Human resources for health: overcoming the crisis

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In this analysis of the global workforce, the Joint Learning Initiative—a consortium of more than 100 health leaders—proposes that mobilisation and strengthening of human resources for health, neglected yet critical, is central to combating health crises in some of the world's poorest countries and for building sustainable health systems in all countries. Nearly all countries are challenged by worker shortage, skill mix imbalance, maldistribution, negative work environment, and weak knowledge base. Especially in the poorest countries, the workforce is under assault by HIV/AIDS, out-migration, and inadequate investment. Effective country strategies should be backed by international reinforcement. Ultimately, the crisis in human resources is a shared problem requiring shared responsibility for cooperative action. Alliances for action are recommended to strengthen the performance of all existing actors while expanding space and energy for fresh actors.

The power of the health worker

After a century of the most spectacular health advances in human history, we confront unprecedented and interlocking health crises. Some of the world's poorest countries face rising death rates and plummeting life expectancy, even as global pandemics threaten us all.[1] Human survival gains are being lost because of feeble national health systems. On the front line of human survival, we see overburdened and overstressed health workers, too few in number, without the support they so badly need—losing the fight. Many are collapsing under the strain; many are dying, especially from AIDS; and many are seeking a better life and more rewarding work by departing for richer countries.

Today's dramatic health reversals risk more than human survival in the poorest countries; they threaten health, development, and security in an interdependent world. How the world community responds to these challenges will shape the course of global health for the entire 21st century.

The global health crisis occurs against a backdrop of mass poverty, uneven economic growth, and political instability. The feeble response to threatening diseases is exacerbated by three major forces assailing health workers. First is the devastation of HIV/AIDS, a triple threat that is increasing workloads on health workers, exposing them to infection, and stressing their morale.[2] Many are becoming terminal care providers, not healers. Hardest hit are societies in sub-Saharan Africa, but the virus is also spreading rapidly from hotspots in Asia, the Americas, and eastern Europe. Second is accelerating labour migration causing loss of nurses and doctors from countries that can least afford the brain drain.[3] Third is the legacy of chronic underinvestment in human resources. Two decades of economic and sectoral reform capped expenditures, froze recruitment and salaries, and restricted public budgets, depleting working environments of basic supplies, drugs, and facilities.[4] These forces have hit economically struggling and politically fragile countries the hardest.

Even so, dedicated health workers across the world show social commitment and purpose far beyond the call of duty. And their steadfast motivation is finally being matched by new political priority and greater financial allocation for health, with the AIDS epidemic fuelling public concern and social activism. Money—although still far from adequate—is beginning to flow, and drugs, vaccines, and technologies are now far cheaper and more widely available than just a few years ago.

Accompanying these dynamics is the broader development compact forged by the United Nations (UN) to reach the Millennium Development Goals (MDGs) by 2015. These global goals, prominently featuring health, have become a focal point for rallying international cooperation to achieve time-bound targets. Emerging are many new programmes, mechanisms, financing strategies, and actors.

To take advantage of these opportunities, a strong and vibrant health system is essential. Yet, such systems are impossible without health workers who are the ultimate resource of health systems. Yes, money and drugs are needed, but these inputs demand an effective workforce: for it is people, not just vaccines and drugs, who prevent disease and administer cures. Workers are active—not passive—agents of health change. Often commanding two-thirds of health budgets, they glue together the many parts of health systems to spearhead the production of health.[5]

Evidence shows that human force drives health-system performance.[6,7] Throughout history, periods of acceleration in health have been sparked by popular mobilisation of workers in society. Higher worker density and better work quality—joining such social determinants of health as education, gender equality, and higher income—improve population-based health and human survival (figure 1). The density of workers in a population can make an enormous difference in the effectiveness of MDG interventions. For example, the prospects for achieving 80% coverage of measles immunisations and skilled attendants at birth are greatly

