



17 October 2015

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MODELING THE IMPLICATIONS OF MOVING TOWARDS UNIVERSAL COVERAGE IN TANZANIA

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INTRODUCTION

- ❑ Value of promoting universal health care coverage
- ❑ A situation where the whole population has access to good quality services according to needs and preferences, regardless of income level
- ❑ Many countries currently consideration: develop **financing systems** to move towards or sustain universal coverage in a way which is **affordable**, **feasible** and politically **acceptable**

INTRODUCTION

- ❑ Many low-income countries challenge in Africa: committed to **increasing financial protection** among their populations in an **affordable** and **equitable** manner, especially in contexts of a **large informal sector**.
- ❑ One of the major concerns: whether offering complete financial protection will be affordable and sustainable.

INTRODUCTION

- ❑ The Tanzanian Health Sector Strategic Plan III indicates a commitment to the **expansion of pre-payment schemes** as a means of generating complementary financing for health service provision and, ultimately, achieving universal coverage, with 30% coverage targeted by 2015.

INTRODUCTION

This paper aims to:

- ❑ Assess the impact in Tanzania of possible moves towards universal coverage compared with the current situation in relation to service use, health care expenditure and revenue generation
- ❑ Calculate expenditure as a proportion of government expenditure and gross domestic product(GDP).
- ❑ Explore how the additional expenditures associated with greater coverage might be financed.

METHODS-Study Setting

Table 1 Characteristics of the Tanzanian population and projected changes

Population characteristics	2010	Projected 2025
Total population (million) ^a	43.19	65.34
Women aged 15–49 years (million) (%) ^a	10.37 (24)	15.45 (23.6)
Children aged 0–4 years (million) (%) ^a	19.17 (44.4)	28.18 (43.1)
Working age population (aged 15–59) (million) (%) ^a	22.02 (51.0)	34.18 (52.8)
Elderly population (aged ≥60) (million) (%) ^a	2.00 (4.6)	2.97 (4.5)
Dependency ratios (%) ^a		
Young	87.06	82.45
Elderly	9.08	8.69
Total	96.14	91.14
Population growth rate ^a	2.51	2.73
Life expectancy in years ^a	55	61
GDP in billion Tsh ^b	23 564	42 438
Government expenditure in billion Tsh ^b	7541	13 580
Informal sector (% of population aged ≥15 years) ^{c,*}	69.9	62.1
Inactive and unemployed (% of population aged ≥15 years) ^c	20.8	13.9
Public formal sector (% of population aged ≥15 years) ^c	2.1	2.2
Private formal sector (% of population aged >15 years) ^c	7.1	21.7
Average monthly income in public/private sector (Tsh) ^d	253 295	340 901

METHODS-Study Setting

- ❑ The Tanzanian health system is comprised of a large number of faith-based providers and a growing number of private for-profit providers.
- ❑ However, over 65% of all facilities in the country are government owned and there is a wide discrepancy in the distribution of facilities between urban and rural areas.
- ❑ In 2008, the government launched a comprehensive plan to strengthen the public primary health system, including the construction of a dispensary in every village. This is referred to as the primary health care development programme.

METHODS-Study Setting

- ❑ Currently, Tanzania has a **highly fragmented health financing system** which combines funding through health insurance schemes and tax funding with out-of-pocket payments.
- ❑ Total health insurance coverage in 2008 was estimated at around 10%.
- ❑ Out-of-pocket payments account for about 25% of total health care expenditure, donor funding for 44% and tax funding for 28%.

Table 2 Health insurance schemes in Tanzania

Descriptive	NHIF	CHF/TIKA
Eligibility-focus	Mandatory for public servants and up to 5 dependants. Since 2009 members of other sectors can opt in.	Voluntary for the rural population (CHF), urban population (TIKA)—covers a couple and their children under 18 years.
Estimated population coverage (2008)	5%	4%
Benefit package	Inpatient and outpatient care from accredited facilities. An estimated 72% of all health facilities across the country are accredited (National Health Insurance Fund 2009).	Primary level public facilities. Limited referral care in some districts.
Contribution rate and revenue collection	6% of gross salary, split between employer and employee, deducted at source.	Typically Tsh 5000–15 000 per year/household with a 100% matching fund paid by the government through the health basket fund. Funds are collected at lower level health facilities and sent to the district.
No. of risk pools	1	Funds pooled at district level, but re-disbursed to facilities as supplies, so facility is effectively the risk pool.
Provider payment method	Fee-for-service except for a few specialized hospitals in Dar es Salaam which operate under a capped daily rate system.	Essentially capitation, as there is no payment for services; facilities use CHF revenue to support service delivery.

