Acting Now to Overcome Tanzania's Greatest Health Challenge

Addressing the Gap in Human Resources for Health

Report from Field Visit, Tanzania 2004
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ABOUT THIS RESEARCH

The subject of Human Resources in Health (HRH) and the specific situation in Tanzania is a complex and challenging one. We would like to thank the many people who contributed to this effort. The ministries of Health, Science/Technology/Higher Education, and Finance, the President’s Office of Local Government and Regional Administration, and the Civil Services Department provided us with helpful access to key officials and data and were patient with our many questions. Members of the technical community, including Dr. Kurowski (LSHTM/World Bank), Dr. Reid and his colleagues (TEHIP/IDRC), Dr. Nangawe (WHO), and Dr. Ipuge (CDC) were generous with their time and expertise. The donor community in Tanzania, including DID, USAID, SDC, The Netherlands Embassy, the Clinton Foundation, and others were most helpful in their observations and provided practical guidance to the team. Our hosts in Tanzania – Bishop Balina, Professor Shija, and Dr. Majinge on behalf of the Bugando University – were tireless in their efforts to ensure that the McKinsey team had full access to all key stakeholders during our 2-week visit in Tanzania. We would have accomplished little without their support.

Our report is based on findings from our visit, supplemented by an in-depth desk review, including numerous telephone discussions and an extensive review of various reports on HRH and the situation in Tanzania. During the course of the field trip, the team had the opportunity to meet with representatives of almost every cadre of HRH in Tanzania, and all key ministries and stakeholders including Tanzania’s development partners (both donors and technical agencies), universities, and non-government agencies and health programs. We also conducted visits to tertiary, regional, and district facilities, as well as had focus group discussions in Dar es Salaam, Mwanza, Kibaha, Monduli, and Arusha.

Our findings are not exhaustive, given the short duration of the field visit and limited access to data. The conclusions and suggestions described in this report are not meant to be a conclusive road map with detailed tested recommendations to resolve the HRH challenge in Tanzania. In particular, the quantitative estimates in this report build on existing studies and incorporate broad assumptions, and should therefore be refined with the benefit of more data and input. However, the messages are compelling and unambiguous
enough to support an urgent “call to action” to address the HRH challenge in Tanzania and highlight potential areas for further investigation.

The focus of McKinsey’s research effort is on the HRH constraint, faced by many developing countries, in absorbing development aid and scaling up urgently needed health programs. HRH in this context is defined as the health workers at the front line of healthcare service delivery. The field work necessary to diagnose the problem and identify possible solutions has been initiated in Tanzania. We believe these findings, accounting for certain differences, will be broadly applicable to several developing countries. We will explore opportunities to expand the scope of this effort to cover situations in other developing country to refine our findings and recommendations.

This report is structured in five chapters:

- **Chapter 1: Assessing the HRH challenge in Tanzania.** In this chapter, we take stock of the progress and setbacks in health in Tanzania. The inadequacy of HRH in Tanzania is highlighted, and the worsening HRH situation is identified as one of the biggest challenges for the country’s health sector. Various HRH initiatives are profiled and barriers to HRH development discussed in detail, across education and recruitment; deployment and utilization; retention; and cross-cutting management issues. Last, a possible scenario for “double jeopardy” in Tanzania is described, wherein additional HRH needs for HIV/AIDS treatment could erode an already precarious HRH shortage and accelerate a health system breakdown.

- **Chapter 2: Maximizing HRH capacity within the current constraints.** This chapter examines each of four levers to increase effective HRH capacity, namely increasing training throughput; increasing retention; attracting previously trained but unemployed HRH; and improving productivity. It concludes by arguing the need for a three-pronged strategy: a short-term focus to absorb available training output; a medium-term focus on productivity improvement of at least 60 to 75 percent; and a long-term emphasis on increasing training throughput by at least 50 percent, with action on all three fronts to be launched immediately and in parallel.
• **Chapter 3: Realizing potential productivity gains.** Chapter 3 focuses on a strategy to capture the potential 60 to 75 percent productivity gains established in Chapter 2. It argues for effective decentralization as the best route to realize these gains and recommends leveraging existing successful district-level programs as vehicles for a broad rollout of the HRH productivity toolkit. It also describes five key success factors underpinning this productivity strategy.

• **Chapter 4: A good start, but much more needs to be done.** This chapter steps back to assess whether the gains in effective HRH capacity from training and productivity can be achieved in a cost-effective and timely manner to meet Tanzania’s needs. The answer on costs is encouraging, but the conclusion on time is that greater acceleration is needed.

• **Chapter 5: A call for “out-of-the-box” solutions.** In the final chapter, the potential out-of-the-box solutions to Tanzania’s HRH situation are explored, since more conventional approaches, even with highly ambitious goals, will be insufficient to close the HRH gap in a timely manner.
ABOUT McKinsey & COMPANY

McKinsey & Company is a global management consulting firm, serving clients across the private, public and nonprofit sectors. Our primary mission is to help our clients achieve distinctive, substantial, and lasting improvements in their performance, and to build a great firm that is able to attract, develop, excite, and retain exceptional people. McKinsey was founded in 1926 as the first professional management consulting firm and currently has about 6,600 consultants in 83 offices across 45 countries.

The Nonprofit Practice and Global Public Health Sector

The mission of McKinsey’s Nonprofit Practice is to have extraordinary impact in communities worldwide by serving leading organisations and supporting efforts that will shape the nonprofit sector and developing and disseminating cutting-edge knowledge. Each of our 83 offices works with nonprofit and/or public sector organisations in their communities. More than half of our consultants participate in this work during their tenure with McKinsey, both as consultants and through board memberships and part-time adviser roles. Our work in this sector represents an annual in-kind contribution of well over $100 million.

Global Public Health, along with Philanthropy, and International Aid & Private Sector Development, form the three core sub-sectors of our nonprofit work. Our Global Public Health group is constituted of individuals deeply committed to achieving the goal of health equity and passionate about making a difference by contributing at the intersection of sound management practices and global health. Through our work in this area, we aim to serve development agencies, private foundations, ministries of health in developing countries, and non-government agencies and health alliances on their most pressing issues. Our work spans the areas of strategy (including business plan development, fund-raising, product introduction, and demand estimation), organisation (including alliance building, governance, performance measurement, process design, and post-merger management), and operations (including supply chain design, program design and business building).

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ABBREVIATIONS

AMO: Assistant Medical Officer
CHMT: Council Health Management Team
CO: Clinical Officer
CSD: Civil Services Department
DID: Department for International Development, U.K.
DHMT: District Health Management Team
DMO: District Medical Officer
HRH: Human Resources for Health
HMIS: Health Management Information Systems
HSR: Health Sector Reform
IDRC: International Development Research Center
IMCI: Integrated Management of Childhood Illness
MDG: Millennium Development Goal
MO: Medical Officer
MoF: Ministry of Finance
MoH: Ministry of Health
MoS/T/HE: Ministry of Science, Technology and Higher Education
PAHO: Pan-American Health Organisation (WHO Regional Office)
PORALG: President’s Office – Regional Administration and Local Government
RHMT: Regional Health Management Team
RMO: Regional Medical Officer
SASE: Selective Accelerated Salary Enhancement
SDC: Swiss Agency for Development and Cooperation
SWAP: Systemwide Approach
TEHIP: Tanzania Essential Health Interventions Project
USAID: United States Agency for International Development
WHO: World Health Organisation
ZTC: Zonal Training Centre
Executive Summary

From the 1960s into the 1980s, health outcomes in Tanzania were improving. Adult average life expectancy increased and infant and under-five child mortality rates declined. In the early 1990s, the government of Tanzania made health sector reform an important priority and launched a number of new initiatives. International aid donors reinvigorated their commitment to help Tanzania progress.

Today, however, Tanzania’s public health situation looks grim. In most aspects of population health, Tanzania now lags behind most developing countries. Adult life expectancy has declined by more than 15 percent (in large part due to AIDS) and gains in infant and under-five child mortality have reversed and are worsening. The AIDS pandemic threatens to explode and overwhelm the system.

Tanzania, like most developing countries, is highly constrained in the resources needed to respond to its public health situation. Especially problematic is the lack of adequate Human Resources in Health (HRH), sufficiently trained and appropriately deployed. In fact, despite a range of initiatives, Tanzania has experienced a substantial decline in per capita availability of HRH over the last decade, resulting in one of the lowest ratios in the developing world.

There are several imposing barriers to improving the HRH situation in Tanzania. The attractiveness of a public sector career in healthcare delivery has substantially diminished, particularly to the better educated in Tanzania. The work is demanding, pay is barely above subsistence levels, and working conditions are demoralizing. Training capacity is severely limited, and even if more capacity were available, the secondary school system is hard-pressed to graduate enough qualified entrants and the prevailing hiring freeze makes recruitment a problem. Deployment of available cadres is highly imbalanced, a situation made worse by a substantially underdeveloped private sector. HRH retention is poor, as significantly more attractive opportunities encourage a mobile workforce, and likely to get worse as an aging HRH cohort moves into retirement. Physical infrastructure for service delivery and training at all levels has scarcely been updated or expanded for over a decade now. Furthermore, inadequate managerial and administrative capacity, fragmented accountability
between the many government bodies, and opaque financial processes and systems for obtaining funds for priority areas all make addressing the HRH situation in the country an extremely difficult proposition.

These problems alone would be hard enough to cope with, but HRH demands for effective care and treatment of HIV/AIDS create a major additional problem. While the HRH contingent is likely to decline in absolute numbers over the next decade, even as population continues to grow at 2 to 3 percent per year, the commitment to the HIV/AIDS Care and Treatment Program will add a further 20 percent to the HRH workload. Unless the HRH bottleneck can be removed, Tanzania faces the real possibilities of failing to respond adequately to the AIDS peril and watching mortality and morbidity from other causes accelerate upwards.

In this situation, a three-pronged strategy can help effectively double HRH capacity in Tanzania over 8 to 10 years, even while playing within the “rules of the game” as defined currently. First, a targeted near-term “fix” of recruiting as much of the current training output of HRH as possible to fill priority gaps can alleviate immediate chronic shortages. Second, potential productivity gains could be captured to increase effective HRH capacity by as much as 60 to 75 percent over time, even without increasing the absolute HRH numbers. The basic strategy and toolkit for achieving those gains, as well as a set of tested implementation vehicles are at hand. Specifically, capacity increases equivalent to about 19,000 to 24,000 HRH in the public sector can be achieved through a determined commitment to decentralize in a way that is fully consistent with other change initiatives in Tanzania. Decentralization should be supported by an optimized HRH productivity toolkit that includes a clear delineation of roles between different levels of government, productivity-focused continuous education, tailored incentives and flexibility for service delivery network and cadre optimization, rolled out in conjunction with existing vehicles like Tanzania Essential Health Interventions Project (TEHIP). Third, and in parallel to the first and second prongs, a concerted effort to increase training capacity by at least 50 percent will be required to ensure a long-term sustainable addition to the HRH workforce that Tanzania so desperately needs.

On the positive side, the costs of implementing this strategy are manageable. Preliminary outside-in projections suggest that the costs of the productivity
program and increasing training output represent only a 15 to 20 percent annual increase in total healthcare expenditure in Tanzania, or a little over $1 per person. However, the full 60 to 75 percent capacity gain from productivity improvement will require extraordinary effort and persistence to achieve. And even if this improvement is achieved, the results will still fall short of HRH requirements, particularly over the next 5 years. In the base case, without any improvements and with moderate assumptions about HRH attrition rates, the shortfall in 2008 will be about 14,000 HRH to meet the needs of the HIV/AIDS Care and Treatment Plan\(^1\) and to keep core HRH/population ratios at current levels. Even with an aggressive rollout of the productivity toolkit, increased training capacity, and flawless implementation, effective HRH capacity will only have increased by about 6,000 to 8,000 by 2008. This will result in a net shortfall of 6,000 to 8,000 HRH or about 20 percent of the public sector workforce. This shortfall in 2008 takes into account only the handling of the HIV/AIDS care and treatment load while keeping HRH available for other interventions at today’s badly inadequate HRH-to-population ratios. The more ambitious Millennium Development Goals (MDGs) are completely outside and beyond the reach of this scenario.

In summary, to increase effective HRH capacity primarily in the public sector, the boundaries of today’s conventional approaches must of course be stretched to the limit, but this will still not be enough.

And so, we must turn to exploring possible “out of the box” solutions that might deliver a breakthrough in this situation. We believe that the entire Tanzanian government must address this critical HRH challenge, supported and abetted by the full contingent of international donors, lined up behind a systematic, comprehensive, and aggressive program to realize the necessary productivity gains. The problem requires all relevant players to do everything possible to increase the training throughput, which is so essential in the long term. In addition, however, every interested participant must come together immediately to answer some hard questions:

\(^1\) The HIV/AIDS Care and Treatment Plan was developed by the Clinton Foundation in 2003 in partnership with development agencies in Tanzania. It has been adopted by the Tanzanian cabinet.
• Why can’t health intervention tasks and service delivery be redefined so that lower-skilled cadres (who are easier to attract, and whose training can be completed faster) can handle more of the workload?

