

IMPACT REPORT

Training Somaliland's Future Health Workforce

Improving the Learning Experience of Undergraduate Medical, Nursing and Midwifery students

APRIL 2022



About Us



King's Global Health

Partnerships works with health facilities, academic institutions and governments to strengthen health systems and improve the quality of care in four countries: Somaliland, Sierra Leone, the Democratic Republic of Congo and Zambia. We bring together expertise from King's College London, the UK's National Health Service (NHS) and our international partners to educate, train and support healthcare workers; strengthen healthcare and training institutions; and enhance national health policies and systems.

Our partnership in Somaliland is anchored in trusted, mutually beneficial relationships that are over 20 years old. Working in partnership has meant true collaboration, even under challenging circumstances, such as during the Covid-19 pandemic, co-designing and codelivering activities and intervention strategies. This partnership approach has led to genuine change that is both sustainable and impactful.



Founded in 2011, **MedicineAfrica** launched its first custom-built platform to allow real-time training to take place between UK doctors and Somaliland medical students and health workers to improve healthcare outcomes.



Amoud College of Health

Science, Somaliland's first health training institution, was set up in 2000 following the civil war of the 1990s. The faculties work to bring confidence and quality healthcare professionals to the people of Somaliland. In 2002, King's and THET were the first organisations to visit, working particularly with the Faculty of Medicine as the King's Somaliland Partnership began to form. The first intake of students graduated in 2007, and since this, work has continued, broadening to engagement across the health faculties.



Founded in 1988, the **Tropical Health and Education Trust** (**THET**) works to strengthen local health systems and build a healthier future. They work through partnerships between institutions in the UK and in low and middleincome countries to strengthen the health workforce and the health system. They work closely with Ministries of Health to ensure their programmes respond to local needs and priorities and achieve sustainable change.



Edna Adan University Hospital has been involved in health professionals training for many years and is Somaliland's longest established nursing and midwifery school. Even before the hospital opened in 2002, the founder was training nurses and midwives who would go on to staff the hospital. King's Global Health Partnerships has worked with Edna's since 2002 as the hospital formalised and expanded its training programs, which now include 4-year programs in Nursing, Midwifery, Nutrition, Medical Laboratory, Public Health, 5-year programs in Pharmacy and Dentistry, a 7-year medical program, post-basic midwifery training, and new postgraduate programs in Microbiology and Public Health.



The University of Hargeisa College of Medicine and Health Sciences was opened in 2003 and graduated its first cohort of doctors in 2009. The university has over a decade of experience running education programmes in Somaliland and holds strong relationships with the ministries of health and education. King's Global Health Partnerships has worked with the College since 2004.

Introduction

HIGHER EDUCATION: THE FOUNDATION OF THE HEALTH SYSTEM

Although there have been improvements in health outcomes globally, 5 million people die each year in low- and middle-income countries (LMICs) due to poor quality health care¹. Poor quality care is now a bigger barrier to improving mortality than access to care². These deaths could be avoided in a well-functioning health system that provides safe and effective health care, delivered by a well-trained, skilled and motivated health workforce.

Low levels of knowledge, skills and confidence among health care workers are often a direct result of their pre-service education and training. And yet, there has been very little focus or funding dedicated to improving the professional education of health workers. As *the Lancet Commission on High Quality Health Systems* has made clear, wide-ranging reforms in professional education are required if health workers are to be adequately equipped to provide high quality care.

PREPARED FOR PRACTICE (PFP) PROJECT: A STRATEGIC PARTNERSHIP FOR HIGHER EDUCATION INNOVATION AND REFORM

Recognising that the development of health workers begins in the higher education sector, King's Global Health Partnerships were invited by three Somaliland universities – Amoud University, University of Hargeisa and Edna Adan University – to improve the quality of education for medical, nursing and midwifery students, through the 'Prepared for Practice (PfP),' five-year project. PfP is part of the UK aid-funded Strategic Partnerships for Higher Education Innovation and Reform (SPHEIR) programme (www.spheir.org.uk). Through this partnership, we are increasing the number of well-trained health workers entering the health system by:

- **1.** Supporting undergraduate teaching, examination and clinical supervision;
- **2.** Strengthening capacity of academic staff and teaching institutions;
- **3.** Strengthening national governance and management of education for health professionals.