Descriptive	NSSF-SHIB	Private insurance	Micro-schemes (example: Chawana)
Eligibility-focus	Members of the NSSF are eligible subject to completing a registration form.	Voluntary, often tied to employment—individual cover.	Informal sector (e.g. market vendors).
Estimated population coverage (2008)	1 %		
Benefit package	Outpatient and inpatient care up to Tsh 80 000 at a small network of less than 300 facilities.	Various packages typically including outpatient and inpatient care at a range of providers.	Private outpatient care plus transport for referral and up to Tsh 10 000 referral costs.
Contribution rate and revenue collection	NSSF contributions (20% of gross salary split between employer and employee) used to refund health care use of members, no ear-marked funds for SHIB.	Various depending on benefits.	Tsh 50/person/day collected at the work place.
No. of risk pools	1	Each scheme has its own risk pool.	No risk pooling across schemes.
Provider payment method	Capitation, some fee-for-service	Fee for service	Capitation

Summary Of Health Care Financing Reform Scenarios

- ❑ Tanzania is currently committed to expanding health insurance cover within the population with a view to moving towards universal coverage.
- ❑ The Health Sector Strategic Plan III specifically identifies the NHIF and the CHF/TIKA as the means of expanding coverage.

Summary Of Health Care Financing Reform Scenarios

Three simple scenarios are described:

- Maintaining the current situation ('the status quo');
- Expanded health insurance coverage (the estimated maximum achievable coverage in the absence of premium subsidies, coverage restricted to those who can pay);
- Universal coverage for all (government revenues used to pay the premiums for the poor).

Summary Of Health Care Financing Reform Scenarios

Scenario 1: The status quo

- ✓ The status quo was based on the 2008 situation, where **10%** of the population is covered by a **fragmented set of insurance schemes** with **varying levels of benefits**.
- ✓ The remaining population benefit from **subsidized user charges** in public facilities funded mainly through **tax revenue**.
- ✓ **Utilization rates** were assumed to remain at current levels.

Summary Of Health Care Financing Reform Scenarios

Scenario 2: Expanded insurance coverage

- ❑ The expanded coverage scenario assumed that the entire **formal sector** would be covered by the **NHIF** under the existing benefit package. Under this scenario the CHF/TIKA benefit package was assumed to expand to include public inpatient care.
- ❑ Coverage of informal sector households by the CHF/TIKA was set at **52%** on the assumption that all those who currently pay more than the cost of the CHF/TIKA premium in user fees would enroll in the CHF/TIKA.
- ❑ Utilization rates for public inpatient care among CHF/TIKA members were assumed to increase **by 90%** due to the inclusion of these services within the benefit package. Those individuals not covered by the NHIF or the CHF/TIKA would benefit from **subsidized user charges** in public facilities funded mainly through tax revenue.

Summary Of Health Care Financing Reform Scenarios

Scenario 2: Expanded insurance coverage

- ❑ It was assumed that achieving significant increases in insurance coverage would require **substantial investment** in the public health system.

Two scenarios for upgrading the public health system were considered: an upper and a lower cost scenario

- ✓ In the lower cost scenario, the cost of **training and recruiting sufficient health workers** to meet national human resource requirements was included.
- ✓ In the upper cost scenario, the costs of **comprehensive health system strengthening** were included, as for the universal coverage scenario.

