International Journal for Quality in Health Care 2010; Volume 22, Number 1: pp. 39–43
Advance Access Publication: 1 December 2009
10.1093/intqhc/mzp051

Educating leaders in hospital management: a new model in Sub-Saharan Africa

SOSENA KEBEDE[1], YIGEREMU ABEBE[2], MIRKUZIE WOLDE[3], BIFTU BEKELE[3], JEANNIE MANTOPOULOS[1] AND ELIZABETH H. BRADLEY[1]*

[1]Yale School of Public Health, New Haven, CT, USA, [2]Clinton Foundation HIV/AIDS Initiative, Addis Ababa, Ethiopia, and [3]Faculty of Public Health, Jimma University, Jimma, Ethiopia

Address reprint requests to: Elizabeth Bradley, Yale University School of Public Health, 60 College Street, PO Box 208034, New Haven, CT 06520-8034, USA. Tel: +1-203-785-2937; Fax: +1-203-785-6287; E-mail: elizabeth.bradley@yale.edu

Accepted for publication 29 September 2009

Abstract

Quality issue. The vast majority of health system capacity-building efforts have focused on enhancing medical and public health skills; less attention has been directed at developing hospital managers despite their central role in improving the functioning and quality of health-care systems.

Initial assessment and choice of intervention. Initial assessment of hospital management systems demonstrated weak functioning in several management areas. In response, we developed with the Ethiopian Ministry of Health (MoH) a novel Master of Hospital Administration (MHA) program, reflecting a collaborative effort of the MoH, the Clinton HIV/AIDS Initiative, Jimma University and Yale University. The MHA is a 2-year executive style educational program to develop a new cadre of hospital leaders, comprising 5% classroom learning and 85% executive practice.

Implementation. The MHA has been implemented with 55 hospital leaders in the position of chief executive officer within the MoH, with courses taught in collaboration by faculty of the North and the South universities.

Evaluation and lessons learned. The program has enrolled two cohorts of hospital leaders and is working in more than half of the government hospitals in Ethiopia. Lessons learned include the need to: (i) balance education in applied, technical skills with more abstract thinking and problem solving, (ii) recognize the interplay between management education and policy reform, (iii) remain flexible as policy changes have direct impact on the project, (iv) be realistic about resource constraints in low-income settings, particularly information technology limitations, and (v) manage the transfer of knowledge for longer term sustainability.

Keywords: Ethiopia, hospital management, Africa

Background

Strengthening health systems is an international priority as highlighted by the World Health Organization, World Bank and major donor groups [1, 2]. Central to health systems strengthening is enhancing the management capacity within a health-care delivery system [3]. The vast majority of capacity-building efforts, however, have focused on enhancing medical and public health skills [4–6]. Less attention has been directed at developing health-care managers despite their potentially important role in improving the functioning and quality of health-care delivery systems.

Although management capacity is needed at all levels of health systems, hospital management is particularly important for several reasons. First, hospitals are typically institutions with substantial complexity requiring effective coordination of resources and managerial problem solving. Second, hospitals typically account for more than half of the health-care spending in a country [7], suggesting the need for effective management of hospital resources. Finally, hospitals play a crucial part in the referral system and provide public confidence that treatment for serious illnesses is accessible.

Accordingly, we sought to develop an effective and sustainable model for enhancing capacity in hospital management. The model includes as a cornerstone a Masters of Hospital and Health-Care Administration (MHA) degree program, delivered at Jimma University in Ethiopia, and has been implemented as a core component of the Ethiopia Hospital Management Initiative (EHMI) [8, 9], a collaborative effort of the Ministry of Health (MoH) of Ethiopia, The William Jefferson Clinton HIV/AIDS Initiative (CHAI), Jimma University and Yale University.

Program planning and assessment

Setting

Ethiopia currently has a total of 143 hospitals, 88 of which are government-owned hospitals. Historically, Ethiopian hospitals have been run by medical doctors who neither had the formal training nor the time to manage such complex institutions. In a country of 80 million people where the annual per capita total health expenditure is about 5 US dollars and where the physician density is one of the lowest in the world, hospitals have been poorly managed. Our previous assessments [8, 9] documented weak management systems in place in the hospital setting including inadequate systems in human resource management, medical records and patient flow, infection prevention, nursing practice, pharmacy and warehouse management and other areas.

