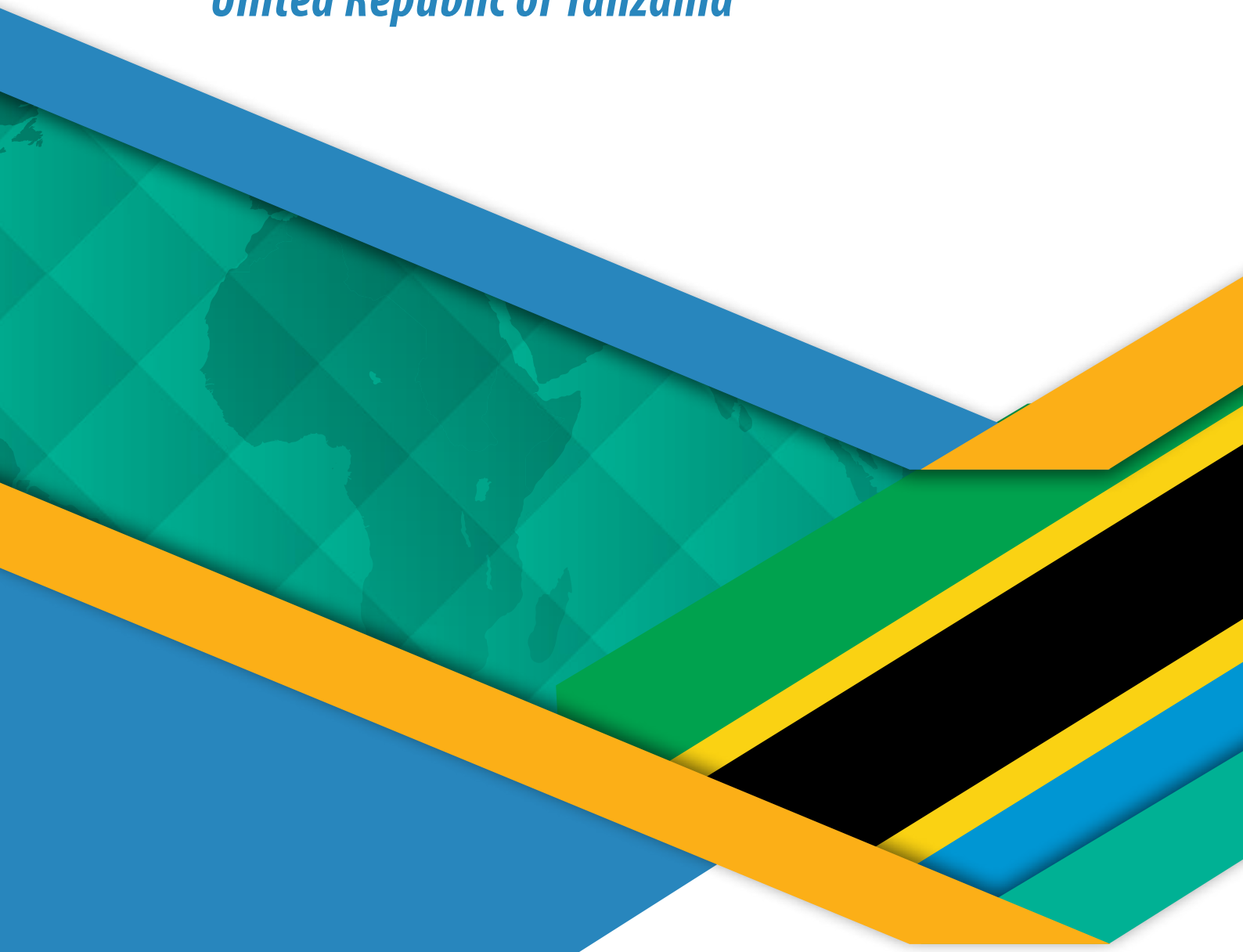
PRIMARY HEALTH CARE SYSTEMS (PRIMASYS)

Comprehensive case study from United Republic of Tanzania



Alliance for Health Policy and Systems Research

World Health Organization

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Comprehensive case study from United Republic of Tanzania

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WHO/HIS/HSR/17.39

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Cataloguing-in-Publication (CIP) data. CIP data are available at http://apps.who.int/iris.

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Editing and design by Inís Communication – www.iniscommunication.com

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Abbreviations and acronyms

ANC	antenatal care	ITN	insecticide-treated net
CPD	continued professional development	NCD	noncommunicable disease
HMIS	Health Management Information System	PHC	primary health care
HRH	human resources for health	TFDA	Tanzania Food and Drugs Authority
HSSP	Health Sector Strategic Plan	WHO	World Health Organization

Background to PRIMASYS case studies

Health systems around the globe still fall short of providing accessible, good-quality, comprehensive and integrated care. As the global health community is setting ambitious goals of universal health coverage and health equity in line with the 2030 Agenda for Sustainable Development, there is increasing interest in access to and utilization of primary health care in low- and middle-income countries. A wide array of stakeholders, including development agencies, global health funders, policy planners and health system decision-makers, require a better understanding of primary health care systems in order to plan and support complex health system interventions. There is thus a need to fill the knowledge gaps concerning strategic information on front-line primary health care systems at national and subnational levels in low- and middle-income settings.

The Alliance for Health Policy and Systems Research, in collaboration with the Bill & Melinda Gates Foundation, is developing a set of 20 case studies of primary health care systems in selected low- and middle-income countries as part of an initiative entitled Primary Care Systems Profiles and Performance (PRIMASYS). PRIMASYS aims to advance the science of primary health care in low- and middle-income countries in order to support efforts to strengthen primary health care systems and improve the implementation, effectiveness and efficiency of primary health care interventions worldwide. The PRIMASYS case studies cover key aspects of primary health care systems, including policy development and implementation, financing, integration of primary health care into comprehensive health systems, scope, quality and coverage of care, governance and organization, and monitoring and evaluation of system performance.

The Alliance has developed full and abridged versions of the 20 PRIMASYS case studies. The abridged version provides an overview of the primary health care system, tailored to a primary audience of policy-makers and global health stakeholders interested in understanding the key entry points to strengthen primary health care systems. The comprehensive case study provides an in-depth assessment of the system for an audience of researchers and stakeholders who wish to gain deeper insight into the determinants and performance of primary health care systems in selected low- and middle-income countries. Furthermore, the case studies will serve as the basis for a multicountry analysis of primary health care systems, focusing on the implementation of policies and programmes, and the barriers to and facilitators of primary health care system reform. Evidence from the case studies and the multi-country analysis will in turn provide strategic evidence to enhance the performance and responsiveness of primary health care systems in low- and middle-income countries.

1. Methodology: key informants

Key informants were selected purposively based on available knowledge of the respondents. In addition, snowball sampling was used to select additional key informants. Respondents were requested to identify other people who could be added to the list the researcher had identified. Different categories of key informants were selected, including policy-makers and implementers, academicians, and civil society actors.

A list of key informants is presented in Annex 1.

In addition, various documents were analysed, including health policies, guidelines, strategic plans and published reports.

2. Overview of PHC in United Republic of Tanzania

Over the last 10 years, the United Republic of Tanzania has successfully reduced death rates in younger age groups and surpassed the Millennium Development Goal related to child mortality. Between 1999 and 2010, infant mortality fell from 99 to 51 per 1000 live births, while under-5 mortality declined from 147 to 81 per 1000 live births *(1)*. Despite such progress, Tanzanian health outcomes are still lower than expected for its level of economic development (Table 1).