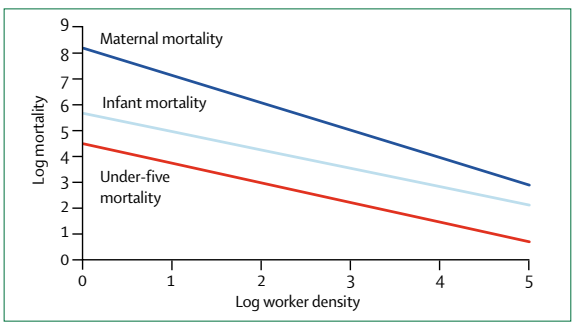

Figure 1: **Association between worker density and mortality rates**
Compiled with data from reference 6.

enhanced where worker density exceeds 2·5 workers per 1000 population (figure 2). 75 countries with 2·5 billion people are below this minimum threshold.[8]

We estimate the global health workforce to be more than 100 million people. Added to the 24 million doctors, nurses, and midwives who are recorded, there are at least three times more uncounted informal, traditional, community, and allied workers. The enumerated professionals are severely maldistributed between regions and countries. Sub-Saharan Africa has a tenth the nurses and doctors for its population that Europe has: Ethiopia has a fiftieth of the professionals for its population that Italy does.

With such wide variation, every country must devise a workforce strategy suited to its health needs and human asset base. Here, we cluster 186 countries into five groups (figure 3). Countries are grouped into low, medium, and high worker density clusters (<2·5, 2·5–5·0, and >5·0 workers per 1000 population, respectively). The low-density and high-density clusters are further subdivided according to high and low levels of under-five mortality. In low-density countries, 45 countries are in the low-density-high-mortality cluster; these are predominantly sub-Saharan countries with the double crisis of rising death rates overwhelming weak health systems. The remaining 30 low density countries are mostly in Asia and Latin America, which are also the predominant regions of the 42 moderate density countries. Among high-density countries, 34 are in the high-density-low-mortality cluster; these are all wealthy countries, mostly members of the Organisation for Economic Co-operation and Development (OECD). The remaining 35 high-density countries are transitional economies or exporters of medical personnel.

All these countries, rich and poor, have numeric, skill, and geographic imbalances in their workforce. And all countries can accelerate health gains by investing in and managing their health workforce more strategically. While maintaining a global perspective, we focus on low-density-high-mortality countries because of their dire health situations. For all countries, our outstanding global challenges are as listed below.

Global shortage

There is a massive global shortage of health workers. We estimate the global shortage at more than 4 million workers approximately. Sub-Saharan countries must nearly triple their current numbers of workers by adding the equivalent of 1 million workers through retention, recruitment, and training if they are to come close to approaching the MDGs for health.