• What innovative approaches would nurture the growth of the private sector – both for-profit and non-profit, in health and beyond – and ensure that it takes a larger share of the burden?

• How can donors change their focus and innovate approaches so that they are more directly addressing the overall HRH crisis in their programs, going beyond cash alone? How can they build stronger conditionality into their programs so that the focus on HRH capacity deliverables is tightened?

• Accepting that donors will remain strongly interested in some form of vertical programs, how can it be made certain that such efforts add to overall HRH capacity rather than simply reallocate scarce resources?

• What new programs can the Tanzanian government and donors design in tandem to bring about a very large increase in senior healthcare managerial and administrative talent?

• How can Tanzania redesign its ministerial and departmental governance so a single point of end-to-end responsibility is established for delivering against HRH capacity increase targets on an urgent basis?

Our report attempts to provide a few thought starters and examples for answering each of the above questions. More importantly, it is intended to serve as an urgent and clear call for doing everything humanly possible to realize the gains available within current constraints, and for boldly stepping beyond those constraints. The prize is nothing short of securing Tanzania’s future.
1. Assessing the HRH Challenge in Tanzania

**Worsening Public Health Context in Tanzania Today**

Until the mid-1980s, Tanzania had a sound track record of investing in a strong, well-distributed public health care infrastructure for training and service delivery; creating tailored cadres of health workers to ensure equitable access; and ensuring favourable gains in child and adult mortality. Today, however, Tanzania’s public health situation looks grim. On most dimensions of population health, Tanzania lags behind most developing countries and has begun to see a reversal in the health gains achieved in previous decades (exhibits 1, 2). Barring urgent action, Tanzania is not on track to meet any of the UN’s Millennium Development Goals (MDGs) or even internal targets like the Poverty Reduction Strategy (PRS). The current situation could get markedly worse as a result of the HIV/AIDS epidemic, which could overwhelm the system and deliver a substantial blow to the fledgling economy (Exhibit 3). In fact, Tanzania’s GDP is predicted to be as much as 15 to 20 percent lower in 2010 than it would have been without the AIDS epidemic.

**Exhibit 1**

**Life Expectancy Declining Due in Large Part to HIV/AIDS**

<table>
<thead>
<tr>
<th>Average life expectancy in Tanzania 1985-2005</th>
<th>Tanzania average life expectancy vs. comparable countries 2001</th>
</tr>
</thead>
</table>
| ![Graph showing life expectancy decline](image) | Average life expectancy  
- Low middle-income countries*  
- Low-income countries*  
- Tanzania  
  | Difference  
- 57 years  
- 34 years  
- 6 years  
  | Percent  
- 69%  
- 59%  
- 44%  
  |

* The World Bank classifies low middle-income countries as those having GNI per capita between $745 and $2,975; and low-income countries as those having GNI per capita less than $745; Tanzania is classified as a low-income country.

Source: U.S. Census Bureau, International Database (accessed December 2, 2003); World Bank; McKinsey analysis

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Exhibit 2

REVERSAL IN HEALTH GAINS ACHIEVED IN 1960S-80S

Under-5 mortality rate
Per 1,000 births

Infant mortality rate
Per 1,000 births

Crude death rate
Per 1,000 people

Source: World Development Indicators, McKinsey analysis

Exhibit 3

ONSLAUGHT OF HIV/AIDS – A FULL-SCALE PUBLIC HEALTH CRISIS?

Population of Tanzania in 2025, with and without AIDS
Millions, by 5-year age group

- Estimated life expectancy in 2025: 63 years without HIV/AIDS vs. 51 years with the disease – a 24% loss
- Decline in GDP: Estimated 15-20% lower GDP in 2010 than without the AIDS pandemic
- Enormous development impact in Tanzania
  - 29% of household savings redirected to cope with AIDS illness of 1 family member
  - Food consumption dropped 15% in poorest households after death of adult from AIDS
  - HIV infection is major cause of illness leading to hospitalization (33% HIV prevalence in one Tanzanian hospital)
  - 114 teachers now dying of AIDS each month
  - By 2005, 10% of productive workers will be lost due to AIDS, increasing to 15% in 2020

HRH INSUFFICIENCY – THE MAJOR CONSTRAINT

Tanzania’s ability today to respond even partially to its impending crisis is substantially compromised by the lack of adequate, sufficiently trained and appropriately deployed HRH. Tanzania has witnessed a steady decline in the size of its health workforce and per capita availability of HRH, to a large extent an intended consequence of the overall public sector reforms initiated under the guidance of the World Bank and the IMF in the early 1990s (Exhibit 4). Not surprisingly, the system is chronically understaffed, with fill rates as low as 30 percent of government-mandated staffing norms (Exhibit 5). Without a reversal of current trends, Tanzania will have even fewer HRH with which to tackle even the most basic service provision and could see a major setback in health outcomes. One scenario predicts a reduction in the size of the total health workforce from 54,200 in 2002 to 40,600 in 2015 (Exhibit 6).

Exhibit 4

STEADY DECLINE IN SIZE OF TANZANIA’S HEALTH WORKFORCE

<table>
<thead>
<tr>
<th>Total HRH in the system (public and private sectors)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994-95</td>
</tr>
<tr>
<td>67,000</td>
</tr>
</tbody>
</table>

- While rationalizing lower-skilled HRH as intended, hiring freeze also dramatically reduced ratios of skilled HRH to overall population.
- Ratios for Tanzania are among lowest in developing world

<table>
<thead>
<tr>
<th>Doctors per 10,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Africa</td>
</tr>
<tr>
<td>Botswana</td>
</tr>
<tr>
<td>Zimbabwe</td>
</tr>
<tr>
<td>Kenya</td>
</tr>
<tr>
<td>Tanzania (94-95)</td>
</tr>
<tr>
<td>Tanzania (2002)</td>
</tr>
<tr>
<td>5.8</td>
</tr>
<tr>
<td>2.4</td>
</tr>
<tr>
<td>1.4</td>
</tr>
<tr>
<td>1.3</td>
</tr>
<tr>
<td>2.4</td>
</tr>
<tr>
<td>0.75</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nurses per 10,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Africa</td>
</tr>
<tr>
<td>Botswana</td>
</tr>
<tr>
<td>Zimbabwe</td>
</tr>
<tr>
<td>Kenya</td>
</tr>
<tr>
<td>Tanzania</td>
</tr>
<tr>
<td>12.9</td>
</tr>
<tr>
<td>12.0</td>
</tr>
<tr>
<td>6.5</td>
</tr>
<tr>
<td>3.0</td>
</tr>
</tbody>
</table>

* Latest years data available
Source: Human Resources for Health: Requirements and Availability in the Context of Scaling Up Priority Interventions – Case Study of Tanzania (October 2003, HRHCLSTM). World Bank WGI 2003; team analysis

LIMITED SUCCESS DESPITE SEVERAL HRH INITIATIVES SINCE THE 1990s

Many stakeholders have come forward to help address Tanzania’s health and HRH challenge. Accordingly, a number of initiatives have been launched over the last decade by the government and donors in response to Tanzania’s HRH
Exhibit 5

CHRONIC UNDERSTAFFING AT ALL LEVELS

Public sector staffing levels vs. MoH staffing norms 1999-2002

<table>
<thead>
<tr>
<th></th>
<th>2002 HRH levels</th>
<th>1999-2002 required HRH levels*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctors</td>
<td>0.5</td>
<td>0.8-0.9</td>
</tr>
<tr>
<td>Lab technicians</td>
<td>0.4</td>
<td>1.1-1.2</td>
</tr>
<tr>
<td>AMOs / COs</td>
<td>3.9</td>
<td>12.1-13.0</td>
</tr>
<tr>
<td>Nursing cadres</td>
<td>10.8</td>
<td>31.1-32.7</td>
</tr>
</tbody>
</table>

Example: Regional hospital’s staffing levels vs. MoH staffing norms*

<table>
<thead>
<tr>
<th></th>
<th>2002 HRH levels</th>
<th>1999-2002 required HRH levels*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctors</td>
<td>18</td>
<td>91-98</td>
</tr>
<tr>
<td>Lab technicians</td>
<td>16</td>
<td>25-27</td>
</tr>
<tr>
<td>AMOs / COs</td>
<td>0</td>
<td>65-70</td>
</tr>
<tr>
<td>Nursing cadres</td>
<td>10.8</td>
<td>675-727</td>
</tr>
</tbody>
</table>

*Latest year for revision of MoH staffing norms is 1996; 2002 estimate derived by increasing MoH 1999 staffing norms by 7.7%, Tanzania’s overall population growth rate 1999-2002.

Source: Human Resources for Health: Requirements and Availability in the Context of Scaling Up Priority Interventions – Case Study of Tanzania (October 2003, HRDCLSHTM); Staffing Levels for Health Facilities/Institutions (Ministry of Health/CSD, April 1999); interviews, McKinsey analysis

Exhibit 6

GOING FORWARD, TANZANIA WILL HAVE MUCH LARGER HRH GAP TO ACHIEVE ITS HEALTH ASPIRATIONS

All public and private sector HRH at district level only*

<table>
<thead>
<tr>
<th></th>
<th>2002 availability and requirements</th>
<th>2015 availability and requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Thousands</td>
<td>Thousands</td>
</tr>
<tr>
<td></td>
<td>Available HRH</td>
<td>Required HRH to meet MDGs</td>
</tr>
<tr>
<td>Doctors</td>
<td>0.6</td>
<td>4.1</td>
</tr>
<tr>
<td>Technical staff</td>
<td>1.9</td>
<td>1.7</td>
</tr>
<tr>
<td>Medical staff (except doctors)</td>
<td>7.5</td>
<td>6.0</td>
</tr>
<tr>
<td>Nursing cadres</td>
<td>15.3</td>
<td>16.9</td>
</tr>
<tr>
<td>Unskilled workers</td>
<td>4.6</td>
<td>17.5</td>
</tr>
<tr>
<td>Total HRH</td>
<td>33.2</td>
<td>42.6</td>
</tr>
</tbody>
</table>

2002 availability and requirements

2015 availability and requirements

Actual gap is likely larger given:
- HRH availability is for delivery of both priority and non-priority interventions;
- HRH requirement is for delivery of only priority interventions to meet MDGs
- Aggregate numbers hide huge differences between rural and urban availability

Source: Human Resources for Health: Requirements and Availability in the Context of Scaling Up Priority Interventions – Case Study of Tanzania (October 2003, HRDCLSHTM)
challenge, each usually intended to address some specific aspect of the HRH challenge. Some initiatives, such as the Tanzania Essential Health Interventions Project (TEHIP) and efforts around HRH training to support the roll out of the IMCI program, have been well received. However, Tanzanian health experts broadly conclude that most HRH initiatives – e.g., Health Sector Reform (HSR), Health Management Information Systems (HMIS), HRH Planning, and Selective Accelerated Salary Management (SASE) – although well intended and launched with high aspirations, appear to have failed and have done little to mitigate Tanzania’s growing HRH problem.

DAUNTING BARRIERS TO ADDRESSING THE HRH CHALLENGE

Tanzanian authorities and the nation’s development partners have long recognized the HRH problems, but they have proven intractable and have become worse over time. The barriers to success are discussed within the four elements of the “HRH funnel”: education and recruitment, productive deployment and utilization, retention, and HRH management.

Education and recruitment

Tanzania faces the following barriers to attracting raw talent of the right nature and capability; to training and developing talent with adequate and appropriate capacity; and to recruiting talent into the workforce effectively:

• **Fundamental unattractiveness of the public sector HRH profession**, due to low salary levels as compared to other options (Exhibit 7) and very poor working conditions for healthcare professionals (Exhibit 8).

• **Structural constraints to increasing potential talent pool**, including low secondary school enrollment, poor quality of secondary school graduates ready to take up medical training, high cost of education and high attrition rates.