Table 1. Primary health care (PHC) statistics in the United Republic of Tanzania

Demographic indicators (TDHS 2015)	
Total population	44 928 923
Growth rate	2.7%
Fertility rate	5.4
Outcome indicators	
Maternal mortality rate	556/100 000
Perinatal mortality rate	39/1000
Infant mortality rate	43/1000
Under-5 mortality rate	67/1000
Service coverage indicators	
Skilled birth attendance (% of pregnant women)	63%
Contraceptive prevalence (% of women ages 15–49 years)	32%
Full immunization coverage (% of children aged 12–23 months)	75%
Antenatal care (ANC) attendance for four ANC visits	51%
First ANC visit before the fourth month of pregnancy	24%
Children who slept under an ITN last night (% of under-5 children)	54%
Women who slept under an ITN last night (% of pregnant women)	54%
Health financing indicators	
Total health expenditure per capita	$52
Total health expenditure as % of gross domestic product	7.3%
Government health expenditure as % of total health expenditure	36.3%
Government health expenditure as % of general government expenditure	11.3%
Out-of-pocket payments as proportion of total expenditure on health	31.8%
Development assistance for health as % of total health expenditure	48%

Source: Tanzanian Demographic and Health Survey, 2015; WHO, 2015; World Bank, 2015.

Note: ITN = insecticide-treated net.

3. Governance and organizational structure

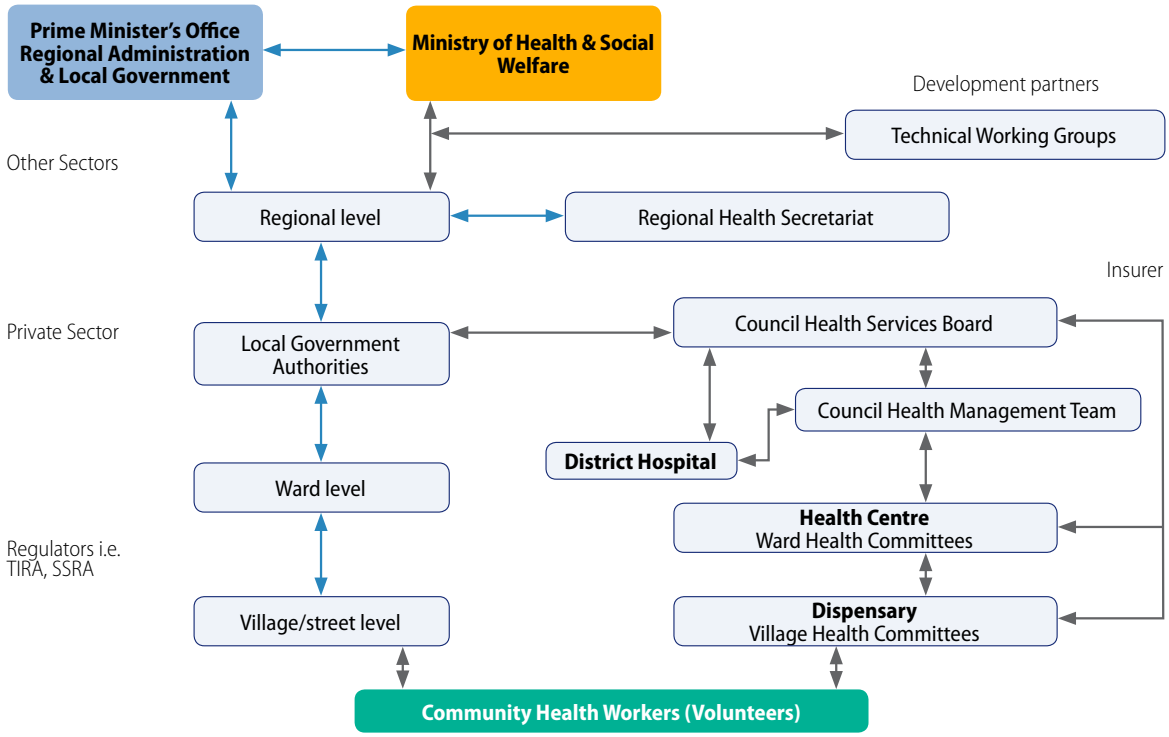
Health services in the United Republic of Tanzania are delivered through a decentralized system. The Prime Minister's Office, Regional Administration and Local Government, is responsible for service delivery through dispensaries, health centres and district hospitals. The decentralized health system broadly falls into three functional levels: district (primary level), regional (secondary level), and referral hospital (tertiary level). Under this system, the district has a mandate to plan, implement, monitor and evaluate health services. The district level provides PHC services through dispensaries at ward level, catering for three to five villages with an average population of 10 000. The health centre is the referral level for the dispensary and provides a slightly broader range of services than dispensaries, including inpatient care. It previously covered an average population of 50 000. District hospitals provide services to an average of 250 000 people. All districts have districts hospitals. A district that does not have a public district hospital enters into a service agreement (contractual agreement) with a hospital run by a faith-based organization, which is then designated as a district hospital.

While regional referral hospitals are in place in all regions in the United Republic of Tanzania they face substantial challenges due to the lack of availability of key health personnel. According to the Ministry of Health and Social Welfare, 54% of the 24 regional referral hospitals have at least four specialists *(2)*. Besides staffing problems, there are also challenges with medical supplies, blood transfusion services and laboratory services. The 2012 Service Availability and Readiness Assessment survey showed that only 52% of public facilities that provided delivery care had emergency transport available. In some cases where transport was difficult, women spent the last few weeks of pregnancy at a waiting home near the referral hospital *(3)*.

The midterm review of the implementation of the third Health Sector Strategic Plan, 2009–2015, found that all 23 hospitals that were officially recognized as regional referral hospitals had received coaching on hospital planning, and had developed both strategic plans and annual plans since 2010. Regional hospital health services boards are in place in a number of regional referral hospitals. However, according to some academicians and regional health managers who were interviewed, while members of regional hospital health services boards have received training on board functions, the terms of reference of the boards may require further clarification, especially with regard to accountability of the Ministry of Health and Social Welfare and the Prime Minister's Office, Regional Administration and Local Government *(4–6)*.

Figure 1 depicts the organizational structure for PHC in the United Republic of Tanzania.