This impact report draws on our experience delivering the 'Prepared for Practice' project, as well as qualitative and quantitative data collected from undergraduate medical nursing and midwifery students, graduates, volunteers and university records. We collected data through internal surveys, an external evaluation and final examination records.

The report is aimed at donors, practitioners and policy makers, though we hope it will also be a useful tool for universities in Somaliland and in other low-income settings. It is one of a series of impact reports which draw on learning from our work in higher education for health professionals in Somaliland. We hope that the many achievements will inspire and inform.



¹ KRUK, M.E., GAGE, A.D., JOSEPH, N.T., DANAEI, G., GARCÍA-SAISÓ, S. AND SALOMON, J.A., 2018. MORTALITY DUE TO LOW-QUALITY HEALTH SYSTEMS IN THE UNIVERSAL HEALTH COVERAGE ERA: A SYSTEMATIC ANALYSIS OF AMENABLE DEATHS IN 137 COUNTRIES. THE LANCET, 392(10160), PP.2203-2212.

² KRUK, M. ET AL (2018) HIGH QUALITY HEALTH SYSTEMS IN THE SUSTAINABLE DEVELOPMENT GOALS ERA: TIME FOR A REVOLUTION

IMPROVING THE LEARNING EXPERIENCE OF UNDERGRADUATE MEDICAL, NURSING AND MIDWIFERY STUDENTS

Both the Lancet Commissions on health professionals for a new century³ and on the future of health in sub-Saharan Africa⁴ emphasise the need for the education of health workers to focus on achieving competence through active learning, early clinical exposure, and problem-based learning. Interactive teaching promotes information retention, leading to better learning outcomes and the development of clinical competence⁵. There were many challenges facing medical, nursing and midwifery undergraduates in Somaliland:

- Insufficient opportunities for students to gain practical experience or to apply theory.
- Weak clinical supervision of students: hospital rounds and clinical supervision did not provide the required levels or quality of student supervision, and the few large group demonstrations given only allowed for passive observation.
- Faculty lacked pedagogical training and, with few opportunities for post-graduate medical education, few specialists were available to teach.
- Lack of interactive teaching⁶: Students reported that they had sufficient access to clinical knowledge but were lacking the necessary interaction with their teachers that would allow them to apply knowledge and refine understanding. Teaching practices in Somaliland tended to emphasise passive 'monologic learning' at the expense of interactive 'dialogic learning'.

3 FRENK, J. ET AL (2010) HEALTH PROFESSIONALS FOR A NEW CENTURY: TRANSFORMING EDUCATION TO STRENGTHEN HEALTH SYSTEMS IN AN INTERDEPENDENT WORLD

- 4 AGYEPONG, I.A ET AL (2017) THE PATH TO LONGER AND HEALTHIER LIVES FOR ALL AFRICANS BY 2030: THE LANCET COMMISSION ON THE FUTURE OF HEALTH IN SUB-SAHARAN AFRICA
- 5 MKONY, C. ET AL (2012) TEACHING AND EDUCATIONAL SCHOLARSHIP IN TANZANIA: FACULTY INITIATIVE TO IMPROVE PERFORMANCE OF HEALTH PROFESSIONS' STUDENTS
- 6 FYFE M. SYNCHRONOUS ONLINE CLINICAL EDUCATION IN FRAGILE STATES: AN ACTIVITY THEORY PERSPECTIVE

Our Approach

The 'Prepared for Practice' project focused on strengthening the undergraduate curriculum and assessment, improving critical thinking skills among students, and providing them with supervised hands-on experience in a clinical setting where they were able to practice what they have learned.

