The Labor Market For Nurses and Midwives

An Overview of Challenges and Solutions from Africa

Christopher H. Herbst, Recife 2013

Overview of Presentation

1. Maternal mortality and the relationship to HRH
2. The numbers problem
3. The distribution problem
4. The performance problem
5. Crafting solutions to address the nursing/midwifery crisis in Africa (and elsewhere)

DIRECTIONS IN DEVELOPMENT
Human Development

77020

The Labor Market for Health Workers in Africa

A New Look at the Crisis

Agnes Soucat, Richard Scheffler,
with Tedros Adhanom Ghebreyesus, Editors

THE WORLD BANK

A Continent of Revival and Challenges

MATERNAL MORTALITY AND RELATIONSHIP TO HRH

Africa has some of the worst life expectancy and maternal mortality rates in the world

Of the **20** countries with the lowest **life expectancy at birth** in 2011, **19** are in SSA

	LEB 2011	Rank LEB
Sierra Leone	47.78	176
Lesotho	47.98	175
Guinea-Bissau	48.11	174
Central African Republic	48.35	173
Congo, Dem. Rep.	48.37	172
Swaziland	48.66	171
Afghanistan	48.68	170
Zambia	48.97	169
Chad	49.52	168
Mozambique	50.15	167
Burundi	50.34	166
Angola	51.06	165
Equatorial Guinea	51.14	164
Somalia	51.19	163
Zimbabwe	51.24	162
Mali	51.37	161
Cameroon	51.58	160
Nigeria	51.86	159
South Africa	52.61	158
Botswana	53.02	157

Of the **20** countries with the highest **Maternal Mortality rates** (model estimates, 2010), the top **19** are in SSA

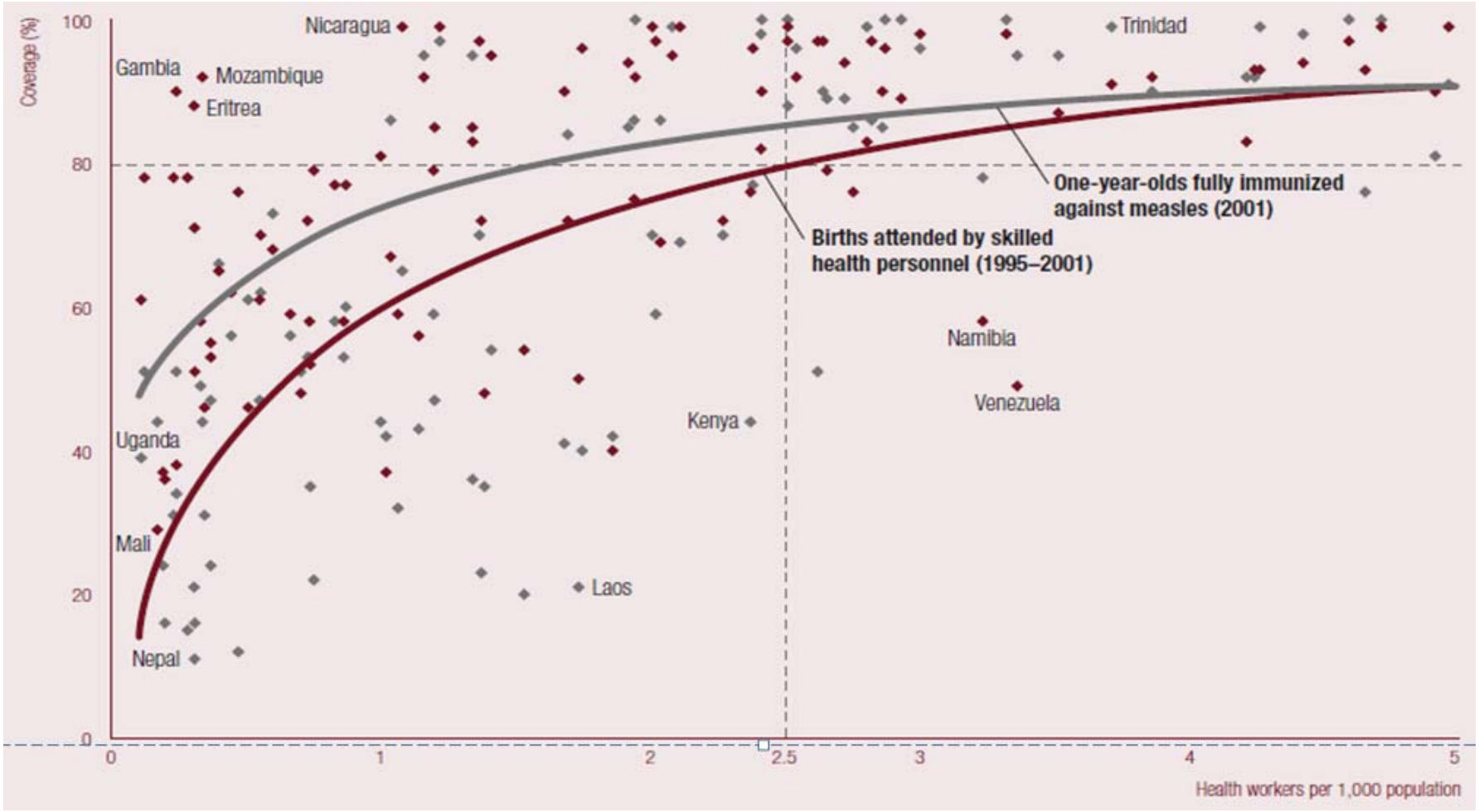
	MMR 2010	Rank MMR
Chad	1100	176
Somalia	1000	175
Sierra Leone	890	174
Central African Republic	890	173
Burundi	800	172
Guinea-Bissau	790	171
Liberia	770	170
Sudan	730	169
Cameroon	690	168
Nigeria	630	167
Lesotho	620	166
Guinea	610	165
Niger	590	164
Zimbabwe	570	163
Congo, Rep.	560	162
Mali	540	161
Congo, Dem. Rep.	540	160
Mauritania	510	159
Mozambique	490	158
Lao PDR	470	157

Of the 20 countries with the lowest coverage of Skilled Birth Attendance (SBA), 12 are in SSA

	SBA latest	Rank SBA
Ethiopia	10.0	197
Niger	17.7	196
South Sudan	19.4	195
Chad	22.7	194
Sudan	23.1	193
Haiti	26.1	192
Eritrea	28.3	191
Timor-Leste	29.3	190
Bangladesh	31.7	189
Somalia	33.0	188
Yemen, Rep.	35.7	187
Nepal	36.0	186
Lao PDR	37.0	185
Afghanistan	38.6	184
Nigeria	38.9	183
Pakistan	43.0	182
Kenya	43.8	181
Madagascar	43.9	180
Guinea-Bissau	44.0	179

Strong Global Relationship between skilled birth attendance and health worker densities

Relationship between health service coverage and HRH in LMIC (Source JLI,

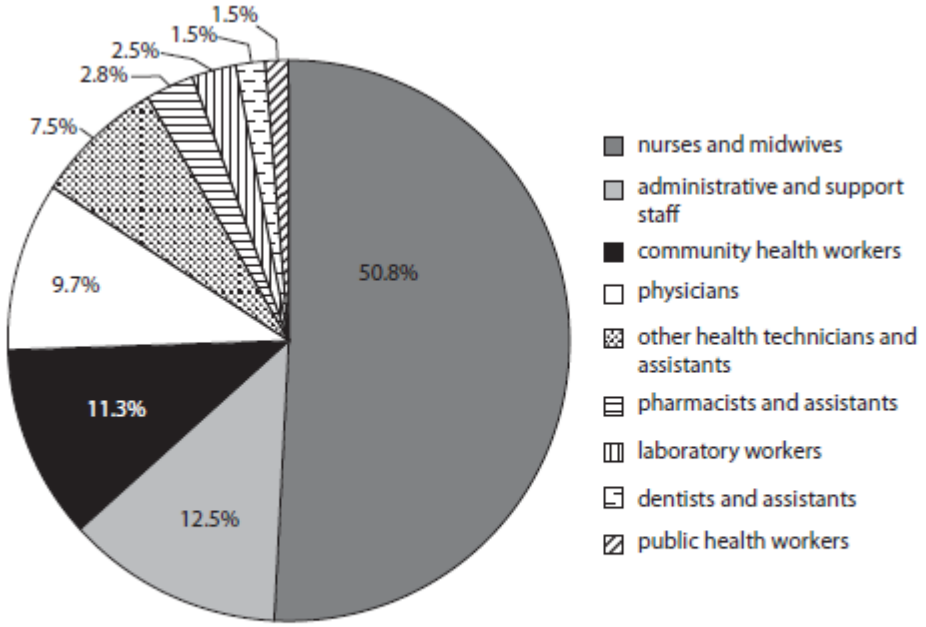


The HRH Crisis in Africa

THE NUMBERS PROBLEM

Of all the different health workers in Africa, more than half are nurses and midwives

Average Skill mid in SSA by Cadre



Source: WHO 2005.
Note: The table has data for only 46 countries, given problems of data availability. Cadres were aggregated into nine main categories, to allow for comparisons.