Summary Of Health Care Financing Reform Scenarios

Scenario 3: Universal coverage

- ✓ The universal coverage scenario assumed that the **entire population** would be covered by insurance financed either through **contributions** or from **tax funding** for those who could not afford premiums.
- ✓ The formal sector would be covered through the NHIF under the existing benefit package, and the informal sector through the CHF/TIKA with benefits extending to public inpatient care, and all other members of the population would be dependents on either of these schemes.
- ✓ The utilization rates were those considered under the expanded insurance scenario.
- ✓ We included the **costs of comprehensive health system strengthening** including: rehabilitation, human resource development, improving the referral system and improving the provision of medicines, equipment and supplies.

Model For Estimating Resource Requirements

- ❑ A model was developed in **Microsoft Excel** to explore the health care expenditures associated with each of the reform scenarios in relation to the delivery of public health services and all health services (public, private and faith-based as well as pharmacies/drug shops).
- ❑ This process relied on **three key variables**: population; service utilization rates; and the unit costs of service delivery.

Model For Estimating Revenue

- ❑ The second objective of the model was to forecast total revenue from user fees and insurance contributions associated with each scenario.

Key Findings

Changes in population coverage and service utilization

- ❑ Under **the status quo**, financial protection is available to **10%** of the population through health insurance schemes, with the remaining population benefiting from subsidized user charges in public facilities.
- ❑ **Seventy-six per cent** of the population would benefit from financial protection through health insurance under the **expanded coverage scenario**, and
- ❑ **100%** of the population would receive such protection (by year 15) through a mix of insurance cover and government funding under the **universal coverage scenario**.

Table 4 Estimates of total utilization levels, baseline and year 15 (millions)

	Baseline	Scenarios: Year 15		
		Status quo	Expanded coverage	Universal coverage
Total outpatient visits	101	157	228	268
Total inpatient admissions	11	17	21	22
Total outpatient visits to public providers	64	98	150	196
Total outpatient visits to pharmacies/drug shops	64	89	134	182
Total inpatient admissions to public providers	7	10	16	17

Projected Expenditure Levels

Table 5 Projections of average annual public and total health service delivery costs, and revenue from user fees and insurance premiums, in billion Tsh (2010 prices), over the period baseline to year 15

Scenario	Average annual public health service delivery costs	Average annual total health service delivery costs	Average annual revenue from user fees		Average annual revenue from insurance contributions
			Public health services	All health services	
Status quo	825	1090	178	436	71
Expanded coverage—lower ^a	967	1355	109	294	1449
Expanded coverage—upper ^b	1695	2055	109	294	1449
Universal coverage ^c	1784	2130	71	247	1471

Notes:

^aExpanded coverage—lower assumes the minimal level of public health system investment.

^bExpanded coverage—upper assumes the maximum level of public health system investment.

^cUser fees are still incurred as CHF/TIKA members pay out-of-pocket when using non-public services which are not covered in their benefit package.