> This report tells the story of change that occurred at our three partner universities in Somaliland. The focus is on the quality of undergraduate education and the actions taken to support graduates to be better prepared for clinical practice. In particular, the report documents:

- The co-delivery of online courses for undergraduates
- The institutionalisation of objective structured clinical examinations (OSCEs)
- The enhancement of clinical supervision and the medical internship

1) CO-DELIVERY OF ONLINE COURSES

KGHP provided live, online courses to complement the in-person classes provided by Somaliland universities. These courses were delivered primarily by expert clinical volunteers from the National Health Service (NHS) in the UK alongside Somaliland faculty.

The online courses have marked the first remote delivery of this scale in Somaliland, connecting students with NHS expert clinicians and educators for live interactive learning. To ensure our portfolio remained relevant and responsive to the needs on the ground, local health faculty selected the courses to be delivered each year based on identified gaps in local curricula and available specialists. The courses were hosted on the MedicineAfrica platform and were delivered in the format of live tutorials which were co-developed by UK specialists and Somaliland educators and clinicians. Over the lifetime of the project, 144 individuals from the NHS volunteered their time to deliver tutorials for undergraduate medical, nursing and midwifery students.

UNDERGRADUATE **TEACHING IN NUMBERS**



medical, nursing and midwiferv students reached through online courses





universities now run OSCEs as part of final examinations



unique online courses were collaboratively designed and delivered with partners



clinical supervisors trained and supported through the project



NHS volunteers taught online courses





2) INSTITUTIONALISATION OF OBJECTIVE STRUCTURED CLINICAL EXAMINATIONS (OSCES)

The partnership had already introduced practical, evidence-based and internationally recognised final examinations in 2011, but this work was extended during the project through the provision of technical support to universities. The OSCEs assess students' competency through direct observation of a range of clinical skills. Students interact with a simulated patient and the student is evaluated on the questions they ask and how the physical examination is conducted.

Internationally, most medical schools use this form of evaluation. Holding rigorous, evidence-based assessments, such as these, for final year medical, nursing and midwifery students has been critical to ensuring that only those students that meet an acceptable level of knowledge, skills and competencies can graduate and enter the health workforce. It has also provided data on the quality of the curriculum and insights into whether the teaching is fit to prepare students for the health workforce. Educators from academic institutions such as King's College London, with expertise in teaching and assessment, provided technical expertise to Somaliland institutions in the following areas:

- · the development of written papers
- the design of clinical skills stations for practical exams
- the development of marking criteria
- acting as external examiners (observing the conduct of the exams and providing feedback on how practices could be strengthened)



3) ENHANCEMENT OF CLINICAL SUPERVISION AND MEDICAL INTERNSHIPS

Practice-based learning is the backbone of the education of health professionals. Hospitals, clinics, and community services are where future doctors learn from their peers and develop an understanding of patient-centred care. Clinical supervision of health professionals involves senior clinicians overseeing and guiding the practice of students and early career clinicians and has been shown to improve patient safety, effectiveness of care and patient experience⁷. The partnership addressed the gap in high quality clinical supervision and opportunities for practical experience in community healthcare for students. Our approach to improving practice-oriented learning was multi-faceted:

- UK expert clinical volunteers and Somaliland clinicians co-developed and implemented standard operating procedures for supervisors.
- Logbooks for medical internships were introduced to track and document the learning of new graduates working in clinical settings.
- Initial salary support was also provided to the clinical supervisors, allowing the supervision system to better manage and provide oversight to the large numbers of students coming through the hospitals.
- The project also provided some funding for students in their final years of study to visit the community.