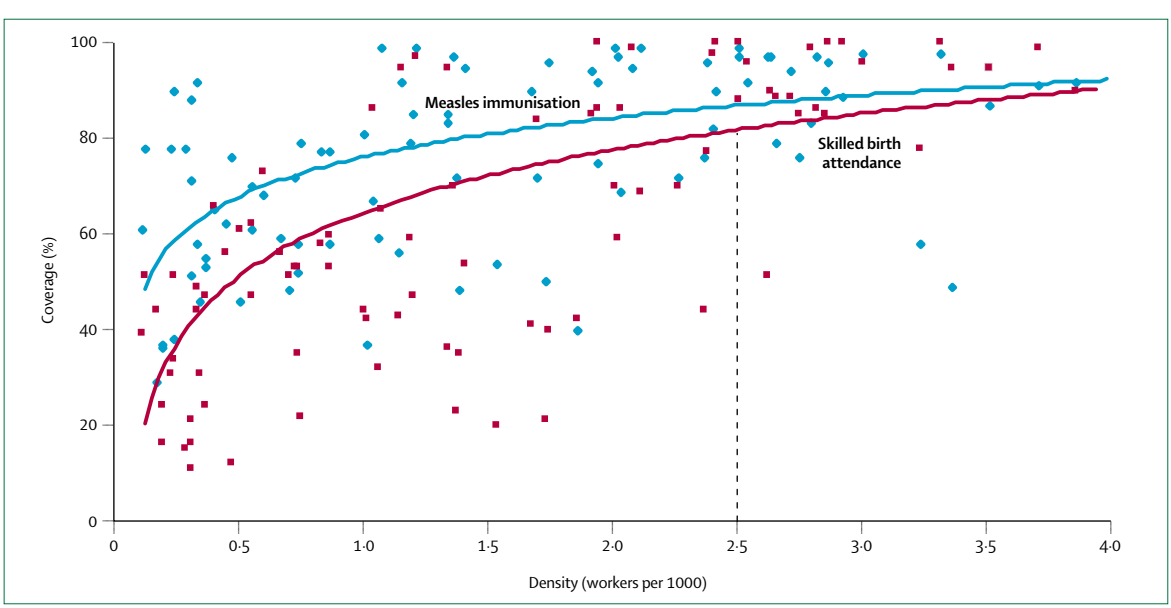

Figure 2: **Association between worker density and service coverage**
Compiled with data from reference 8 and United Nations Development Programme. Human Development Report 2003: Millennium Development Goals—a compact among nations to end human poverty. New York: Oxford University Press, 2003.

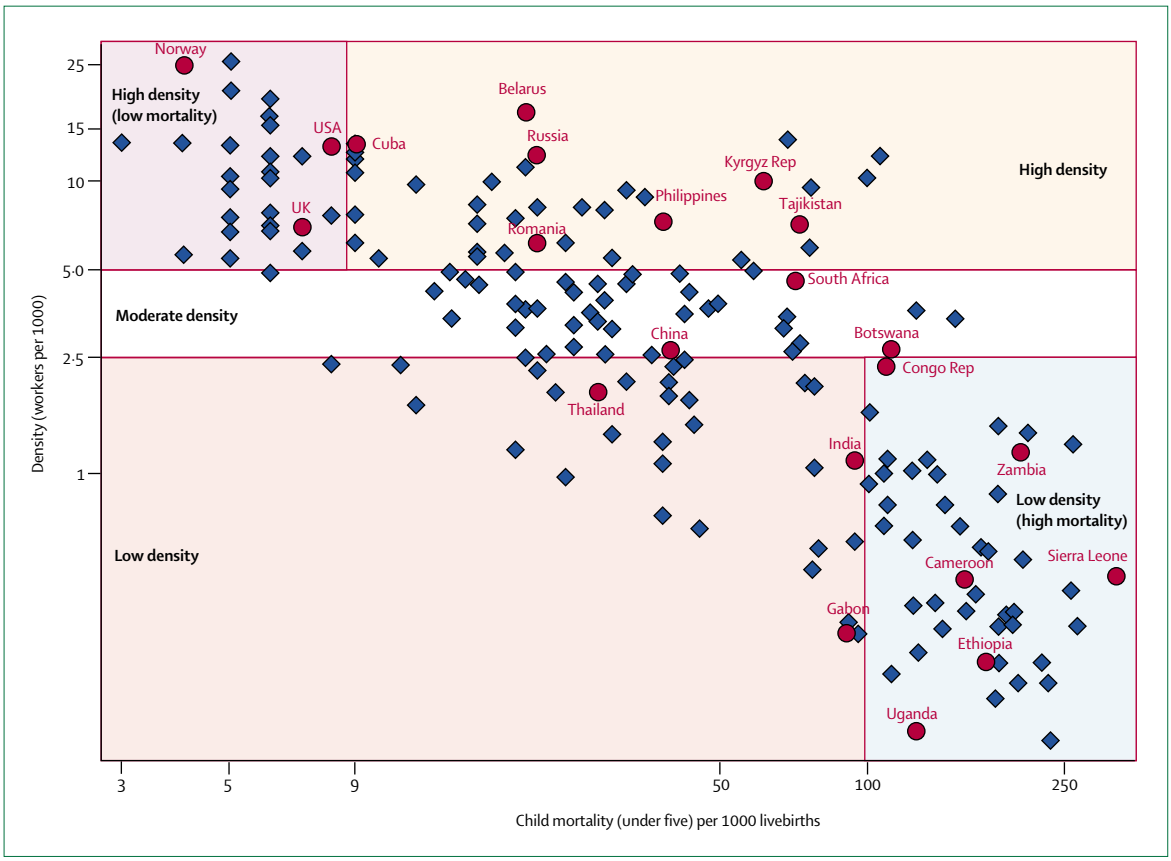

Figure 3: **Country clusters**
Scales are log. Compiled with data from reference 8 and United Nations Children's Fund. State of the world's children 2003. New York: UNICEF, 2003.