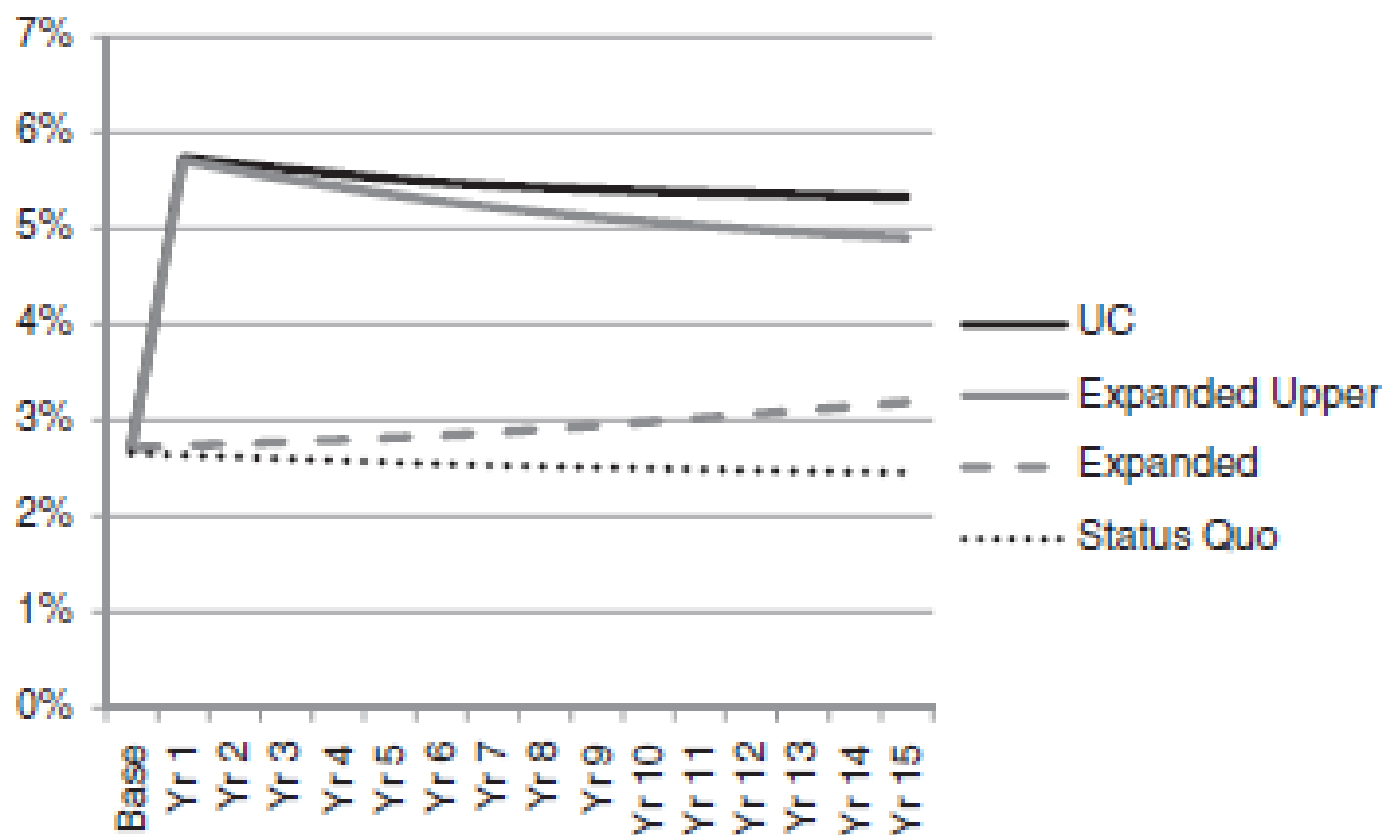


Figure 1 Projections by scenario of public service delivery costs as a proportion of GDP

Table 6 Best and worst case scenario analysis: impact on expenditure results of changes in key assumptions

	Expanded coverage lower		Universal coverage	
	Best case	Worst case	Best case	Worst case
Year 1				
Total expenditure (billion Tsh)	935	1124	1642	1968
Total expenditure on public health services (billion Tsh)	690	842	1446	1551
Total expenditure as % GDP	3.5	5.0	6.1	8.7
Total expenditure on public health services as % government expenditure (billion Tsh)	8.1	11.6	16.9	21.4
Year 5				
Total expenditure (billion Tsh)	1123	1632	1862	2548
Total expenditure on public health services (billion Tsh)	831	1150	1626	1898
Total expenditure as % GDP	3.2	6.7	5.2	10.4
Total expenditure on public health services as % government expenditure (billion Tsh)	7.3	14.6	14.3	24.2
Year 15				
Total expenditure (billion Tsh)	1938	5736	2794	7085
Total expenditure on public health services (billion Tsh)	1391	3396	2232	4282
Total expenditure as % GDP	3.0	15.2	4.3	23.7
Total expenditure on public health services as % government expenditure (billion Tsh)	6.7	35.5	11.1	44.7