7 SNOWDON, D.A., LEGGAT, S.G. & TAYLOR, N.F. DOES CLINICAL SUPERVISION OF HEALTHCARE PROFESSIONALS IMPROVE EFFECTIVENESS OF CARE AND PATIENT EXPERIENCE? A SYSTEMATIC REVIEW. BMC HEALTH SERV RES 17, 786 (2017). <u>HTTPS://DOI.ORG/10.1186/S12913-017-2739-5</u>

Impact for Undergraduates

IMPROVEMENT IN STUDENT PERFORMANCE

Improvements to the curriculum, clinical learning environment, and assessment have been matched by considerable shifts in the quality of teaching at Amoud University, University of Hargeisa and Edna Adan University⁸. This has all led to continuous improvements in student performance during practical and written examinations. However, our data shows that in some cases students are performing less well than before. This is in part because of the improvements to the quality of examinations, which has vastly improved at the three universities. At the University of Hargeisa, where student numbers are high, the average score for each cohort has been gradually decreasing since 2018, though pass rates are increasing. In other words, students are finding the examinations more challenging as the exams improve.



8 HTTPS://WWW.KCL.AC.UK/KSP/ASSETS/STRENGTHENING-QUALITY-OF-TEACHING-IMPACT-REPORT-SOMALILAND.PDF

RAINING SOMALILAND'S FUTURE HEALTH WORKFORCE



IMPROVED COLLABORATION BETWEEN INSTITUTIONS MEANS MORE STUDENTS REACHED

The outbreak of the Covid-19 pandemic in 2020 accelerated handover plans for the OSCEs. UK clinical volunteers could no longer travel to support the examination process and Amoud and Hargeisa began leading the examinations independently, with some remote support from volunteers. This independence and expertise led to them offering much needed support to other universities, where previously collaboration between institutions had been rare. The OSCE examinations were cascaded to additional departments at partner universities, as well as expanded to other university medical schools, creating much wider impact than originally envisaged.

OSCEs have now been adopted by three new medical schools, and two nursing and midwifery schools, not directly supported by the project. This collaboration across the Somaliland university sector will need to continue for the OSCEs to be a long-term contributor to quality in health professions training in Somaliland.

Changes in the approach to student examination were supported by policy change at the national level. The National Commission for Higher Education (NCHE) and Ministry of Health Development (MoHD) enabled medical faculties to set written examinations and OSCEs to develop common standards. There is momentum and support for the introduction of a harmonised national examination for final year medical students.

IMPROVEMENTS TO THE CLINICAL LEARNING ENVIRONMENT

In 2021 more students agree that they are being well prepared for their profession than in 2017, at all partner universities.

UNDERGRADUATE WARD ROTATIONS

Due to capacity constraints, hospitals in Somaliland were providing students with limited clinical experience, relying on passive observation in big groups, with students receiving little mentorship and support. The partnership supported universities and hospitals to create a system to monitor and manage the work of clinical supervisors and paid their salaries. We also trained clinical supervisors in pedagogy through the Health Professions' Education course.⁹

At the end of the project 85% of students at each university reported that they were satisfied with the hospital as a learning environment and 80% were satisfied with the learning they received during ward rotations. Even though there is work to be done, and there is variation between universities, significant improvements have been made. The evaluation found that clinical supervision is a highly relevant intervention for Somaliland's nursing, midwifery and medical graduates who need direct, hands-on training accompanied by expert supervision and guidance. Students now working as health professionals identified greater clinical practice during their studies as a means to feeling more confident and prepared for their role.

9 HTTPS://WWW.KCL.AC.UK/KSP/ASSETS/ STRENGTHENING-QUALITY-OF-TEACHING-IMPACT-REPORT-SOMALILAND.PDF

GRADUATE INTERNSHIP

The internship is a crucial part of training for medical graduates, helping them to build their clinical skills. It can also support the learning of students as interns play a role in supervising students on the wards. Support to the medical internship included the setting up of an Internship Committee which improved governance across institutions and facilitated decision-making. This structure also meant that members acted as project champions, driving change at an institutional level.

