

Human Resources for Health and Economic Growth
Learning from the Cuban experience in Medical Education (April 2017)
24th and 25th April 2017

Imperial College, Council Room, 170 Queen's Gate, London SW7 5HF

Background

This meeting was the major dissemination activity of a project funded by Department for International Development (DfID) Policy Research Programme in 2014. This project aimed to assess the impact of the Cuban medical education model on the delivery of care and the wider health systems in Sub Saharan Africa (SSA), using the Republic of South Africa (RSA) as the focal country in SSA.

During the project two meetings were held in Cuba to discuss the scope of the project and gain involvement of key stakeholders in Cuba: Ministry of Health; Pan-American Health Organisation; National Institute of Public Health and academics in Cuban medical schools. Research was initiated by scoping secondary data resources, interviews and meetings with officials, academics, Cuban researchers and discussions with the UK Ambassador to Cuba. We presented our research programme at an international conference – Cuba Salud, April 2015 and held a further meeting at this conference. A major meeting was held in South Africa in July 2015 with the RSA Ministry of Health, academics and our research colleagues at Human Sciences Research Council. Following this meeting field work was initiated in South African medical colleges, data were collected, analysed and research reports prepared for discussion at this London meeting.

The meeting was organised by Imperial College, London, and the Human Sciences Research Council, South Africa to enhance the understanding of the approach used for Cuban medical education and the implications of the transnational medical education to inform policy and intervention. The meeting was attended by colleagues from Cuba, South Africa and United Kingdom to stimulate a dialogue of the key concerns and issues associated with medical education, and to explore future collaborations that would maximise the support for promoting healthy workforce and universal health coverage among the stakeholder countries. This report presents the summary of the presentations with recommendations.

Institutions attended:

Imperial College (UK), London School of Hygiene & Tropical Medical, Public Health England, Royal College of General Practitioners (UK), Tropical Health & Education Trust (UK), Human Sciences Research Council (South Africa), MEC for Health (South Africa), Cuban trained doctors returned to South Africa, University of Cape Town (South Africa), and Cuban representatives (MOH and WHO).

1. Health system in Cuba

The Cuban health system aim to meet people's health needs dates back to 1959 and was a response to "social illnesses" such as high dependency on agriculture, poverty, overcrowded housing, difficult access to health facilities, and the resulting high infant and child mortality rates. It is a single public health system with no private medical education, serving the health

needs of all people regardless of ability to pay. The governance of the Cuban health system is based on the principles of humanism and solidarity stated in the Constitution of the Republic of Cuba (Law 41; Article 50). To date, the Cuban model continues to transform around the three-R's: reorganisation, rationalisation, and regionalisation, deepening the process of rationality and efficiency in the health system. It responds to people's needs in both urban and rural settings, with a primary health care emphasis and interdisciplinary approach, strong community participation, an internationalist focus, and a health workforce of sufficient size and skills. The Cuban system has successfully contributed to numerous health improvements in the population, such as being the first country in the world to eliminate vertical HIV transmission and congenital syphilis in 2015, high coverage of 11 vaccines against 13 diseases, and infant and maternal mortality, life expectancy (79 years) comparable with much wealthier European countries.

2. Health system in South Africa

The health system in South Africa faces many challenges such as workforce shortages, skills-mix imbalances, and maldistribution of health resources and health workforce. The health system remains inequitable and fragmented, with outcomes not commensurate with the percentage of GDP spent on healthcare. The private sector caters for about 16% of the insured population, utilising about 60% of the 8.4% of GDP spent on health. Access to and quality of health care in rural and disadvantaged urban populations remain serious problems.

3. Cuban medical education

The shortages of health workforce in South Africa provided an impetus to increase doctor output in South Africa. A decision was made in 1995 between Present Nelson Mandela and President Fidel Castro to train students in Cuba. The South African–Cuban Medical Collaboration (SACMC) programme entails the recruitment of black, high school graduates from disadvantaged rural provinces in SA for medical training in Cuba. Students are offered a scholarship with the understanding that they would return to SA to provide services to rural communities.

Cuban medical education has three key objectives: 1) recruit and train socially committed students; 2) match competencies and knowledge base, and the scope of responsibilities to the health needs of Cuban communities or other countries where these future doctors may serve; 3) scale up training to meet the needs of the whole population. The Cuban doctors have been considered as “six star” doctors who have the qualities of a caregiver, decision maker, communicator, manager, community leader, and teacher.

Cuba medical education model is based on social legitimacy. In addition to responding to Cuban people's need by training doctors, it also contributes to Cuba's economic growth and development through global medical collaborations, and by training medical students from many countries to improve universal health care coverage. Medical education in Cuba is the responsibility of the Ministry of Health which enables academic outreach to community health service settings which are integral learning places providing early linkages with community/family/patient for students. The medical curriculum has a social and humanistic focus, free tuition and textbooks, and a system of free university residences. The medical

university is a concept, not a building. It strives for comprehensiveness and is an integral part of the health system.