Skill imbalances

Nearly all countries have skill imbalances, creating huge inefficiencies. In some, the skill mix depends too much on doctors and specialists. In most, population-based public health is neglected. Many countries must revamp their health plans towards a workforce that more closely reflects the health needs of their populations especially through deploying auxiliary and community workers.

Maldistribution and migration

Nearly all countries have maldistribution, which is worsened by unplanned migration. Urban concentration of workers is a problem everywhere. Improving within-country equity requires attracting health workers to rural and marginal communities—and retaining them. There is also maldistribution between public and private sectors in many countries. And international equity is severely affected by international migration, because the loss of nurses and doctors is crippling health systems in many poor sending-countries.

Poor work environments

Nearly all countries must improve poor work environments by scaling up good practices to strengthen management of existing resources, assure adequate supplies and facilities, and create monetary and non-financial incentives to retain and motivate health workers. The voices of workers should be listened to.

Weak knowledge base

The weak knowledge base on the health workforce hampers planning, policy development, and programme operations. Information is sparse, data are fragmentary, and research is limited, which are deficiencies that must be remedied.

Workforce strategies

Evidence confirms that effective workforce strategies enhance the performance of health systems, even under difficult circumstances.[9–11] Indeed, the only route to reaching the health MDGs is through the worker; there are no shortcuts. Workers alone are not panaceas. Building a high-performance workforce demands hard, consistent, and sustained effort. For workers to be effective they must have drugs and supplies, and for them to use these inputs efficiently they must be motivated, skilled, and supported.

Appropriate workforce strategies can generate enormous efficiency gains. Successful strategies must be country-based and country-led, focusing on the front

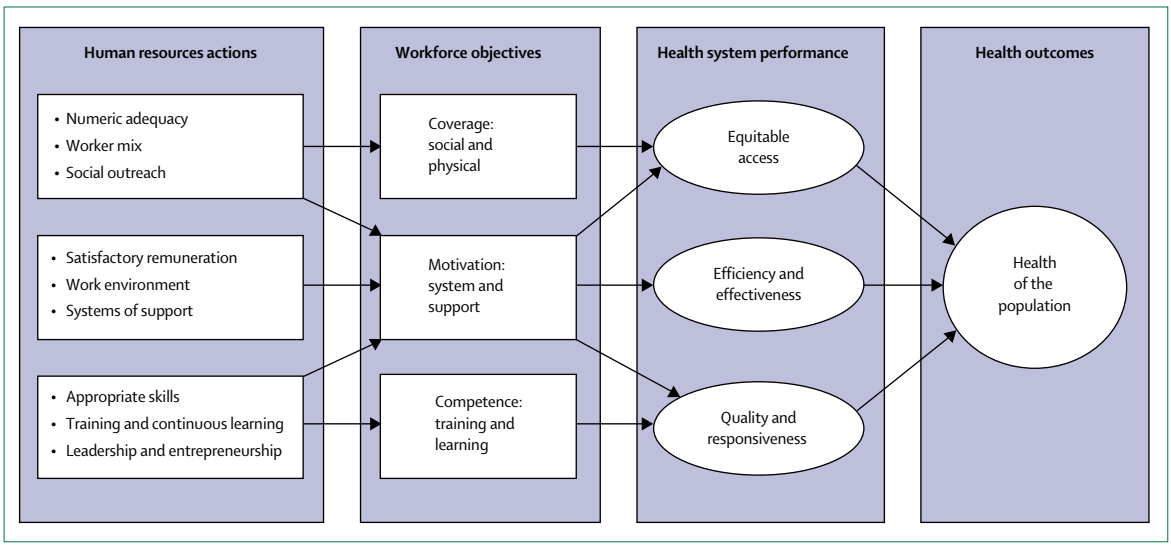

Figure 4: **Managing for performance**

lines in communities and backed by appropriate international reinforcement.