Partnership

Central to the program development was the partnership between academic, non-governmental and governmental organizations. Primary in the partnership was the MoH, who envisioned developing a new cadre of hospital leaders through a novel Masters of Hospital Administration (MHA) program. The MoH and the Regional Health Bureaus developed a new government job category, hospital chief executive officer (CEO) and entered a focused recruitment and hiring process for these positions. After interviewing multiple universities in Ethiopia, Yale University and the MoH selected Jimma University to house the MHA program. Jimma faculty came to Yale University for a month of intensive work to build common expectations, draft program goals and create the curricular schedule, which were subsequently approved by the MoH and by the Jimma University Committee on Academic Affairs.

Program implementation

Program design

The MHA program is a 2-year, executive education style degree program for the new cadre of government hospital CEOs. We purposefully included design features known to be more effective for adult learners [10] rather than early careerist health-care managers, such as use of applied cases, substantial group projects and a focus on problem solving. The MHA is taught in six blocks, which take place on the Jimma University campus for 3 weeks of intensive classroom time every 4 months and are supported jointly by Yale and Jimma University faculty. Between these blocks, students are in 'executive practice,' which is a field-based experience that takes place in their assigned hospitals. Executive practice comprises the systematic application of classroom tools to specific management projects to improve the functioning and quality of the hospital and is evaluated through monthly reporting and periodic site visits by faculty. The MHA is therefore split 15% in the classroom and 85% in executive practice at the hospital.

Application and selection process

Individuals are eligible to apply for the MHA if they have attained at least a bachelors' degree, are proficient in spoken and written English and have adequate work experience and basic computer skills. A clinical background, although desirable, was not a requirement for application. However, in the first cohort of students, all applicants were required to hold the position of CEO of a government hospital. Furthermore, all applicants had to be recommended for application by either the Federal Ministry of Health or the Regional Health Bureaus since the program was designed to support the government hospitals. Student slots for the MHA program were distributed via a quota system to ensure representation from federal hospitals and hospitals in the seven participating regions of Ethiopia.

Curriculum

Overview. The MHA is a competency-based curriculum comprising selected skills taught in typical MBA and MPH degree programs. Six broad areas of competency, corresponding to the curriculum blocks, were identified for classroom teaching: (i) public health, epidemiology, biostatistics and research methods (ii) scientific problem solving and quality improvement in health management, (iii) hospital operations, (iv) health economics and financial management, (v) human resource development, leadership and strategic management, and (vi) health policy, ethics and law. Skills in these areas are developed through a combination of didactic classes, executive practice and an individual management thesis. Course materials are available through a shared website with discussion board (http://www.ju.edu.et/mha).

Didactic classes. Within each competency area, classes are designed to be effective for adult learners. Classes include formal lectures (pertaining to conceptual principles and technical tools), case applications (in which students work in groups to define and address case-based problems) and expert panel discussions (involving local experts in the topic). Written examinations are given at the end of each class (18 classes over 2 years) to track progress through the program. In addition, because a major goal of the MHA is to develop both personal leadership capacity and the profession of hospital management leaders in Ethiopia, students' time together in Jimma University also involves intensive work on oral presentation. Each day, two CEOs are selected to present 'leadership moments,' which are 10-minute descriptions of their progress in the implementation of hospital management improvements completed during their executive practice. The leadership moments accomplish two goals: they enhance the oral presentation skills of the CEOs and allow for experience sharing opportunities with their peers. CEOs receive intensive feedback from faculty on presentation skills, as advocacy and oral articulation skills are central to their leadership as individuals and as a profession within the health services sector of Ethiopia. Norms of

professional behavior are developed through role modeling and feedback throughout group learning sessions.

Executive practice. Executive practice focuses on improving the functioning and quality of the CEO's hospital and is meant to reflect the team-base learning process of problem solving. Each CEO uses the *Blueprint for Hospital Management* and accompanying *Standards for Hospital Management* [8, 9] that set benchmarks for processes and measures of hospital management capacity. Each CEO submits a progress report mid-month with updates on their major activities and a monthly report at the end of each month with the detailed description of the application and impact of the scientific problem-solving method. These reports are graded by the MHA program faculty, who also complete site visits throughout the year to examine progress.

Master's thesis. MHA students are required to complete and present a Master's thesis at the completion of the 2-year program. The thesis reports on a management project in which the CEO performs a baseline assessment of a particular hospital management standard, implements an intervention seeking to improve performance on that standard and subsequently evaluates changes in predefined indicators. Every effort is made to make these studies as rigorous as possible. These efforts include the use of comparison groups whenever feasible and the use of both qualitative and quantitative data as appropriate. All theses prospectuses are reviewed and approved by the MHA Program Director and the academic commission of the Jimma University School of Public Health.