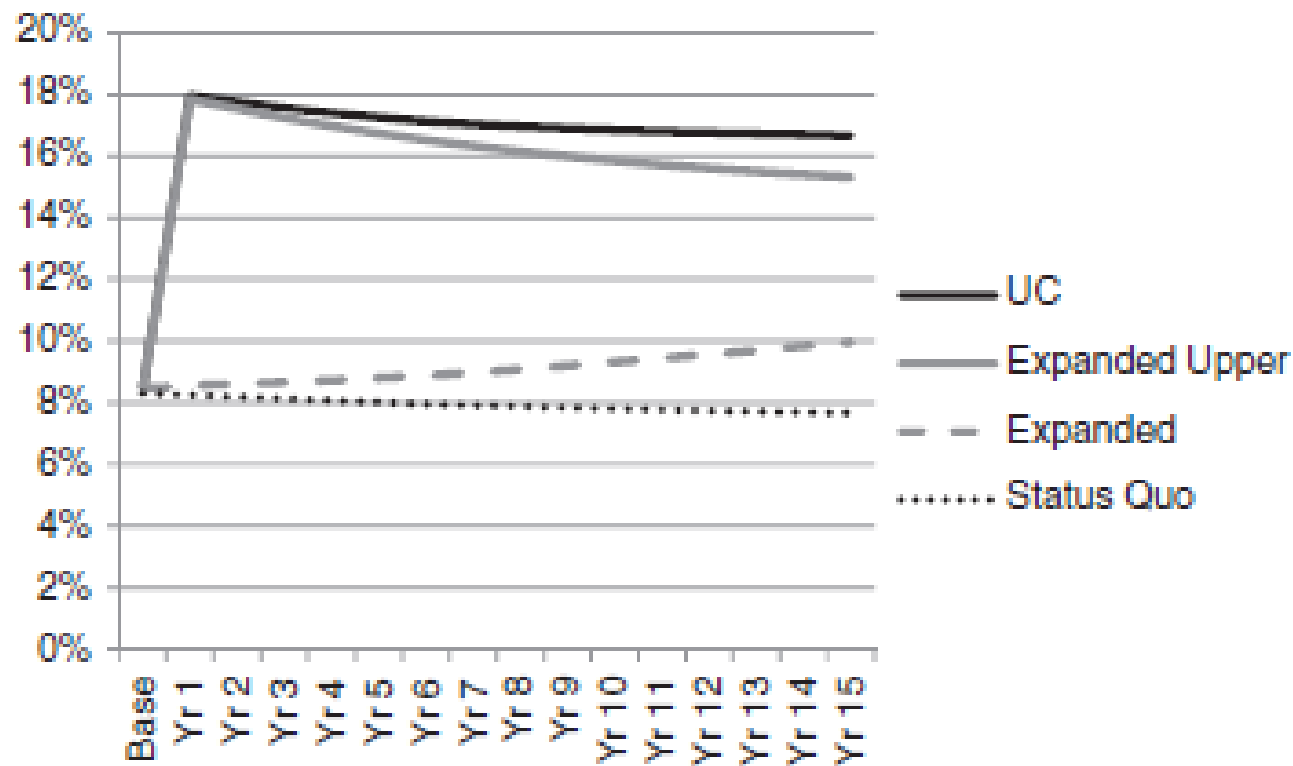


Figure 3 Projections by scenario of public service delivery costs as a proportion of total government expenditure