Africa nonetheless has the lowest density of nurses and midwives of all regions

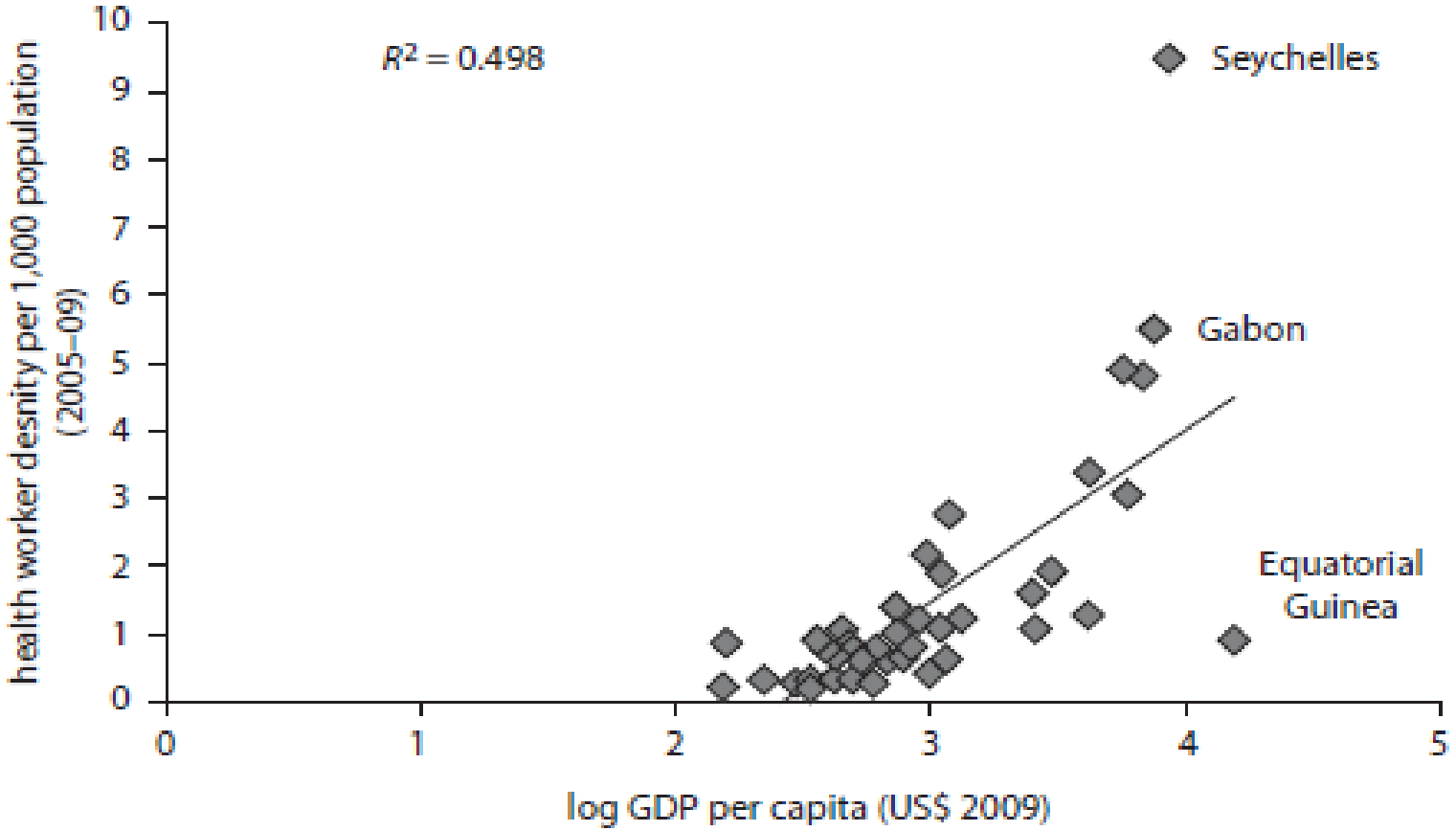
HRH per 1000 population by Region

WHO region	*Physicians*	*Nurses and midwives*	*Total*
Africa	0.24	1.09	1.33
Americas	2.29	5.49	7.78
Eastern Mediterranean	1.01	1.42	2.43
Europe	3.25	6.81	10.06
South Asia	0.58	1.24	1.81
East Asia	1.87	2.51	4.37
Western Pacific	1.40	2.08	3.48
Global	1.36	2.75	4.11

Source: Global Health Observatory, World Health Organization (http://apps.who.int/ghodata/#).

Health Worker Densities are particularly low in poorer countries

Per capita GDP and HRH density



Sources: WHO/Global Atlas (2005–09) and World Bank (2010).

Note: Somalia is excluded as reliable GDP data are not available.

The HRH Crisis in Africa

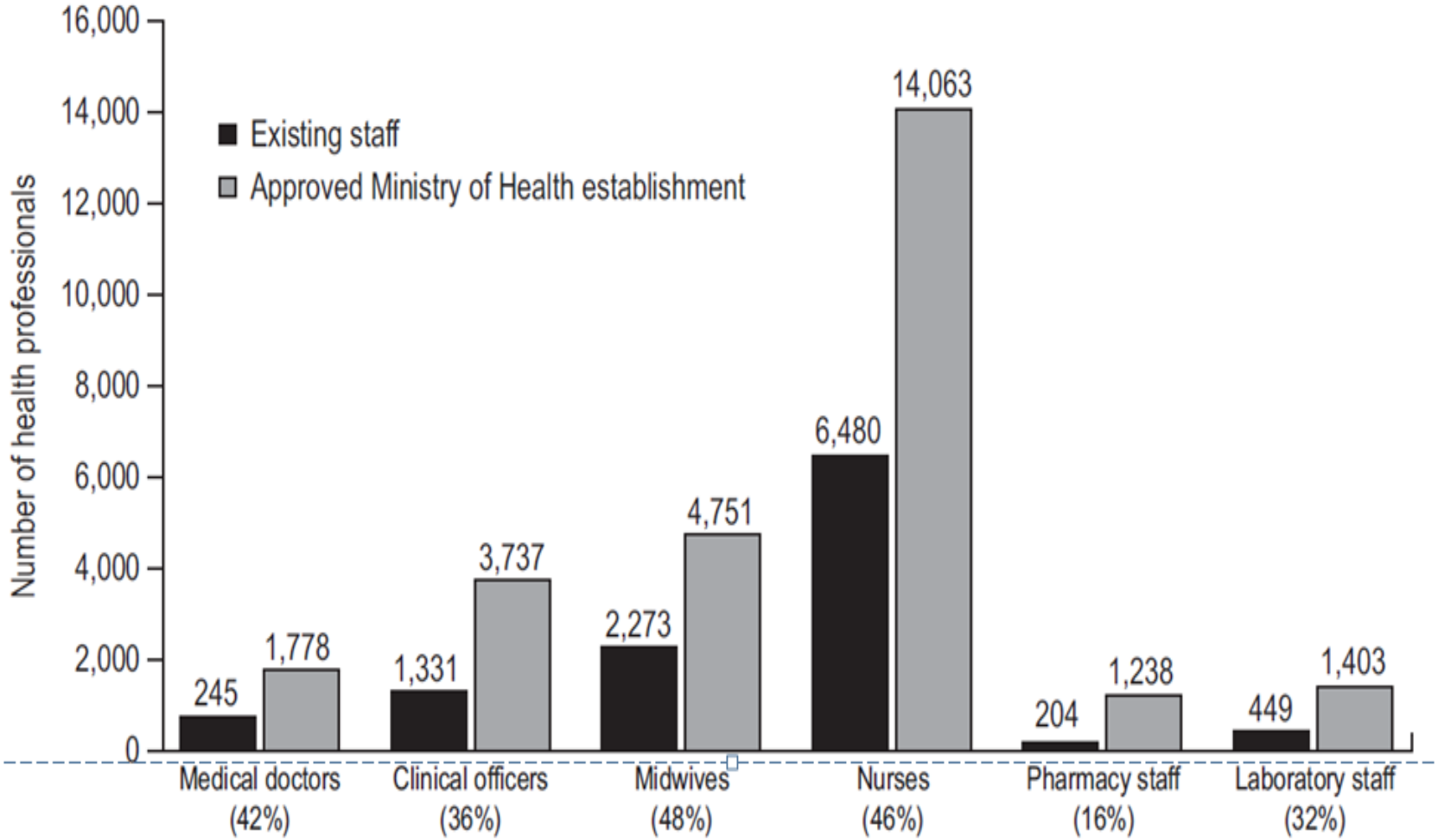
WHAT EXPLAINS THE NUMBERS PROBLEM?

Core Analytical Framework to help explain Low Numbers in Africa

- The low health worker numbers can largely be explained by two main features of the labor market:
  - Labor Market Supply :Number of workers produced and willing to enter or stay in a national labor market
    - Influenced by monetary and non monetary compensation
  - Labor Market Demand :Number of employers and their willingness/ability to hire health workers
    - Influenced by ability and sufficient funding of the employer to hire/absorb workers
- Supply and demand are not mutually exclusive and a country can experience an issue with both (varies by region)

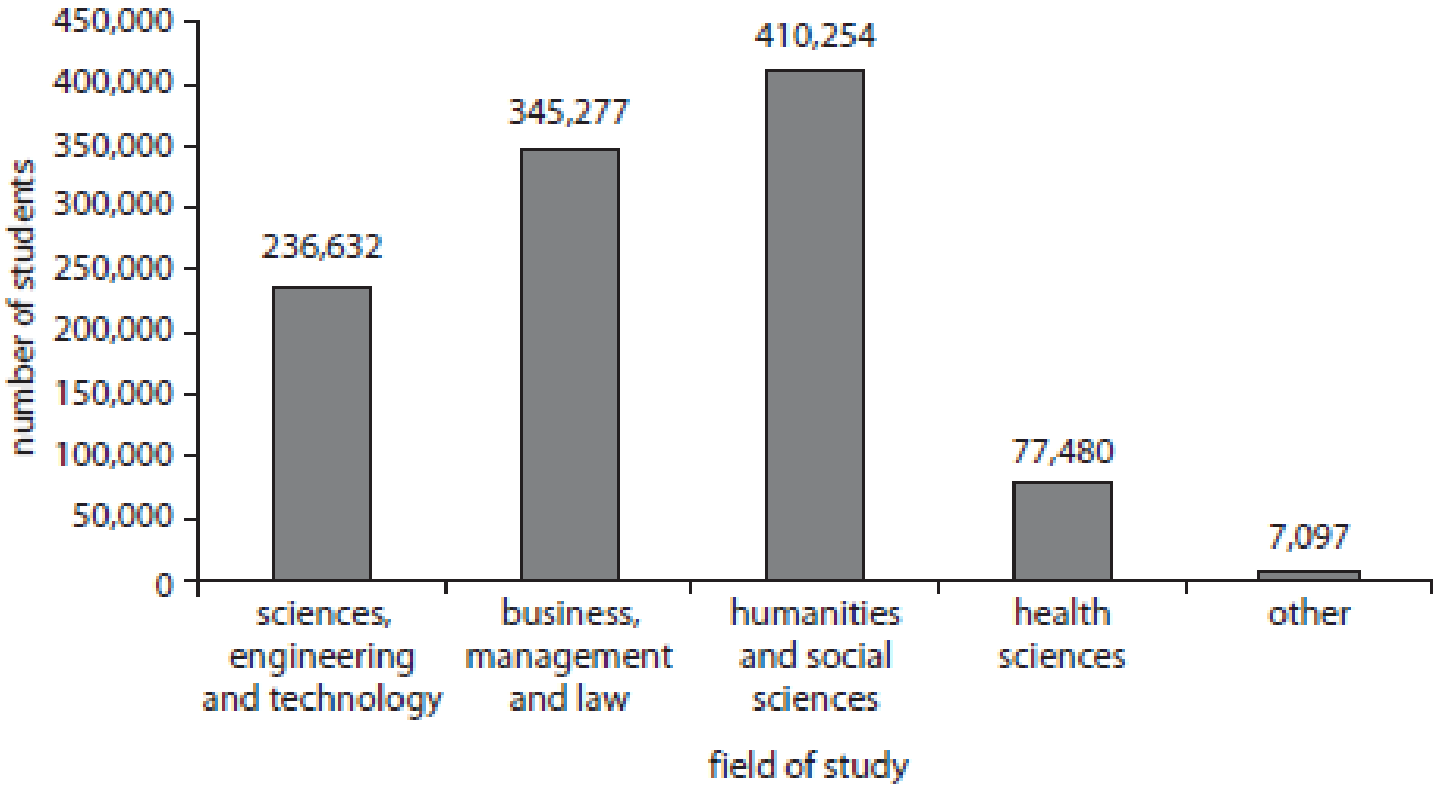
Countries experience massive vacancy rates vis a vis national needs

Typical example of existing vs desired staff from Zambia



Labor Supply is low because Labor Production is low

Number of students (all levels) per major field of study in selected African Countries

