

Turning the HEAT up for frontline health workers in Ethiopia

The Open University's Health Education and Training (HEAT) course is being rolled out in Ethiopia. Lesley-Anne Long describes the innovative distance-learning programme



An urgent problem with a tangible solution?

The challenges of providing quality and equitable health care in Africa, especially to vast rural populations, are well known. The continent's healthcare workforce is chronically and critically understaffed; it is estimated that sub-Saharan Africa requires between 1 and 1.5 million more healthcare workers, particularly to reduce under-5 mortality by two-thirds by 2015.^{1,2} The need for sustainable, sound training programmes that can be implemented and delivered at scale and at low cost is urgent.

Increasingly, the focus is on providing programmes for frontline health workers to enable them to deliver effective healthcare to people in their communities, particularly but not exclusively, in relation to maternal and child health. There is strong evidence, from China, Brazil, Bangladesh, and elsewhere, that the use of community health workers (CHWs) can have a material effect on reducing child and maternal mortality and morbidity.³⁻⁶ But ensuring a well-trained, motivated, and committed cadre of CHWs in the context of political, economic, and social constraints is not simple. Although there are many interventions taking place in the health sector across Africa, some at huge cost, these do not always reach the communities and individuals they are meant to be helping.⁷ And successful, small projects meeting local, highly contextualised needs often have no capacity to scale up.

A key feature of many health training programmes is that they are located away from the health workers' community. Such training tends to be dislocated from the context in which CHWs work, and provides little support to them once they're back in their communities. Furthermore, CHWs being away from their health posts as a result of attending training programmes in other lo-

cations severely disrupts the delivery of critical services in communities. In addition, for many health workers, leaving home, family, and work to upgrade their skills is not a viable option.⁸ Research suggests that to be effective, training should be located close to CHWs' working context, and structured around competence- and practice-based learning resources and activities specifically developed for CHWs.⁹ All too often, learning resources used for training (residential or otherwise) are out-of-date, drawn from Western medical textbooks, with little relevance to the context in which CHWs live and work.¹⁰

Distance learning

Increasingly, governments are looking to distance learning programmes as a potential solution to some of these issues.^{8,11} A major benefit is the convenience and accessibility of training for those who do not live near traditional training centres and universities. There is also evidence that good quality distance learning programmes can achieve equal or better completion rates than traditional face-to-face learning,¹¹ and by applying the methodology to upgrading programmes this frees up the residential and classroom space available at constrained health training institutions.

Although distance learning begins to overcome some of the limitations of traditional residential/classroom-based teaching, there are two important constraints. The first is that development of contextualised, up-to-date, and relevant distance learning resources is an expensive process. Second, distance learning is not simply a matter of making materials available and sending them out to students in the hope they will be sufficiently motivated, with the skills to be effective self-learners or know how to apply what they learn to their practice. There need to be effective systems in place, for distributing materials, supporting students, and monitoring and encouraging their progress. The Open University's HEAT (Health Education and Training) programme addresses these constraints, and more.

HEAT is an innovative, scaleable programme for frontline health workers. Launched by the UK's Open University (OU), in partnership with UNICEF, AMREF, the World Health Organization (WHO) and others, HEAT builds on the OU's expertise in distance learning to create high quality learning resources that, combined with practical skills training, provide a blended, work-based approach to health education. All of the materials are Open Educational Resources (OERs) so it's a model that is flexible, replicable, and can help significantly

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to address Africa's human resources for health crisis. HEAT was created in response to the Ethiopian Federal Ministry of Health's invitation to the OU to support the Government's ambitious plan to provide upgrading training to thousands of the country's Health Extension Workers (HEWs).

Ethiopia: the Level IV Health Extension Programme

Ethiopia, one of the most populous countries in sub-Saharan Africa, began investing 8 years ago in a large-scale, innovative community-based programme to address the challenge that few people in rural areas had access to modern healthcare.¹² Between 2003 and 2009 over 31 000 HEWs (young women, with grade 10 education) were selected by their communities and provided with 12 months' residential training prior to employment with their Woreda Health Offices and placement in a health post. The Government is now committed to a further urgent and ambitious programme of training, the Level IV Health Extension Programme, intended to upgrade the skills of many of the HEWs. The Open University's HEAT programme was created as a response to the Ethiopian Federal Ministry of Health's invitation to support this commitment.

With seed funding from the Allan and Nesta Ferguson Charitable Trust, and significant investment in the programme by UNICEF (Ethiopia), the HEAT team has been working collaboratively with the Federal Ministry of Health, UNICEF, AMREF, the World Health Organization (WHO) and other health experts for over 2 years to develop a distance learning curriculum (which accounts for about one-third of the Level IV Health Extension Programme) and to support implementation of the pilot in six regions in Ethiopia.

The curriculum

The curriculum consists of 13 modules (equivalent to around 450 hours of learning). The materials have been written by 50 Ethiopian health professionals and academics, supported by distance learning experts from the HEAT team, via a series of intense 2 to 4-week writing workshops that took place over about 15 months in Ethiopia. This has helped to create a tangible sense of local ownership of the materials, and ensured their relevance for the context in which the HEWs work and live.

The curriculum covers a range of key health areas including maternal and child health, disease management and prevention, family planning, nutrition, and community mobilisation skills. A module consists of a series of 2-hour study sessions, each session highly structured, with features designed to place the student at the centre of the learning, to support their understanding and help them to study on their own. Learning is facilitated by a tutor (who will meet face-to-face with the students on a regular basis) and a series of practical training mentors who will support and assess the linked practical skills training. Dr Kesetebirhan Admasu, the State Minister of Health, believes: *'This blended approach to workplace learning ensures that students achieve all the required theoretical and practical competencies while they continue to provide health services for their communities.'*¹³ (Pictured right).