Faculty

The MHA is taught by a combined faculty from Yale and Jimma University Schools of Public Health. The program requires one full-time faculty member, who has an academic appointment at both universities, to direct the MHA program and a project manager at each university. Jimma faculty members teach public health, epidemiology, statistics, principles of health management, health economics, research methods and health policy, ethics and law. Yale faculty members teach scientific problem solving and quality improvement, hospital operations and financial management, human resource development and strategic management.

Monitoring and evaluation of progress

The program has enrolled two cohorts of hospital leaders (a total of 55 CEOs) and is working in more than half of the government hospitals in Ethiopia. Students' progress in the MHA is closely monitored through examination grades, executive practice monthly reports and hospital site visits by MHA faculty. In addition, the MoH and Regional Health Bureaus annually evaluate the percent of 85 *Standards for Hospital Management in Ethiopia* met by hospitals. To date, site visits for assessing hospital adherence to standards have been conducted by the MHA and CHAI/Yale staff involved; however, government entities are developing the function of hospital licensure, which will be used in the future to measure adherence to hospital management standards. Last, because social networks have been shown to be associated with diffusing new knowledge and practices [11, 12], we are examining changes in the size and density of the CEOs' social networks, as well as the information exchanges across the network.

Discussion

Although the literature suggests that hospital management is paramount to health systems strengthening [2, 3], there are few on-the-ground hospital management educational programs in developing countries. The MHA program in Ethiopia is an innovative response to the call for increased health management capacity in low-income countries as a keystone to health system strengthening efforts. The MHA program, although designed for hospital CEOs in Ethiopia, demonstrates an approach to building management capacity that can be helpful in other settings facing similar challenges and constraints. Central aspects of the program design include the integration of public health and management curricula, the linking of didactic and practical training using executive-style education and the North-South collaboration of universities so that new skills can be appropriately fit into the country-specific context.

Lessons learned

We have learned several lessons that may be helpful to other programs considering the development of health-care management educational programs in low-income countries. The key lessons highlight the need to: (i) balance education in applied, technical skills with more abstract development of new modes of thought regarding management and problem solving, (ii) recognize the interplay between management education and policy reform, (iii) remain flexible as policy changes that have direct impact on the project are frequent and dynamic, (iv) be realistic about the resource constraints in low-income settings, particularly the information technology limitations, (v) manage the transfer of knowledge for longer term sustainability.

First, we learned the important balance between imparting new technical skills (i.e. how to design a balanced scorecard, how to create a budget, how to do inventory management in the pharmacy store) and building critical thinking skills (i.e. framing problems, diagnosing organizational context and managing change, strategic analysis). There was an immediate need for the CEOs to develop technical competency in concrete areas; however, the longer term goal of developing a cadre of leaders requires participants to develop a way of thinking that will be pertinent even as the context shifts over the decades ahead. A curriculum might easily become overly technical and concrete or may become overly abstract and academic; the balance is important in which abstract modes of critical thinking are taught through case applications that ask participants to apply the new ways of thinking to real-life, applied problems in their own hospitals. The integration of

classroom and executive practice educational methods facilitates this balance.

Second, we learned that recognizing the interplay between health management education and health policy reform both improve the relevance of the MHA curriculum and enhances the influence of hospital CEOs in country-wide health policy reforms. In the Ethiopian MHA, the CEOs are influenced by the current hospital policy reform but, at the same time, they also influence the policy as well. For instance, the CEOs, as part of the MHA, have helped to create service quality measurements and hospital performance benchmarks that will eventually be used to inform the national hospital accreditation system that is hoped to be formed. This unintended but positive aspect of the MHA highlights the importance of equipping CEOs with not only hospital management skills but also policy advocacy and implementation competencies.

Third, we learned that flexibility and creativity play a crucial role in effective program design as policy changes that affect the trainees were frequent and dynamic. This may be especially true in countries where health delivery is largely in the public sector and in a state of reform, such as Ethiopia. In the MHA, for instance, all the students were hospital CEOs at the time of enrollment and our curriculum was designed for CEOs. Nevertheless, in the first year of the MHA, a few students were removed as the CEO of their hospitals to accommodate regional and hospital-specific policies and priorities. We had to adapt the assignments and curriculum quickly to ensure the MHA remained relevant to these students and the CEOs. The ability to adapt quickly in response to policy shifts was therefore central to sustaining such educational programs.