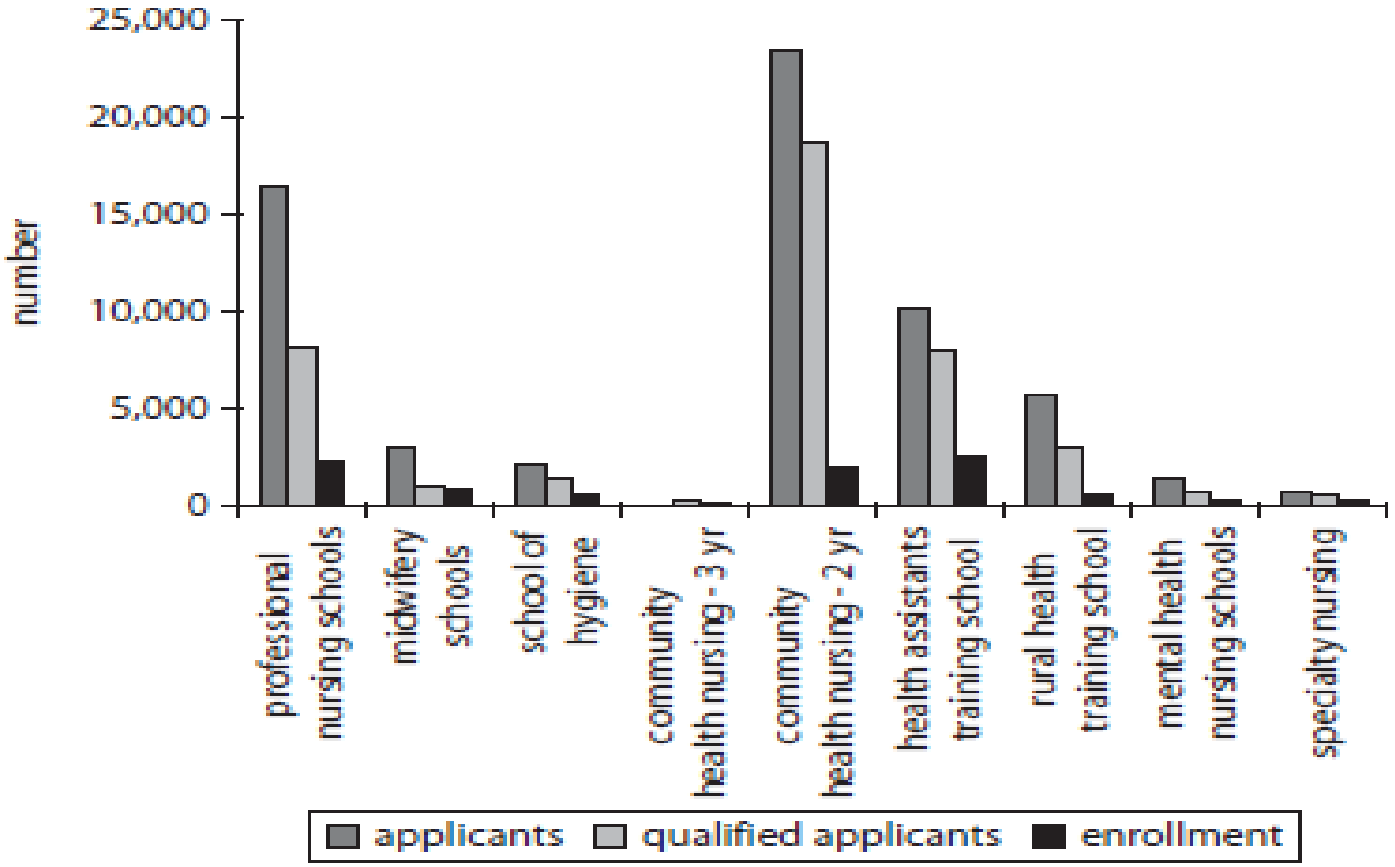


Source: Kotecha 2008.

Note: Figures represent the sum of totals for Angola, Botswana, Democratic Republic of Congo, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia, and Zimbabwe.

Many training Institutions lack capacity to enroll more students

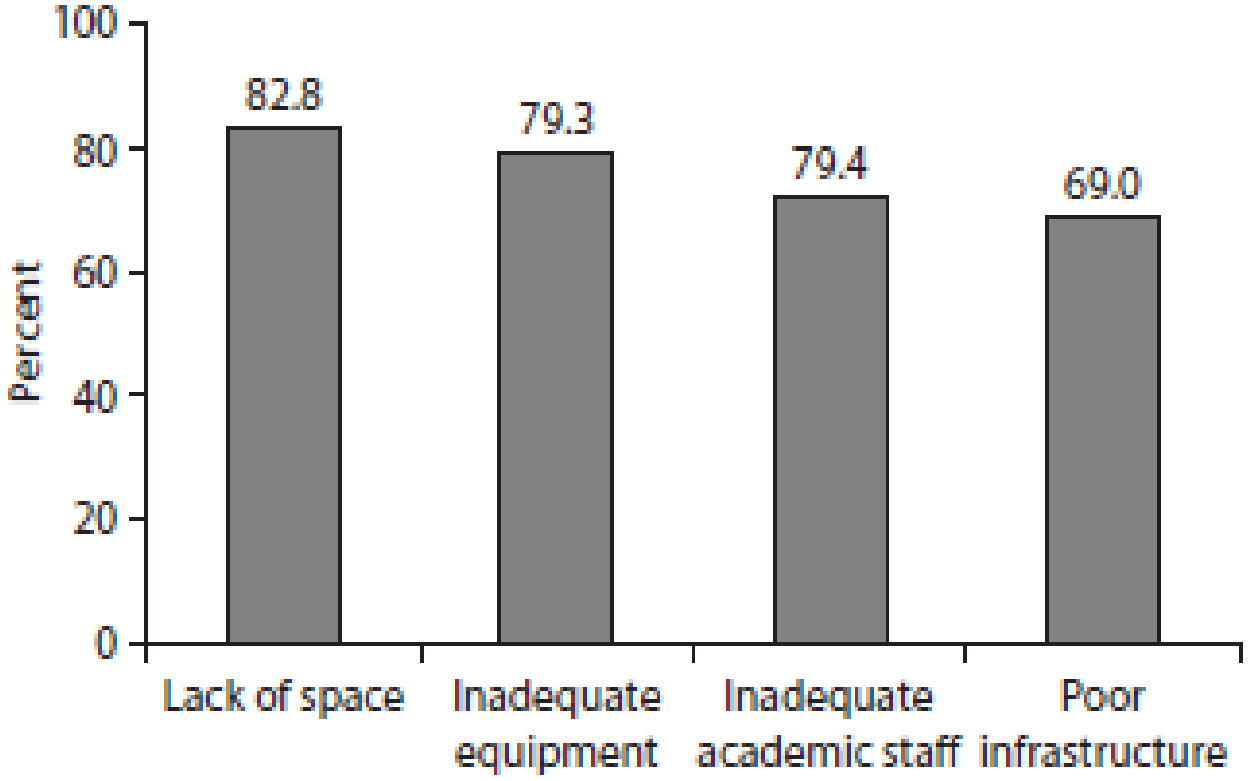
Applicants and Enrollment at Selected Health Training Institutions in Ghana, 2008



Source: Appiah, E; Herbst, C; Soucat, A, 2012: Human Resources for Health In Ghana: Towards Evidence based Interventions, 2012, Directions in Development, World Bank, forthcoming.

Health Training Institutions experience physical, technical and organizational capacity constraints

Capacity weaknesses in Ghana Health training institutions

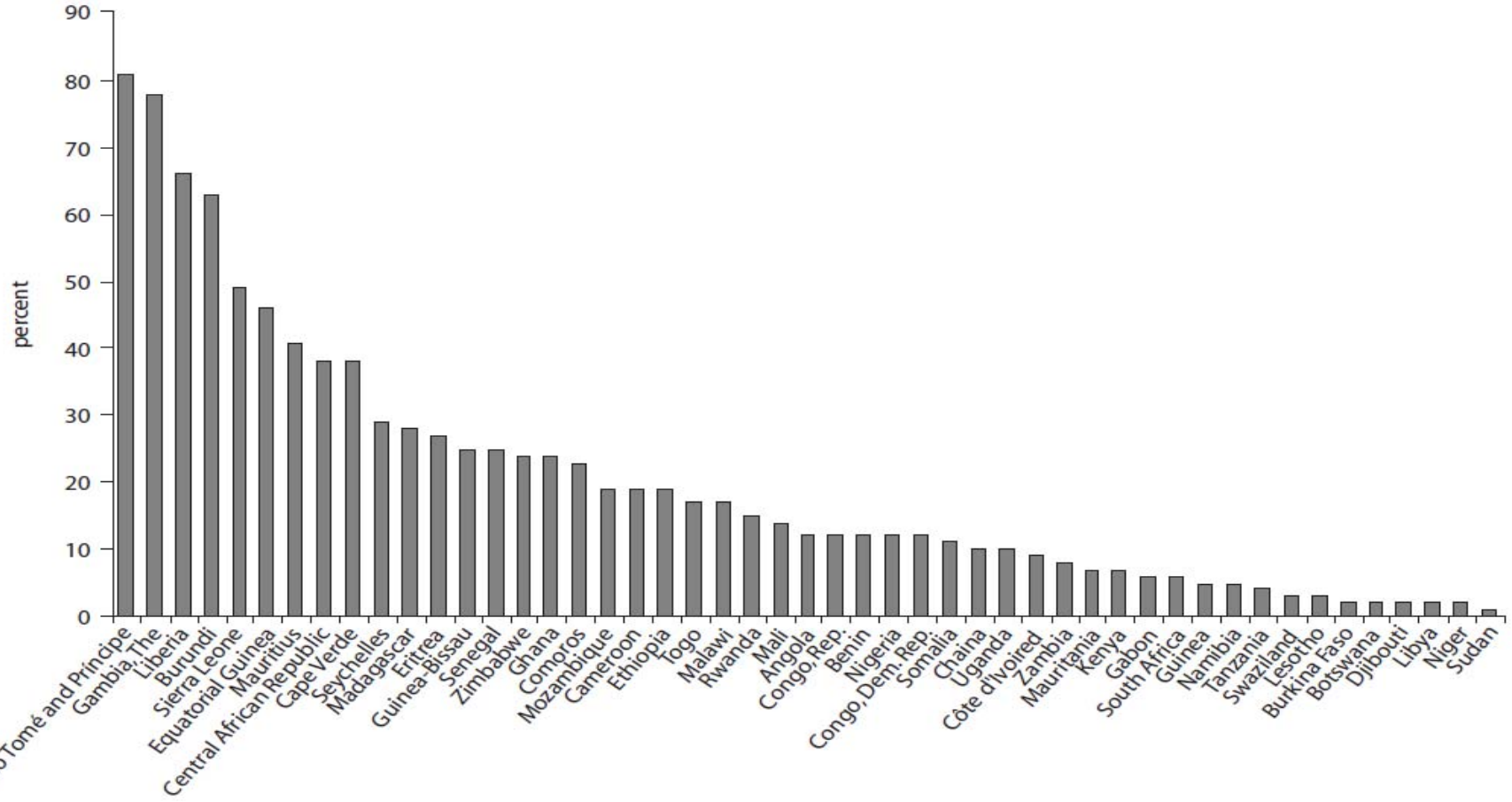


Source: Beciu et al. 2009.

Note: These weaknesses were identified by directors of health-training institutions.