• **Limited training capacity, including limited and old physical infrastructure**, outdated curriculums, teaching materials and pedagogy, and a chronic shortage of qualified teaching staff.
Exhibit 7

SALARY LEVELS A FRACTION OF THOSE IN NEIGHBOURING COUNTRIES

<table>
<thead>
<tr>
<th>Monthly salaries of selected occupations in Tanzania and of public sector junior doctors in comparable countries*</th>
<th>Difference from Tanzanian junior doctor salary ( \frac{\text{Factor}}{} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botswana</td>
<td>597</td>
</tr>
<tr>
<td>Tanzania (university professor)</td>
<td>516</td>
</tr>
<tr>
<td>South Africa</td>
<td>375</td>
</tr>
<tr>
<td>Kenya</td>
<td>360</td>
</tr>
<tr>
<td>Tanzania (private sector junior doctor)</td>
<td>280</td>
</tr>
<tr>
<td>Tanzania (starting banker)</td>
<td>207</td>
</tr>
<tr>
<td>Tanzania (living wage)</td>
<td>183</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>148</td>
</tr>
<tr>
<td>Tanzania (junior doctor)</td>
<td>90</td>
</tr>
</tbody>
</table>

Tanzania would have to at least double salaries to provide a living income to some of its HRH

Required HRH spending**

\[ \text{Tsh, billions} \]

\[ 4 \times \]

\[ 3 \times \]

\[ 2 \times \]

\[ 45 \]

\[ 90 \]

\[ 136 \]

\[ 181 \]

Current HRH spend

Living wage for some HRH

Comparable to private sector

Comparable to Kenya

Source: Interviews; PSM public sector salary grades, 2003; Press search; World Bank, 2003 PER Update; McKinsey analyses

Exhibit 8

DISCOURAGING WORKING CONDITIONS FOR POTENTIAL ENTRANTS

Factors reducing attractiveness

- Low salary: Private sector salaries are 2X as high; salaries in neighbouring countries are 3-4X more
- Poor career prospects: COs and nurses have not been promoted for over 10 years (although stated period for promotion is 3 years); most have not received training in over 5 years
- Poor facilities: Lack of basic equipment like x-ray machines; rampant drug shortages
- No hardship/rural allowance
- Exposure to high risk
  - Highly contagious diseases
  - Lack of basic protective supplies, e.g., gloves
  - Inadequate health insurance
- Poor working and living conditions
  - Limited communication
  - Poor transportation between facilities
  - Inadequate or no housing

Focus group findings

- Unmotivated workforce in every cadre
- High incidence of brain drain
  - 10-15% of doctors estimated to emigrate from Tanzania, or work in non-health service delivery in Tanzania
- Widespread moonlighting
  - 60-80% of doctors employed in the public sector moonlight
  - Only 10-15 MOs in every 100 believed to work full time in public sector
  - Nurses need to moonlight in agriculture to provide food at home
- Low willingness to join public health workforce

Source: Interviews
• **Fragmented and outdated skill grades and profiles**, with almost 90 HRH job categories, and consequently, fragmented training capacity.

• **Current hiring freeze**, which has had a significant negative consequence by markedly reducing the ratio of skilled professionals to the population.

**Productive deployment and utilisation**

Notwithstanding the fundamental constraints to attracting and training HRH described above, the situation could be much improved if the few available resources were equitably deployed and maximum productivity achieved. However, Tanzania faces additional barriers in this area:

• **Suboptimal decentralization of responsibility for hiring** has accentuated the major imbalances between urban and rural settings, and also among rural districts (Exhibit 9). In many cases, it is challenging for poorer districts even to find applicants for funded positions, while more attractive districts have unemployed HRH.

### Exhibit 9

**MAJOR GEOGRAPHIC IMBALANCES IN HRH DEPLOYMENT**

<table>
<thead>
<tr>
<th></th>
<th>Medical staff per 10,000</th>
<th>Nurses per 10,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dar es Salaam</td>
<td>2.2</td>
<td>4.9</td>
</tr>
<tr>
<td>Coast</td>
<td>2.3</td>
<td>3.8</td>
</tr>
<tr>
<td>Tanga</td>
<td>1.7</td>
<td>3.6</td>
</tr>
<tr>
<td>Average</td>
<td>1.7</td>
<td>3.4</td>
</tr>
<tr>
<td>Iringa</td>
<td>1.6</td>
<td>3.2</td>
</tr>
<tr>
<td>Shinyanga</td>
<td>1.3</td>
<td>1.9</td>
</tr>
</tbody>
</table>

**Nursing staff per 10,000 population is 0.6 in Manyu District versus 16.2 in Ilala District**

**In 2002, 80 of 130 positions were filled in Morogoro, but only 21 of 100 were filled in Kondoa**

Source: Human Resources for Health: Requirements and Availability in the Context of Scaling Up Priority Interventions – Case Study of Tanzania (October 2003, IRDC/LSHTM)
• *Poor availability and quality of continuous education*, with no plan or budget for training centres, unclear responsibility and no link to productivity.

• *The lack of a cohesive approach to private sector healthcare services* has resulted in a patchy development of for-profit providers, largely restricted to urban areas as well as rampant moonlighting. These factors have collectively contributed to a substantial productivity loss in the sector.

**Retention**

Across our interactions with HRH of every cadre in Tanzania, the common theme has been one of despair, frustration and serious doubt about staying in the profession. Retaining talent has been a great challenge due to the compensation and working conditions challenges discussed earlier. Other factors include

• *High exit mobility* to neighboring countries

• *Internal brain drain* to administrative positions within the health sector (due to better salaries, incentives, and opportunities for promotion), private “moonlighting” practices, and other organisations like donors, international NGOs, multilateral and bilateral agencies (Exhibit 10)

• *Rapid aging of the HRH workforce*, caused by the hiring freeze of the past decade, which makes much of the attrition structurally unavoidable (Exhibit 11)

**HRH management (cross-cutting issues)**

In health care as in every other sector, unambiguous goals, clear accountability and effective performance and consequence management are the hallmarks of effective management systems. HRH management in Tanzania appears to manifest few of these characteristics. Five factors stand out:

• *No end-to-end responsibility for HRH*. At least five ministries or government departments are involved in HRH decisions, making it challenging to coordinate actions for planning, designing key initiatives and implementation (Exhibit 12). Even within the Ministry of Health, it is unclear
Exhibit 10
LEAKAGE FROM PUBLIC SECTOR HEALTH WORKFORCE

Graduating doctors 100%

Practicing healthcare in Tanzania**
85-90%

Left Tanzania or not practicing healthcare
10-15%*

Private sector 35%

Moonlight regularly in private sector
60-80%

Public sector 65%

Practice entirely in public sector
20-40%

* Tanzanians are willing to leave because of higher incentives and low barriers to moving abroad
  - Significantly higher salaries in neighbouring countries
  - Language not a constraint as English is the primary language of medicine in these countries
  - and Swahili is common; Tanzanian healthcare qualifications recognized

** Includes doctors who practice healthcare on a full-time or part-time basis (i.e., doctors who split their time between practicing and other roles such as administration, teaching, paid research, NGO-related work, etc.)

* Includes graduates who no longer practice healthcare in any capacity

Source: Averaged from information received in 3 doctor focus groups and other interviews in Tanzania; McKinsey analysis

Exhibit 11
SUBSTANTIAL INCREASE IN AVERAGE AGE OF MANY HRH CADRES

Age composition of Tanzania’s HRH workforce

<table>
<thead>
<tr>
<th></th>
<th>1994-95</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 30</td>
<td>23.1</td>
<td>11</td>
</tr>
<tr>
<td>30s</td>
<td>47.4</td>
<td>35.3</td>
</tr>
<tr>
<td>40s</td>
<td>24.7</td>
<td>38.2</td>
</tr>
<tr>
<td>50+</td>
<td>4.8%</td>
<td>15.4%</td>
</tr>
</tbody>
</table>

* More than 50% of Tanzania’s HRH were older than 40 years in 2002 compared to just 30% in 1994/1995

* Aging of Tanzania’s workforce compounded by practice of contracting workers beyond age of retirement, which is only a temporary solution to overburdening of workforce

Source: Human Resources for Health: Requirements and Availability in the Context of Scaling Up Priority Interventions – Case Study of Tanzania (October 2003, HRDC/LSHTM)
where clear responsibility to address the HRH challenge lies within the current management structure.

- **Weak and inadequate public health managerial capacity.** Weak management at all levels has led to flawed implementation of many good ideas. Furthermore, doctors are pulled out of service delivery into administration (which accentuates the doctor shortage), but not trained to become strong managers and administrators either.

- **Opaque financial systems.** There is little clarity on budgetary processes or timing, funding flows between or within Ministries, decision-making framework, prerequisites to get funds released and channeled to specific areas.

- **Externalities, such as the HIV/AIDS epidemic and civil sector reforms.**

- **Weak performance management systems**, including weak health management information systems (HMIS) and a poor culture of accountability.
Finally, a common denominator of all of these problems within the “HRH funnel” is the lack of funds. Tanzania enjoyed exceptional donor generosity in the last decade, with donor funding contributing to 56 percent of accounted healthcare expenditure in 2003, up from 48 percent in 1999. However, funding for health and HRH in particular continues to be low relative to Tanzania’s needs (Exhibit 13). According to recent estimates, Tanzania needs $28 per person to meet the MDGs with only $6 currently available from the government. Competing alternative uses for government and donor funds (e.g., education, roads and sanitation) also affect funding for health.

Exhibit 13
HRH SPENDING HAS SUFFERED – OTHER RECURRENT EXPENDITURES GREW THREE TIMES FASTER FROM 1998 TO 2002

<table>
<thead>
<tr>
<th>Health care sector recurrent expenditures</th>
<th>CAGR 1998-2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Tanzanian shillings (Tsh), Billions</td>
<td>Percent</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
</tr>
<tr>
<td>Other charges</td>
<td>28</td>
</tr>
<tr>
<td>Personal emoluments</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: Department of Policy and Planning, PER Health Sector Update 2002; Ministry of Health, PER Health Sector Update 2003

A TOUGH SITUATION, GETTING WORSE – “DOUBLE JEOPARDY” FROM HIV/AIDS

HIV/AIDS adds a huge burden to an already overloaded situation. The risk of dramatically increased mortality is well known; the risk that HIV/AIDS poses in terms of its drain on HRH available to fight other causes of death is not as well understood. On the one hand, the rising mortality and morbidity, and lack of resources pose a big healthcare challenge; on the other, the HIV/AIDS challenge threatens to monopolize a large part of the health sector resources,
allowing very limited resources for general healthcare delivery. The HIV/AIDS Care and Treatment Plan calls for $500 million over the next 5 years to treat 1.6 million Tanzanians. The Plan projects a workload for the equivalent of 9,300 incremental HRH\(^2\) to provide ARV treatment to 423,000 people\(^3\) (Exhibit 14).

**Exhibit 14**

**HRH SHORTAGE IS LIKELY SINGLE BIGGEST BARRIER TO IMPLEMENTING THE HIV/AIDS CARE AND TREATMENT PLAN**

Likely output from training institutions* vs. HIV/AIDS C&T requirements (Cumulative numbers 2004-08)

<table>
<thead>
<tr>
<th></th>
<th>Projected likely output</th>
<th>Required output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prescribing clinicians</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctors</td>
<td>613</td>
<td>508</td>
</tr>
<tr>
<td>AMOs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluating clinicians</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COs</td>
<td>2496</td>
<td></td>
</tr>
<tr>
<td>Treatment Counsellors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>and Phlebotomists</td>
<td>1467</td>
<td></td>
</tr>
<tr>
<td>Nurse A’s</td>
<td>2381</td>
<td>1750</td>
</tr>
<tr>
<td>Pharmaceutical cadres</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacists</td>
<td>583</td>
<td></td>
</tr>
<tr>
<td>Pharmaceutical tech.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmaceutical assts.</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>Laboratory cadres</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lao technologists</td>
<td>474</td>
<td>915</td>
</tr>
<tr>
<td>Lab technicians</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lab assistants</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Human resource capacity is a major constraint to scaling up comprehensive HIV/AIDS care and treatment, probably the most limiting factor determining how many people living with HIV/AIDS can begin antiretroviral therapy within the next 5 years*  
— William J. Clinton Foundation

* Projected likely output of cadres calculated as [highest rate output in last two years of data reported between 1999-2002 * 65% rate of HRH staving in public sector] / Analysis for doctors projects graduation rates based on current enrollment * 60% rate of doctors staving in public sector


2 Of the projected 9,300 additional HRH, about 50 percent are HRH cadres and the rest “counselors” who may not need the full complement of HRH training. The estimates of the HRH requirement to provide the full range of HIV/AIDS prevention, care, and treatment services vary substantially between sources. We have used the HIV/AIDS Care & Treatment Plan estimates as the Plan has been approved by the Cabinet. However, refinements to the estimates can be expected from ongoing efforts like the HRH audit conducted by the WHO 3x5 mission and from the D4T-sponsored effort; C. Kurowski, et al., Human Resources for Health: Requirements and Availability in the Context of Scaling-Up Priority Interventions in Low-Income Countries (London: London School of Hygiene and Tropical Medicine, IRDC, 2003).

3 In the absence of a robust surveillance system or models, the estimate of 423,000 people requiring ARV treatment has been arrived at in the Care and Treatment Plan based on the following assumptions: 8 percent HIV incidence in Tanzania, i.e., an estimated 2.2 million people have been infected. It is believed that 15 to 25 percent are eligible for ARV treatment. Using an average of 20 percent, that totals about 440,000 people.
This would represent almost 20 percent of the available HRH in Tanzania and certainly a much greater percentage of future availability as these numbers significantly exceed the projected number of newly trained HRH without factoring in natural attrition.

The expected HRH requirement can be estimated at three distinct outcome levels:

- **Level 1**: Reversing the projected attrition in the size of the HRH workforce and achieving growth in numbers equivalent to population growth, in order to maintain today’s ratios of HRH to population.