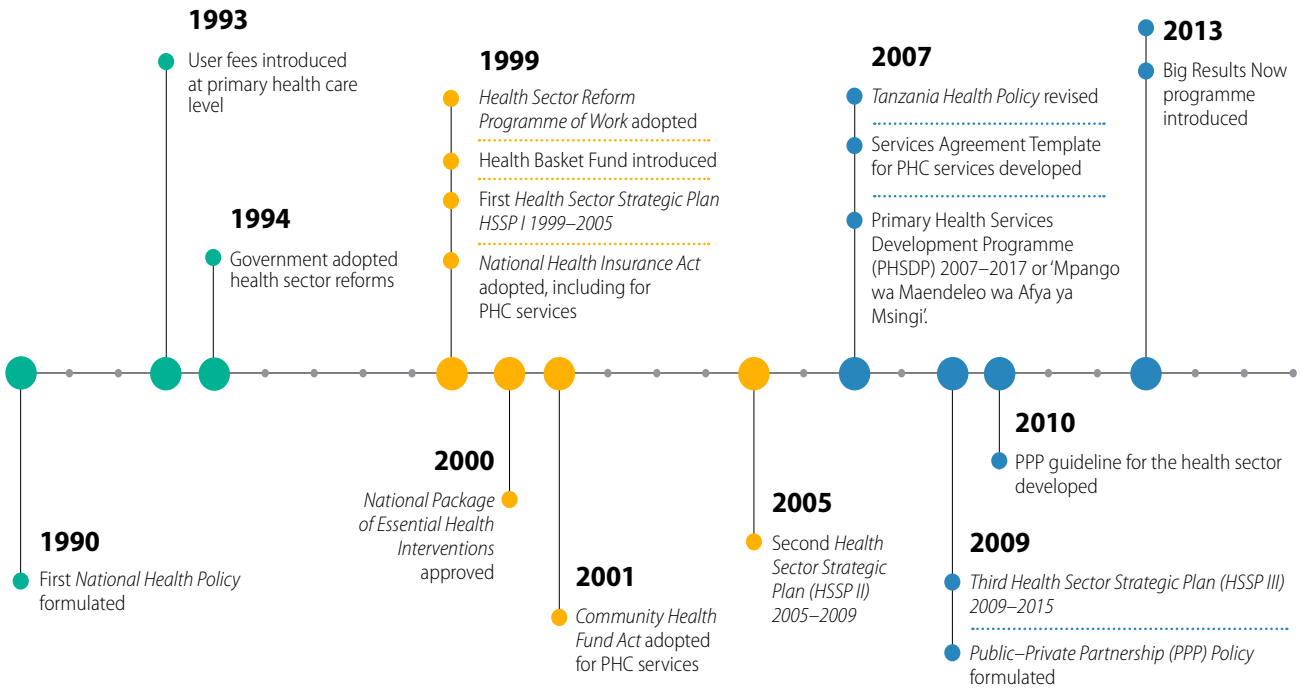
Figure 1. Key PHC organizational structures and decision-making bodies in United Republic of Tanzania



4. Timeline of PHC reforms

In the 1980s, the United Republic of Tanzania went through a severe economic crisis that adversely affected the management and financing of basic social services, including health care services. In addressing these problems, the health sector was appraised in 1993 by a health sector strategy note, and in 1994 proposals for health sector reforms were introduced. The process resulted in the first Health Sector Strategic Plan (HSSP) and the Health Sector Programme of Work, 1999–2004. The reforms have continued to be implemented through the Health Sector Strategic Plans – HSSP I (1999–2004), HSSP II (2005–2009), HSSP III (2009–2015) and HSSP IV (2016–2020). Other key reforms have included the Primary Health Service Development Programme (2007–2017), the Public-Private Partnership Policy (2009), and the Big Results Now programme introduced in 2013. Figure 2 shows the timeline of key events in the development of PHC reforms in the United Republic of Tanzania.

Figure 2. Chronology of PHC reforms in United Republic of Tanzania



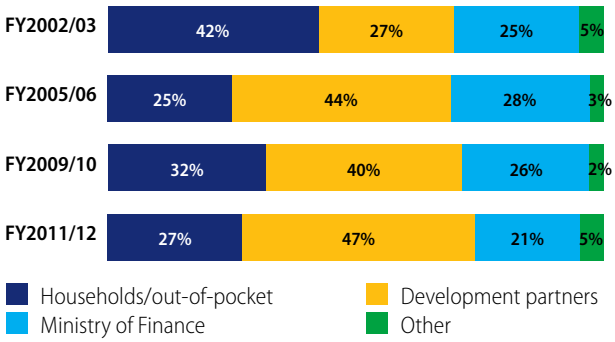
5. Financing

Overall, there has been an increase in the health budget over recent decades. Total health expenditure increased from US$ 734 million in 2002/2003 to US$ 1.75 billion in 2009/2010, as indicated in the National Health Accounts 2010 report *(7)*. However, despite the decrease in their share of health expenditure from 44% in 2005/2006 to 40% in 2009/2010, most of the funds to finance the health sector come from the development partners. Generally, the government allocation to health spending has remained almost constant at about 7% since 2002/2003, far short of the Abuja Declaration target of 15% of total government expenditure *(7)*.

The 2011/2012 National Health Accounts data show an increase in donor dependence to fund PHC in the United Republic of Tanzania. This source accounted for about 48% of the total health sector resources envelope in 2011/2012, an increase from 40% in 2009/2010. A significant proportion of donor funding support goes to vertical programmes, which benefit only a small segment of the population, leaving limited resources available for broad health system improvements. This poses a threat to the sustainability of the PHC system *(7)*.

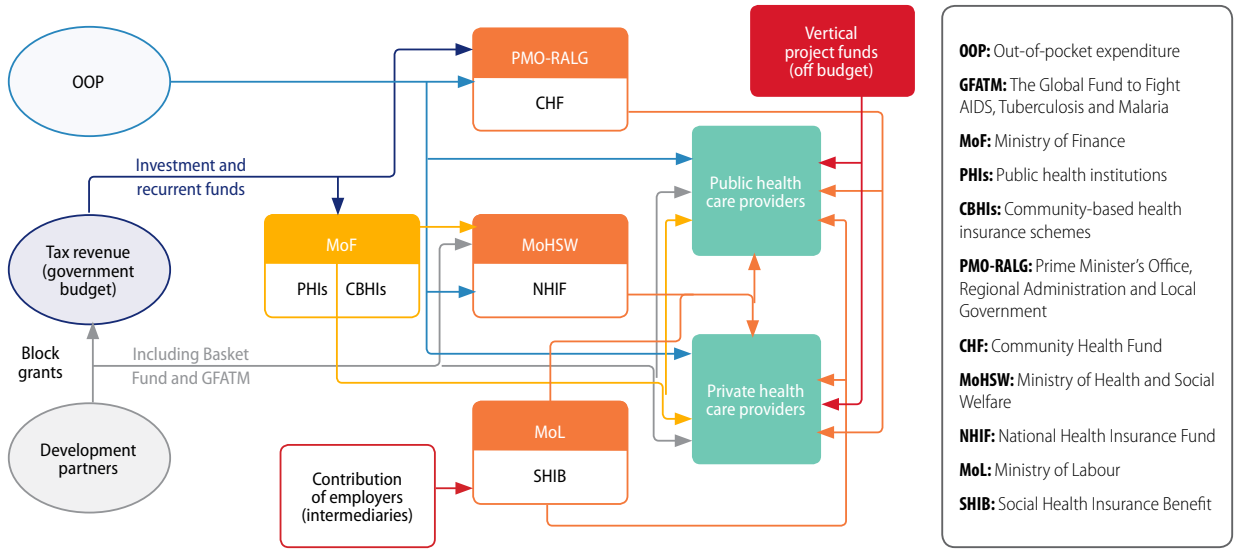
The share of out-of-pocket expenditure remains high, accounting for about 27% of total health sector financing in 2011/2012, though that represents a decrease from 34% in 2009/2010. Contributions from total general tax revenue remain relatively low, accounting for about 21% of total health financing, which is a decrease from 24% in 2009/2010. The contribution of health insurance schemes is insignificant, accounting for about 3% of total health sector financing *(7)*. Figure 3 shows the relative importance of various sources of health expenditure for the period 2002/2003 to 2011/2012, while Figure 4 shows the current health financing structure.