Labor supply is low because there are strong Preferences for Out of Country Employment

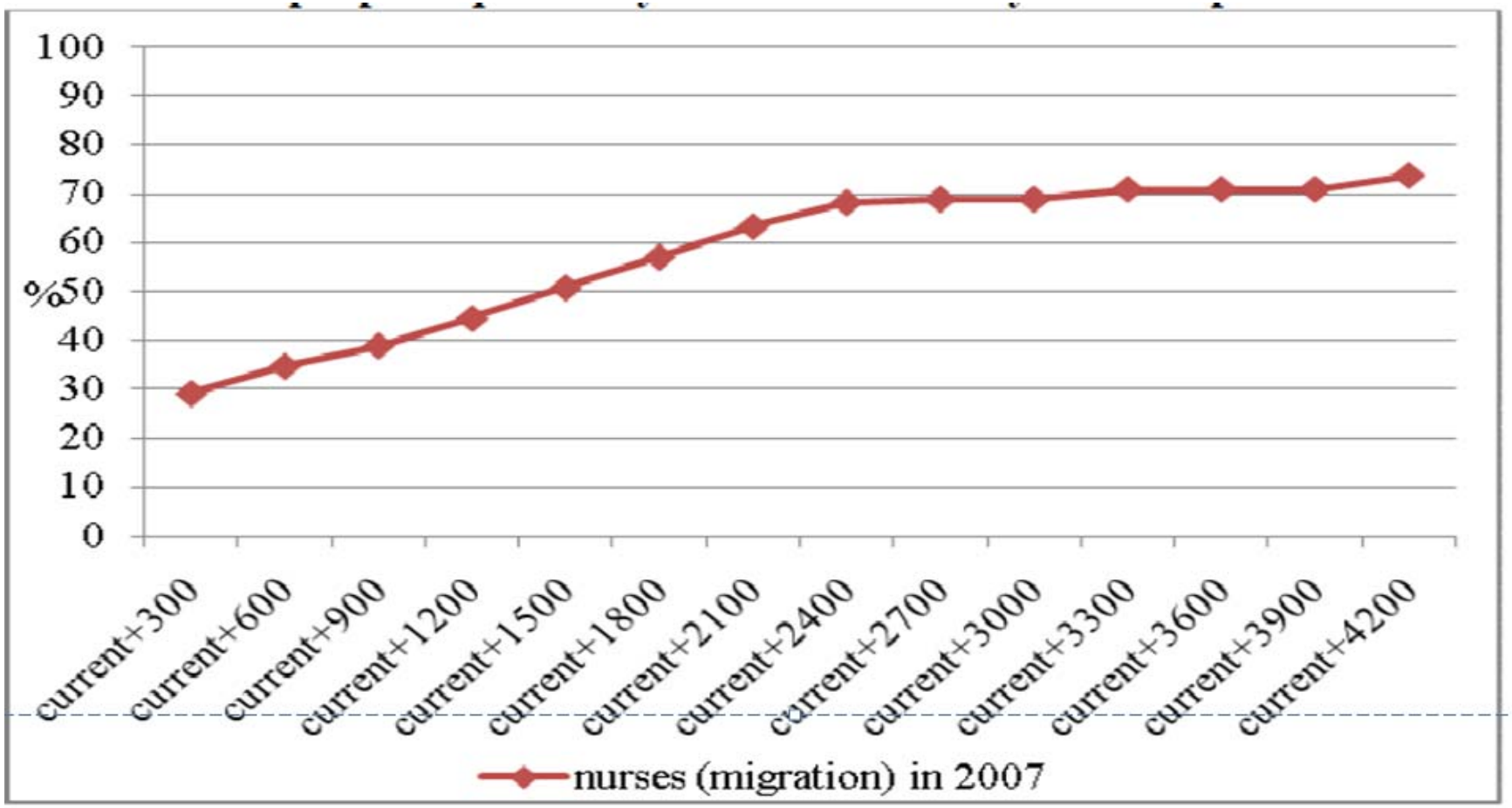
Emigration of African Nurses by Country in Africa



Source: Clemens and Pettersson 2006.

Low Salaries are a very strong factor in considerations to migrate (but also other factors including education)

Example from a Contingent valuation: compensation required to keep nurses from migrating out of Ethiopia

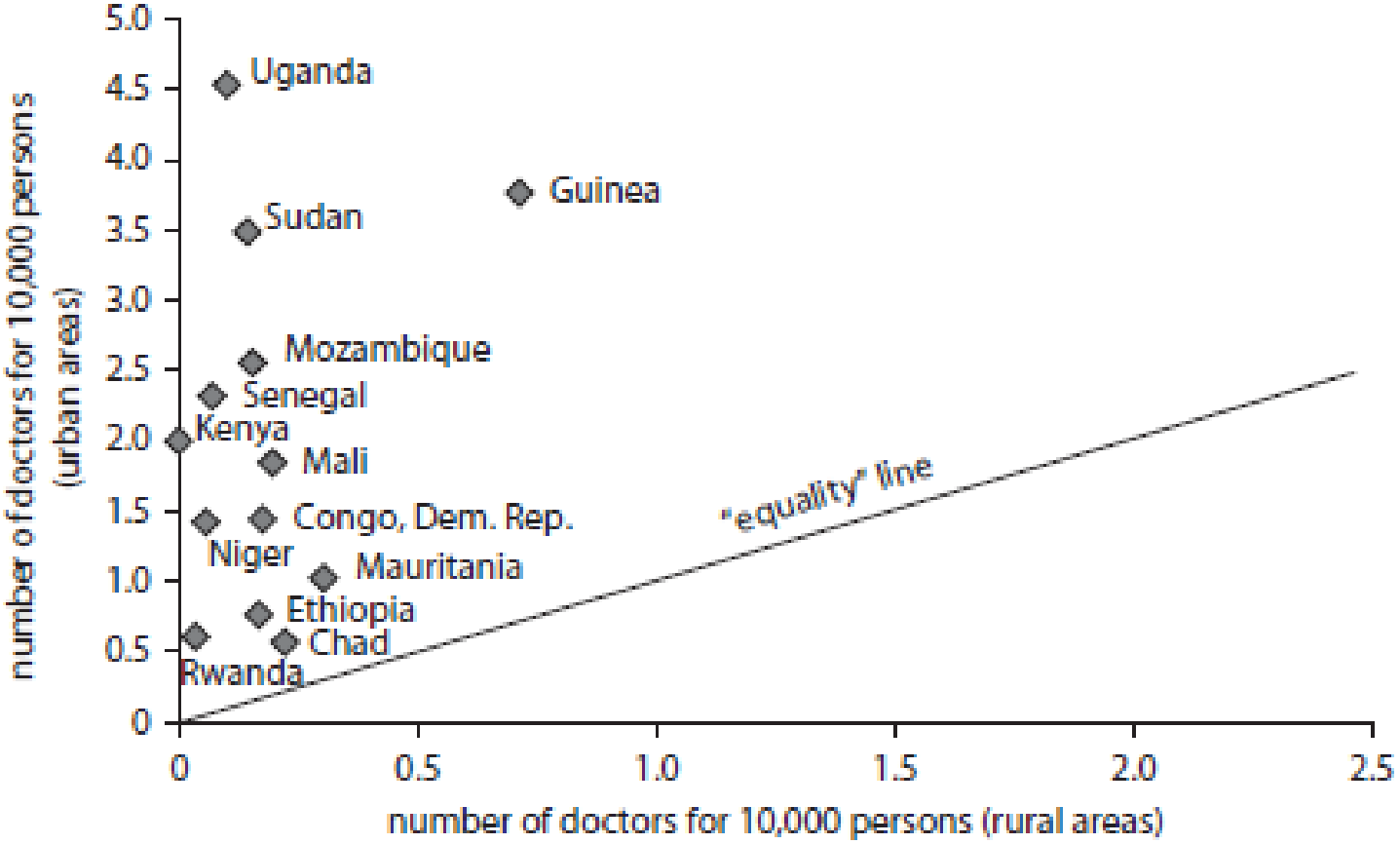


Examples from Africa

THE DISTRIBUTION PROBLEM

Within Countries, the shortage of health workers is particularly detrimental in Rural Areas

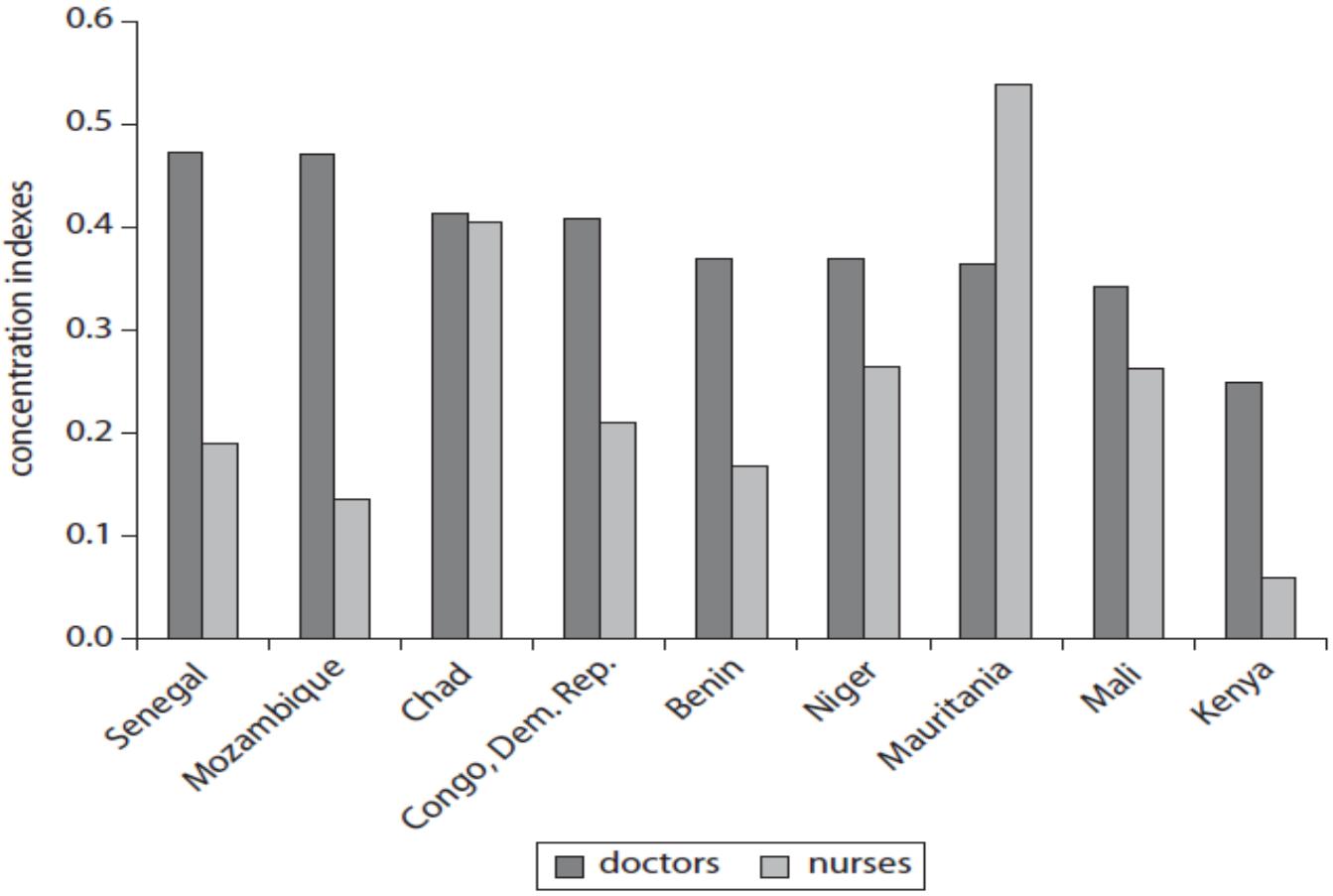
Density of HRH in Urban and Rural Areas: 13 Countries in SSA



Note: If doctor densities in urban and rural areas were similar, the points (one point represents one country) would be close to the equality line. Densities are much higher in urban areas, so all points are above that line.