- **Level 2**: In addition to meeting Level 1, meeting the extra needs of the HIV/AIDS Care and Treatment Plan, i.e., providing 9,300 incremental HRH needed by the Plan.

- **Level 3**: In addition to meeting Level 2, meeting the needs of the MDGs, to guarantee minimum health outcomes in priority areas for all Tanzanians.

A potential Level 4, which includes HRH requirements for non-priority outcomes, has not been considered, given the obvious shortfalls for Level 2 itself, as discussed below.

Tanzania will fall seriously short of meeting the HRH requirements at levels 2 and 3 if current trends persist (Exhibit 15). To achieve Level 2 by 2008, there must be 48,000 HRH in the public sector system, 40 percent more than projected availability. To achieve Level 3 by 2015, and assuming a straight-line extrapolation, public sector HRH must total almost 78,000 by 2008, a gap of about 130 percent vis-à-vis projected availability. Without a way to breakthrough the HRH impasse, the Tanzanian government’s laudable recent commitment to the care and treatment of HIV/AIDS will either: a) succeed, but overwhelm the provision of basic services essential to reducing mortality and morbidity from other causes; or b) fail, or at least fail well short of the levels of HIV/AIDS care and treatment required to contain the disease but still drain away more HRH than the rest of the system can adjust for.
A further concern is that, if HIV/AIDS incidence (or, more likely, availability of treatment in the initial years) is higher in urban than in rural areas, a significant diversion of at least senior HRH cadres from rural to urban will be inevitable. This will further diminish already low and unbalanced rural HRH capacity.

Tanzania desperately needs an HRH breakthrough and must act now, to avert an HRH crisis.
2. Maximizing HRH Capacity within the Current Constraints

Within today’s solution space, there are four ways to maximize HRH capacity: 1) increase training throughput; 2) increase retention; 3) attract back trained HRH that are not currently in healthcare delivery in Tanzania, and 4) increase productivity of the current workforce. The following chapter examines each of these levers to determine their potential for impact. We conclude that within the “rules of the game” today, Tanzania needs a three-pronged approach to boost HRH availability (Exhibit 16): 1. Adopt a targeted near-term “fix” of recruiting as much of the current training output of HRH into the public sector to fill priority staffing gaps; 2. commit to an integrated program designed to realize system-wide productivity gains of at least 60 percent over the medium term; and 3. in parallel, begin a long-term systematic program aimed at increasing training capacity by at least 50 percent. No single “silver bullet” will be adequate in itself.

Exhibit 16

3-PRONG STRATEGY TO MAXIMIZE HRH CAPACITY

1. Increase recruitment of current HRH training output
   - Targeted near-term fix
   - Numbers too few, e.g. <5% of COs
   - Highly skilled unlikely to have stayed unemployed; higher bar to attract them
   - Short-term measure to recruit current output (only 500-800 hired into public sector vs. output of ~2,900)

2. Increase productivity of current HRH – significant potential (medium-term impact)
   - Expanded definition of production – individual and system
   - 60-75% improvement potential = *19,000-24,000 additional HRH
   - Medium-term impact potential – 5-8 years
   - Positive spillover benefits for attraction and retention

3. Increase training capacity to ensure long-term sustainable addition to HRH
   - Critical to overcome resource scarcity
   - About 50% increase possible, with some stretch
   - Translates to 10,000 more HRH by 2015
   - However, long gestation period to train new workers – only 1,010 available by 2008
   - Lead time increases with skill – no MOs or A nurses by 2008

Increased retention – unrealistic
- Involuntary attrition will continue to be – ageing, disease high
- Voluntary attrition – requires huge change in current pay, work conditions
- Small magnitude of impact – 10% improvement = <150 HRH p.a.
FIFTY PERCENT INCREASE IN TRAINING OUTPUT POSSIBLE AND NECESSARY IN THE LONG TERM, BUT INSUFFICIENT

In an environment as resource-constrained as Tanzania, the potential to increase training throughput must be fully captured (Exhibit 17). Over the next 10 years, the total training capacity can be increased significantly by about 50 percent. However, even achieving this stretch goal would make only a modest dent in the total requirements in the near-term (2008), given the inherently long gestation period for impact from expanding training capacity and educating students, both in terms of numbers and effectiveness. For example, for medical officers, it can take as long as 7 years to set up facilities, recruit students and train the first batch of graduates. A 50 percent gain translates to an additional 10,000 HRH by 2015 (but only an extra 1,000-1,100 HRH in the system by 2008).

Exhibit 17

POTENTIAL TO TRAIN 10,000 ADDITIONAL HRH OVER 10 YEARS, BY INCREASING TRAINING CAPACITY 50%

<table>
<thead>
<tr>
<th>Approach and assumptions</th>
<th>Cumulative increase in HRH availability in Tanzania, with increase of 50% in training capacity 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Methodology</td>
<td>Medical officers (MO) 300 530 400 300. Assistant medical officers (AMOs) 530 300. Clinical officers (COs) 1,710 2,640. Nurse A 1,890 2,000. Nurse B 1,520 2,490. Lab technicians, technologists, etc. 360 360. Assistants 220 330. Total HRH 4,400 9,900. Corresponding totals for Year 2008 are only 1,010 and 660 respectively.</td>
</tr>
<tr>
<td>- Current training capacity numbers (from MoH, Care and Treatment Plan, interviews)</td>
<td></td>
</tr>
<tr>
<td>- Capacity adjusted upwards by 50%; netted against 5% dropout rate across skill levels</td>
<td></td>
</tr>
<tr>
<td>- Number of graduating trainees joining the public healthcare sector obtained by adjusting downwards for emigration (10% for MOs, reduces by skill level) and exits to the public sector (35%)</td>
<td></td>
</tr>
<tr>
<td>* Time for new capacity to be available (in years): Set-up time</td>
<td></td>
</tr>
<tr>
<td>Cadre</td>
<td>Training</td>
</tr>
<tr>
<td>Cadre</td>
<td>Setup Time</td>
</tr>
<tr>
<td>MO</td>
<td>2</td>
</tr>
<tr>
<td>AMO</td>
<td>2</td>
</tr>
<tr>
<td>CO</td>
<td>1</td>
</tr>
<tr>
<td>Nurse A</td>
<td>1</td>
</tr>
<tr>
<td>Nurse B</td>
<td>1</td>
</tr>
<tr>
<td>Lab technician, technologist</td>
<td>1</td>
</tr>
<tr>
<td>Assistants</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: Ministry of Health, Information Bulletin on School Database; Kurowski et al; HIV/AIDS Care and Treatment Plan; expert interviews; McKinsey analysis.

4 Within the short duration of our visit, it was not possible precisely to determine whether a 50 percent expansion in training output is realistic. However, discussions have suggested that it is a reasonable stretch target, achievable in light of the 50 percent expansion in training capacity for MOs and the optimistic scenario described in the 2003 HRDCL/LSHTM study.
Of these, only about 6,500 would possibly join the public healthcare system at current ratios by 2015. Even this will require substantial effort and changes beyond the health sector, in areas like secondary school education and training infrastructure.

Furthermore, the picture does not look the same across skill levels. In higher skill categories like MO and Nurse A, none of the new students would have even graduated by 2008. Even among AMO, only one class of new graduates would be available to the system by 2008. The increase in numbers in the medium term therefore will come from lower skill levels (e.g., CO, Nurse B, technicians). There are two obvious implications of this analysis. First, an increase in training capacity must be recognized as a long-term investment. Second, we must explore every opportunity to utilize lower skill categories to their fullest in the delivery of basic health services (this is explored later in chapter 5).

**LOW POTENTIAL AND UNREALISTIC PROSPECTS FOR INCREASING RETENTION**

Given the ageing HRH workforce and increased vulnerability to HIV/AIDS infection, involuntary attrition is expected to be high and difficult to curb. Voluntary attrition could be reduced by improving basic factors like pay, work conditions, career prospects and overall worker motivation, but these would be very difficult to improve due the financial constraints that Tanzania faces today. Most observers and HRH in Tanzania estimate that at least a doubling of public sector compensation would be required to fundamentally alter the appeal of the sector, and a tripling for higher skill levels like MOs. Since such an increase in real salary levels seems inconceivable with the overall financial constraints that Tanzania faces today, a significant change in voluntary attrition levels seems unlikely. Finally, even if a 10 percent improvement in reducing overall retention were possible, that translates to less than 150 health workers annually. These numbers will not be adequate to meaningfully increase overall HRH availability in Tanzania.
POTENTIAL TO ATTRACT BACK UNDEPLOYED TRAINED HRH IS LIMITED, BUT RECRUITMENT OF CURRENT TRAINING OUTPUT CAN BE STEPPED UP IN THE NEAR TERM

Anecdotal arguments are sometimes advanced holding that given the hiring freeze of the 1990s, significant numbers of trained HRH are either unemployed, working outside Tanzania, or working in sectors other than health in Tanzania. However, an approximate analysis suggests that the actual pool of trained but unemployed HRH is quite small (Exhibit 18). For example, trained clinical officers and nurses not working in the health sector in Tanzania total less than 5 percent of current levels. However, even if the pools of potential candidates were bigger, it is very unrealistic to believe that such highly skilled HRH would have stayed in Tanzania, but remained unemployed. Finally, even if some have stayed unemployed or are employed in other sectors in Tanzania, they would likely have to be retrained significantly to become productive in the HRH workforce again. Attracting back such HRH under current compensation levels and work conditions is a highly unrealistic proposition.

**Exhibit 18**

THE ACTUAL POOL OF TRAINED BUT UNEMPLOYED HRH MAY BE QUITE SMALL AND/OR NOT AVAILABLE

<table>
<thead>
<tr>
<th>Approach and assumptions</th>
<th>Trained HRH not employed in healthcare delivery in Tanzania 2002</th>
<th>As a % of actual availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Methodology for computing trained, but unemployed</td>
<td>Doctors (medical officers and specialized)</td>
<td>320</td>
</tr>
<tr>
<td>• Cumulative training output from 1994-95 to 2002, net of 1) upfront attrition (mostly emigration, 10% for medical officers and lower for lower skill levels + 2) annual attrition of 4%</td>
<td>Assistant medical officers (AMOs)</td>
<td>250</td>
</tr>
<tr>
<td>• Plus: HRH already in the system in 1994-95, net of annual attrition</td>
<td>Clinical officers (COs)</td>
<td>610</td>
</tr>
<tr>
<td>• A-G = trained HRH, not currently employed in the healthcare sector in Tanzania</td>
<td>Professional nurses (A and B)</td>
<td>3,370</td>
</tr>
<tr>
<td>• Negligible trained but unemployed resources at lower skill levels</td>
<td>Lab technicians, technologists, etc.</td>
<td>440</td>
</tr>
</tbody>
</table>

Source: MoH – Information Bulletin on School Database; Kukuwadi et al. (Ibid); expert interviews; McKinsey analysis
A more feasible and pragmatic proposition in the near term is to at least recruit into the public sector a higher number of HRH being trained currently. Current public sector hiring is estimated at 500 to 800 HRH versus an annual training throughput of about 2,500 HRH. Such targeted recruitment to fill in existing staffing gaps, especially in critically underresourced districts/facilities, will provide a short term respite to the HRH shortage.

**POTENTIAL FOR SIGNIFICANT (60 TO 75 PERCENT) PRODUCTIVITY GAINS FOR THE CURRENT WORKFORCE IN THE MEDIUM TERM**

Total HRH capacity is a function not just of the number of healthcare workers but also of the combined output of those individuals. For example, if 5 nurses can care for 50 patients in one setting, with outcomes no worse than in another setting in which the same 5 nurses care for 30 patients, then the real capacity in the first setting is higher than the second, even though the number of nurses is the same.

**Gain of 45 percent in effective HRH capacity by improving individual productivity**

The IHRDC/LSHTM study offers a highly valuable first definition of the potential for HRH productivity increases in Tanzania: productivity gains driven by “improved staff management and optimized staffing levels” (Exhibit 19). Using this definition, the study determines that the average health worker contributes only 57 percent of his/her potential output today and suggests a 26 percent point potential productivity gain (PPG), even within the current Tanzanian facilities set-up. This translates to about a 45 percent increase in output over today’s levels, by improving staff management and optimizing staffing levels.