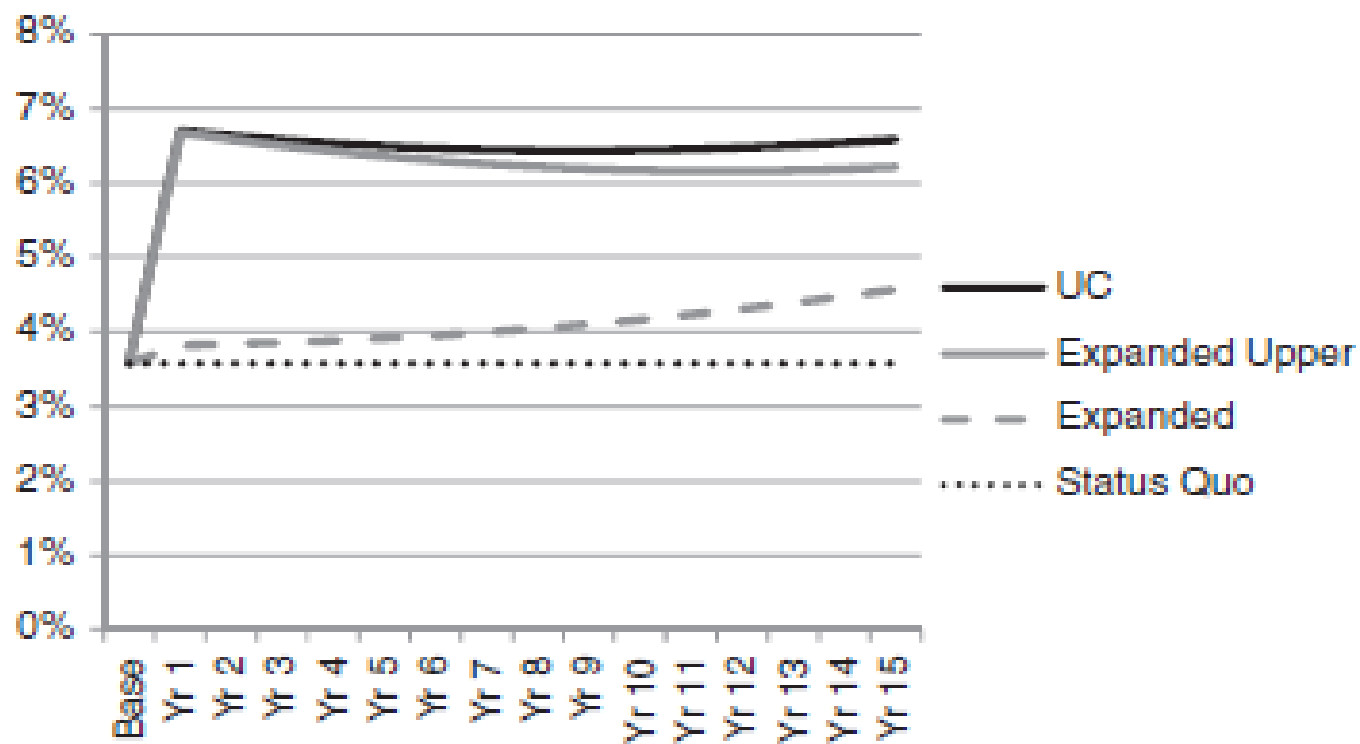


Figure 2 Projections by scenario of total service delivery costs as a proportion of GDP