Nurses are often a little better distributed than doctors (and enrolled better than registered)

Concentration indexes for doctors and nurses



Note: The closer the index is to zero, the more equal the distribution; the closer the index is to 1, the less equal the distribution.

Strong correlation between lack of HRH in rural areas and skilled birth attendance coverage

Health worker density and SBA coverage by Region: Ghana

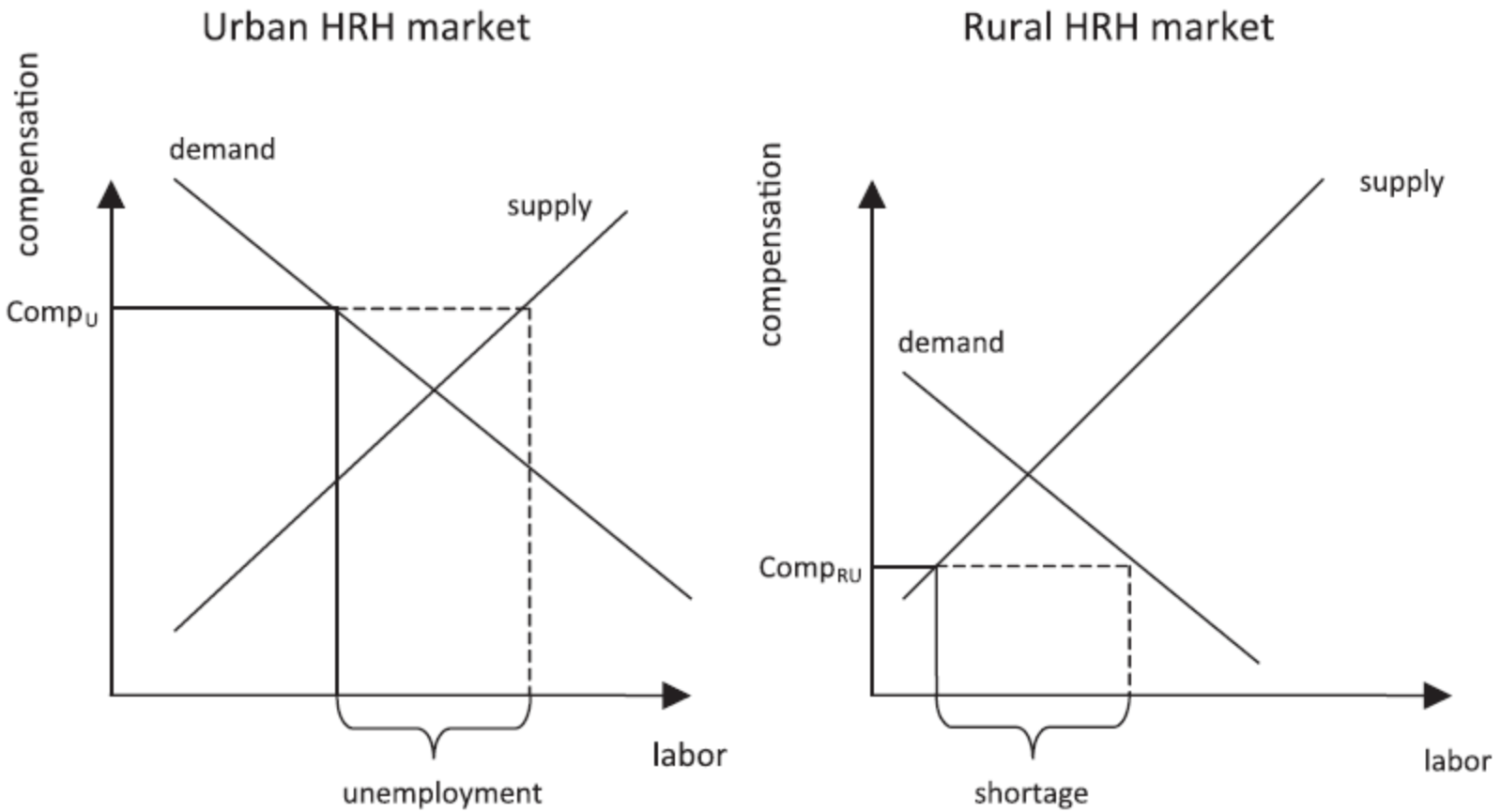
Region	*Doctors, nurses, and midwives per 1,000 population (2009)*	*Births attended by a physician, nurse, midwife, or auxiliary midwife (%, 2008)*
Greater Accra	1.4	84.3
Ashanti	0.9	71.6
Brong Ahafo	0.9	65.6
Western	0.8	60.2
Eastern	1.0	58.3
Central	1.0	54.0
Volta	1.1	52.3
Upper West	1.2	43.4
Upper East	1.1	38.9
Northern	0.7	25.1
Total	**1.0**	**57.2**

Sources: Calculated from GHS Human Resource Department 2009, data from the Integrated Personnel Payroll Database; GSS, GHS, and ICF Macro 2009; 2010 Population and Housing Census, Provisional Result, February 2011.

WHAT EXPLAINS THE DISTRIBUTION PROBLEM?

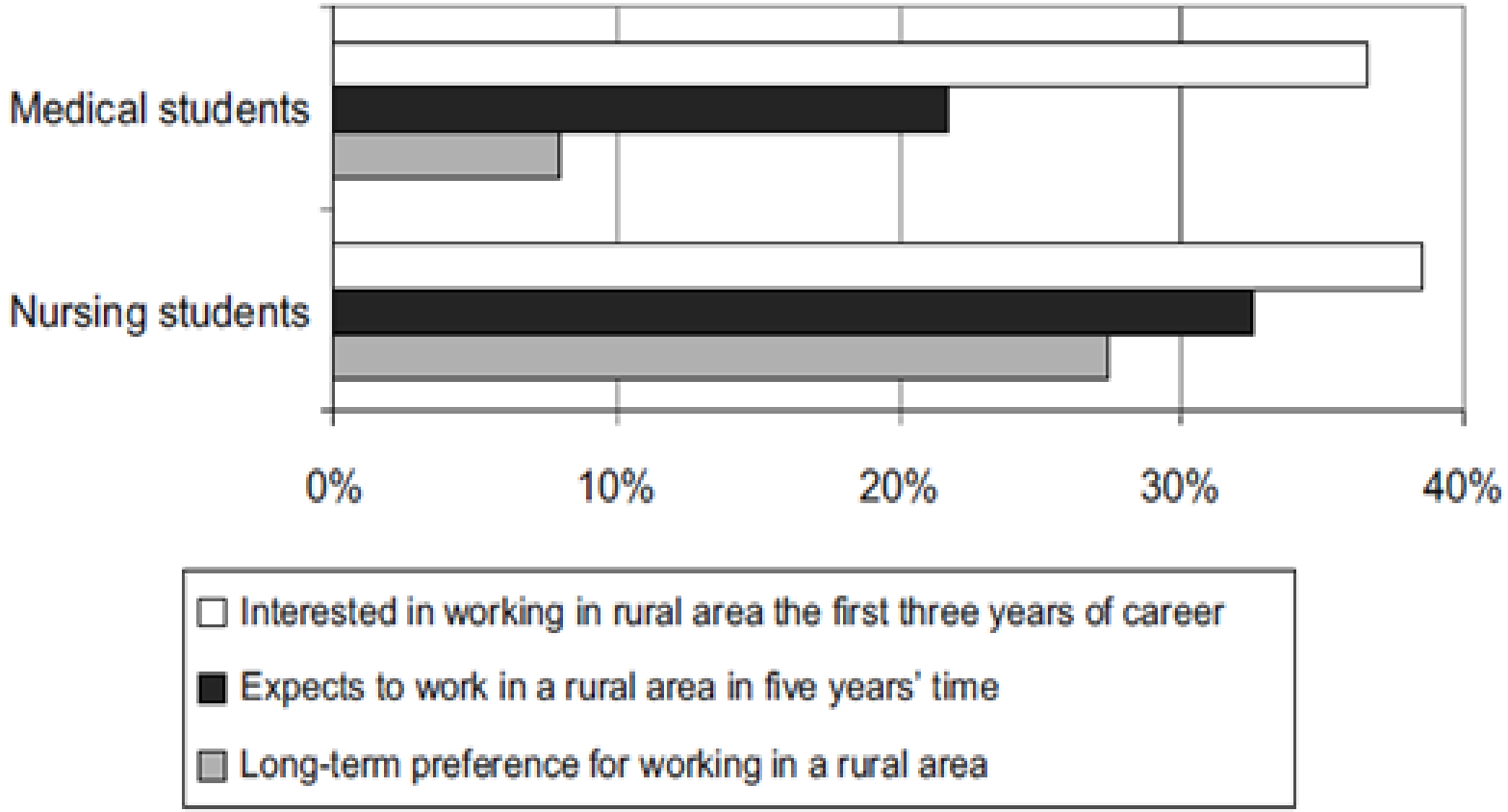
Labor Market Framework can be used to explain the Rural/Urban Imbalance

Example of typical urban and rural labor market situation in Africa



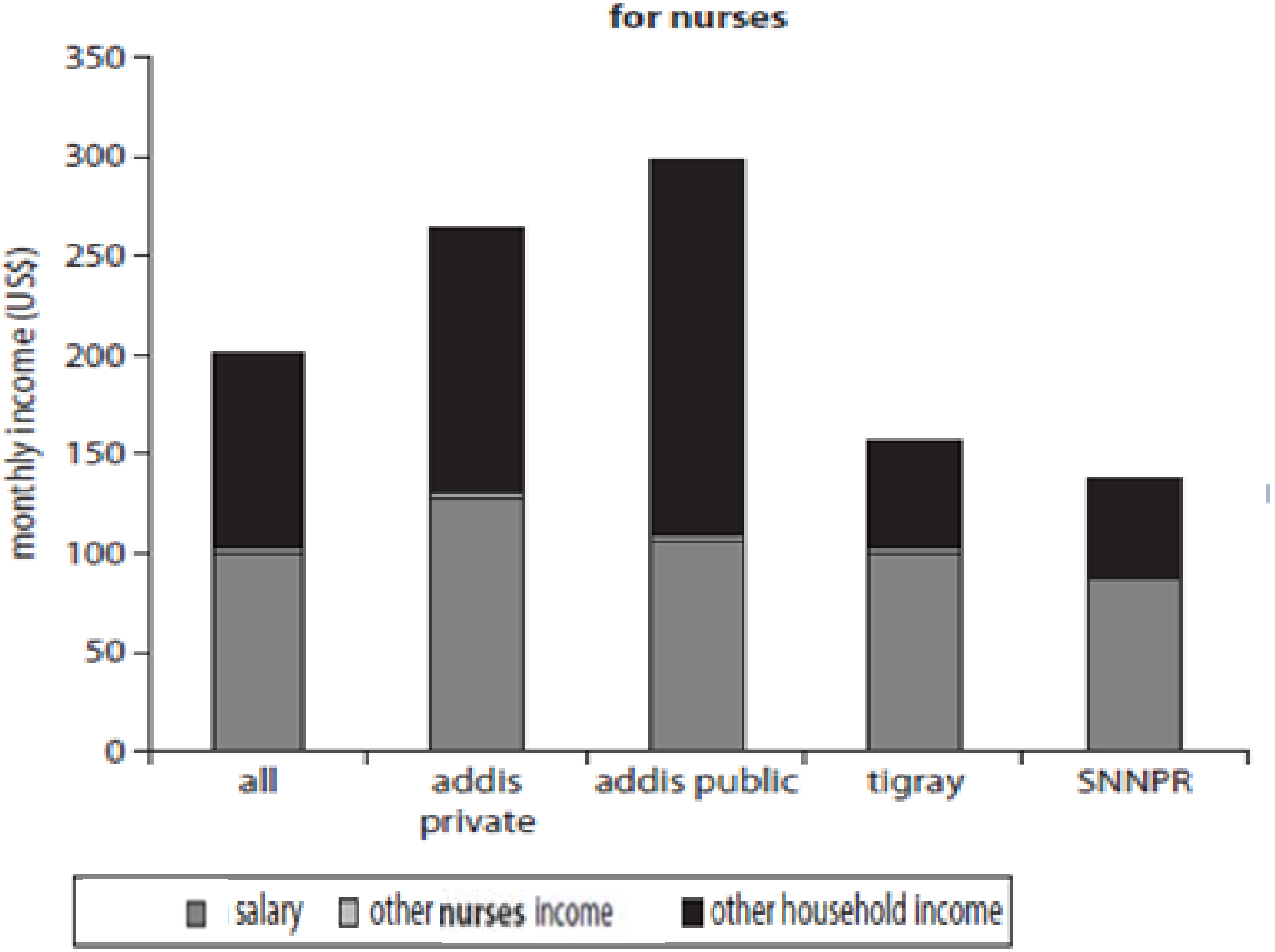
Overall willingness to work in a rural area is low, but higher with nursing than medical cadres