**Additional impact from an expanded definition of productivity, by optimizing system levers**

HRH productivity can also be increased by optimizing (Exhibit 20): a) *individual work efficiency* on assigned tasks, through pragmatic use of simple enabling technologies for improved communication and transport; systematic on-the-job and continuous training; and availability of professional aids; b) *managerial effectiveness* through availability and use of basic managerial tools for planning,
**Exhibit 19**

**SUBSTANTIAL POTENTIAL FOR PRODUCTIVITY INCREASES**

<table>
<thead>
<tr>
<th>Current definitions of productivity concepts (HRDC/LSHTM case study on Tanzania)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Staff productivity:</strong> Time spent on</td>
</tr>
<tr>
<td>• Patient care</td>
</tr>
<tr>
<td>• Outreach activities</td>
</tr>
<tr>
<td>• Training</td>
</tr>
<tr>
<td>• Cleaning</td>
</tr>
<tr>
<td>• Preparatory and maintenance</td>
</tr>
<tr>
<td>• Research</td>
</tr>
<tr>
<td><strong>Potential productivity gain:</strong> Proportion of time spent on</td>
</tr>
<tr>
<td>• Breaks</td>
</tr>
<tr>
<td>• Waiting for patients</td>
</tr>
<tr>
<td>• Social contacts</td>
</tr>
<tr>
<td>• Unexplained absences</td>
</tr>
</tbody>
</table>

**Overall productivity – Research findings at 10 Tanzanian health facilities**
(based on relatively narrow definition of Individual productivity)

<table>
<thead>
<tr>
<th>Percent</th>
<th>36</th>
<th>38</th>
<th>48</th>
<th>52</th>
<th>53</th>
<th>65</th>
<th>68</th>
<th>70</th>
<th>74</th>
<th>74</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban dispensary 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural dispensary 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban dispensary 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural health center 1</td>
<td></td>
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<td>Rural dispensary 2</td>
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</table>

78% difference in productivity between top 3 and bottom 3 facilities

*Source: Human Resources for Health: Requirements and Availability in the Context of Scaling Up Priority Interventions – Case Study of Tanzania (October 2003, HRDC/LSHTM)*

**Exhibit 20**

**EXPANDED DEFINITION OF PRODUCTIVITY – INDIVIDUAL AND SYSTEM**

**ILLUSTRATIVE EXAMPLES – NOT EXHAUSTIVE**

- **Individual productivity enablers**
  - Use of simple enabling technologies for improved communication (e.g., 2-way radios, telephone facilities) and transport (e.g., motorbikes, weekly van service)
  - Systematic on-the-job and continuous training in clinical and managerial skills
  - Availability of professional aids (medical literature, newsletter/forums for sharing best practices)

- **Managerial productivity enablers**
  - Basic managerial tools for planning, accounting, forecasting, etc. for DHMTs
  - Patient flow management systems to encourage queuing, balanced workloads at different times of day
  - Downtime reduction through improved availability of drugs and medical equipment (through better drug management, planning, maintenance, etc.)

- **System productivity**
  - Flexibility in labor deployment across facilities to better match demand and capacity
  - Optimum configuration of the hospital-dispensary-health center network, in terms of location, services offered and referrals
  - Rationalization of skill levels and use of “multiskilled” workers
  - Use of private-public partnerships with private providers, NGOs, corporates; expanding access to public facilities for private specialists; shifting select specialist facilities to private institutions

- **Worker motivation**
  - Well-structured and targeted team incentives with appropriate recognition at a community level
  - Timely provision of basic amenities like reasonable housing, cost of living increases and on-call allowances
  - Structured job rotation and career development programs
  - Professional associations and “pride of membership”

*Source: Interviews with Tanzania and HRH experts; team analysis*
accounting, forecasting; more effective patient flow management systems; and improving the availability of drugs and medical equipment to minimize downtime; c) worker motivation through well-targeted team incentives; and timely provision of basic amenities and allowances; and d) the productivity of the overall health system through flexibility in labour deployment; optimum configuration of the hospital-dispensary-health centre network; rationalization of skill levels and use of “multi skilled” workers (e.g., non-clinican HRH deployed in the IMCI program); and wider use of private/public partnerships.

Estimated 60 to 75 percent total potential productivity improvement

The above levers offer the opportunity to achieve a dramatic increase in real HRH capacity without fundamentally altering the set-up of the current system or altering the make-up or demographics of the current population of healthcare workers. Tanzanian health experts estimate a total potential productivity gain of 60 to 75 percent potential gain in effective HRH capacity, i.e. capacity equivalent to an additional 19,000 to 24,000 HRH can be made available without hiring a single new worker.

THREE-PRONGED APPROACH IS RECOMMENDED

In the long run Tanzania must reverse the decline in absolute numbers of HRH by increasing training throughput. Nothing else will suffice. The productivity boost can address the more urgent need for HRH capacity across the system in the medium term. Both, productivity and training will not have immediate impact in the 6- to 24-month time frame, which can be addressed through a targeted hiring of trained HRH graduates. Hence, a three-pronged approach is required: a) Adopt a near-term “fix” of recruiting as much of the current training output of HRH into the public sector to fill priority staffing gaps, with emphasis on deployment and simplifying the recruitment process; b) adopt an urgent, national commitment to an integrated program designed to realize system-wide productivity gains of at least 60 percent over the medium term; and c) at the same time, begin a systematic program to increase long-term training throughput by at least 50 percent. All three areas need to be launched in parallel, although impact will show over different time periods.

The rest of the report primarily focuses on an approach to unlock the potential productivity gains.
3. Realizing Potential Productivity Gains

We believe that much of the potential productivity gains are attainable for two reasons. First, the core, *sine qua non* strategy for success is already central to the government’s current programs: effective decentralization. Second, there are a few proven district-level programs in Tanzania that build on decentralization to enable effective change that is the key to realizing productivity gains.

**ROLE OF "EFFECTIVE DECENTRALIZATION" IN ACHIEVING PRODUCTIVITY GAINS**

Achieving productivity improvement is about recognizing and making trade-offs: scarce financial resources deployed in one way, but not another; standard programs adapted and shaped to fit realities from locale to locale; multi-tasking in situations where standardized role descriptions are simply suboptimal. In the Tanzanian HRH context we define “effective decentralization” as: *Providing the senior healthcare administrator in each tertiary and regional facility and at the district level with the authority required, within the limits of controllable accountability, to make trade-offs based on particular local knowledge, in order to optimize productivity of available resources and to reach target outcomes.*

**"EFFECTIVE DECENTRALIZATION" NOT THE SAME AS FULL DECENTRALIZATION**

We believe that it is critical first to identify the key decision and action areas in the health system, and then to map, in a systematic exercise, the specific area to the appropriate authority level. Some aspects of healthcare delivery are perhaps best overseen at a central level, *e.g.*, health policy, pre-service training, and the setting of HRH salaries. Some are better handled at a district-level, *e.g.*, service delivery planning, monitoring of outcomes, network optimization. In some cases, regions and zones might be more helpful to provide critical mass for aggregating activities, *e.g.*, continuous education, managerial oversight, and performance management. In other cases, broad guidelines are best set at a central level, with enough flexibility given to districts to adapt to local circumstances. Creating a clear map up front of roles and responsibilities by level of government is also critical, especially given the number and diversity of districts in Tanzania and limited managerial capacity.
A NASCENT, BUT PROMISING RECORD OF DECENTRALIZATION IN TANZANIA

There are compelling examples of local success, where strong and committed leadership at the facility and district level has achieved desired outcomes, even without much of the accompanying toolkit in place. For example, 1) Tanzanian Effective Health Interventions Project (TEHIP), a collaborative venture between the Ministry of Health and Canada’s International Development Research Center (IRDC), which focuses on training and empowering DHMTs with planning, information and managerial tools and training to expand and improve the delivery and use of health interventions suitable for the district (Exhibit 21); 2) Flexibility in use of cost sharing revenues, introduced in the mid-1990s by the government – an evaluation of the program in 1999 suggests that a majority of stakeholders believe that quality of healthcare has improved after introduction of user fees, in terms of availability of adequate drugs, doctors and nurses, etc. Anecdotally, we have been given to understand that a few innovative and proactive CHMTs and DHMTs have begun to do this successfully. However, broad-based impact will require clear guidelines for others to follow suit; 3) Non-health decentralization/local government reform show some progress in most of the Phase I districts. Performance assessment and consequence management has also been initiated for the first time, although in a limited manner.

VEHICLES EXIST TO EXECUTE THE PRODUCTIVITY STRATEGY THROUGH EFFECTIVE DECENTRALIZATION

Rather than starting de novo an HRH productivity exercise can be rolled out by leveraging several existing vehicles, optimized with a modest increase in scope, resources and speed of implementation. These vehicles have proven results, good support in Tanzania, fit with the government’s overall decentralization paradigm, and flexibility to incorporate an HRH productivity toolkit. There is no alternative to adopting existing vehicles, as there is no time to launch pilots for a new productivity-boosting vehicles. Potential vehicles include TEHIP (with its successful programs in Morogoro and Ruffiji rural districts), GTZ-sponsored district programs (in North Tanzania in Tanga), the district-focused IMCI program (the program has recently been evaluated in Tanzania), the Dar es Salaam Urban Health project, and the DANIDA-supported district programs in Kagera, to name a few.
### Exhibit 21

**EXAMPLE: TEHIP HAS BEEN TESTING DISTRICT-LEVEL TOOLS FOR PLANNING, PRIORITY SETTING AND RESOURCE ALLOCATION**

<table>
<thead>
<tr>
<th>Elements of the TEHIP toolbox – not exhaustive</th>
<th>Description</th>
<th>Contribution to productivity improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>District burden of disease profile</td>
<td>* Graphical, readily accessible illustration of local disease profile and statistics</td>
<td>* Enables CHMTs in planning to determine optimal allocation of resources</td>
</tr>
<tr>
<td>District cost information system</td>
<td>* Custom database storing information from health facility patient registers</td>
<td>* Improves efficiency of delivery of essential health interventions; facilitates inter-facility comparison</td>
</tr>
<tr>
<td>District health service mapping</td>
<td>* Computerized tool that assists CHMTs in managing health management information at a district level</td>
<td>* Facilitates efficiency in service delivery, in an evidence-based manner</td>
</tr>
<tr>
<td>Strengthening district health management</td>
<td>* Training courses: ‘Strengthening health planning’ and ‘Ten steps to a district health plan’</td>
<td>* Strengthens health care planning, management and administration</td>
</tr>
<tr>
<td>District Integrated management cascade</td>
<td>* Functional hierarchy below CHMT for distribution of supplies, training, monitoring, communications, feedback</td>
<td>* Enhances autonomy of decision making at facility-level, participation of frontline workers in district health activities and HSR implementation</td>
</tr>
<tr>
<td>Project operations committee meetings</td>
<td>* District-level meetings with participation from stakeholders across the district</td>
<td>* Strengthens performance monitoring and improved financial reporting</td>
</tr>
<tr>
<td>Community voice; ownership of facilities</td>
<td>* Surveys to elicit community preferences and feedback; mechanisms for sustainable facility management</td>
<td>* Ensures service delivery meets user needs; increases grass-roots resources for facility staffing, rehabilitation, etc.</td>
</tr>
</tbody>
</table>