The focus of all strategies should be to ensure access by every family to a motivated, skilled, and supported health worker. The base of the worker system consists of family members, relatives, and friends—an invisible workforce consisting mostly of women.[12] They are backed by diverse informal and traditional healers, and in many settings by formal community workers. Beyond these front-line providers are doctors, nurses, midwives, professional associates, and managers and non-medical workers who support effective practice. Although the national pattern of workers shows extraordinary diversity, all strategies should seek to promote community engagement in recruiting, retaining, and accounting for worker performance.

The leverage points for workforce development are governments, because they set policies, secure financing, support education, and operate the public sector while regulating the private sector. Diverse national circumstances also mean that solutions must be crafted to unique country challenges. But all country strategies should have five key dimensions—engaging leaders and stakeholders, planning human investments, managing for performance, developing enabling policies, and building capacity while monitoring results.

Workforce development is not merely a technical process. It demands building a strong action-coalition across all stakeholders, with health workers at the centre but also reaching beyond the health sector and beyond government. Finance, health, and education ministries, academic leaders, professional associations, labour unions, educational institutions, and non-governmental organisations—all having different aims, capabilities, and interests—must be involved in setting national goals, designing strategies, drawing up plans, and implementing policies and programmes. Good data, invariably scarce where needed most, are essential to inform and guide this work.

Management of the workforce for improved performance brings together the health and educational sectors to achieve three core objectives—coverage, motivation, and competence (figure 4). Coverage strategies promote numeric adequacy, appropriate worker skill mixes, and outreach to vulnerable populations. Motivation strategies focus on adequate remuneration, positive work and career environments, and supportive health systems. Competence is advanced through educating for appropriate attitudes and skills, training for continuous learning, and cultivating leadership, entrepreneurship, and innovation. All these efforts should be oriented towards building national capacity. Progress and setbacks should be monitored for making mid-course corrections.

Global responsibility must be shared, because no country is an island in workforce development. Due to transnational flows of labour, knowledge, and financing, successful country strategies depend on appropriate international reinforcement. Left unattended, some cross-border flows can generate negative health consequences—the brain drain in sending countries, for example. Properly harnessed, transnational flows have high potential—the scaling up of good practices and the better use of foreign aid are examples.

Improved management of the transnational flow of highly skilled medical professionals is important. Migration of doctors and nurses resembles a carousel of multiple entry and exit paths—from low-income to high-income regions.[3,13] These migratory flows can produce many benefits—and generate much harm. Because blocking the movement of people violates human rights and is generally impossible to enforce, the global

management of medical migration should seek to protect both health and human rights, dampening push forces by retaining talent in sending countries and reducing pull forces by aiming for educational self-sufficiency in destination countries.[14] Global opportunities should be expanded through massively increasing educational investments in source countries and accelerating appropriate reverse flows of workers from better-endowed to deficit countries.[15]

The great potential for harnessing the transnational flow of knowledge for workforce development remains largely untapped. Diffusion of knowledge accounts for much of the spectacular health advances of the past century. Yet, workforce data and research are sparse. Strategies must focus on bridging the knowledge-action gap, promoting the sharing of information, and strengthening the knowledge base. Inculcating a culture of research and promoting the diffusion of innovation among countries are especially important.

After a decade of stagnation, official development assistance, another transnational flow of high potential, is finally increasing. We estimate that of a total of US$57 billion official development assistance in 2002, 13% is directed at health—which will soon amount to almost $10 billion. Most new funds are targeted at HIV/AIDS in sub-Saharan Africa. We also estimate that 30–50% or about $4 billion of development assistance for health is devoted to human resources—salaries, allowances, training, education, technical assistance, and capacity building.[16]

Current spending patterns on human resources are fragmented and inefficient. To invest more strategically, donor coordination and policy coherence must be greatly improved—changing attitudes about health workers, not as a burden but as a crucial investment, harmonising the workforce across competing categorical programmes, and ensuring fiscal policies that support workforce improvements. For countries in a health emergency, international financial institutions must join in the lifting of public expenditure ceilings to permit donor support of the massive mobilisation of the workforce that will be necessary.