Final year doctor and nurse student preferences to work in rural vs urban labor market in long term in Rwanda



The opportunity cost for nurses to move to rural area is extremely high: loss of income

Sources of income for nurses in select regions in Ethiopia



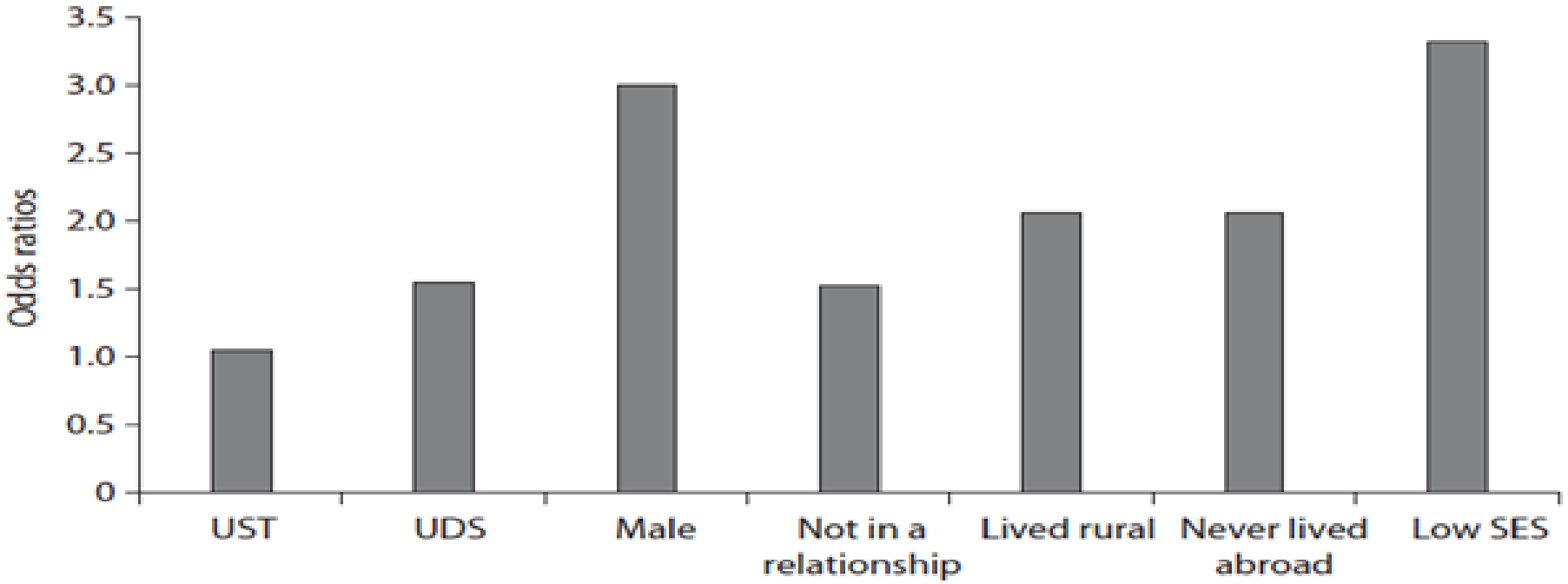
Working and living conditions often worse in rural than urban areas

Example variables:

- Availability of quality Housing
- Equipment and supplies
- Supervision and mentorship
- Access to education for children
- Opportunities for promotion
- Opportunities for career development
- Appropriate Workload and administrative staff support
- Opportunities for finding a well to do spouse

Certain Characteristics of health workers increase the odds of working in a rural area

Likelihood that graduating Health worker consider rural practice, Ghana



Source: Kotha 2010.

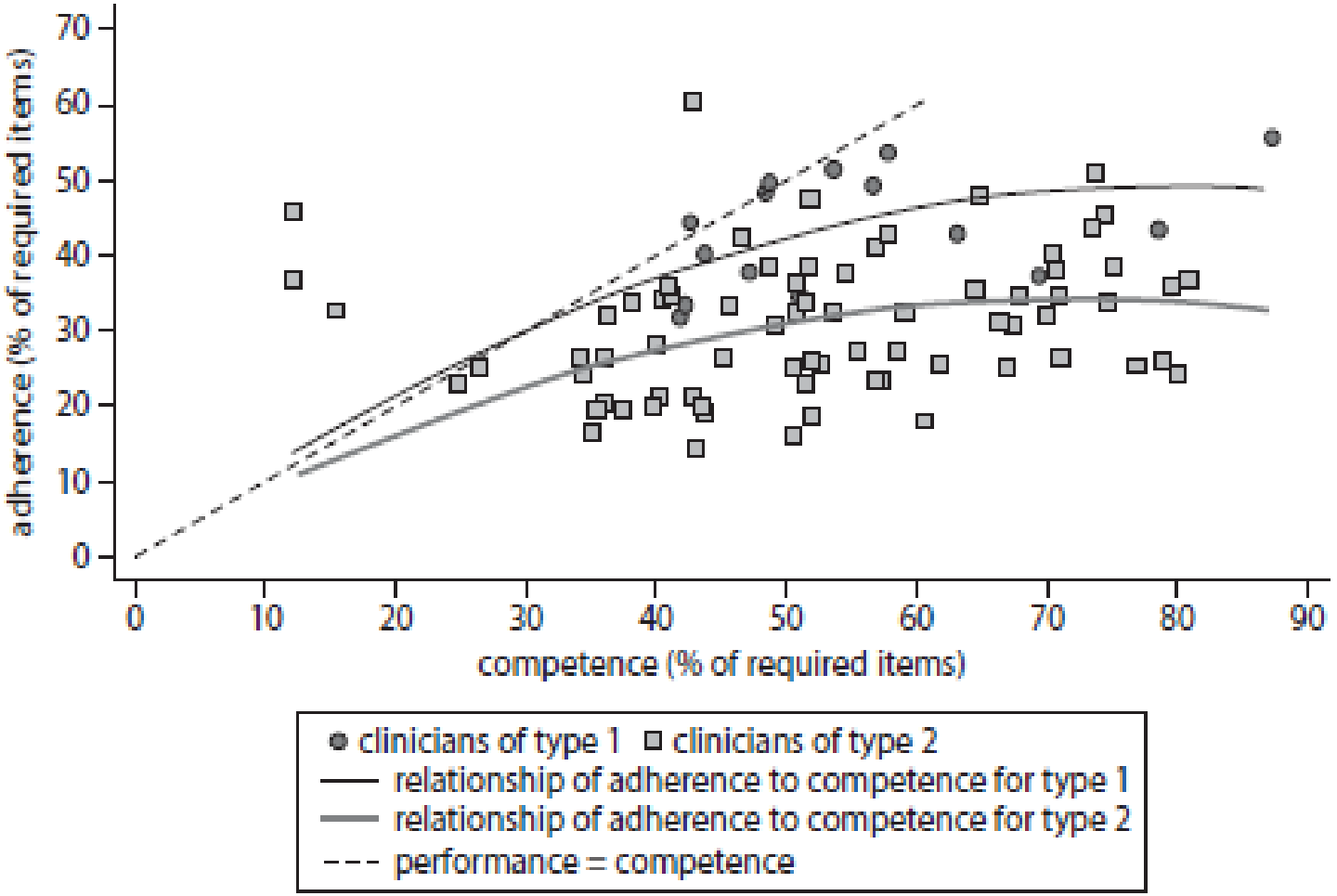
Note: Odds ratios for Kwame Nkrumah University of Science and Technology and the University of Development Studies are relative to the University of Ghana; male (versus female); not in a relationship (versus currently in a relationship); lived rural (versus never lived in a rural area); never lived abroad (versus ever lived outside Ghana); UST = University of Science and Technology; UDS = University of Development Studies; low SES = low socioeconomic status: the proportion for whom *neither* parent is a university or polytechnic-trained professional (versus those with one or both parents with university training).

Examples from Africa

OVERVIEW AND CAUSES OF PERFORMANCE PROBLEM

Health workers lack 1) competencies (skills) and/or 2) do not fully adhere (apply their skills)

Mapping Adherence and Competence of HRH in Tanzania (Leonard 2010)

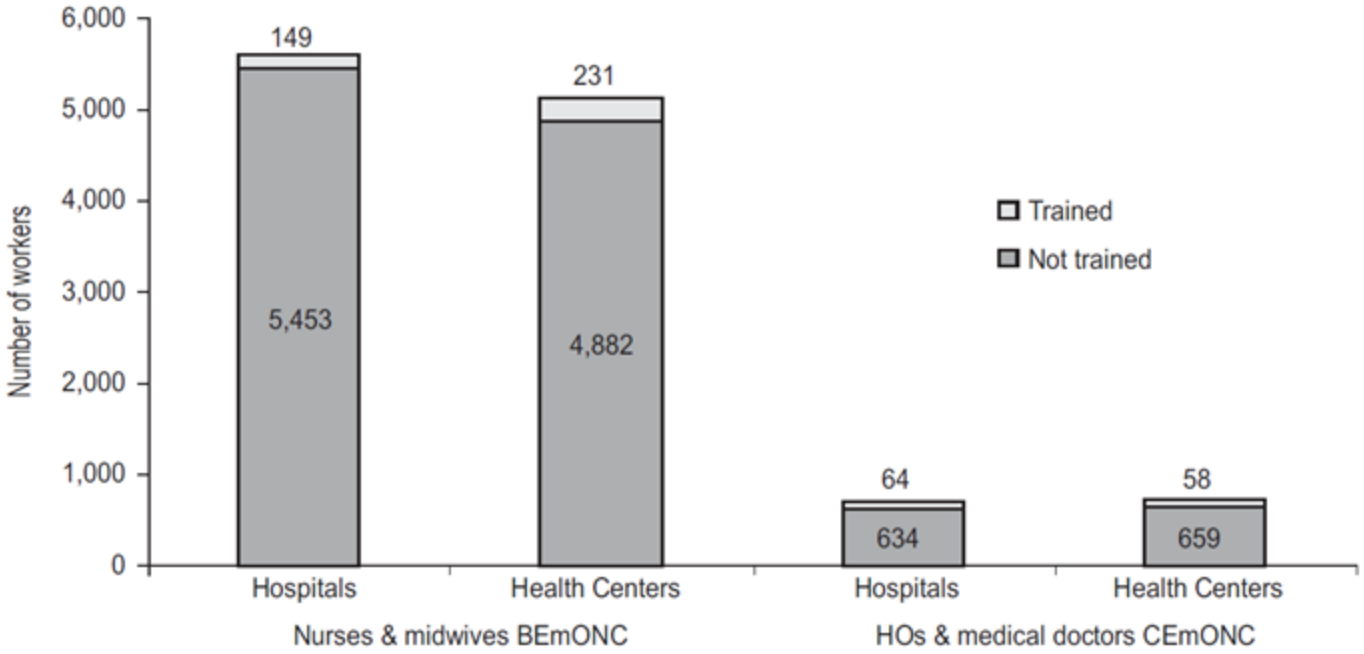


The HRH Crisis in Africa

WHAT EXPLAINS THE PERFORMANCE PROBLEM?