South African students training in Cuba spend their first year on premedical bridging training and become proficient in Spanish. Two years are spent on studying basic medical sciences followed by three years of clinical sciences at one of three collaborating Cuban medical training facilities. After these six years of university training in Cuba, the students join one of nine South African medical schools for a period of orientation which is at least a year, and often longer. During this time the students became familiar with the South African health care system and complete their training as required to practise as an intern in South Africa.

Research findings: a comparison between Cuban trained students' and South African trained students' experiences on medical education

A collaborative Cuba/UK/RSA proposal for using evidence of the effectiveness and cost-effectiveness of the Cuban model to drive policy change for Universal Health Coverage that was funded by the Department for International Development (DfID). Several key findings on comparisons between Cuban trained students and South African students' experience of medical education were presented. The results suggested that both Cuban and South African trained participants were similarly very confident in carrying out practical clinical procedures, contrary to common beliefs.

Cuban trained participants reported significantly higher confidence in a range of clinical skills without supervision than South African trained participants. Cuban trainees reported stronger aspirations for community engagement, rural experience, social change, creativity initiatives, and ability to make a difference. South African trainees indicated the importance of high income potential and stable futures among their career goals. More Cuban trainees plan to work in underserved areas and in primary health care (90% and 79% respectively) vs. South African trainees (24% and 21%). Although the study has several limitations, including small sample size, it demonstrates that Cuban medical education instils a strong focus on PHC and embeds individual health needs in the collective context of family and community. It also provides an appropriate set of skills and competencies in students. Importantly, the aspirations of Cuban trainees to work in underserved and rural areas can contribute towards meeting the shortages of health care providers in the public health sector in South Africa by retaining more doctors in these underserved areas and providing large scale and rapid increase in doctors.

Experience of Cuban trained doctors returning to South Africa

However, the transnational education programme carries with it unique challenges. In the meeting, the Cuban trained South African doctors, who are currently working and leading the community health centres in Kwazulu-Natal Province of South Africa expressed several personal, academic and structural challenges they have experienced when they returned to South African Medical Schools. For example, they experienced inconsistent (both in terms of duration and content) orientation programmes in South African Universities; language difficulties (thinking in Spanish, and poor English), and cultural adjustment. They had experienced a different, more comprehensive health paradigm and had to adapt to more

hospital and “rescue” medicine emphasis. They experienced difficulties with an exam system with which they were unfamiliar. Discrimination was a dominant experience and in addition their medical knowledge was assumed to be inferior and the ‘default’ perception is that they are failures. Their interactions since returning to South Africa have been influenced by these stigmatizing experiences. Not surprisingly, they identified resilience (achieved by supporting each other) as important factor in overcoming these difficulties.

4. The broader context and implications

The WHO stipulated that universal health coverage (UHC) means that all people, without discrimination, should have access to comprehensive, timely, and quality health services; as well as access to safe, effective, and affordable quality medicines. This requires a multi-sectoral approach to address the social determinants of health to foster health and wellbeing.

Invited participants gave presentations focusing on how their organisations and networks could contribute to UHC. The following areas were identified as particularly promising for further exploration in the context of Cuba, Republic of South Africa and UK interests. These areas should not be considered as a coherent or integrated plan of action but may be valuable in leveraging activities between Cuba, Republic of South Africa and UK in the future.

The South African aspirations: inter-sectoral, integrated, and sustainable health workforce

South Africa’s National Health Insurance (NHI) strives to create a unified health care system by making health care more affordable and accessible for the South African population. The re-engineering of primary healthcare in South Africa requires greater numbers of clinical and non-clinical professionals with different skills and competencies. As such, there is a need to scale up doctor training to meet the health needs of the population particularly from South African rural settings.

The High-Level Commission on Health Employment and Economic Growth was established by the UN Secretary-General in March 2016. The mission is to build a sustainable, needs based, fit for purpose, social and global health workforce. This will require the creation of at least 40 million new jobs in the health and social care sectors and reduce the projected shortfall of 18 million health workers by 2030. It is important to align public and private investments to boost global security against outbreaks and other emergencies, and help countries achieve the 2030 Agenda for poverty elimination, good health and well-being, quality education, gender equality and decent work and inclusive economic growth.

Based on this, there is now a five-year plan to implement the agenda (resolution to be presented at the World Health Assembly in May 2017) to facilitate and scale up country-driven action and investments in the health and social workforce through social dialogue, research and analysis, normative guidance, evidence-based policy advice, technical assistance, and institutional capacity building.

Pan American Health Organisation’s (PAHO) proposed strategies to sustainable health workforce

PAHO has developed a collaboration programme, relevant to the South Africa situation, where Cuban doctors are going to Brazil to work in underserved areas to achieve a rapid increase in UHC.