Improvements to the medical internship included development of a Standard Operating Policy (SOP), workplace-based assessments – including the introduction of logbooks and use of competencies to evaluate graduates. These were approved by the Ministry of Health Development and have been adopted nationally, providing much needed quality assurance for internships and standardising the assessment of interns.

Specific changes to the internship include:

- An increase in number of shifts provides round the clock staffing and more clinical exposure for interns
- Interns are supervised by clinical supervisors who are now supported by specialist doctors
- All interns now have the SOP, a contract and workplace-based assessment documentation at induction

GAINED EXPERIENCE IN PRIMARY AND COMMUNITY CARE

An independent evaluation found community visits to be a highly relevant activity, particularly so for students coming from wealthy backgrounds or from the city. The visits allow students to understand the reality of health service delivery in poorer, or more rural communities. The project part-funded community visits to primary healthcare facilities for students, who were accompanied by clinical supervisors. Training for the health workforce in Somaliland is very hospitalcentric and there is not a lot of opportunity for exposure to primary healthcare settings. For this reason, the outreach visits proved useful for students who gained new perspectives, new skills, and a deeper understanding of the healthcare system in Somaliland.

Students reported in the final year of the project that they gained 'soft' and 'hard' skills in many important areas. New perspectives on the importance of empathy, kindness, patience and respect were gained through exposure to patients from different backgrounds; soft skills such as communication, teaching, people skills and leadership skills were gained through working with patients in a real clinical setting; hard skills in things such as conducting examinations, monitoring and procedures such as ultrasounds were learnt during their time at the primary healthcare facilities.

(The community visits) improved us a lot and made us address the needs of the community. It changed our way of seeing things, for example it made me understand the problems being faced at community-level like non-communicable diseases."

UNDERGRADUATE MEDICAL STUDENT, AMOUD UNIVERSITY



Confidence Respect



New learning

Leadership Teaching Communication Terminology Understanding people Somaliland Health Sector Community Medicine



New skills

History taking Monitoring Examinations Referrals Ultrasound Chronic Diseases Life-saving skills

GAPS IN THE CURRICULUM FILLED

The project introduced a series of online tutorials in twelve subjects reaching nursing, midwifery and medical students at the three universities in Somaliland. Subjects were selected by university partners and the content was co-designed by Somaliland educators and UK specialists. This meant that courses were relevant and of high quality.

The tutorials were run online by NHS expert clinicians and provided learning that students wouldn't otherwise receive:

• Tutorials in clinical reasoning provided an extra platform for students to experience more interactive learning using real life cases as a basis for discussion. These courses matched the clinical hospital rotations the students attended in the following wards: internal medicine, surgery, obstetrics and gynaecology and paediatrics.

I always meet up with patients [at Abrar Hospital] during my internship. They are from poor backgrounds that can hardly access health facilities. In the early days, I used to find difficulties in listening to their problems, but thanks to the online learning system it has helped me develop my communication skills."

AMOUD UNIVERSITY MEDICAL INTERN

- Tutorials in communication skills, aimed at ensuring students had more effective communication with their patients, and by extension with their colleagues, offered theoretical background as well as practical demonstrations through the use of scenarios and role play to practice and improve.
- Tutorials in basic research methods offered students more in-depth knowledge on the application of critical skills to their practice.
- Tutorials in subjects such as mental health, neurology and radiology provided students with knowledge in subjects not otherwise provided by the curriculum and lacking in specialist trained faculty to teach them.
- Nursing and midwifery tutorials provided students with additional support on subjects that they found difficult.



IMPROVED STUDENT SKILLS AND CONFIDENCE

Medical, midwifery and nursing graduates in Somaliland believe that specialist educators are critical to improving their preparedness for practice. However, despite progress in recent years, Somaliland lacks specialist doctors, with hospitals often filling these gaps with generalists or family doctors. By bringing on board specialists from the UK to conduct case-based discussions and clinical reasoning for pre-existing courses such as paediatrics, obstetrics and mental health, the online courses made students feel more confident in their preparedness to practice medicine and nursing.