Weak Competencies due to lack of training capacity

Number of HRH provided with in-service training on EmONC in Ethiopia



- Lack of pre-service training capacity.
- Lack of in-service training capacity/mentorship

Weak adherence because of lack of supervision and accountability

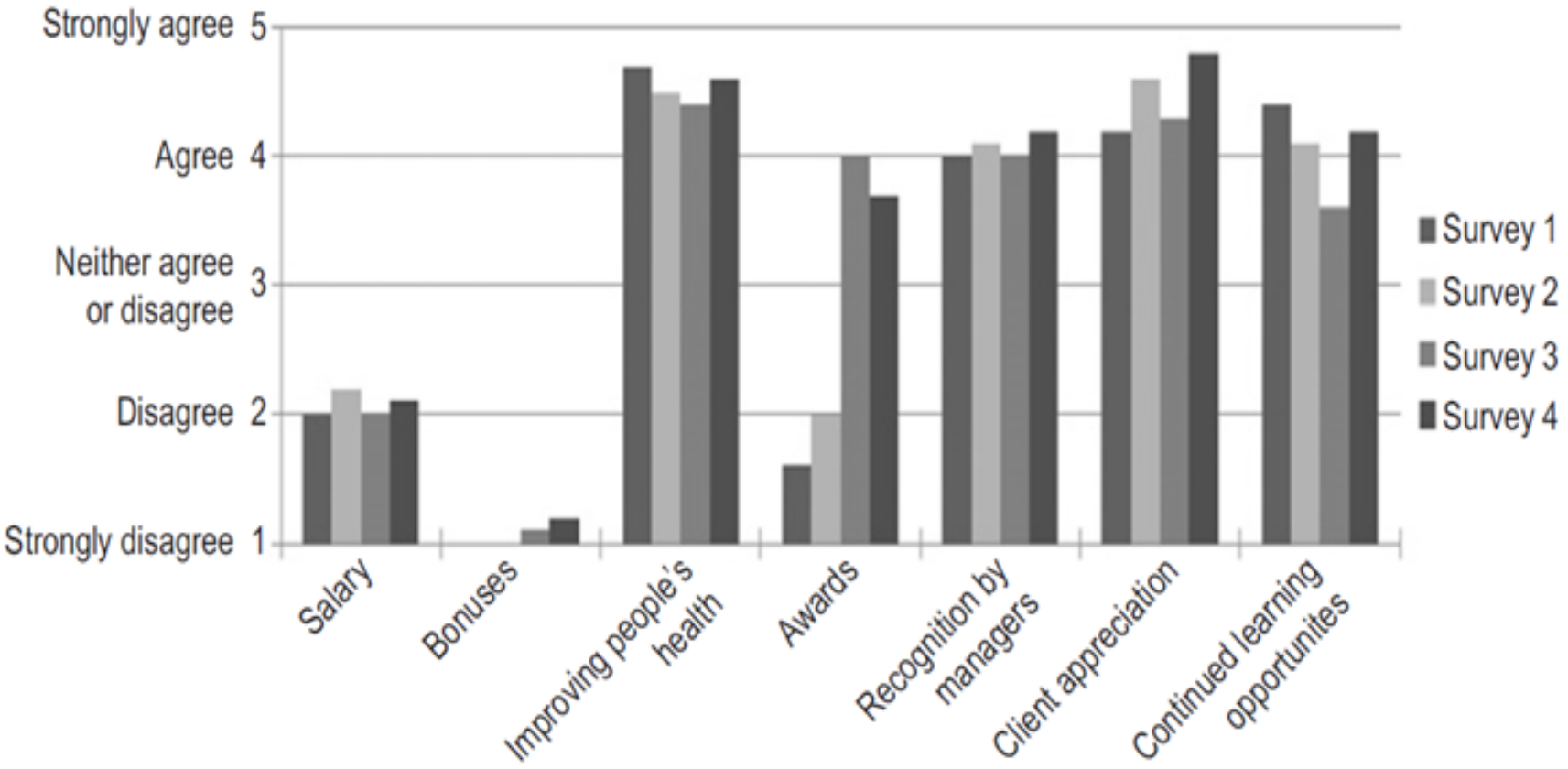
Supervision of doctors and nurses in Ethiopia (percent)

Facility conditions	All regions		Addis Ababa				Southern Nation, Nationalities, and People's Region		Tigray	
			Public		Private					
	Doctor	Nurse	Doctor	Nurse	Doctor	Nurse	Doctor	Nurse	Doctor	Nurse
Supervisor reprimands	31.1	40.3	34.7	39.5	36.0	49.0	34.2	38.8	12.8	38.9
Supervisor supportive	45.3	46.1	32.0	38.3	62.0	68.8	50.4	45.2	26.7	45.0

Source: Jack and others 2010.

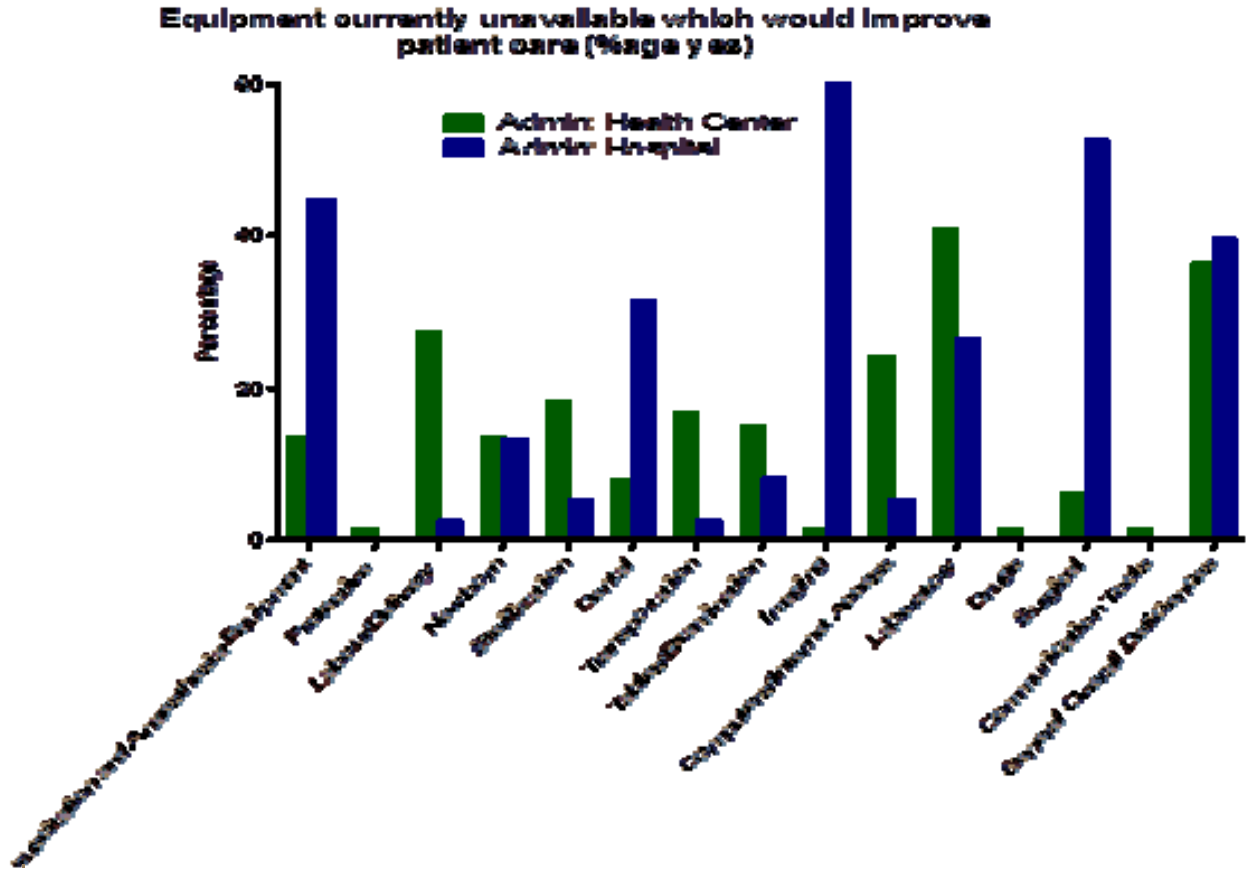
Weak adherence because of lack of motivation

Factors affecting staff motivation in Zambia (Furth 2006)



Performance compromised due to lack of equipment and Supplies

Example from Rwanda (Source: University of Western Ontario, 2010)

