



## Mapping of Health Professional Programs in sub-Saharan Africa

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### Introduction

The health systems of WHO's Africa Region address 24% of the world's disease burden with 3% of the world's health workforce and less than 1% of world health expenditure. The reasons for the severe workforce shortages in Africa are manifold, including decades of underfunding tertiary education. Many African universities are unable to play their critical roles of developing the human capital of countries, including health professionals and researchers. Education programs for health professionals in sub-Saharan Africa (SSA) are reported to be both too few and unevenly distributed. However, an accurate and comprehensive inventory of existing health professional programs (HPPs) in SSA is not readily accessible to planners, educators or researchers. Without an inventory of programs a systematic mapping of the distribution of existing HPPs relative to population, burden of disease or level of development cannot be conducted. This study asks: What is the distribution of of university-based medical, nursing, and public health training programs in sub-Saharan Africa? It is a component of an on-going research program examining health science capacity building (education, research and service) of universities in SSA, and the role of international partnerships in supporting this effort.

### Methodology

We searched electronic and printed references to identify all public and private university-based, medical, nursing and public health programs in the 47 countries of SSA. SSA includes all countries in the WHO Africa Region with two exceptions: Algeria is not included, South Sudan is.

“Medical” refers to an university-based, undergraduate medical program, including Doctor of Medicine (MD), MBBS, doctorat de medicine and diplôme d'État de docteur en medicine, or equivalent;

“Public health” refers to an university-based Master's program, an MPH, MHSc, M.Med in Community Medicine, or equivalent.

“Nursing” refers to an BScN, a diploma, or equivalent at an academic institution – university and non-university (e.g. nursing training schools, schools of midwifery).

The initial sources of data were:

- Medical programs - The Sub-Saharan African Medical Schools Study - [www.samss.org](http://www.samss.org).
- Nursing programs - Health training Institutions WHO AFRO Data 2005.xls.
- Public health programs - the COHRED database - [www.cohred.co.za](http://www.cohred.co.za).

Gaps were noticed in the data. Our database was supplemented with data from these additional sources:

1. Guide to Higher Education in Africa, 5th Edition, International Association of Universities (IAU) and the Association of African Universities (AAU). Hampshire (UK): Palgrave Macmillan, 2010.
2. University websites.
3. Wikipedia (English, Français and Português) - <http://en.wikipedia.org>; <http://fr.wikipedia.org>; and <http://pt.wikipedia.org>.
4. Country-specific nursing associations.
5. Personal communication.

## Results

- 912 universities and non-universities offer 1,049 HPPs in the 47 countries of sub-Saharan Africa.
- Of the 1,049 HPPs: 808 Nursing, 177 Medical and 64 Public Health.
- Only 36 institutions offer all three HPPs. 14 (40%) of these institutions (7 each) are in South Africa and Nigeria. 31 countries in SAA have no institutions offering all three HPPs and 7 have only 1 that does.
- Information on the institutional ownership was available in only 48.4% (441) of cases (there were 471 unknown cases): 277 public, 155 private, 9 public/private.
- HPPs are concentrated in countries with the highest populations, but roughly in proportion to the populations of countries: the five countries accounting for ~50% of SSA's population have ~60% of the HPPs.
- Wealthier countries have more programs.

- Anglophone countries have more HPPs - they account for 65% of SSA's population but have 84% of HPPs; Francophone countries represent 28% of SSA's population but only 12% of HPPs; Lusophone countries represent 5% of SSA's population but have 3% of HPPs.
- 3 countries have no medical program, 3 countries no nursing program, 24 countries no Master's level public health program. All countries have at least one program.
- At least 83 new institutions offering HPPs have been opened in SSA since 2000.

## Conclusion

A preliminary mapping of health professions training in Africa is now available – it can be viewed at: <http://www.locsis.com/hpp>. The distribution of HPPs in SSAs roughly follows: 1) population, 2) wealth and 3) colonial heritage. It is necessary to continue to update the information to capture new institutions and programs, especially in francophone and lusophone countries, and to populate more fields in the database (e.g. year founded, number of current students, existence of research programs). Additional research is required to fully map existing institutions providing HPPs relative to burden of disease and socio-economic indicators, and to analyse the content and quality of HPPs

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