PAHO has a draft resolution on human resources for universal health care:

1. To strengthen and consolidate governance and steering role in HR: policies, regulations and interventions related to capacity building, employment and working conditions, internal & external mobility of health professionals, better distribution of the working force;
2. To tackle conditions and capacity development to extend access and coverage with equity and quality: improve the system's conditions in which HR works, and change the way competencies are executed and shared within the interdisciplinary teams;
3. To reorient the training sector to respond to the needs of the health systems in process to transform to UH.

Royal College of General Practitioners (RCGP), UK: expanding health work force:

RCGP has implemented a project to grow a critical mass of family practitioners in South Africa with the capacity to deliver consistent work, aligned with clinical competencies expected of National Exit Exam (NEE). To achieve this, South African Family Medicine Training Departments send at least five delegates to RCGP to experience a Training the Clinical Trainers (TCT) course. These delegates are supported by a self-reflect toolkit and get in country support six months after the training. Evaluation of clinical trainers following TCT demonstrated improvements in their educational competency. To improve self-sufficiency, RCGP also provides training to South African Family Practitioners on how to facilitate TCT and conduct quality support visit so they can develop their own system. RCGP has also run 1-day workshops with the national pool of examiners in South Africa to increase skills in key areas and has supported the development of the NEE so it is consistent with international standards and accurately assesses the clinical competencies expected of family practitioners in South Africa.

Global surgery

Globally, there are five billion people who do not have access to safe surgery when needed. 143 million more surgeries needed annually at minimum, and the poorest one third of the world's population receives 6.3% of worldwide procedures, as such there is a need to scale up of the surgical workforce. There is a potential to move away from primary health care model to the role of surgery in delivering global health. Global Surgery 2030 (Lancet Global Surgery Commission DOI: [http://dx.doi.org/10.1016/S0140-6736\(15\)60160-X](http://dx.doi.org/10.1016/S0140-6736(15)60160-X)) has the mission to improve health sustainably and achieve health equity for all.

How can Cuba help countries scale up surgical workforce?

- 1) Traditional and novel methods (e.g. use of virtual environments for supporting surgeons remotely - <http://www.proximie.com/>);
- 2) Building infrastructure, technology, basic and novel models of surgical care, directly or through research programs;
- 3) Provision of affordable training and education through country joint ventures and multi-level collaboration.

The role of Cuban-trained doctors in achieving Universal Health Coverage

South Africa needs contributions from doctors trained as family practitioners, yet few South African trained doctors want to make a career in family medicine. Therefore, improving the quality and quantity of Family Physicians (FP) is critical for South Africans ability to achieve UHC. Cuban trained doctors can contribute towards meeting the shortages of doctors in the public sector and are more likely to work in underserved areas long-term. A large scale and

rapid reorientation and increase in South African medical school output is needed but will take a decade to materialize. The large increase in Cuban-trained doctors returning to South Africa over the next 5 years provide a major resource for re-engineering of the primary health care system to focus on preventive care and promote UHC.

Revolution of medical education system in South Africa

To achieve global health and to enhance access to quality health care, a major integration between public health and medicine is needed. There is an opportunity to transform the medical education to an interdisciplinary education model that focuses on competencies and is aligned with the needs of the health system. The Cuban approach has global relevance and would provide a strong basis for transformation.

Recommendations

Cuban programme

- Improving induction, support and re-integration medical education programmes for cohorts training in Cuba, including mentoring;
- Deployment of returning Cuban trained doctors in 2017 and beyond: distribute a significant proportion of training outside the major centres, and re-direct a significant proportion of training to smaller regional hospitals, district hospitals and community health facilities;

South African medical education

- Curriculum innovation: community-centred, integrated and longitudinal curriculum could be supported by Cuban inputs;
- Training fit-for-purpose, and socially and culturally appropriate;
- Training students more often in community and district clinic settings and making a real commitment to PHC could be supported by expanding RCGP collaborations
- Investment of new resources for medical training in rural and under-served urban areas in RSA;

Research, monitoring and evaluation

- Systematic data collection of health-related students and graduates to enable monitoring of careers, quality of education, long term comparisons and benchmarking;
- Future research should focus on the political economy of medical education to understand the challenges, agents for change and examples of success that can be expanded.
- A definitive HTA of medical education is feasible but requires full engagement of government and academic sectors to obtain relevant data for economic appraisal and outcome assessments.

Communications, networking

- A forum for a wider discussion of the Cuban project and its implications for meeting RSA's plans for UHC and improving primary care is needed. It would have a role in defining research needs, focusing on concerns with improving the primary care focus in medical school and subsequent retention of doctors in areas of need.
- There is a role for UK agencies to promote collaborations for promoting healthy workforce and UHC among the stakeholder countries in SSA.