Figure 3. Health expenditure by source, 2002/2003 to 2011/2012



Sources: National Health Accounts, 2012 and 2014.

Figure 4. Current health financing structure, United Republic of Tanzania



Source: United Republic of Tanzania Health Financing Strategy (2016–2020).

6. Accessibility and availability of services

6.1 Accessibility

In the United Republic of Tanzania, the Primary Health Services Development Programme[1] 2007–2017 is the major health sector strategy to improve access to and expand health services in underserved areas, with the aim of establishing one dispensary per village and one health centre per ward. Since the start of the programme in 2007, emphasis has been on expanding the number of dispensaries in rural areas. An average of 66.4% of the Tanzanian population lives within 5 kilometres of a health facility, ranging from 25% in Kagera region to 100% in Dar es Salaam *(3)*. In general, geographical accessibility is increasing with the construction of new facilities. However, not all health facilities provide all basic health services. For example, only 70% of the health facilities provide delivery care *(3)*.

The Primary Health Services Development Programme aims not only at construction of new facilities, but also at improvement of existing ones. Unfortunately, no comprehensive national-level information is available with regard to the status of infrastructure, patient privacy, and availability of electricity, water supply, toilets and staff houses. The Service Availability and Readiness Assessment survey of 2012 found major shortcomings, especially in dispensaries, of which less than 25% are fully up to standard.

6.2 Availability

In many areas there is progress in addressing the needs of the population, especially in disease control programmes. However, remote rural and hard-to-reach areas are still disadvantaged compared to urban areas, and the health issues of women are not adequately addressed to cover their needs. For instance, the 2012 Service Availability and Readiness Assessment survey indicated that PHC service availability varied considerably. Provision of some services (such as curative and preventive services for children aged under 5 years) is expected in almost all health facilities *(3)*, while provision of other more specialist services would only be expected in a minority of health facilities. Malaria services, antenatal care, family planning, child immunization and preventive and curative child health services were available in 80% or more of all facilities in the sample. Prevention of mother-to-child transmission of HIV and sexually transmitted infection services were available in 78% of all facilities in the sample *(3)*. Services that were available in less than 30% of facilities included antiretroviral therapy for HIV, basic surgery, cardiovascular and chronic respiratory infection services, diabetes services, blood transfusion and advanced delivery services *(3)*.

In terms of utilization of PHC services, there are mixed findings across different service areas. While almost all pregnant women in the United Republic of Tanzania (98%) make at least one antenatal care visit, only 15% made their first visit before the fourth month of pregnancy *(1)*. The attendance rate for four antenatal care visits has declined, from 64% in 2005 to 36% in 2010, whilst 90% is the target *(1)*. The United Republic of Tanzania has developed a number of guidelines on prevention of mother-to-child transmission of HIV and has integrated most of the guidelines into antenatal care services *(8–11)*. Testing and counselling for HIV is offered to all mothers during antenatal care. Access to and coverage of prevention of mother-to-child transmission of HIV services and antiretroviral therapy continue to increase and appear to be on track to meet the targets of the third Health Sector Strategic Plan *(8–11)*. Malaria prevention is integrated into antenatal care services through ensuring access to subsidized insecticide-treated nets. Now, 76% of pregnant women in all wealth quintiles use a bednet. A second strategy for malaria prevention during pregnancy is to provide two doses of intermittent preventive treatment during routine antenatal care visits. Not all pregnant women receive

1 In Kiswahili, Mpango wa Maendeleo wa Afya ya Msingi, or MMAM.

that treatment because of low follow-up attendance in antenatal care. Coverage is 25% amongst the poorest quintile and 45% among the richest quintile, with no improvement in recent years *(12)*.

The United Republic of Tanzania has made slow progress in coverage of deliveries by skilled birth attendants, which increased from 43% to 51% between 2005 and 2010 *(1)*. The 2012 Service Availability and Readiness Assessment survey found that 30% of health facilities did not have a proper delivery room and adequate facilities *(3)*. In rural areas, 42% of women delivered in a health facility, compared to 83% in urban areas. There is also a wealth gap in skilled birth attendance, as 93% of women in the highest wealth quintile had attended births compared to only 33% in the lowest quintile *(3)*.

Postnatal care services are not well developed in the United Republic of Tanzania. Most women who deliver at a health facility are discharged home within 24 hours, without organized follow-up at home for the mother and the neonate *(1, 3)*. About 65% of women whose last live birth occurred in the five years preceding the 2010 Demographic and Health Survey did not receive a postnatal check-up, though 75% of neonatal deaths occur during the first 24 hours *(1)*.

In the United Republic of Tanzania, only 27% of currently married women use a modern method of family planning, and the unmet need for family planning stands at 25%. Contraceptive injection and the pill are the most commonly used methods. The use of modern family planning varies by residence and region: 34% of women in urban areas compared to 25% of women in rural areas use a modern method of family planning *(12)*. In public facilities there is still a lack of trained personnel to provide family planning services, and frequent stock-outs of medicines and supplies are recorded *(12)*. Challenges include spousal refusal, clients' general misconceptions regarding family planning use, and negative attitudes of providers towards clients. Moreover, in most areas family planning services are dependent on the support of national and international nongovernmental organizations, which poses questions about the sustainable continuation of those services after phasing out of the external funding *(12)*.

Immunization coverage rates in the United Republic of Tanzania are amongst the highest in sub-Saharan Africa. Child immunization coverage is high; more than 90% of children receive measles vaccine. Access to services is good, with three quarters of health facilities offering child immunization services. A facility survey conducted in 2012 found that over 90% of facilities had key supplies such as vaccines and needles in stock *(12)*.

The prevalence of anaemia in children aged under 5 years dropped by 13 percentage points between 2005 and 2010, from 72% to 59% *(1)*. The country has developed a number of interventions to address anaemia in children, including deworming of children aged 2 to 5 years every six months and promotion of use of insecticide-treated nets for children aged under 5 years. Every six months, children aged 6 to 59 months are targeted for vitamin A supplements.

In terms of chronic malnutrition, the United Republic of Tanzania is one of the 10 worst affected countries in the world, with 42% of children aged under 5 years showing stunted growth *(1)*. Factors placing children at risk of malnutrition include repeated episodes of ill health (malaria, diarrhoea, pneumonia and other illnesses) and inadequate infant and young child feeding practices *(13)*. Other underlying causes include inadequate health care for women and children, insufficient health services and an unhygienic environment. The proportion of children who are stunted has declined at a slower rate than the proportion of children who are underweight. Over a 10-year period, prevalence of stunting declined from 48% to 42%. Children in rural areas were more likely to be stunted (45%) than those in urban areas (32%). Disparities were also noted across regions. Stunting also varied by wealth stratum; the lowest household wealth quintile had a stunting prevalence of 48% compared to 26% amongst children from the highest wealth quintile *(13)*.