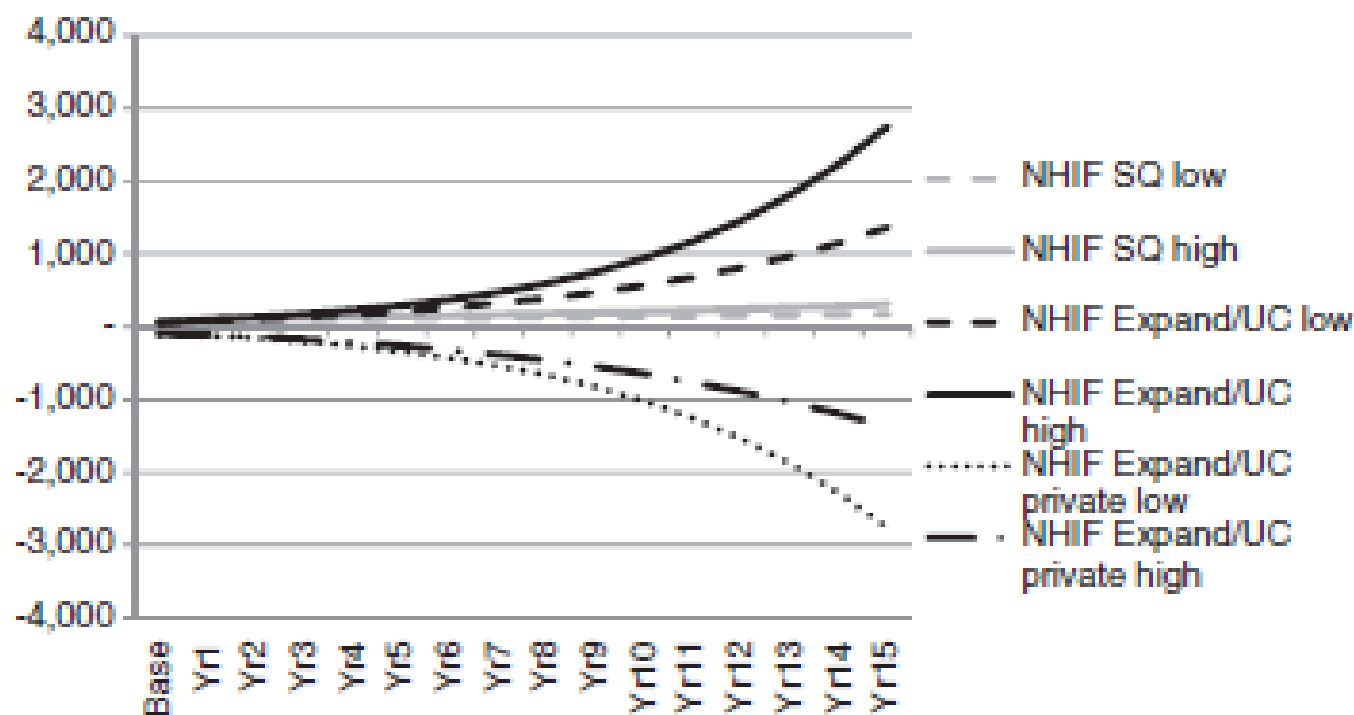


Figure 4 Projected revenue surplus/deficit for the NHIF in 2010 billion Tsh

Note: SQ: Status quo; Expand/UC: Expanded insurance cover; universal coverage scenarios using current estimates of unit costs. Expand/UC private: expanded insurance cover and universal coverage using private scheme unit cost levels. Low: assumes lower level of real wage inflation of 2%; High: assumes higher level of real wage inflation: 5%.

Table 7 Per capita annual cost and revenue from user fees and insurance premiums and net cost to the government in Tsh associated with different population groups at baseline

Population groups	Per capita service delivery costs	Per capita revenue from public sector user fees	Per capita revenue from insurance premiums	Net cost per capita
Uninsured	5 956	2 240	0	3 716
CHF/TIKA current package	12 778	392*	1702	10 683
NHIF	17 891	0	43 053	−25 162

Note: *At baseline, CHF/TIKA members are still paying user charges for inpatient care in public facilities.