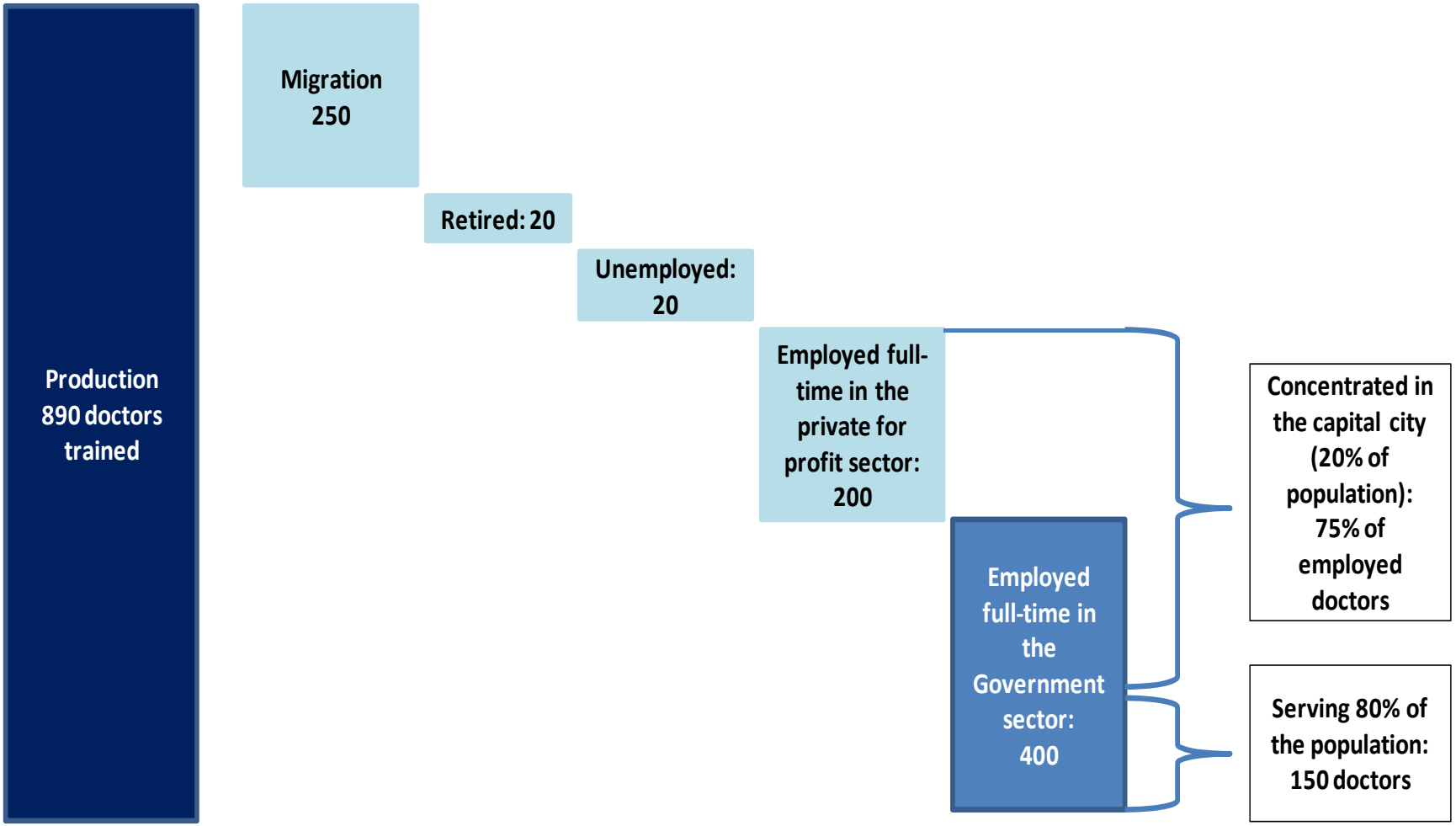


Examples from Africa

POLICIES TO IMPROVE THE STOCK, DISTRIBUTION AND PERFORMANCE OF NURSES/MIDWIVES

Scaling up production important but so are the leakages and performance issues

Illustration of leakages of Medical Doctors in Togo:

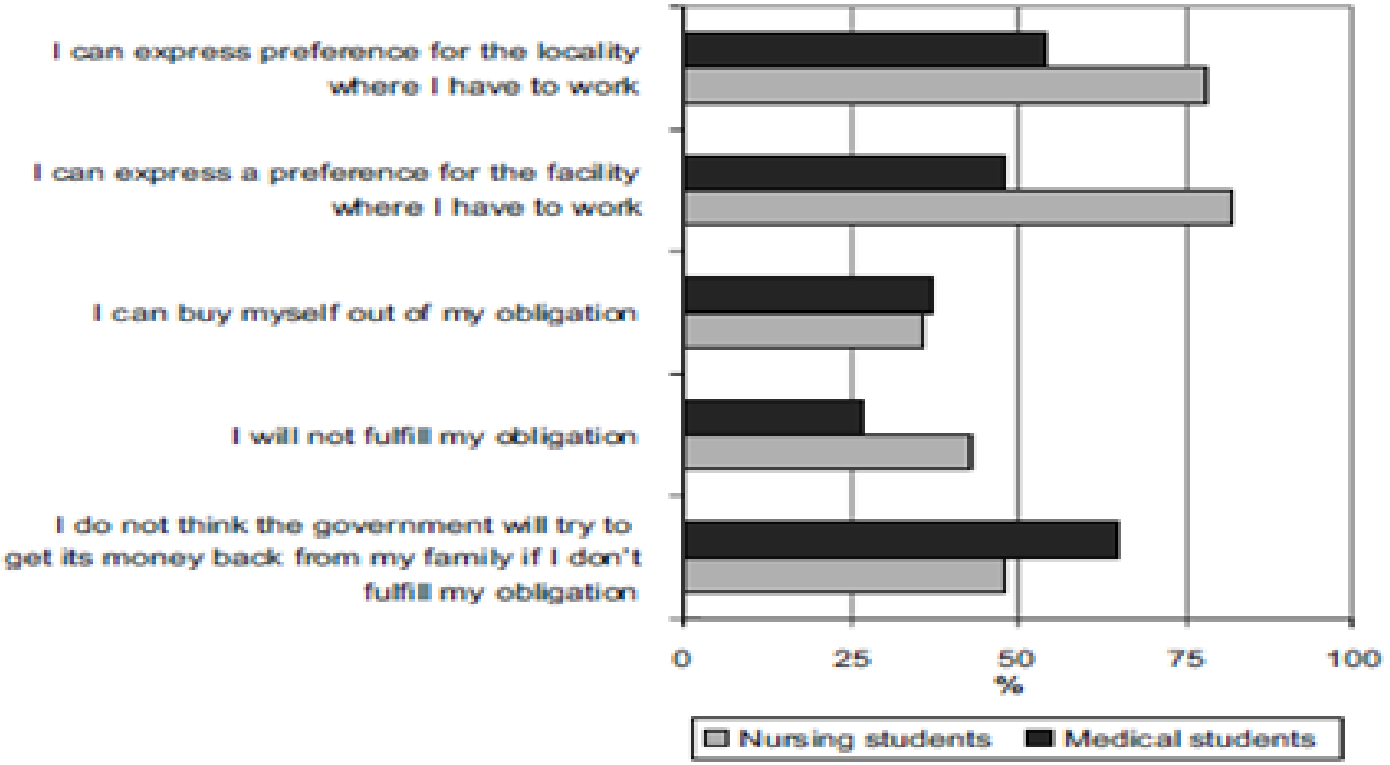


Examples from Africa

POLICIES TO IMPROVE DISTRIBUTION

1. Compulsory bonding policies do not work in the long term

Attitudes to bonding of doctors and nurses in Rwanda

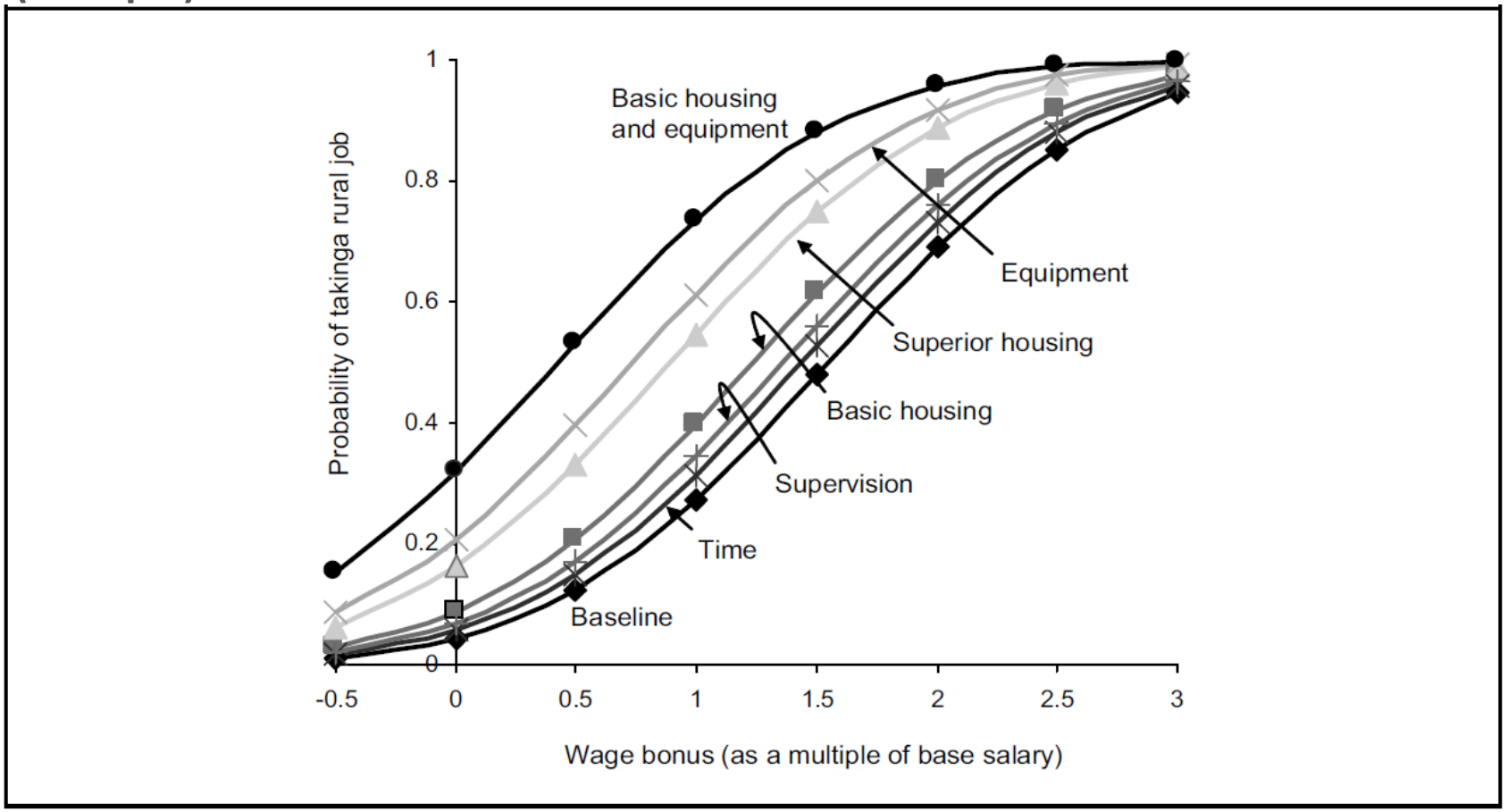


•little or no impact on long-term rural retention.

•Revidence suggests that they are also difficult to enforce.

2. Targeted Monetary and non monetary incentives: in long run, non monetary factors hold greater weight than monetary factors

Monetary and non monetary incentives required to move HRH to rural areas (Ethiopia)



3. Produce health workers with characteristics that increase their odds of working in rural areas

- **Focus production on lower level, alternative and less competitive cadres with high impact skills**
  - Enrolled nurses/midwives
  - Alternative nurses/midwives: Direct Entry Midwives (Zambia)
  - Though task shifting (providing in-service training to existing nursing/midwifery cadres in rural areas)

- **Focus on rural pipeline policies** (train nurses/midwives *from* rural areas, *in* rural areas, and according to *rural orientated curricula*)

Concluding Main Message

- **Low numbers, uneven distribution and inadequate performance of workers are of critical concern to Universal Health Coverage**

- **The Nursing and midwifery crisis is a big contributor to maternal mortality rates in Africa.**

- **Policy options need to take into account that health workers and employers are economic actors, with different preferences and interests, making informed trade offs**

- **A rigorous country specific evidence base as well as impact evaluation is critical to identify policies to improve the HRH crisis in Africa and elsewhere**