship, robust education, effective performance management, and a genuine commitment to diversity, equity, and inclusion. When HR systems are thoughtfully adapted to local and regional realities—and properly resourced, they can significantly strengthen leadership pipelines and, by extension, public health outcomes.

Leadership development must be seen as a dynamic, ongoing process that evolves alongside the shifting needs of healthcare systems. Aligning HR strategies with national health priorities is essential for long-term effectiveness and sustainability. Additionally, fostering cross-sector collaboration and embracing digital solutions can deepen capacity-building efforts. Ultimately, a coordinated, contextually responsive approach equips public health leadership to meet both routine demands and unexpected crises with resilience and skill.

Discussion

Drawing from the revised text, this study explores the integration of human resource practices and leadership development within public health systems, with an emphasis on the global variability in methods, resources, and outcomes. The analysis considers a spectrum of HR functions—from workforce planning and employee training to mentorship, performance evaluation, and the pursuit of equity,

demonstrating how intentional HR structuring can foster leadership abilities. By synthesizing these findings with established theoretical models and empirical evidence, the research advocates for the design of more precise and contextually appropriate strategies to strengthen leadership within the public health sector.

Integration with existing frameworks

The findings here are strongly consistent with established leadership theories—especially transformational and adaptive leadership. Transformational leadership, for instance, focuses on motivating individuals, developing a shared vision, and fostering innovation. You see clear evidence of these principles in HR strategies like strategic workforce planning, ongoing professional development, and robust performance evaluations (Bass & Riggio, 2006). Moreover, the study reinforces the World Health Organization’s Global Strategy on Human Resources for Health: Workforce 2030, which emphasizes the importance of integrated HR systems that cultivate leadership at every level (WHO, 2016). When leadership development is approached as an ongoing, system-wide endeavor, not just a one-time intervention, it can drive meaningful improvements across the health system. In this way, the findings contribute to existing scholarship by framing leadership not only as a desired outcome but also as an ongoing process embedded within HR structures.

Implications for Policy and HRH System Reform

From a policy standpoint, it's clear that embedding leadership development into national health workforce strategies isn't optional, it's essential. This means leadership competencies need to be explicitly stated in job descriptions, and HR departments must move beyond administrative duties to serve a strategic function in talent management and succession planning. Performance evaluations should include leadership metrics to help identify and nurture future leaders.

Capacity-building can't be a one-off initiative; it should be built into the system through investments in academic partnerships, e-learning, and regional leadership institutes. Crucially, these efforts must prioritize inclusivity, ensuring

equitable access for women, underrepresented ethnic groups, and rural professionals. This isn't only a matter of fairness; diverse leadership teams are demonstrably more effective at addressing a wide range of population health needs (Combs *et al.*, 2009).

Furthermore, cross-sector collaboration is vital. Working with education, finance, and governance sectors can strengthen leadership pipelines, while aligning curricula with national public health goals ensures training remains relevant. Partnerships with universities and NGOs can further expand the reach and impact of leadership development initiatives, supporting innovation and ongoing improvement.

Table 8: Strengths and Weaknesses of Different HR Approaches to Leadership Development

HR Approach	Strengths	Weaknesses
Strategic Workforce Planning	Anticipates future leadership needs; aligns staff roles with system goals	Requires high-level coordination and accurate forecasting
Pre-service & In-service Training	Builds foundational and evolving leadership competencies	Inconsistent quality; may lack contextual relevance
Mentoring & Coaching	Personalized support; promotes retention and institutional learning	Resource-intensive; success depends on mentor availability and compatibility
Performance Management	Reinforces leadership behaviors; promotes accountability	Often focuses on short-term KPIs; may neglect developmental feedback
DEI-Focused Recruitment	Promotes equitable leadership representation; strengthens legitimacy	May face institutional resistance; needs strong policy backing

Limitations and contextual differences

Context matters a lot, too. Wealthier countries tend to have the resources and structure to run polished leadership programs, but that's not the case everywhere. In low- and middle-income countries, informal leadership and learning by doing often take center stage because the formal systems just aren't there (see Frenk *et al.*, 2010). So, leadership development models need to be tailored—not just copied and pasted—to fit local resources, organizational capacity, and cultural context.