The HEAT programme

HEAT's overarching objective is to accelerate quality-assured, relevant, and sustainable health worker training programmes across sub-Saharan Africa (and beyond), ensuring that effective health interventions are accessible in the remotest and hardest to reach areas.

Using an innovative application of work-based, distance-learning training methods based on Open Educational Resources (OERs), HEAT is deploying a platform for the delivery of a new peer-reviewed curriculum, authored by African health experts with support from the HEAT team.

The centralised, online storage of HEAT's OERs creates limitless access to anyone in the world who wants high-quality, structured learning resources created specifically for frontline health workers. Because they are hosted online, the learning resources can be easily updated and distributed as health protocols change and new modules are added. For countries with the technical infrastructure, the material can be readily utilised online if capacity is available, but it is also responsive to infrastructure and connectivity constraints, so content can be downloaded and distributed, as high-quality printed learning resources. With the smallest unit of content equivalent to a 2-hour study session, it means that materials can be selected and adapted to meet specific training needs, for use in both distance education and in classroom settings, to be integrated into and supplement existing courses or to create new programmes, or for other health cadres such as paramedics, nurses, and midwives.

The Ethiopian Government is clearly committed to investing in sustainable development of its HEWs. It intends to increase the pay of HEWs upon their successful completion of the programme, thus providing an important financial incentive. There is also a career trajectory; successful students will qualify as Health Extension Practitioners (equivalent to diploma level) with the potential for some to continue their career development through to medical training. Evidence suggests that the combination of adequate remuneration together with professional development is a powerful motivating factor for frontline health workers and possibly improves retention.^{14,15} The Level IV programme has been described by Ted Chaiban, the UNICEF representative for Ethiopia, as 'the most important platform for scaling up basic maternal, newborn and child health

and nutrition interventions in rural Ethiopia' and 'a career path for the Health Extension Workers [that] is critical for their motivation and the quality of services.'

Tutor training

Effective student support is also a critical factor impacting on the success of distance learning programmes.^{9,10,14} A principal



aim for tutors supporting distance learning is to cultivate skills of independent learning in their students and to help students to navigate and approach materials in ways that suit each student's individual needs¹⁶ – to be a 'facilitator of learning', rather than a formal teacher and source of knowledge. For the Level IV Programme, tutors were appointed by their Regional Health Bureaus and attended a 4-day workshop coordinated by the HEAT team, the Federal Ministry of Health (FMOH), and the African Medical and Research Foundation (AMREF,) designed to orient them to the programme and the distance learning component in particular.

Tutors will receive support from a supervisor appointed by the Regional Health Bureau, who will also oversee the organisation and delivery of the practical skills training sessions for students. Tutors and supervisors will meet regularly to discuss how the tutor is progressing, and whether there is any support the tutor needs, to consider the progress that students are making, and agree how best to support a student who is having any difficulty in keeping up with the pace or level of study.

Implementation

The pilot Level IV Programme is currently being implemented in six regions, with around 1000 students supported by over 100 trained tutors. Almost all students will be studying the theoretical part of the programme as distance learning,* which will be delivered hand-in-hand with practical skills training based in and around local health centres. This work-based /distance learning approach means there is no need for the HEWs to relocate: they can continue their critical service to their communities while they study at work or at night, and apply their knowledge immediately in their practice.

Implementation of the programme is supported by UNICEF, AMREF, and WHO but is largely the responsibility of the Regional Health Bureau in each region. A health science college in each of the pilot regions has been nominated as a Regional Distance Learning Centre and will manage the administration as well as the formal assessment process.

Students (in study groups of 10) will meet with their tutor in-person at least once a month in Study Support Meetings, usually at the health centre where they go to collect their monthly salaries. In these meetings they will learn how to integrate theory with hands-on practice during on-site skills training. Local experts will provide practicum on such topics as maternal and child health issues and community interventions such as child health days and supplementary feeding programmes. Students' performance during those training sessions will be assessed; these assessments, together with the tutor-marked assignments linked to the theory modules, plus a final exam administered by the Ministry of Education form the overall assessment strategy for the Level IV Programme. This integrated approach to learning – with theory and practice closely linked – is aimed at changing the HEWs' behaviour to become more reflective practitioners and to increase their potential for providing and extending a basic healthcare service to the 65 mil-

* The Southern Nations, Nationalities and People's Region (SNNPR) is using the theoretical modules as part of a face-to-face teaching programme.

lion people who live in rural Ethiopia.

Monitoring and evaluation

A monitoring and evaluation plan for the pilot is currently under discussion with the FMOH. Broadly, the plan is expected to assess the overall principal pedagogical and implementation goals of the Level IV Programme, namely:

- (i) to build the capacity of HEWs with the knowledge, skills and motivation required to improve health outcomes;
- (ii) to build the capacity of the national health system to apply the blended learning approach to rapidly up-scale training and skills development.

Expansion of HEAT

HEAT has potential application around the world. Its vision is to help transform the way healthcare education is delivered and health workers are supported in communities across Africa. By providing a flexible, cost-effective** and sustainable approach to CHW education, and working in partnership with governments, WHO, AMREF, and others, HEAT can support training on a massive scale for countries where skilled frontline health workers are urgently needed in their thousands. Through expansion into new partner countries in Africa, and eventually beyond the region, HEAT can lead to scaleable, meaningful and lasting capacity building for health.

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** Following initial investment in developing the 13 modules for Ethiopia, there are diminishing costs in adapting and contextualising the learning resources for other countries' use.