Source: Interviews, TEHIP literature, IDRC Website

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**FIVE KEY ELEMENTS IN THE HRH PRODUCTIVITY TOOLKIT**

A toolkit to optimize these district-level efforts to capture HRH productivity gains potentially represents one of Tanzania’s best chances to significantly expand HRH capacity in the next 5 to 10 years. Applying this toolkit in a systematic way to regional and tertiary facilities will help to wring out latent productivity at those levels as well. The toolkit would also include levers to gain more control over factors that contribute to superior local trade-offs in decision making. We would emphasize the following five elements, discussed in Table 1, as necessary parts of this HRH toolkit to maximize productivity gains:
<table>
<thead>
<tr>
<th>Suggested action areas</th>
<th>Supporting rationale</th>
</tr>
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<tbody>
<tr>
<td><strong>1. Map key roles and responsibilities to the appropriate level of decision making across various levels of government (central, zonal, regional, district, village)</strong>&lt;br&gt;• Launch a systematic exercise to detail the major areas related to HRH&lt;br&gt;• Outline actions related to policy and guideline setting, component design and delivery for each area&lt;br&gt;• Map actions to the 5 levels of government to develop a clear hierarchy of decision making. Criteria to identify the appropriate level include the need for standardization versus customized response; critical mass required for effective and efficient service provision; available manpower and physical infrastructure</td>
<td>Push levels of authority and decision making to the appropriate level of government for “effective decentralization.” For example, to ensure optimal and equitable distribution of HRH, recruitment and deployment should be handled centrally, giving the government more freedom to rotate HRH between districts and implement incentives for hardship postings. Pre-service training, accreditation, cadre rationalization, negotiation of pay scales may be other areas that could be handled centrally. On the other hand, many actions are best taken at a district level, based on evidence of what a district needs, available resources and community feedback; e.g., prioritization of health programs, program design, HRH staff level by facility, facility locations, and locally tailored performance incentives</td>
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<tr>
<td><strong>2. Fully harness the potential of effective continuous education to enhance productivity</strong>&lt;br&gt;• Develop robust strategy for continuous education, including, a) growing number of fully functioning ZTCs from 2 now to 8–9 over time; b) expanding range of training programs, particularly for healthcare administration and managing for productivity; c) attracting competent trainers; d) clarifying roles and responsibilities across training facilities; e) exploiting synergies in curriculum design, teaching materials, instructors, and physical infrastructure between pre-service and continuous education&lt;br&gt;• Clarify the legal status of ZTCs and other continuous education facilities between the MoH and PORALG&lt;br&gt;• Substantially increase funding for continuous education. Also address the issue of allowances for trainees to make continuous education economically viable. Options include making the allowance a supplemental source of income or providing credits post-training that can qualify for a bonus or promotion</td>
<td>Effective and timely continuous education is critical to unlocking productivity. For example, two Zonal Training Centres (ZTCs) – Arusha (CEDHA) and Iringa – have been instrumental to success in the first TEHIP districts. TEHIP’s program managers have leveraged and expanded capabilities in these ZTCs to conduct all the training and tool development for the pilot districts. Both districts have a budget earmarked for training, with a heavy emphasis on needs-based clinical and managerial (planning, financial, budgeting, HR) training. However, significant effort is required to upgrade the facilities and capabilities of the ZTCs, which are mostly operating well below even basic potential. Second, the status and role of ZTCs between the MoH and PORALG is unclear, causing jurisdictional friction. Other related policy measures that must be driven centrally include a comprehensive review and rationalization of skill levels, and establishment of quality control processes such as school accreditation and certification of graduates. Some of these action areas may have policy ramifications that must be resolved expeditiously</td>
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<tr>
<td>Suggested action areas</td>
<td>Supporting rationale</td>
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<tr>
<td><strong>3. Create the capacity and mechanisms to provide simple and meaningful bonuses and incentives and performance management at the local level</strong></td>
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<tr>
<td>- Provide the financial capacity at the district and facility levels to create and implement structured performance rewards for strong productivity performance</td>
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<tr>
<td>- These incentives need not be cash, but could be oriented to professional enhancement (e.g., transport and communication equipment, training), geared towards both individual and team performance</td>
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<td>- Incentives need not be made available to all units, but only to those that meet threshold performance standards</td>
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<tr>
<td>- Furthermore, they need not be too expensive. Discussions suggest a starting level that adds up to about 20 percent of base compensation would be considered meaningful</td>
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<tr>
<td>Tanzania must break through and find a way at least to double HRH compensation levels. Nothing will attract and retain health professionals if they cannot be guaranteed a wage comparable to other options. However, we accept that this problem cannot be resolved within current constraints. Locally tailored discretionary funds to motivate HRH could be an interim step to increase incentives. Such a fund for performance incentives builds on the philosophy of cost-sharing revenues being used by facility managers to improve the quality of services. The proposal here is to increase the resource pool for facility managers and make the use of funds more flexible to include performance incentives for HRH. These funds should be subject to the discretion of the facility manager, tied to specific productivity performance goals to guard against misuse. A combination of policy change and detailed design appears required to create this lever</td>
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<tr>
<td><strong>4. Implement the HERA study recommendations to increase local accountability in lockstep with rollout of productivity toolkit, including the required investment in Health Management Information Systems (HMIS)</strong></td>
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<td>- Potential approaches to establish accountability include a) partial performance assessments of DHMTs and willingness to manage the consequences of poor performance (e.g., PORALG); and b) health service contracts for service delivery and health outcomes</td>
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<td>- The HERA report contains detailed recommendations to ensure adequate, reliable, and timely data is available for making managerial decisions and monitoring performance. Ways to strengthen community involvement in performance monitoring of health facilities should also be explored, e.g., patient and community satisfaction surveys. Cost-sharing survey is illustrative of tools for tracking spending effectiveness</td>
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<tr>
<td>Report on Technical Review of Health Service Delivery at district level conducted by Health Research for Action (HERA) group in March 2003 contains specific provisions to change the structure and flexibility of district, tertiary, and regional facility budgets, and ensure local accountability for expenditure control. Process of providing autonomy to district health management councils should be uncoupled from decision to provide autonomy for entire district. Linking the two decisions will result in suboptimal levels of autonomy and accountability for districts that have successfully adopted the HRH productivity toolkit and are committed to having or have already an established performance record. An effective HMIS is also critical for making decisions on HRH planning, deployment, training, performance management and other decisions. More effective facility-based routine health information systems are also needed to track and report basic information; e.g., financial information, drug availability, service coverage</td>
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</table>
5. Allow optimization of the service delivery structure, including, e.g.,
   - Flexibility to move HRH across facilities
   - Relocating dispensaries by need
   - Clear articulation of service standards for each tier with requisite skilled HRH, equipment and medical supplied
   - Instituting feedback loop between tertiary and regional hospital, health centre and dispensary to check against wrong referrals and ensure quality control on service delivery at lower levels
   - Shared incentives across levels for referrals, case load management

<table>
<thead>
<tr>
<th>Suggested action areas</th>
<th>Supporting rationale</th>
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<tbody>
<tr>
<td>Potential for productivity gain by optimizing the network of the facilities, between and among regional hospitals, health centres and dispensaries, Guidelines for allocation of new facilities should be developed to ensure broad consistency and adherence to overall health goals of equity and coverage. Districts and regions should have adequate flexibility to make changes within these guidelines, so that solutions can be optimized for a district's requirements.</td>
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This report is not intended to provide a comprehensive action plan for various stakeholders in Tanzania. Hence, the key success factors discussed in the previous table should be viewed as prerequisites for success and not a “recommended course of action.” Further, we have focused on productivity enablers in much of this section. Similar actions need to be taken to realize the other two aspects of the recommended approach, namely the short-term actions to increase hiring and the long-term action to expand training capacity. In Table 2, we highlight a few of the action areas required to realize the potential from these avenues.
<table>
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<tr>
<th>TABLE 2: SUGGESTED ACTION AREAS TO INCREASE TRAINING THROUGHPUT</th>
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<tr>
<td>1. Strengthen quality and quantity of secondary school output via supplementary programs to increase pool of potential HRH students. Muhimbili University, for example, is experimenting with a 6-week intensive supplementary training program for women students who do not meet the entry-level course requirements. Early results are encouraging, with 77 of the first batch of 80 women fulfilling their course requirement satisfactorily. The Hubert Kairuki Memorial University has introduced an additional 1-year post-secondary school training period to adequately prepare students for the academic requirements of medical education. Similar efforts are needed to increase secondary school enrollment and graduation rates, encourage focus on and support for basic sciences subjects and provide pre-medical school preparatory training.</td>
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<tr>
<td>2. Galvanize political commitment and planning to step up investments in training capacity, including physical infrastructure, teaching staff resources and materials. Options include a) partnerships with the private sector to fund or fully set up and operate training facilities; b) targeted donor support for innovative training models; c) collaboration with foreign schools for transfer of learnings and resources (e.g., distance-based learning, Web-based training programs, student exchange programs, sharing of teaching pedagogy, curriculum and materials, visiting faculty, regional schools for critical mass); and d) government, donor and private sector support for financing students through loans, grants and scholarship programs. In parallel, fully leverage ways to rationalize current cadres and optimize the productivity of the training system (e.g., reduce drop out, modify curriculum).</td>
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In parallel, ways to lift the recruitment freeze selectively must be explored for Tanzania to take full advantage of the expanded training capacity. In the absence of these actions, investment in training capacity would not yield the desired impact.

Finally, as described earlier, in the immediate 6- to 24-month window, the government can undertake pragmatic and targeted recruitment of HRH to fill priority gaps, in line with its current staffing norms. To do this effectively, a few areas discussed in Table 3 must be addressed.
<table>
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<tr>
<th>Suggested action areas</th>
<th>Supporting rationale</th>
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</thead>
<tbody>
<tr>
<td><strong>1. Partially relax the hiring freeze</strong> to fill at least the critical gaps in priority districts, in line with government-mandated staffing norms.</td>
<td>The public sector currently hires only 500-800 HRH annually, despite an annual training output of ~2,500, attrition levels that are higher than intake and in light of glaring vacancies across districts.</td>
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<tr>
<td><strong>2. Simplify hiring processes and help priority districts fill gaps.</strong> Simplify forms and procedures for recruitment. Provide targeted training to DHMTs to comply with CSD rules. Provide targeted support to priority districts with the most glaring gaps to ensure successful hiring</td>
<td>Recruitment of HRH has been decentralized and DHMTs have to liaise directly with the Civil Services Department. However, few DHMTs fully understand the processes for hiring and have the capabilities to complete the requirements, resulting in an often ad-hoc, variable hiring pattern.</td>
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<tr>
<td><strong>3. Provide interim allowances to help attract HRH to hardship districts.</strong> To ensure that these allowances are not counterproductive to any long-term actions, they could be linked to hardship/rural postings, improvement in work or living conditions, etc.</td>
<td>Many of the gaps are likely in underserved districts which cannot attract HRH under current work and pay conditions. An interim set of incentives may be needed to overcome this barrier in the short term, even as a more structured incentives package is being developed.</td>
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</table>
4. A Good Start, but Much More Needs to Be Done

The recommended strategy to boost effective HRH capacity leaves two key questions: Is it affordable? and, will this strategy be adequate to make available the HRH to achieve Tanzania’s priority health outcomes? The answer to the question about costs is encouraging, but much more than the “three-pronged strategy” is needed to accelerate time to impact for HRH sufficiency.

**ONLY AN EXTRA $1 PER PERSON PER ANNUM TO EXECUTE THE STRATEGY**

Using outside-in estimates and rough projections, we have broadly estimated the one-time infrastructure and capital investments, as well as the ongoing recurring expenditure for executing the strategy (Exhibit 22). Accordingly, combined incremental costs will be in the neighborhood of $110 million for one-time capital expenditures, and $40 million to $45 million (or roughly $1 per person) in recurring annual expenditures. These estimates are explained in Table 4.

**Exhibit 22**

**TOTAL COST OF INCREASING PRODUCTIVITY AND TRAINING OUTPUT**

### Costs for productivity increase of 60-75%

- Annual recurring expenditure increases from ~$2MM in 2005 to $7.5 MM in 2008 to $25 MM in 2010 steady state
- $4 MM of total $11 MM is training allowances
- Upgrading ZTCs
  - 11
- Improving availability of drugs, supplies
  - 7
- Provision for performance incentives
  - 7
- Annual recurring costs -2010
  - 25
- One-time capital cost of $65 MM-75 MM spread over 5 years
  - Classroom, training facilities
    - 3
  - Housing facilities
    - 8
  - Upgrading all health facilities
    - 57
  - Total one-time capital costs
    - 68

### Costs of boosting training throughput by 50%

- Annual recurring expenditure increases from ~$3 MM in 2005 to $16 MM in 2010 to $20 MM in 2015
- Variable expenses (salaries, materials)
  - 9
- Fixed expenses (facility, IT)
  - 4
- Salaries for new HRH trained/hired
  - 3
- Annual recurring costs -2010
  - 16
- One-time capital cost of $40 MM-45 MM spread over 6 years
  - Classroom, lab, training facilities
    - 30
  - Housing facilities - students, teachers, staff
    - 11
  - Total one-time capital costs
    - 41

*Source: Interviews, literature search, McKinsey analysis*
### TABLE 4: HIGH-LEVEL PROJECTIONS OF COSTS FOR INCREASING HRH CAPACITY FROM PRODUCTIVITY GAINS AND EXPANDING TRAINING OUTPUT

<table>
<thead>
<tr>
<th>Area</th>
<th>One-time capital investment</th>
<th>Annual recurring expenditure</th>
<th>Total projected costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Cost of achieving productivity gains</td>
<td></td>
<td></td>
<td>$65 MM-75 MM in capital expenditure; $25 MM-26 MM p.a. in recurring expenditure</td>
</tr>
<tr>
<td>1. Cost of improvements on the job</td>
<td>$55 MM-60 MM over 3-5 years (to improve quality of existing healthcare facilities, modernize infra-structure and improve work conditions)</td>
<td>$14 MM p.a. (to improve availability of medical supplies, provide 20% compensation increase for team performance incentives)</td>
<td></td>
</tr>
<tr>
<td>2. Cost of improvement in continuous education</td>
<td>$10-15 MM over 3-5 years (to revamp continuous education facilities, including ZTCs)</td>
<td>$11 MM-12 MM p.a. ($3 MM-4 MM for incremental training resources and $8 MM in trainee allowances)</td>
<td></td>
</tr>
<tr>
<td>B. Cost of increasing training output by 50% over 10 years</td>
<td>$40 MM-45 MM over 6 years (expand/improve facilities; much existing infrastructure can also be leveraged)</td>
<td>$12 MM-13 MM p.a. (training costs, some of which could be defrayed by student co-payment)</td>
<td>$40 MM-45 MM in capital expenditure; $15 MM-20 MM p.a. in recurring expenditure</td>
</tr>
<tr>
<td>1. Cost of expanded training</td>
<td>N/A</td>
<td>$3 MM p.a. average over 2004-13, growing at $1 MM p.a. ($7.5 MM-8 MM in 2013)</td>
<td></td>
</tr>
<tr>
<td>2. Cost of salaries for new hires</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**HIGH FEASIBILITY OF INCREASED EXPENDITURE . . .**

The annual increment represents only a 15 to 20 percent increase over the total annual healthcare expenditure in Tanzania currently and would increase annual public sector health spending from about $6 per person per year to a little more than $7. This is still much lower than the $34 per capita recommended by the Commission on Macroeconomics and Health to achieve the MDGs. The one-time capital expenditure translates to about $3 per capita and only about
35 to 40 cents per person per year, when amortized over 10 years. Looked at differently, the annual increase would bring total health expenditure as a percent of GDP to a little over 3.0 percent versus 2.6 percent today. The annual recurring expenditure of $40 million to $45 million represents only a 30 percent increase over current aid levels in health, over a 10 year period and much lower in the initial years. If the one-time capital expenditure of $110 million is included, the total increase in recurring and capital expenditure represents a 50 percent increase in required donor aid. Donor aid in health has been growing at 20 percent annually since 1999 and given the current momentum and increasing funding for health at a global level, these increased spend levels seem manageable. In summary, one way or another, the donor community and Tanzania can afford this spend.