And, honestly, public health isn't standing still. With challenges like pandemics, climate change, and migration constantly reshaping the landscape, leadership programs can't afford to be rigid or outdated. If they stick to static content or inflexible HR systems, they risk becoming irrelevant fast. Building in adaptability and encouraging systems thinking is key if we want resilient, forward-thinking leaders who can actually handle what's next.

Advancing the research and practice agenda

Future research should rigorously examine the long-term impacts of leadership development initiatives, particularly within low- and middle-income countries. It is imperative to move beyond surface-level metrics and quantify the tangible return on investment of HR-led leadership strategies, both in terms of health system performance and broader population health outcomes. Evaluative frameworks must extend past individual competencies, encompassing organizational and system-wide transformation.

From a policy standpoint, ministries of health and development partners must elevate leadership development to a central component of comprehensive health workforce strengthening efforts. Evidence-informed policies are essential, but they should be matched with dedicated funding, sustained political will, and robust intersectoral collaboration. Embedding these strategies within core HR functions, rather than treating them as peripheral activities—

is critical for cultivating lasting leadership capacity within health systems.

Recommendations

Developing robust public health leadership truly demands more than temporary fixes—it requires a deliberate, long-term overhaul of human resource systems aimed at fostering enduring capacity. In this section, I'll share practical recommendations rooted in the thematic findings and closely tied to international benchmarks, think the WHO Global Strategy on Human Resources for Health: Workforce 2030, as well as key insights from leadership development scholarship (Day *et al.*, 2014; Ramaswamy *et al.*, 2018; Frenk *et al.*, 2010). Ultimately, this approach emphasizes cultivating genuine leadership rather than simply filling organizational roles.

Strengthen National HR policies to support leadership

Let's be real—leadership shouldn't be some optional extra in national HR for Health (HRH) policies. Governments need to actually build leadership development into the foundation of these policies, not just tack it on at the end. This means putting together a clear framework that spells out what leadership skills look like at every level, not just the top brass (WHO, 2016).

But here's the thing, what works in one place might be a total flop somewhere else. HR policies have to allow for flexibility, so different regions or subnational teams can adapt leadership programs to fit their actual needs. None of this works unless there's clear governance, reliable funding, and actual coordination between ministries. Otherwise, all these good intentions just end up as forgotten paperwork.

Invest in institutional leadership development programs

Leadership development doesn't happen in a vacuum, it demands sustained, strategic backing from institutions. Ministries of Health need to actively collaborate with

universities and international organizations to set up national leadership training centers or, at the very least, partner with established regional hubs (Ramaswamy *et al.*, 2018). These programs shouldn't be cookie-cutter; they ought to be built around concrete competencies, hands-on experience, and include structured mentorship and coaching (Day *et al.*, 2014) [14].

In contexts where leadership academies already exist, just having them isn't enough. There needs to be a serious investment in evaluation, actually checking if the training is making a difference, and adjusting as needed for real improvement. Plus, it's crucial to foster peer learning communities so leaders can exchange knowledge and ideas across regions and sectors. Leadership isn't a solo sport; it thrives on connection and continual feedback.

Integrate leadership into academic and professional training

To ensure a genuinely sustainable leadership pipeline, leadership development shouldn't be an afterthought, it ought to start within pre-service education and continue across a professional's entire career. Public health training institutions have a responsibility to embed comprehensive leadership modules directly into both undergraduate and postgraduate curricula. This includes vital topics like systems thinking, ethics, policy analysis, change management, and effective stakeholder engagement (see Frenk *et al.*, 2010; Kouzes &

Posner, 2012).

Accrediting bodies, frankly, shouldn't give a pass to programs that neglect this. Leadership training needs to be a required element in continuing professional development, so current practitioners can evolve alongside the shifting demands of complex healthcare environments.

Implement monitoring and accountability frameworks

If leadership development isn't systematically tracked, it risks staying in the realm of lofty rhetoric instead of translating into genuine operational change. Health systems need to ground leadership initiatives in concrete metrics, think KPIs tied to strategic execution, stakeholder involvement, and ethical decision-making (Buchanan *et al.*, 2017). Performance reviews should move beyond formality by incorporating 360-degree feedback, which provides a fuller picture and supports the creation of targeted development plans.