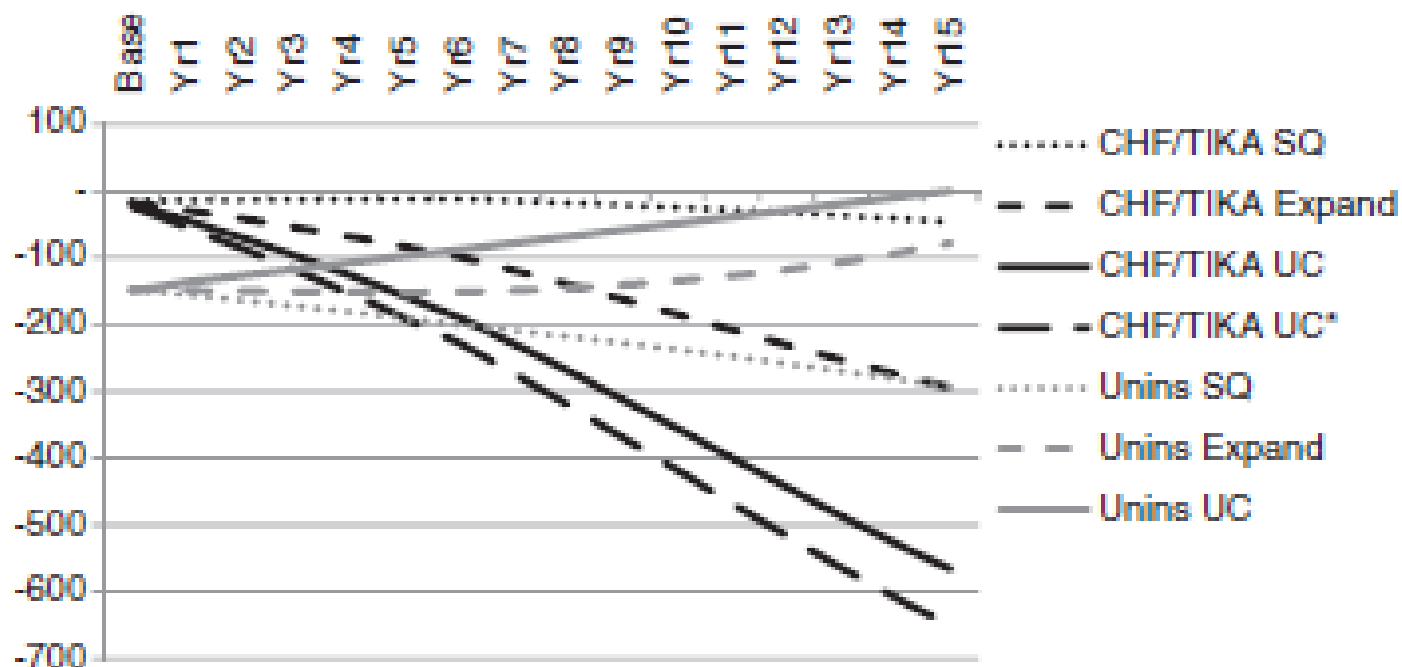


Figure 5 Projected net public sector resource requirements (revenue minus cost) for CHF/TIKA members and the uninsured in 2010 Tsh billion

Note: SQ: Status quo; Expand: expanded insurance coverage; UC: universal coverage; Unins: uninsured. CHF/TIKA UC* signifies universal coverage in the absence of premium contributions from CHF/TIKA members.

Discussion

- ❑ A potentially sizeable expansion in insurance coverage could be achieved just by **expanding coverage** within the **formal sector**. If the government made it **mandatory** for the entire formal sector to enroll in the **NHIF**, this would immediately expand coverage to around **50%** of the population(including dependants).
- ❑ The achievement of **universal coverage** relies primarily on the successful expansion of **CHF/TIKA** cover among the **informal sector** and their dependants, which are the majority of the population, and expanding benefits to include inpatient care, without which financial protection would be incomplete.

Discussion

- ❑ In the two scenarios considered, health insurance expansion had a significant effect on **outpatient care utilization** at lower level public facilities.
- ❑ These scenarios, therefore, rely on the existence of a **sufficient network of** appropriately equipped lower level **public facilities** to ensure that quality services are made available to the population in sufficient quantity.
- ❑ Costs of upgrading the public health system
- ❑ A limited investment in the health system to ensure sufficient human resource availability

Discussion

- ❑ The other major cost driver is the expansion of coverage among the CHF/TIKA, which leads to **increased service delivery costs** and **lost revenue** from **user fees**, with premiums doing little to offset these costs.
- ❑ The removal of CHF/TIKA premiums would have little effect on the overall resource requirements associated with moves towards universal coverage.
- ❑ funding the informal sector through other revenue sources: Ghana and Thailand experiences

Discussion

- ❑ Under the base case and best case scenarios, expanded insurance coverage was largely **affordable** at current levels of government health sector spending.
- ❑ However, universal coverage would require a doubling in the proportion of GDP going to public health services from **3% to 6%** in the short term.
- ❑ NHIF revenue surplus
- ❑ Cross-subsidization between the NHIF and the CHF/TIKA.

Conclusion

- ❑ There are variety of options to finance expanded and universal coverage in Tanzania.
- ❑ The use of NHIF reserve funds to cross-subsidize, at least, a proportion of the informal sector would be the most straightforward and equitable way of financing insurance expansion.
- ❑ The achievement of universal coverage will be highly dependent on Tanzania's ability to contain health care costs by negotiating with service providers to ensure reimbursement rates remain reasonable.
- ❑ Under the worst case scenario, neither the expanded nor the universal coverage scenarios were likely to be affordable.
- ❑ The government commitment to upgrading the public health system outlined in the MMAM will also need to be made a reality in order to deliver services of adequate quality to the population.
- ❑ Indeed, ensuring that quality services are available will be critical to the success of a universal coverage plan and to the willingness of the population to pre-pay for health care.



Thank you