Of course, over the long term, public sector HRH salaries may have to rise significantly to sustain this change and momentum (over and above the 10 to 20 percent incentives that form a part of the HRH productivity toolkit). This increase has not been factored here.

**... BUT FINANCIAL BOTTLENECKS NEED TO BE ADDRESSED**

More importantly, significantly greater clarity is needed on how funding flows within and between ministries and from donor agencies to various programs. Although the funding levels are manageable, unless funds flow smoothly towards the HRH efforts identified, there will be little impact. This calls for strong coordination between the MoH, MoF, CSD and PORALG in budgeting, agreeing on funding patterns, roles and responsibilities, etc. Further, donors need to actively work with the government to ensure that their funds are directed in a timely and effective manner, especially in a set-up where most funds go into a common SWAP basket and health system strengthening priorities like HRH may not get adequate focus.
IMMEDIATE ACTIONS NEEDED, GIVEN MINIMUM LEAD TIME OF 10 YEARS TO REALIZE FULL IMPACT

To measure impact against Tanzania’s HRH needs, it is important to understand timelines for each element.

Productivity gains

The pace of successful ramp up will be materially influenced by progress on the key success factors described earlier. Exhibit 23 shows one possible rollout plan for TEHIP. Based on the TEHIP experience in the initial two districts (7 years) and PORALG’s own experience in getting Phase I districts to a minimum level of performance (3 years), we have assumed that full productivity gains will accrue in a district over 4 years. Based on these assumptions, we can project approximately a 15 percent productivity gain across districts by end 2008 (5 years) and 60 to 75 percent gain by end 2013 (10 years). These projections are contingent on these actions being launched immediately in 2004-05 and key conditions for success being in place. The 22 tertiary and regional hospitals, which do not fall under the jurisdiction of the districts and PORALG, need a similar productivity exercise. Such an exercise can be led from the Department of Hospital Services, in the Ministry of Health, which is most likely the natural owner of such an effort.

Increases in training output

Increasing training throughput involves an even longer gestation period, one that increases with skill level. Based on discussions with informed observers in Tanzania, we expect a 1- to 2-year set-up time to develop a plan to increase training output, attract resources, set up physical infrastructure, and attract students, in addition to the required training period for each skill level. We project a cumulative total of 10,000 additional HRH to be trained by 2013-14, of which about 6,500 might join the public sector (Exhibit 24). By 2008 the numbers are not likely to be higher than 1,050 and 650 respectively.
**Exhibit 23**

**TIMELINE TO CAPTURE GAINS IN HRH CAPACITY – BY INCREASING PRODUCTIVITY BY 60-75%**

Cumulative increase in additional HRH trained, by increasing productivity by 75%

![Graph showing cumulative gain from productivity across the system, district-level cumulative gain, and regional- and tertiary-level cumulative gain over 2004-2015.]

Effective capacity increase equivalent to 23,000-29,000 HRH over 2015, and 6,000-8,000 HRH by 2008

Source: McKinsey analyses; Interviews with Tanzania experts

**Exhibit 24**

**TIMELINE TO CAPTURE GAINS IN HRH CAPACITY – BY INCREASING TRAINING CAPACITY BY 50%**

Cumulative increase in additional HRH trained by increasing training capacity by 50%

![Graph showing total additional HRH trained, additional HRH likely to join the public sector over 2004-2015.]

Almost 10,000 additional HRH trained by 2015, of which about 6,500 for the public sector

Source: McKinsey analyses; interviews with Tanzania experts
**A GOOD START, BUT MUCH MORE REMAINS TO BE DONE**

We earlier described three possible aspirations for increased HRH levels in Tanzania: **Level 1** reverses the attrition in the size of the HRH workforce and achieving growth in numbers equivalent to population growth; **Level 2** provides, above the Level 1 aspirations, incremental HRH needed by the HIV/AIDS Care and Treatment Plan; **Level 3**, over and above Level 2, provides HRH sufficient to meet the Millennium Development Goals (Exhibit 25).

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**Exhibit 25**

CONTINUING SUPPLY-DEMAND GAP CALLS FOR ADDITIONAL “OUT-OF-THE-BOX” SOLUTIONS

Public sector HRH 2008 and 2015

<table>
<thead>
<tr>
<th>Year</th>
<th>HRH availability (public sector)</th>
<th>Level 1: Reverse attrition in size of workforce and achieve growth in numbers equivalent to population growth</th>
<th>Level 2: Level 1+ meet extra HRH needs of HIV/AIDS Care and Treatment Plan</th>
<th>Level 3: Level 2+ meet needs of MDGs, to guarantee minimum health outcomes in priority areas for all Tanzanians</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>40,000-42,000</td>
<td>39,000</td>
<td>48,000</td>
<td>78,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No gap</td>
<td>6,000-8,000</td>
<td>36,000-38,000</td>
</tr>
<tr>
<td>2015</td>
<td>60,000-66,000</td>
<td>45,000</td>
<td>54,000</td>
<td>119,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No gap</td>
<td>No gap</td>
<td>53,000-59,000</td>
</tr>
</tbody>
</table>

Source: McKinsey analyses; interviews with Tanzania experts

- **Within 10-12 years.** Even by 2013-15, with the full impact of the conventional strategy in place, meeting the HRH requirements for the MDGs will be a challenge. However, Tanzania can meet the Level 1 and Level 2 goals, assuming the productivity gains and increases in training throughput have been fully realized.

- **Within 5 years (2008).** Achieving even Level 2 will be a challenge in the medium term. Although the basic aspiration of Level 1 can be reached by
2008, the shortfall against Level 2 could be 6,000 to 8,000 HRH, about 20 percent of the available HRH in the public sector or most of the 9,300 HRH requirement of the Care and Treatment Plan. Level 3 attainment in this time frame is inconceivable. One way the government can mitigate the consequences of the Level 2 shortfall is to enlist a broad partnership of players to take the lead in implementation of the Care and Treatment Plan, for example, private sector health providers, corporations (through workplace programs), and international agencies (like NGOs). This partnership would have a stretch target, as the private sector is expected to have a total of 19,000 HRH in 2008, so the 6,000 to 8,000 HRH shortfall represents a demand above that of no less than 35 to 40 percent.

By assuming today’s constraints on the healthcare system in Tanzania, these scenarios provide a useful, quantitative “reality check” of such aspirations as the HIV/AIDS Care and Treatment Plan and the MDGs. They convey the true magnitude of the HRH challenge, especially in the near and medium term and argue for an even greater level of engagement by the international community in finding a solution. The question therefore arises, “What innovative options and more unconventional strategies can and must be explored by the global community and Tanzanian government to meet the HRH requirements?”
5. A Call for “Out-of-the Box” Solutions

Tanzania can achieve major increases in HRH capacity and at reasonable cost. However, much more needs to be done to ensure adequate HRH capacity to help Tanzania meet its priority health goals. Within the scope of this effort, we have not attempted to look at the full range of possibilities nor to develop targeted solutions, but we have begun to explore some options. The measures we have looked at are by no means proven, exhaustive, or even achievable in the short term; they are intended to initiate a dialogue and stimulate innovation in the areas they address.

We have focused on four areas that have repeatedly appeared as enablers of or major barriers to success in our discussions with health experts and practitioners in both Tanzania and other developing countries:

1. Redefining the basic rules of HRH supply, with a particular focus on:
   • Redefining cadres and responsibilities, so that less educated HRH can do more
   • Stimulating private sector participation

2. Increasing donor impact – what to avoid, do more of, or do differently

3. Creating effective managerial capacity

4. Encouraging effective governance in health

1. REDEFINING THE BASIC RULES OF HRH SUPPLY

The HRH shortfall in the public health sector in Tanzania is unbridgeable if current rules are accepted. Beyond the targeted productivity gain, only a 200 to 300 percent increase in training throughput in many cadres can make up the difference. Even if such an increase were possible, two immutable problems would remain: a) 5 years out senior cadre training would still be under way for almost all who enter the system even starting today; and b) the healthcare sector’s intake of secondary school graduates would have to climb substantially in a constrained environment. In this context, two questions arise, suggesting alternative approaches: 1) can service provision be redefined so that a higher share of the work is undertaken by more junior cadres? and 2) can the private sector be encouraged to assume a much greater responsibility for the public health case load, even if only temporarily? We explore each of these questions below.
Redefinition of cadre roles

Tanzania can build on its success in experimenting with cadres of health workers tailored to its unique circumstances. “Clinical Officers,” for example, have helped provide meaningful clinical capacity, especially in rural and underserved areas at the lowest tiers of healthcare delivery – in dispensaries and health centres. This kind of innovation could be pushed even further. One such analysis suggests that for priority interventions, the majority of HRH (55 to 60 percent of all resources) will be required at the dispensary level, which is the lowest infrastructure level and a majority of the required resources fall into the category of nursing and midwifery skills (almost 50 percent of HRH), followed closely by basic medical skills. Such a zero-based analytical approach to redesign HRH cadre roles and responsibilities, combined with a pragmatic assessment of the realities of healthcare service delivery in a resource-constrained setting like Tanzania, could open up additional avenues for redefinition of cadre roles. For example, nurses might be able to take on more of the roles of clinical officers. Multi-skilled workers might be deployed across a range of tasks, thus reducing the numbers of specifically trained cadres. HIV/AIDS clinics could be run largely with clinical officers and trained nurses, supervised by only one qualified doctor, along the lines of the experimental programs in Kenya and other parts of sub-Saharan Africa launched by Médecins Sans Frontières (MSF). These suggestions, if implemented, would not negate the much-needed upgrading of skill levels in Tanzania. They are intended instead to address Tanzania’s urgent HRH crisis in the short and medium terms (which cannot wait for enough doctors to be trained over 10 years), while the gradual upgrading of skill levels in the long term continues in parallel.

Stimulating private sector participation to meet public health needs

We believe that the private sector can become meaningful third front in fighting the overall health and HRH challenge; however, its potential has so far been underexploited. There has been little by way of a structured plan or incentives to involve the private sector as a partner in the health sector. In fact, barriers to the growth of the private sector remain significant; for example, the lack of
adequate capital or a legal and institutional framework to guide and regulate private participants. At least three broad axes should be explored to engage the private sector more productively in health to complement government resources:

- **Provision of training or healthcare delivery by the private sector**

  1. The private (for-profit and nonprofit) sector could be allowed to offer training programs for cadres with a shortage in training capacity, subject to strict capacity and quality norms prescribed by an accreditation body. New financing mechanisms like bank loans, corporate sponsorships or donor aid could be established. Graduates who do not join the public sector could become licensed practitioners in specific geographies. The government could also offer tax breaks, soft loans, and other incentives for professionals to set up practice in underserved geographies.

  2. Private nonprofit hospitals and other health facilities could be more actively involved in a mutually beneficial partnership with the government to further extend their services and build additional capacity in underserved regions.

  3. The private sector can augment the public sector in healthcare delivery. A structured approach to licensing HRH and thoughtful incentives for sharing of skilled resources between public and private facilities could be helpful. Another option might be to focus the public sector on delivery of an essential package of interventions and free up resources from non-essential areas that the private sector could be encouraged to develop. Obviously, these options need to be carefully designed.

- **Outsourcing of supporting systems like drug supply chain or health information systems.** A second area to explore could be the subcontracting of services to private players, with clear service contracts, enforcement clauses, and accountability. For example, some international NGOs have credible expertise in social marketing of products and programs and their support could be enlisted in areas like vaccination, condom and bed net distribution. An international agency is working closely with the Ministry of
Health of Kenya to revamp drug management systems to ensure a steady and reliable supply of quality drugs across districts. In Tanzania, the malarial bed net program is an example of a successful public-private partnership – Tanzania today has a vibrant local supply base for insecticide-treated nets (ITNs) with three local companies making ITNs, versus a situation 3 years ago, which was defined by shortages and the need to import.

- **Involvement of private non-health corporate players in health.** Finally, the corporate sector can be a critical partner for the government. Corporations, especially in sub-Saharan Africa, are increasingly realizing that their contribution in ensuring a healthy productive workforce is critical to profitable operations. Examples abound of such partnerships with corporations in Africa (e.g., ACHAP in Botswana with Merck and the Gates Foundation; workplace programs for HIV/AIDS provided by several multinational corporations in Africa; advice on supply chain management for drugs from consumer goods companies). The government of Tanzania can proactively explore the possibility of such partnerships with local and multinational corporations (e.g., in mining, oil exploration, consumer goods) to leverage their assets and skills through tax incentives, sponsorship of districts and/or facilities, etc.