7. Addressing the disease burden: policy and other measures

In the United Republic of Tanzania, a surveillance system is in place whereby district hospitals and council health management teams have staff responsible for disease surveillance. Reporting under the Health Management Information System (HMIS) facilitates disease surveillance. Community participation in disease prevention and control is mainly dependent on local initiatives and programmes, and as such is not uniformly operative throughout the country. However, district health management teams are required to include community initiatives in their annual health plans and budgets. Recent assessments indicate that HIV/AIDS strategies for the period 2009–2013 achieved their targets, particularly with regard to utilization of HIV/AIDS care and treatment services *(12)*. Similarly, the malaria strategies for the period 2009–2013 were successful, particularly for malaria diagnosis and treatment and use of insecticide-treated nets. Furthermore, tuberculosis strategies for the period 2009–2013 were generally implemented according to plan *(12)*.

With regard to noncommunicable diseases (NCDs), policy guidelines have been developed but not yet implemented at the facility level *(12)*. Recent surveys have provided more insight into the scale of NCD health risk factors affecting the population of the United Republic of Tanzania. The Environmental Health Strategy 2008–2017 is being implemented, with the legislative support of the Public Health Act (2009). Almost all respondents were of the opinion that a good system for addressing health emergencies has been developed in the country, but implementation lags behind *(12)*.

8. Human resources for health

8.1 Health worker supply and distribution

The analysis of relevant documents for this study showed that within the context of the decentralization process in the United Republic of Tanzania, the President's Office, Public Service Management, is responsible for matters related to human resources management in the public sector. It approves staffing levels, determines recruitment procedures and, together with the Treasury, approves salary structures for all public employees *(2, 14)*.

Recruitment in the health sector involves various governmental entities. The Prime Minister's Office, Regional Administration and Local Government, is responsible through the district councils for the identification of new employment posts. Similarly, the President's Office, Public Service Management, is responsible for rationalization, validation and approval of new employment posts. The Ministry of Health and Social Welfare is charged with the responsibility of advertising vacancies and posting health workers to the subnational levels. Finally, the Ministry of Finance is responsible for paying the salaries of all public employees on a monthly basis *(2, 14)*.

The district councils have been delegated the authority to establish human resources for health (HRH) needs, and to hire, deploy and fire public employees. At the district level, HRH matters are coordinated by the district medical officer and the district human resources officer, on behalf of the district executive director. The district councils have also been granted authority to evaluate health workers' performance and promote relevant staff, provided that any salary increments are included in the district annual plan and budget. An Open Performance Review and Appraisal System for the public service was introduced in 2004 for top officials, and has now been rolled out to cover all health workers *(2)*.

However, bottlenecks and bureaucracy in HRH management still exist, leading to limited absorptive capacity of the system *(2, 14)*. For example, devolution of the HRH planning and deployment role to lower levels of the administrative hierarchy is limited. According to key informants, district councils concentrate more on personnel emolument budgeting rather than overall HRH planning. Another challenge is the limited collection and sharing of HRH information from the private sector *(14)*. Other challenges in recruitment and deployment of health staff include limited allocations for personnel emoluments; worker migration outside the country; and poor working conditions, with deficiencies noted in roads, communication networks, electricity supply, recreation, water supply, and education provision, especially in rural areas. There is also limited ability of the health and social welfare sector to meet basic employee personal needs, including pay for extra or heavy workloads, workplace hazard allowances, and opportunities for self-development *(2, 14)*.

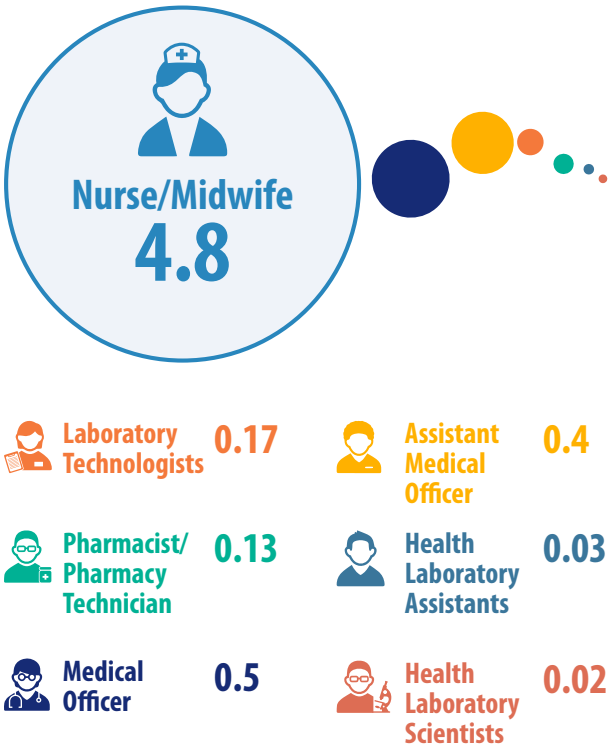
Various studies indicate that the existing workforce is maldistributed, with dispensaries in rural areas being worst affected *(2, 14, 15)*. Many staff prefer to work in urban rather than rural areas, due to the poor working conditions and living environment in the latter. Even if recruited, a significant proportion of HRH professionals posted by the Ministry of Health and Social Welfare to local government authorities do not report to their stations. For example, a survey found that of 4812 permits that were utilized, only 63% reported to their respective stations. Of the staff who did report, 13% left for several reasons, such as delays in being entered into the payroll and failure to receive salary payments on time *(14)*. In addition, there is a clear regional disparity with regard to HRH availability. Kilimanjaro, Dar es Salaam, Iringa, Lindi and Pwani are better provided compared to

regions such as Kagera, Rukwa, Tabora, Kigoma and Shinyanga. Health worker density ranges from 4 per 10 000 population to 10 per 10 000 population *(14)*.

Retaining health workers has proved to be a problem, due to such challenges as lack of adequate compensation and unsatisfactory working conditions. The internal and external "brain drain" due to migration of health workers is a prominent factor *(2, 14, 15)*. The government has been increasing salaries almost annually since 2006. Pilots on ways to attract professionals in underserved areas have been conducted to inform the government on issues for consideration at both national and council levels *(2, 14)*.

Figure 5 shows HRH ratios per 10 000 population for selected categories of health workers.

Figure 5. HRH ratios per 10 000 population for selected categories, United Republic of Tanzania, 2012



Source: Ministry of Health and Social Welfare, 2013.

8.2 Professional education

In 2014, there were 153 registered training institutions that offered various training programmes for health and social welfare workers *(14)*. The non-degree-level programmes for health professionals fall under the Ministry of Health and Social Welfare and are accredited by the National Council for Technical Education, which is responsible for setting entry qualification and educational standards. The degree programmes are under the Ministry of Education and Vocational Training and are regulated by the Tanzania Commission for Universities. The private sector has a growing number of training institutions in the health sector, and in recent years there has been an increase in the number of private for-profit HRH training facilities *(14)*.

Despite the recorded successes, health training institutions face several challenges, including a considerable shortage of teachers in training institutions and increased workload due to the growing enrolment of students. On the matter of the practical experience of students, several challenges have been reported – for example, due to the critical shortage of staff in health facilities, trainees get limited exposure time with clinical instructors *(14)*. Another challenge is the increased number of students and limited numbers of teaching hospitals, leading to inadequate exposure of students to patients. Other challenges include limited funding and unpredictable disbursement of funds, poor infrastructure, shortage of learning materials, and limited enrolment in those cadres for which there is high demand, such as laboratory and pharmaceutical staff. Moreover, the quality management framework is weak, making it difficult to ensure the quality of training in schools and adoption of new technology to increase efficiency in training *(14)*.