Putting workers first

We call for immediate action to harness the power of workers for global health equity and development. The imperative for action springs from the urgency of the health crisis, the timeliness of new opportunities, and the prospect that available knowledge, if applied vigorously, could save many lives. The cost of inaction is unmistakable—stark failures to achieve the MDGs, epidemics spiraling out of control, and unnecessary loss of many lives. At stake is nothing less than the course of global health and development in the 21st century.

Urgency demands an exceptional response from the global community. At its core, the response must be country-based and country-led, because all global developments must be implemented, planned, and owned in specific national settings. That response also must be multidimensional. Technical approaches alone will not do, because adequate financing, strong leadership, and political commitment are necessary. The response must be inclusive, engaging all relevant stakeholders, including non-health and non-governmental groups. In the poorest countries, that response must also include appropriate behaviour by the international community, because external resources are needed to supplement domestic resources.

Business as usual will not do. The very credibility of national, regional, and global health institutions is under siege. Health emergencies, collapsing health systems, and crises in human resources cannot be sealed off to only the poorest countries. These global problems are ultimately shared. Strengthening the workforce is a shared challenge that demands commonly developed solutions—a mutual responsibility of all. The key to unlocking our shared health future is to galvanise action by all actors to strengthen human resources for health—both to combat crises and to build sustainable systems.

Actions must be pursued over a decade for human resources for health (2006–2015) and implemented through action alliances. Crafting a workforce to meet national health needs requires sustained efforts over time; it cannot be a fleeting fad. This timeline also matches the remaining 10 years for achieving the MDGs. All actors—agencies, institutions, associations, non-governmental bodies, private initiatives—should direct their efforts at a three-part agenda (figure 5): (1) strengthening sustainable health systems in all countries; (2) mobilising to combat health emergencies in crisis countries; and (3) building the knowledge base for all.

Strengthening sustainable health systems

Every country, poor or rich, should have a national workforce plan shaped to its situation and crafted to address its health needs. These plans should aim to ensure access of every family to a motivated, skilled, and supported health worker. Where feasible, that worker should be recruited from, accountable to, and supported to work in the community. Our specific recommendations are described below.

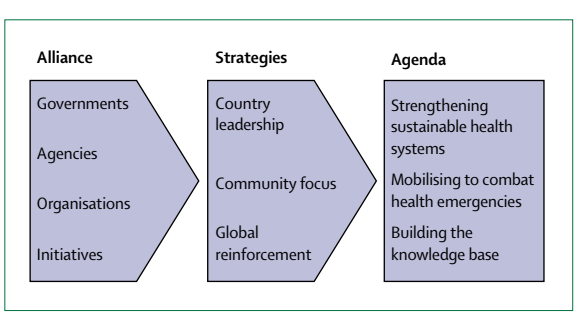

Figure 5: **Alliance for action in the decade for human resources**

First, all countries should develop national workforce strategic plans to guide enhanced investments in human resources as the core component of strengthening national health systems. Second, all countries should examine and increase their investments in appropriate education, deployment, and retention of human resources. Third, an international mobility regime should be crafted that recognises exceptions for medical migration—promoting the human rights of free movement while protecting the health of vulnerable populations. In addition to national actions, a global education reinvestment fund should be launched, and sustainable reverse flows of diaspora, volunteers, and exchanges should be accelerated, wherever appropriate. Finally, global health and finance policy makers must work together to ensure a fiscal environment that enables workforce development. Donors should harmonise their investments, achieving at least 10% or $400 million of their estimated $4 billion spending on human resources for strengthening strategic human capacities within countries. Of these country investments, 10% or $40 million should be earmarked for strengthening technical and policy cooperation at the regional and global levels.

Mobilising to combat health emergencies

In crisis countries severely affected by HIV/AIDS, especially in much of sub-Saharan Africa, popular mobilisation to harness workers is urgently needed to overcome the crisis of human survival. Crisis countries must assess the suitability of their current workforce and mobilise support for appropriate delegation of core health functions to well-trained community-based auxiliary workers. The support of donors, regional bodies, and global organisations is vital for effective implementation. Our specific recommendations are described below.