Student satisfaction with the courses increased steadily over the lifetime of the project. Students found that the courses were highly relevant to real problems and new situations that they encounter in their clinical practice. Working graduates said that the online courses were important in preparing them fully for the workplace.

"Due to the good quality of education I received at Edna Adan University, I believe this prepared me for better practice in the future as a nurse. As I like teaching, the online courses from King's College made me think about doing teaching. I want to teach nursing students a course called Fundamentals of Nursing, which is very basic and difficult for some students." Nursing student at Edna Adan University, Hargeisa

Ministry of Health Development staff say that they have seen improvements in the skills and abilities of recent medical and nursing graduates who enter the health workforce. Hospital workers have also greatly benefited through participation in the bedside teachings by international experts and ability of the students to confidently and with minimal support undertake various medical and surgical procedures."

MINISTRY OF HEALTH DEVELOPMENT STAFF, HARGEISA

Through long-term, in-person support from experts in health professions' education, Somaliland educators have grown in confidence and experience. With a clear commitment to evidence-based examinations among faculty in Somaliland, OSCEs began to be run independently by universities when the Covid-19 pandemic put an end to in-person support. This has led to an increase in confidence that has seen partner universities extending their expertise and support to other health faculties in Somaliland.

IMPACT FOR UNDERGRADUATES AND FACULTY

The collaborative approach taken by the project ensured the quality and relevance of online tutorials both for students and faculty.

A selection of the courses were also codelivered by UK clinical volunteers and their Somaliland counterparts which students found extremely helpful, as the presence of their tutors meant relevant, local and practical examples were used and Somaliland staff gained experience teaching online. The collaborative approach to the design and delivery of online tutorials for students and faculty meant that the project was able to build the capacities of educators in online teaching, course planning, preparation and design.



Future opportunities

DEVELOPING POST-GRADUATE SPECIALIST EDUCATION

In the final months of the project, online teaching transitioned from a bespoke Moodle platform to Google Classrooms. Material used in the online courses, like presentations and scenarios have been handed over to Somaliland faculty. KGHP are happy to continue supporting partner institutions where necessary.

Future support will be tailored to addressing priority areas identified by Somaliland partners, based on their need for specialty teaching in existing subjects or new areas of new or revised curricula where capacity is not yet available. In a 2021 health professions' education meeting with the Ministry of Health Development, universities, and regulatory bodies, all stakeholders agreed that postgraduate speciality education is a priority in Somaliland. KGHP would welcome the opportunity to support Somaliland institutions to produce experts in speciality medical, nursing and midwifery fields- whether through the modality of online learning, or through other methods such as curriculum development and review, guest lecturing, or regional exchange.

MAXIMISING LEARNING IN A CLINICAL SETTING

There are further opportunities in Somaliland to support the clinical supervisors and to ensure that students are maximising their learning in the clinical environment, whether in primary care or a hospital setting. There is potential to expand the clinical supervision programme to ensure smaller ratios of students to supervisors, and also to expand support and improve consistency for supervised visits to community health centres, providing students with longer and more structured rotations in a primary care setting.

There is a need for structured continuing professional development (CPD) for health professionals in Somaliland. Clinical supervisors would benefit from more structured CPD on clinical topics as well as continued development of pedagogical skills.

DELIVERY OF EVIDENCE-BASED ASSESSMENTS FOR UNDERGRADUATE MEDICINE, NURSING AND MIDWIFERY STUDENTS

Partner universities in Somaliland have greatly improved their preparation for and delivery of written and OSCE assessments. There is an opportunity to continue to support other universities to deliver both written and OSCE examinations to the required standards. There is an ambition among medical faculties to combine efforts to produce standard national examinations for all final year medical students. This move towards harmonised examinations would be a huge step forward for Somaliland.





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