There are various providers of continuing education and professional development in the country, with varied levels of competency *(14)*. However, the concept of continued professional development (CPD) is not adequately emphasized and institutionalized. The available CPD guidelines have not been fully

operationalized and are outdated. In-service training has been confined to classroom teaching, which mainly complicates the existing HRH crisis by taking health workers away from their work stations. The potential for applying on-the-job training, mentoring and coaching, distance learning, and e-learning has not been adequately explored *(14)*.

CPD is not well integrated into service provision and practice, and is thus not reflected in the allocation of health care budgets. Medical schools and health training institutions usually focus on basic and qualification programmes, and their role in CPD is not clear. There is hardly any emphasis in the curricula on inculcating a culture of lifelong learning that encourages the student to appreciate the importance of CPD for their future practice and career. There is no system to support or recognize participation of health workers in CPD activities, whether inside or outside the country. Certificates and credits gained from these trainings do not usually count towards the promotion of individual health workers and their career development.

According to the third Health Sector Strategic Plan, zonal human resource centres were to play a crucial role in continuing education and professional development *(16)*. However, there are gaps in the ability of the zonal human resource centres to realize their roles *(16)*. The midterm review of the third Health Sector Strategic Plan identified a number of bottlenecks that affect the functionality of the centres *(12)*. There is no link between the Ministry of Health and Social Welfare through the zonal human resource centres with regions and districts in the areas of training and human resources development, and there is no mechanism to coordinate quality pre-service and in-service training in the zones *(12)*. The assessment also reported that capacity strengthening at district and regional levels through continuing education and professional development is on an ad hoc basis. Similarly, there is no supportive supervision conducted at health training institutions in the zonal human resource centres, and there is no established inventory of human resources and trainers *(12)*.

8.3 Supervision and performance review

The preparation of annual comprehensive council health plans, with technical support from regional health management teams, is one of the most structured management actions at council health management team level. However, most health facilities in the United Republic of Tanzania have only limited involvement in the decision-making process for comprehensive council health plans and do not receive feedback after their inputs *(4–6)*. In general, regional health management teams provide quarterly supportive supervision to council health management teams. In turn, council health management teams provide (often monthly) supportive supervision to health facilities, but face challenges with transport or funding. Recently, with the introduction of the Big Results Now programme, the Ministry of Health and Social Welfare has developed criteria for star rating of PHC facilities.

Since 2004, the government has used the Open Performance Review Appraisal System as a mechanism to enhance the performance of public servants, including health workers, though the system is only partially implemented *(2, 14)*. Several key informants stated that some of the indicators are too vague to be valuable. Consequently, promotion and career advancement are still rewarded by considering staff working experience and not performance, and the Open Performance Review and Appraisal System is not adequately utilized *(2, 14)*. The lack of competency-based indicators or clear standards to assess individual health worker performance is considered problematic. New supportive supervision guidelines have been developed, emphasizing a process of problem solving, communication, teamwork and quality improvement, but there are still shortcoming that challenge effective integration and implementation *(17)*. According to the district- and regional-level respondents, ongoing training in HRH management for supervisors of council health management teams is available at the district level.

8.4 Strategies for in-service support

The Ministry of Health and Social Welfare, through the Training and Human Resources Development Department, developed the Human Resources for Health and Social Welfare Strategic Plan 2014–2019 *(14)*. The strategic approach under the plan focuses on improving the human resources for health and social welfare situation in the country. Overall, the plan guides the health sector in proper planning, development, management and effective utilization of human resources *(14)*. This includes through strengthening human resources for health and social welfare recruitment, retention, career development and utilization at all levels. However, implementation and enforcement of regulations has been weak. The midterm review of the third Health Sector Strategic Plan noted that human resources management practices at district level tend to be limited and poorly implemented *(12)*. Despite these weaknesses there have been remarkable achievements, including expansion of health and social welfare training institutions, increasing enrolment, transformation to competence-based curricula by health training institutions, and opening of closed-down training institutions *(2, 14)*.

A retention scheme for health care workers is being implemented across the country. Specific upper-level health professionals are given incentives, such as housing, as a motivation to achieving excellence in work performance *(2, 14)*. The Benjamin Mpaka AIDS Foundation is building staff houses in many rural areas, and district councils are providing settling-in or duty allowances and non-financial incentives (such as transport). According to the regional- and district-level respondents, training and upgrading is another method used by various districts to keep staff motivated. However, Petit-Mshana and colleagues concluded in their comprehensive analysis in 2011 that there was no comprehensive evidence-based retention programme in the health sector, and that retention was overdependent on local opportunities and challenges *(15)*.

It was evident from the discussion with various stakeholders that human resources management is a rare skill in the health sector. Only health secretaries receive human resources management training and obtain support from the district human resources officer, who is responsible for all staff in the district. Also, district medical officers are not trained in human resources management, except in tailor-made in-service courses. As such, human resources management practices at district level tend to be limited and poorly implemented.

9. Regulatory processes

9.1 Standard treatment practices

The United Republic of Tanzania has been implementing the Standard Treatment Guidelines and the National Essential Medicines List since 1991 *(18)*. The Standard Treatment Guidelines are consistent with the National Guidelines for Diagnosis and Management of Common Diseases. The guidelines also reflect changes in the management of various diseases following recommendations from the World Health Organization (WHO) and experts from international medical associations and agencies *(18)*. The central government prepares and updates the National Essential Medicines List, which is implemented in all districts countrywide.

The Standard Treatment Guidelines and National Essential Medicines List aim at providing health practitioners with standardized guidance to assist them in making decisions about appropriate treatment for specific conditions found in the United Republic of Tanzania *(18)*. The National Essential Medicines List identifies medicines that are considered essential for the treatment of common disease conditions in the country *(18)*. The list to a large extent adopts the WHO recommendations and follows the principles and concepts of essential medicines *(18)*. Under the policy of the Ministry of Health and Social Welfare, all public and private health workers in the United Republic of Tanzania should adhere to the Standard Treatment Guidelines, and prescribing, purchasing, labelling and dispensing of medicines should be by generic name to the extent possible, and consistent with the level of classification in the Standard Treatment Guidelines.

Unfortunately, there is limited knowledge of the adherence of front-line providers to standard treatment practices. A recent national study on malaria treatment practices reported that antimalarial prescription to patients with negative test results and those not tested is still practised, despite the universal malaria testing policy for patients with fever *(19)*.

9.2 Medical equipment and products

Availability of medicines is a crucial issue for the Ministry of Health and Social Welfare, health partners, and the population more broadly, and it has been the subject of various studies and surveys, including through the routine HMIS processes. Generally, the availability of key medicines in health facilities in the United Republic of Tanzania remains low, and no clear trend for improvement can yet be discerned *(12, 20)*. A survey conducted by Sikika in 54 public hospitals across the mainland of the United Republic of Tanzania found that 94% of hospitals were out of stock of one or more essential medical supplies, while 96% were out of stock of one or more essential medicines *(20)*. The Service Availability and Readiness Assessment 2012 survey also established that medicines are more available in urban areas than in rural ones, and in the private sector than in the public sector. In addition, generic medicines for the treatment of NCDs are rarely available *(3)*.