First, we need to urgently develop strategies to mobilise, retain, and train health workers to combat HIV/AIDS and other priority problems while steadily building primary health-care systems. Sub-Saharan African countries should nearly triple the size of their workforce, adding the functional equivalent of 1 million workers operating in supportive work environments. Second, we should bring together country, regional, and global technical expertise on human resources for health through virtual and operational networks that can disseminate best practices and provide effective technical support to country-based and country-led actions. Finally, we need to create an enabling policy and financing environment by specifically ensuring supportive macroeconomic policies and the coherence of categorical funds for HIV/AIDS and other priority problems consistent with national workforce plans. Disease control programmes should seek to achieve their priority targets while strengthening, not fragmenting, a sustainable workforce in the overall health system.

Building the knowledge base

Effective action, both urgent and sustained, needs solid information, reliable analyses, and a firm knowledge base. But data and research for human resources are underdeveloped, especially in low-density-high-mortality countries. National and global learning processes must be launched to rapidly build the knowledge base—essential for guiding, accelerating, and improving action. A culture of science-based knowledge building must be infused into the human resources community. Our specific recommendations are described below.

First, all countries should strengthen national data, information, analysis, and research in human resources for health. All workers should be counted and their social attributes and work functions should be collated to improve planning, policy, and programmes. Second, research on workforce norms, standards, and best practices should be augmented, and these should be rapidly disseminated to improve workforce effectiveness in all countries. Finally, funders, both national and international, should greatly enhance their investments in information and knowledge on human resources. These investments provide a global public good and strengthen country actions.

Action and learning

Implementation of this work agenda demands immediate action backed by simultaneous learning. We must spark a virtuous circle of acting, learning, adjusting, and growing, because we do not have all the answers and yet we must urgently launch concerted action.

Because the key actions rest with national governments, we call on national leadership to implement these recommendations. We also call on international agencies—especially WHO and the World Bank, but also UNDP, UNESCO, the Global Fund, the Global Alliance for Vaccines and Immunization, the President's Emergency Plan for AIDS Relief, and others—to exercise responsibly their vital roles in supporting coherent national action. Through collaborative planning and regular feedback, alliances for action can be systematically strengthened so that international actors play more effective parts in human resources for health at the country and community levels.

We also propose an independent, non-governmental, time-limited action-learning initiative to succeed the Joint Learning Initiative to advocate for human resources to promote the sharing of lessons, and to monitor progress in implementing these recommendations. Operating through networks with nodes in the major world regions, the action-learning initiative will catalyse and reinforce global support of country action.

The advantage of the initiative in an alliance for action is that major activities can be undertaken by existing organisations without creating yet another cumbersome and expensive formal global programme or partnership.

Success will depend, however, on how well existing institutions can ratchet up their capabilities and performance. Official agencies are urged to assume leadership roles in their respective areas of comparative strength, while non-governmental organisations, academia, and professional associations are encouraged to join in this work, both directly and facilitated by the initiative.

It is impossible to underestimate the importance of a response to this call for action. At stake is nothing less than completing the unfinished agenda in health of the past century while addressing the historically unprecedented health challenges of this new century. Millions of people around the world are trapped in a vicious spiral of sickness and death. For them there is no tomorrow without action today. Yet, much can be done through the rapid mobilisation of the workforce, and wise investments today can build a stronger human infrastructure for sustainable health systems. What we do—or what we fail to do—will shape the course of global health for the entire 21st century.

Contributors

The Joint Learning Initiative is an independent network of more than 100 global health leaders who through seven working groups landscaped the field of human resources for health and identified strategies for strengthening workforce development. Information about JLI is available on its website: http://www.globalhealthtrust.org.

Conflict of interest statement

The authors, as independent professionals, jointly produced this work. Institutional affiliations are for identification purposes only, not an endorsement of the JLI findings and recommendations. We declare that we have no conflict of interest.

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