## 2. INCREASING DONOR IMPACT

International aid donors have been central to Tanzania’s ability to make progress in the development of its healthcare delivery capability and will continue to play that role. Tanzania attracts $36 per capita in aid, much higher than the $21 per capita average in sub-Saharan Africa. Going forward, donors must help Tanzania invent new approaches to address the HRH gap. A few avenues for such innovation are described on the following pages.
Increase funding for health and HRH significantly

As generous as donors have been, there is room for them to do more and their existing efforts may not yield results unless they substantially increase support. Even the modest investments cited in chapter 4 are unlikely to be generated by Tanzania itself in the near-medium term. We acknowledge the debate on sustainable levels of funding in social sectors. However, at the current level of fiscal austerity, Tanzania will soon face a full-blown public health crisis and a major reversal of health gains. Failure to act now will exacerbate problems in all areas, making them far more expensive and difficult to correct down the road. Social sectors like health and education typically require disproportionate investment upfront with a longer timeline for impact. Managing public spending on social sectors at long-term sustainable levels may not be possible in the early years. Of course, countries and technical agencies need to demonstrate a positive and sustainable cost-benefit from investments in health and HRH.

Mitigate the negative impact of vertical programs

Donors have traditionally supported vertical programs over systemwide efforts. Vertical programs, however, tend not to “add” to the overall healthcare system and instead merely transfer resources from other areas of less emphasis. Integrated service delivery and streamlined training programs have become casualties of donor-specific programs. Tanzania needs to augment its HRH, not merely shuffle the allocation of insufficient resources. Given donors’ limitations and their need to demonstrate impact to their home constituencies, donors could assess systematically the HRH impact of a program – its positive and negative HRH-related externalities, its overall impact on the healthcare system, and its specific measures to mitigate negative consequences. In this context, special attention must be drawn to actions of potential donors and contributors to the HIV/AIDS Care & Treatment Plan. The Plan demands 9,300 HRH by 2008 for provision of ARV treatment. It is very probable that as funding flows into the Plan, doctor resources will be diverted to HIV/AIDS and more urban care facilities, thus depriving other priority areas of health resources, especially at the district level. Donors to these programs need to be careful in assessing the impact of their actions at the system level, and must include in their grants conditions that make the delivery of HIV/AIDS care and treatment
complementary to an overall strengthening of the health delivery system. Such conditions could include broadly strengthening hospital and lab facilities; ensuring that the coverage targets for key HIV/AIDS interventions are consistent with the level of HRH in the system; tracking health system indicators in addition to HIV/AIDS program indicators; insisting on fresh recruitment of HRH to meet required resources and not reallocation; contributing to the overall strengthening of in-country drug management, supply and logistics; and encouraging the government to tap partnerships with NGOs and the private sector versus a go-it-alone model.

**Question “sacred cows” on what donors will and will not fund**

Donors have traditionally shied away from funding routine needs like drugs or health worker salaries, arguing that it does not create long-term assets or capacity and, instead, fosters an unsustainable dependency on aid. However, as demonstrated repeatedly in Tanzania and other countries in sub-Saharan Africa, funding infrastructure and research will yield no results if the basic drugs and human resources for delivery are not in place. Instead, donors need to explore new approaches to address these gaps, e.g., revolving purchase funds for medicines, pooling country demand to benefit from reduced prices. Similarly, we challenge donors to create programs that enable them to contribute to the HRH productivity enhancement effort.

**Go beyond cash alone**

TEHIP has demonstrated that impact on the ground can be achieved by means other than cash. TEHIP’s results are only partly due to its modest $10 MM funding stream over 7-8 years. Equally or even more critical to the success of TEHIP has been the two experts IDRC assigned to provide partnership and co-management along with the MoH for the entire duration of the effort. Cash backed by such elements as soft skills, managerial capacity, IT systems, drug management/procurement know-how, collaborative partnerships and quality accreditation with international teaching institutions for curriculum and pedagogy, exchange programs, will deliver many times more impact than cash alone. Such support will be especially critical to move efforts from a “pilot” mode to scale-up.
Design and enforce well-structured conditions

Currently, donors in Tanzania tend to be directly involved in program design but concerned only indirectly with financial controls and consequences management. We challenge this approach. We believe that an aggressive HRH productivity rollout creates the opportunity for, and will benefit substantially from a greater conditionality in donor programs and a clear “carrot and stick” package geared to productivity growth. These conditions will initially be activity-based and at a later point, outcome-based. The crucial challenge here is to walk the tightrope of enforcing a few rational, well-structured conditions, while ensuring governments continue to act in an empowered, accountable manner and take ownership of results. Enforcing these conditions will likely increase the monitoring and evaluation of the expenses of the donor programs in the near term. This investment in building a virtuous cycle will be paid back through more effective use of funding. Donor-imposed conditions can also help increase absorption of aid, good governance, and capacity building. Transparent program evaluations might be a good place to start, with the eliciting and sharing of feedback from patients and communities on areas like service quality, coverage, and corruption in delivery.

Innovate – think along different dimensions

Finally, donors need to push the envelope to develop more innovative aid models. This is especially true given the significant shifts in aid money coming from new private foundations and global mechanisms like the Global Fund, versus more traditional bilateral donors. Bilateral donors have typically been more risk-averse, given the need to trace impact to specific funding, report results regularly to their home constituencies, and act within the political motivations of the donor country. Country desk officers, for example, are understandably motivated to show impact within 2 or 3 years to facilitate promotion to their next posting. Building out toolkits, transferring skill, and ensuring sustainability, however, all require longer commitments, typically 5 or 10 years or more. New sources of money have relatively fewer constraints and can therefore afford to be more innovative. As to the question of how such creativity should be exercised, we might look at creating the ability, for example, to support a program over the long term (e.g., 5-10 years), with sustainable
capacity building. The ability to support scale-up efforts and not just pilot projects that lack staying power might be key. Other answers could involve the capacity to engage in partnerships with non-traditional constituencies such as NGOs and private sector entities, and a willingness to work with smaller more progressive state and district governments versus national centralized bureaucracies.

3. CREATING EFFECTIVE MANAGERIAL CAPACITY

There is a growing realization that investing ever larger amounts of development money is unlikely to yield results unless the human capacity is in place locally to use these resources to design, implement, and manage programs. In a similar vein, stepping up funding for health programs and HRH in Tanzania is only one part of the story. Tanzania also needs to create adequate leadership and managerial capacity at all levels to use these funds effectively. Strong management has a substantial “multiplier” effect through improved program design, better deployment, and productivity of resources, and better consequences management.

To address its healthcare managerial bottleneck, Tanzania needs at least 150 or 200 strong managers and administrators to cover district, regional, and tertiary facilities, and key ministries involved in HRH issues. These managers will need adequate resources with supporting skills, in areas like financial management, human resource management, supply chain and logistics management, information technology and hospital administration.

Small as these number are, we recognize that creating and training managers is an uphill task in Tanzania. In a country with little by way of private sector and large-scale enterprises, the culture of management is nascent. Healthcare has been a public sector responsibility and Tanzania’s socialist history and its largely bureaucratic and passive administrative set-up makes it difficult for strong, proactive managers to emerge. The health sector adds to the managerial challenge in other ways as well. Health care differs from sectors like infrastructure development, for example, where road and power projects can be contracted out to international companies which also provide the managerial talent. Healthcare delivery is necessarily diffuse geographically, especially in a
decentralized set-up, and hence requires many more managers. Healthcare delivery requires strong local context and empathy and is a recurring task. Health care is a service sector, and is therefore strongly linked to the quality of personnel. A broader set of personal economic trade-offs also influence the willingness to join the sector. Finally, significant time and effort must be invested to acquire the specialized skills, and that extends the time-to-impact of training new resources.

Given this context, what will it take for Tanzania to identify and develop 150+ capable, proactive and results-oriented health managers? We urge all players to think out-of-the-box. Possible actions to initiate a process of grooming and recruiting good managers could include the following:

- **Explicit government recognition of the need for strong managerial and administrative skills.** The government, encouraged by donors and technical agencies, must recognize the substantial leveraging effect that a strong manager can have in a health facility or district, and support the training that it takes to get there. To do this, the government needs to create a distinct skill category, supported by the relevant education courses for health managers. This skill category will no doubt require a good grounding in medical knowledge and an appreciation of healthcare delivery, but strong health managers need not be doctors.

  A joint medical-public health-hospital management degree could also be another way to help develop this skill category. A strong administrative component should also form a core part of basic medical skill training for medical officers and clinical officers, who are often at the frontline of service delivery and management.

- ** Appropriately structured service terms, pay and incentives.** It seems important to distinguish more clearly between the administrative and clinical cadres to ensure that the career paths are equally attractive but that they do not cannibalize each other. In the current system, lopsided incentives in favour of health administrators deprive the system of a good doctor and convert him instead to an untrained health administrator. Managing a medical professional career path along with an administrative
one is a challenging task and one that even developed countries continue to struggle with. We challenge the government to address it explicitly by redesigning roles and responsibilities, reporting structures, career tracks, compensation, and overall status in the health profession.

- **On-the-job conditions suitable for leadership and performance accountability.** Health managers must be given incentives to take responsibility and held accountable for results. They must be challenged with a linked set of rewards that includes both increased compensation and autonomy on the job. Conversely, mechanisms should be in place to identify and manage the consequences of poor performance.

If the Tanzanian government makes a serious commitment to meeting this challenge, what can donors do to help? Obviously, in the short- medium-term, they can step in to bridge the gap between demand and availability of high-quality managers. By seconding capable program managers to complement government capacity they can help meet critical shortfalls. Donors should also consider programs to provide the talent for co-managing facilities (or districts or programs) along with Tanzanian managers, to ensure on-the-job learning, capacity building, and skill transfer. On the other hand, merely recruiting foreign talent to run local efforts in the short term would be sub-optimal and possibly even counterproductive.

Donors must also focus on how they can help to accelerate the long-term development of managerial talent for Tanzania. Can they create internships that weave work in the donor’s home country with special on-the-ground training in Tanzania? Can they make more extensive use of scholarship programs for high potential administrators? Could donors accelerate the development of teaching facilities in Tanzania devoted solely to healthcare management and administration? Might donors become the catalysts for the development of cooperative efforts pairing Tanzania with another sub-Saharan country that is ahead of it in this respect?
4. ENCOURAGING EFFECTIVE GOVERNANCE IN HEALTH

Another important new question to explore is how to create true end-to-end accountability in Tanzania for the resolution of the HRH crisis. We have described how accountability today is diffused across at least five ministries. Even within the MoH, structures, staffing, and roles appear to have stayed largely the same while circumstances have altered – and worsened – rapidly.

What would it take to ensure more effective governance in health in Tanzania? This no doubt is a vast and politically sensitive problem, and one that we are not competent to address within the limited scope of this effort. However, we would like to propose two starting points for discussion.

1. Explore ways to create an effective partnership among key government bodies

The five ministries and government departments involved in HRH must come together in a meaningful partnership to create a sense of urgency about the HRH challenge and importantly, to create end-to-end responsibility for results. Such a partnership should at the minimum, involve the MoH and PORALG as the two key players to design and implement the productivity growth program and be responsible for results. Another possibility would be to explore the feasibility of separating the health sector’s human resource requirements from the civil services for a finite period of time.

Or, consideration might be given to creating a special 5- or 10-year interministerial HRH taskforce under the auspices of the President’s Office, with members seconded from each of the key ministries with full responsibility and accountability for joint targets. Arguably, only such a radical shift in governance can accomplish the needed 50 percent increase in training output and 75 percent increase in sector productivity.

Donors in Tanzania, for their part, must work closely with the government to help forge such a partnership. So long as donors overlook the current system and continue funding within its inefficiencies, the current inertia will continue and little change is possible.
2. Reflect key HRH priorities in the design and roles of the MoH itself

The MoH must be the starting point for changing how health and HRH issues are addressed in Tanzania. What kind of design changes could help enhance the effectiveness of the MoH in addressing the HRH challenge? A few thought starters include:

- Rebalancing roles and structure to reflect the optimal level of (de) centralization across the centre, zone, regional, and district levels.

- Rebalancing horizontal system-building responsibilities along with vertical program responsibilities.

- Spinning out specific units into partnerships with the private sector or nonprofit institutions.

- Introducing rigorous performance management systems.

Such change need not be dramatic or happen overnight. Instead, a few enlightened individuals working with full political support from senior leadership can be brought together to initiate such a redesign.

* * *

There are no easy answers in this last chapter, only crucial questions and possible paths. They are offered as a challenge to the key players in Tanzania’s healthcare drama, both to do everything humanly possible to realize the gains available within current constraints and to step boldly beyond those constraints. The prize is nothing short of securing Tanzania’s future.


Kombo, D., et al. Human Resources (as part of the Tanzania Joint Health Sector Review).