In 2002 the Ministry of Health and Social Welfare launched the Accredited Drug Dispensing Outlet Programme to increase access to affordable quality medicines in the private sector in rural areas. However, national- and district-level stakeholders interviewed concurred that there were challenges with sustaining the quality of services and products provided by accredited drug dispensing outlets. Infringements include illegal sale of non-authorized, stolen or poor-quality medicines. Regulatory and supervision capacity at the district level is insufficient. One study found that medicines are sold at high prices and expansion of accredited drug dispensing outlets in rural areas is limited *(21)*.

9.3 Regulation and oversight in the health sector

The Tanzania Food and Drugs Authority (TFDA) is mandated to ensure quality, safety and efficacy of medical products marketed in the United Republic of Tanzania *(22–24)*. Its regulatory functions include registration of medical products, control of importation of medical products, inspection of medical products, post-marketing surveillance, pharmacovigilance and laboratory testing. The national guidelines for registration of medicines require a compliance certificate of good manufacturing practices for the manufacturing facilities.

The TFDA registered 50% of all received applications for registration of medicines between 2003 and 2013, whereby a total of 4782 different medicines were registered in the United Republic of Tanzania *(23)*. Over the same 10-year period, 20 233 import permits were issued for importation of medical consignments after meeting regulatory requirements. The TFDA was able to increase the annual number of medicine samples to be tested from 340 to 675 between 2010 and 2012, as well as the proportion of samples actually processed in its WHO prequalified quality control laboratory (from 52% to 96% between 2010 and 2012) *(23)*. According to the key informant from the authority, the TFDA has established mobile testing kits at 15 regional hospital sites, which allows for testing of medicines procured by hospitals from the Medical Stores Department and other sources. The TFDA has published guidelines for pharmacovigilance, and forms for reporting adverse drug reactions are available for download at the TFDA website and have been distributed to health facilities. However, the underreporting of adverse drug reactions causes uncertainty on the safety of medicines on the market, and only 2.5% of recommended annual reports of adverse drug reactions (as per WHO guidelines) are received at the TFDA *(23)*. According to key informants, the low reporting rate of adverse drug reactions negatively impacts evidence-based decision-making, and it is difficult to make an overall assessment of the safety of medicines in the United Republic of Tanzania.

While public-private partnership exists, regulation of medical products in the private sector has been a challenge. The Pharmaceutical Services Section of the Ministry of Health and Social Welfare supports decentralized pharmacovigilance activities *(24)*. However, a recent assessment of the private sector in the United Republic of Tanzania documented views that not all medicines available for sale in the private sector were of guaranteed quality, and many did not have TFDA approval *(21)*. Procurement and distribution of medical products for government facilities has been channelled through the Medical Stores Department but there is no similar common source of procurement of medicines for private facilities. It was also reported that pharmacovigilance sensitization and training mainly targets health care providers working in government health facilities, and no equal efforts have been made for health care providers working in private facilities *(21, 24)*.

Despite the successes attained, the TFDA is still facing challenges in executing its functions, including inadequate staffing levels and the existence of substandard and counterfeit products in the market, many of which are illegally imported. Other challenges include the lack of harmonized regulatory systems in the East African Community and the Southern African Development Community; the failure of the majority of domestic manufacturers of food and medicine products to comply with minimum good manufacturing practices; and low literacy levels in the general public on quality and safety issues for regulated products *(23)*.

10. Monitoring and information systems

The United Republic of Tanzania has a Health Management information System (HMIS) in place, which requires health facilities to report on a monthly basis to their respective districts on the situation with regard to various aspects of the health services and systems, including vaccinations, treatments provided, attendance for maternal, newborn and child health care, human resources, and medicines use *(25)*. A national HMIS was designed and piloted between 1990 and 1994, and fully rolled out to all regions in 1997 *(26)*. The first version was entirely in English and it was soon realized upon testing that the users had limited command of this language, and it was reissued in Kiswahili, the national language, as Mfumo wa Taarifa za Uendeshaji Huduma za Afya (MTUHA) *(26)*.

The HMIS in the United Republic of Tanzania is implemented in approximately 6000 service delivery points, including government, private, faith-based, and nongovernmental health facilities *(12)*. However, the HMIS is not as effective as it should be in terms of delivery of quality health information in the country. The quality of analysis of available information requires further coordination and capacity development for the HMIS to be fully institutionalized as an effective data management system *(12)*.

As part of the monitoring and evaluation of the PHC system, district offices are required to submit quarterly and annual reports on health services provision and performance in their respective districts *(25)*. The districts and regions have an operational software system to support data aggregation and report submission. According to the district- and regional-level respondents, health facilities need to be equipped with sufficient registers, trained HMIS staff, and regular supportive supervision from the higher levels. This will help to improve the data collection system, leading to enhanced quality and reliability of health information.

According to the stakeholders at the regional and district levels, use of information at the grass-roots level for planning and decision-making is still limited. The culture around the HMIS is still focused on producing figures for transmission to the higher levels. However, stakeholders reported that some work has started on improving capacity for data collection, analysis and use across the sector, though more work is required in this very important area.

11. Community participation

In the United Republic of Tanzania, community participation was part of the wider health sector reform of the early 1990s, which aimed to replace the centralized health system with a more decentralized district health system *(27)*. Several structures to facilitate citizens' participation have since been established at the local government and community levels, including council health services boards and health facility committees (hospital committees, health centre committees and dispensary committees) *(28)*. The committees typically consist of five members from the community and three appointed members from the facility and ward development committee *(28)*.

However, several assessments have indicated a number of shortcomings in the way that community health committees operate and undertake their activities *(4–6)*. Virtually no health committees have been reported to be involved in influencing policy or in drawing up district health plans and budgets *(4–6, 29)*. Despite the existence of guidelines that require participation of women, younger people and people living with disabilities in local-level committees and decision-making forums, their participation is still weak *(12)*. Further, an equitable gender balance in council health services boards and health facility committees is rarely achieved, with men typically dominating the committees representing the population *(29)*.

A greater role in governance and oversight is essential for effective and meaningful health committee performance. To achieve impact, health committees will require adequate training in a number of areas, including roles and functions of the health facility committees and boards; interaction between committees, communities and health workers; development of health plans and budgets at the local and district levels; and monitoring and tracking budgets *(6, 30)*.

12. Pathways and barriers to success

The Ministry of Health and Social Welfare has developed a list of priorities that all facilities (dispensaries, health centres and hospitals) need to include in their annual health plans *(31)*. Specific interventions in each priority area may vary from district to district. However, all districts in the United Republic of Tanzania need to follow this template when preparing their health and disease priorities *(31)*. The details of the priority areas contained in the national essential health and social welfare intervention packages have been reported in the PRIMASYS phase 1 report.

12.1 Pathways to success

Decentralization of PHC

Decentralization of PHC has involved devolution of decision-making and management of PHC services to local government authorities and grass-roots organizations. Various mechanisms for community and stakeholder participation and engagement in district health systems are in place. However, the community engagement structures are not functioning as expected due to a number of internal and external factors, as discussed above. Decentralization has increased the decision space of the district health leaders (particularly the council health management teams) in a number of domains, such as hiring and firing of specific personnel; contracting staff with locally generated resources; establishing incentive schemes; appraisal of staff performance; and supervision of health facilities. However, the decision space remains narrow in some areas, such as recruitment of skilled health personnel and formulating job descriptions. The central government needs to grant further power to the districts in order to better utilize the available decision-making authority within the framework of decentralization.