Routine monitoring isn't just a bureaucratic checkbox; it gives institutions the ability to identify where training isn't landing or where persistent leadership bottlenecks exist. Disaggregated data helps to surface inequities, ensuring that interventions reach those who are typically underrepresented. Linking leadership performance to health outcomes reinforces accountability and strengthens the rationale for allocating resources to these initiatives.

Table 9: Short-, Medium-, and Long-Term HR Interventions for Leadership Capacity Building

Time Frame	Intervention	Purpose	Source
Short-term	Add leadership KPIs to reviews	Align with goals	Buchanan <i>et al.</i> , 2017
	In-service leadership training	Boost skills quickly	WHO, 2016
	Inclusive recruitment (gender/region)	Improve DEI in leadership	Combs <i>et al.</i> , 2009
Medium-term	Create leadership institutes/partnerships	Scale training efforts	Ramaswamy <i>et al.</i> , 2018
	National mentoring networks	Support growth, memory	Day <i>et al.</i> , 2014
	Leadership in promotion planning	Merit-based progression	WHO, 2016
Long-term	Add leadership to curricula	Early capacity-building	Frenk <i>et al.</i> , 2010
	Include in HRH strategies	Ensure sustainability	WHO, 2020
	Institutionalize DEI in HR systems	Long-term inclusion	Dussault & Franceschini, 2006

Foster multisectoral and regional collaboration

Public health issues rarely exist in a vacuum, they inherently demand multisectoral engagement. Effective leadership in this arena requires the ability to foster collaboration across domains such as health, finance, education, and local governance. National leadership approaches, then, must deliberately cultivate cross-sector partnerships and break out of bureaucratic silos. This means actively engaging non-state actors and civil society organizations in both the design and execution of training initiatives (Frenk *et al.*, 2010).

Collaborative leadership frameworks have demonstrated potential in promoting policy coherence, mobilizing resources effectively, and building trust among agencies. Joint training platforms that bring together health professionals, educators, and emergency responders foster integrated leadership skills, ensuring a more unified response to complex challenges. Further, regional networks facilitate

peer learning, mentorship, and coordinated action against transnational health threats. In essence, fostering inclusive alliances across sectors and borders serves as a proactive strategy to strengthen and future-proof national leadership development systems.

Conclusion

This study underscores the pivotal function of human resource (HR) strategies in fostering effective leadership development within public health systems. In the face of increasingly complex global health challenges, ranging from pandemics and climate change to persistent health disparities and workforce shortages, there is an unmistakable imperative for leadership that is both adaptive and inclusive. The evidence presented here illustrates that HR functions such as systematic workforce planning, targeted professional development, mentorship initiatives, robust

performance management, and the advancement of diversity are central to cultivating resilient public health leadership.

A significant insight is the necessity of embedding leadership development throughout every stage of the health workforce lifecycle, from pre-service education to succession planning. Notably, pronounced regional disparities exist, especially in low- and middle-income countries, which highlights the importance of contextually tailored HR interventions.

Furthermore, while numerous countries have integrated certain aspects of leadership development into their public health frameworks, few have established comprehensive systems that directly link HR strategy to leadership outcomes. Addressing this systemic gap will require cross-sector collaboration, sustained investment, and policy reforms that are both adaptive and firmly grounded in empirical evidence and stakeholder engagement.

Future Research and Action

Future studies really need to dig into how specific HR interventions shape leadership performance and health outcomes over time. There's a clear gap, are these programs just theoretical, or do they actually move the needle? Comparing different WHO regions could be eye-opening, honestly. There might be hidden gems or best practices out there that most folks don't even know about.

Honestly, there's work to do on every front. Policymakers have to make leadership a priority in national health strategies, not just mention it in passing. Academic institutions should innovate, shake up those traditional curricula. And donors? They have to back leadership programs that actually scale and focus on equity, not just the usual suspects. Embedding leadership development deep within health systems, through smart, robust HR strategies, is the only way to build institutions that can handle whatever public health challenges the future throws at us. If we slack now, we'll pay for it later.

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