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Master in hospital and healthcare management program in Rwanda

Introduction

The focus of human resources development in healthcare for many developing countries had a tendency to focus on clinical vocations, i.e. doctors, nurses and allied health professionals (Allen, 2014; Cherlin *et al.*, 2011; Bradley *et al.*, 2008). Yet, hospitals and health centres are complex institutions which require strong management in much the same way any other organization with large operating budgets and multiple departments with significant infrastructure and human resources depend on. A critical feature of a proper functioning health system are leaders with training in management, in contrast to trained clinicians who have shown aptitude for management. Several analyses of hospital and health centre management, as well as anecdotal evidence from the field, convincingly demonstrate that management systems are not strong at all levels (referral hospital, district hospital and health centre) (Allen, 2014; Cherlin *et al.*, 2011; Bradley *et al.*, 2008).

Rwanda is characterized by rapid change, progressive and innovative policy reform and ambitious goals. In this context, hospital and healthcare managers are required to translate policy into practice. Given severe human resource shortages and other resource constraints, effective healthcare management is even more critical to ensure effective use of limited resources. The training opportunities for healthcare management were minimal in Rwanda, and health management is not a well-developed profession in the country or the region. As a result, management capacity in hospitals is variable and often substandard. Before 2012, there were no formally trained health managers in Rwanda. Therefore, significant support was needed to build an educational pipeline for health managers. Accordingly, the University of Rwanda College of Medicine and Health Sciences, School of Public Health (UR/CMHS/SPH), developed a curriculum for a Masters in Hospital and Healthcare Administration (MHA) with the support of Yale University's Global Health Leadership Institute (GHLI).

MHA programme in Rwanda

The health management degree is a two-year executive-style programme that combines 25 per cent classroom-based work in management and leadership with 75 per cent supported field-based work to apply and refine these skills. In 2015, the programme was transferred to the University of Rwanda College of Medicine and Health Sciences, School of Health Sciences (UR/CMHS/SHS).

The curriculum is modelled after similar initiatives to educate health managers in Ethiopia, Liberia, South Africa, China and the UK (Ministry of Health, 2010; Kebede *et al.*, 2010; 2012; Rowe *et al.*, 2010). Drawing on their prior experience, Yale's GHLI reviewed and revised the curriculum to reflect lessons learned and local context.

The objectives of the MHA are to:

- effectively and efficiently develop the management capacity at the referral and district hospital level of the country;

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- catalyse tangible improvements in key management systems and among the hospital and district management teams;
- develop tools and mechanisms for quality improvement (QI) and system strengthening that can be used nationally to improve delivery of care; and
- support the UR/CMHS in the development of an educational and training programme for faculty to ensure a sustainable pipeline of skilled healthcare managers.

MHA students, who are also full-time managers in hospitals across Rwanda, learn practical hospital leadership and management competencies. Between month-long focused teaching blocks, students lead QI projects in their hospitals. The curriculum focuses training in the areas of human resources, finance, patient safety, supply chain management, patient flow, medical records, performance assessments, QI, leadership and governance, communication and strategic problem solving. Central to the MHA programme's core competency is Strategic Problem Solving (SPS) (Banaszak-Holl *et al.*, 2011).

Strategic problem solving

SPS uses an eight-step approach that incorporates leadership and management skills to systematically identify a challenge or barrier to high-quality care and implement and evaluate measurable solutions to the identified problem. The eight steps are:

1. define the problem;
2. set the overall objective;
3. conduct a root cause analysis;
4. generate alternative strategies that could be used to address the problem given the root causes identified;
5. perform a comparative analysis of the alternative strategies;
6. select the strategy;
7. develop an implementation plan and implement; and
8. develop an evaluation plan and evaluate (Banaszak-Holl *et al.*, 2011).

Through interactive and participatory classroom teaching, students learn the theories of SPS. Via the field work (hospital attachments) between teaching blocks, students apply the skills and knowledge they acquired in class. Each MHA student is required to conduct a QI project in his/her respective work places. There are four hospital attachments during the two-year MHA programme. Each hospital attachment has specific learning objectives pertinent to the knowledge they acquired in the preceding teaching block. For example, in block 1, students learn to define the problem (Step 1) and set the overall objective (Step 2). In the hospital attachment immediately following block 1 (hospital attachment 1), students identify a QI problem in their work place, measure the magnitude of the challenge and set the objective. After having understanding of the identified challenge, students learn root cause analysis (Step 3) in block 2 and continue their QI projects by conducting a root cause analysis in hospital attachment 2. The rest of SPS steps are taught in subsequent teaching blocks and can be applied in the hospital attachment 3 and 4. Upon completion of hospital attachment 4, the students' completed QI projects are developed into the capstone dissertation projects – a partial requirement for the completion of the MHA programme.

Hospital challenges are many in Rwanda. Many hospitals do not have stable water and electricity supply; while some can become almost inaccessible in rainy seasons due to their location and lack of paved roads. Patients often have to wait for a long time to receive treatment or have to share one hospital bed. Trying to find solutions to these intertwined hospital issues can be overwhelming. But by following the SPS step by step, students are able to focus on addressing one resolvable issue at a time. Many students found root cause analysis frustrating and rewarding at the same time. Collecting data and evidence was not easy for many;

documentations were often lost or incomplete. For example, while conducting a file audit, one student discovered gestation age was not often recorded in many medical records. Many students were surprised how seemingly obvious root causes turned out to be no more than just beliefs once they collected the evidence. For example, one hospital was trying to address the issue that many patients wet their surgical wound dressings when they bathe or wash, causing wound infections. The student conducted an observation study and checked the wound dressing for all patients after they returned from washing or shower to realize that about 95 per cent of patients kept their dressings dry, despite the common belief.

Current status of MHA

Since the programme's inception in 2012, the MHA programme has enrolled three cohorts; 32 students have graduated as of June 2016. Twenty-eight cohort 3 students are completing their first year of the programme. Yale GHLI faculty have worked in collaboration with UR/CMHS faculty to develop capacity to deliver and sustain the MHA programme locally, with minimal and eventually no external faculty support. Over the past four years, Yale GHLI has provided guidance in curriculum adaptation, course content development and executive-education teaching techniques, student mentoring and course delivery. Yale involvement in the MHA programme will progressively decrease as that of UR/CMHS proportionally increases and as UR faculty become efficient in leading and managing the programme.

Capstone projects

In this special issue of *On the Horizon*, we present some tangible changes that the MHA students have implemented in Rwandan healthcare facilities through their QI projects. These projects highlight a variety of common healthcare challenges faced in Rwanda. From hospital-acquired infection to documentation incompleteness, from clinical process non-compliance to administrative inefficiency; students strived to resolve these real-life day-to-day challenges in their workplaces. Their successes in these project provided convincing evidence that by applying the SPS approach to break down complex healthcare issues, tangible solutions can be implemented even in resource-limited settings.

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