Public-private partnerships in PHC

In the United Republic of Tanzania, in recent years, the government has increasingly tried to leverage the private health sector's capacity in order to strengthen the Tanzanian health system. Due to the growing demand for health care services, and the related physical and human resources, the government lifted the restrictions on private health care providers in 1991. This was aimed at ensuring that private health services complemented the health care services provided by the government in an effort to narrow the gap between demand and supply. Contractual arrangements were made between the government and faith-based organizations on a subsidy or grant-in-aid basis. The government provided, according to a formula, bed and staff grants to hospitals owned by faith-based organizations that were providing affordable health services to their surrounding communities. In districts without any government hospital, the government designated the hospitals of faith-based organizations to serve as council designated hospitals (formerly also known as district designated hospitals), with the government supporting the operational costs of the private hospital.

In 2007 a new type of operational contract was introduced – the service agreement. The most important change brought about by the new arrangement was the introduction of a system of monitoring and evaluation linked to performance criteria, to a large extent inspired by the performance contract model. The new system marked a transition from a relationship that was mainly founded on mutual confidence to an organized and professionalized system, backed by a solid legal framework *(32)*. Typically, the contractual arrangements are mainly aimed at increasing access to maternal, newborn and child health services. Specific services covered include antenatal, delivery and postnatal services; prevention of mother-to-child transition of HIV; and other HIV/AIDS services. In addition, some district councils have entered into contractual arrangements with non-State providers to make outpatient services available for their clients. This kind of contractual arrangement is completely

initiated, financed and monitored by the district councils.

In order to institutionalize public-private partnerships, in 2009, the first Tanzanian Public-Private Partnership Policy was developed *(33)*. The Public-Private Partnership Act and associated regulations soon followed in June 2010 *(34, 35)*. The Public-Private Partnership Regulations were gazetted in June 2011. Other policy documents include the Ministry of Health and Social Welfare's Public-Private Partnership Strategic Plan 2010–2015 *(36)* and Public-Private Partnership Policy Guidelines *(37)*.

12.2 Barriers to success

Barriers to success in improving delivery of PHC services in the United Republic of Tanzania have been identified in the following areas.

- **Public expenditure on PHC.** Health financing in the United Republic of Tanzania faces many challenges. The donor share of total health expenditure is still significantly high, and despite the sectorwide approach applied by development partners, vertical funding streams still exist, especially for priority disease control programmes. In addition, large out-of-pocket payments make health financing extremely regressive, causing large financial risks for the poor, and the policy on waivers and exemptions has been inadequately implemented. Enrolment in existing health insurance schemes is still at a very low level. The Community Health Fund in particular, which seeks to expand insurance coverage in rural areas, is not achieving its intended purpose. These situations adversely affect the availability and utilization of PHC services in the country.
- **Human resources for health.** While the number of health workers, especially clinical personnel, is increasing, the existing workforce is maldistributed, with considerable shortages in dispensaries and in rural areas. Many staff prefer to work in urban rather than rural areas due to the poor working and living environment in the latter. There are clear regional disparities in HRH availability.
- **Availability of medicines.** The availability of key medicines in health facilities remains low. This situation adversely affects the availability of and access to PHC services, particularly for the poor and marginalized groups of society. A number of factors (internal and external) affect overall management of commodities in the sector. Internal factors include inadequate funding, poor planning and coordination, inadequate tracking mechanisms and tools, and deficient pharmaceutical human resources at the facility level, resulting in poor inventory management. External factors include a lack of coordination of medicines, health products and donated supplies in externally funded vertical programmes, and pilferage. This negatively affects the quality of care and the performance of service provision in general.
- **Funding of medical supplies**. There is a lack of improvement in funding of medical supplies in real per capita terms, and disbursement issues continue to affect the efficient use of limited funds. Budgetary shortfalls are exacerbated by disbursement practices (for example, disbursement of less than the approved budget by the Treasury to the Ministry of Health and Social Welfare; irregular disbursements, late in the financial year; and long lead times for disbursed funds to be credited to health facility accounts at the Medical Stores Department).
- **Public-private partnership.** While there is a very good institutional framework for public-private partnership, implementation of this framework is an issue. The concept is ill understood and the definition of public-private partnership in the health and social welfare context differs from that in the commercial sector; it is a stepped-down definition, focusing on public-private partnership engagement and collaboration. Most public-private engagement in the social sector is small scale and service oriented rather than large scale and infrastructure oriented, requiring special provision, guidelines and support that is not immediately provided for under national-level policy, legislation and guidelines. The public-private partnership model in use is therefore limiting; moving beyond guidelines and plans and achieving buy-in at each level of the system is a slow process.

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Annex 1. Key informants

Descriptor	Main areas of expertise	Main constituency represented	Remarks
Dr Gemin Mtei	Health Economist	Academician	Has been involved in conducting several studies and developing policy documents
Professor Peter Kamuzora	Health Policy and Systems	Academician	Has been involved in conducting several studies on health policy and systems
Dr Alex Nkayamba	Tanzania Food and Drugs Authority	Policy-maker	Has been involved in regulating and inspecting food and drugs in United Republic of Tanzania
Dr Robert Salim	Regional Medical Officer	Bureaucrat	Involved in policy-making and implementation
Mariam Ally	Deputy Director, Policy and Planning, Ministry of Health and Social Welfare	Policy-maker	Involved in policy-making at the Ministry of Health and Social Welfare
Dr May Alexander	District Medical Officer	Policy implementer	Has been involved in policy implementation at the district level
Mr Irenei Kiria	Executive Director, Sikika (health advocacy local nongovernmental organization)	Commentator and civil society actor	Is a commentator working with a civil society organization
Mr Juma Ntantau	District Health Manager	Policy implementer	Has been involved in policy implementation at the district level
Dr Anna Nswila	Coordinator of District Health Services, Ministry of Health and Social Welfare	Policy-maker	Involved in policy-making and monitoring implementation of policies at the district level
Dr Otilia Gowele	Director of Human Resources Development, Ministry of Health and Social Welfare	Bureaucrat and policy-maker	Involved in policy-making and monitoring implementation of human resources for health and social welfare policies
Mr Emmanuel Mtete	Public Health Specialist	Commentator and works with international organization	Has been involved in several ways in policy development process

This case study was developed by the Alliance for Health Policy and Systems Research, an international partnership hosted by the World Health Organization, as part of the Primary Health Care Systems (PRIMASYS) initiative. PRIMASYS is funded by the Bill & Melinda Gates Foundation, and aims to advance the science of primary health care in low- and middle-income countries in order to support efforts to strengthen primary health care systems and improve the implementation, effectiveness and efficiency of primary health care interventions worldwide. The PRIMASYS case studies cover key aspects of primary health care systems, including policy development and implementation, financing, integration of primary health care into comprehensive health systems, scope, quality and coverage of care, governance and organization, and monitoring and evaluation of system performance. The Alliance has developed full and abridged versions of the 20 PRIMASYS case studies. The abridged version provides an overview of the primary health care system, tailored to a primary audience of policy-makers and global health stakeholders interested in understanding the key entry points to strengthen primary health care systems. The comprehensive case study provides an in-depth assessment of the system for an audience of researchers and stakeholders who wish to gain deeper insight into the determinants and performance of primary health care systems in selected low- and middle-income countries.





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