Fourth, inadequate infrastructure, particularly in the area of information technology, limits productivity in education substantially. Limited and slow internet connections can be rate limiting in executive education with CEOs working in various settings across the country. Although we used a robust website to manage course materials, inadequate internet speed in rural areas can result in differences in learning materials available in some settings, despite uniform grading and testing standards. Information technology speed limitations also slows the routine communication between faculty in the north institution and MHA participants. Similar constraints are apparent with physical resources such as paper, classroom space and books. Addressing the information systems and infrastructure needs is central to ensuring educational resources are maximized.

Last, we learned about the complexities of managing the transfer of new knowledge, and skill from institutions in the North to host institutions in the South. The transfer requires not only organizational learning but also acceptance of responsibility, ownership and leadership for the program. Given the greater resources of the institution in the North, the institution in the South may too quickly abdicate responsibility to the north institution, presuming incorrectly that the north institution has the knowledge and ability to design and lead the program without as much input from the south institution. Paradoxically, such deference may limit the long-run transfer of knowledge and leadership for new programs as the institution in the South is the one with the true understanding of what will work in the country and how such programs can be effectively implemented and sustained. As noted by experts in leadership [13], the process of transferring responsibility without abandoning the institution in the South remains a strategic challenge for the institution in the North. Building and empowering local champions for the program in the south institution is a responsibility that should be carried out in tandem with the development of the project itself.

Remaining challenges and next steps

Although reports from the first year are positive concerning the satisfaction of the CEO students, their regional health bureaus, and the MoH, our next steps are nonetheless challenging. We have documented several hospital improvements in terms of improved hospital sanitation procedures, improved medical record accuracy, reduced wait times for admissions and outpatient visits and improved human resource monitoring; however, sustained attention must be directed at the ongoing challenges of harmonizing expectations about the program across the collaborating institutions, establishing strong evaluation metrics and ensuring the full transfer of the program to Ethiopia.

Harmonizing expectations about the program design and implementation is complex, with two institutions in different parts of the world with different work and educational style and culture. Balancing different sets of expectations and demands that stem from these fundamental differences is paramount to educating a cadre of Ethiopian hospital leaders who are culturally valid and credible in their communities. Disappointments and conflicts are bound to arise due to different expectations and norms of the diverse stakeholders. Managing expectations and adequate time investment in dialogue, despite information technology challenges, will be critical for sustaining the collaboration in the face of conflict and for fostering a strong program.

A critical next step for the program is ensuring rigorous evaluation. Our framework for evaluation includes measures of hospital management functions and adherence to standards, academic progress of the students and changes in the professional network of students including their relationships with peers and government agencies that regulate hospitals. Although management education focuses on the non-clinical aspects of the hospital, in time we plan on having CEOs design proper clinical metric data capture methods with the goal of establishing links between managerial effectiveness and clinical quality measures.

Finally, the most central next step is managing the full transfer of the MHA program to Ethiopia. This should be accomplished over a total of 3–4 years and involves ongoing efforts to train faculty in Ethiopia, to ensure needed management structure to implement the MHA and to continue strengthen the hospital CEO position in the health system. Working in partnership to be responsive to the needs and priorities of the MoH and the Ministry of Education, the Jimma University MHA program can become a model for

building management capacity for improved hospital care in Ethiopia and in Sub-Saharan Africa.

Health care management capacity building is paramount to health systems strengthening. Health-care management training can be a successful North-South collaborative effort where more developed nations in the areas of health-care management can greatly assist local capacity building efforts of low-income countries. Such efforts entail several challenges but hold great promise to transform health systems if the collaborative design considers and makes provisions for effective local capacity building methods that will sustain the program for years to come.

Funding

This work was funded by the Clinton HIV/AIDS Initiative. Funding to pay the Open Access publication charges for this article was provided by Yale University.

References

1. World Health Organization. *World Health Report 2006: Working Together for Health*. Geneva, 2006.
2. Mills A, Rasheed F, Tollman S. Strengthening Health Systems. In: Jamison DT, Breman JG, Measham AR, Alleyne G, Claeson M, Evans DB, Jha P, Mills A, Musgrove P *et al.* (eds). *Disease Control Priorities in Developing Countries*, 2nd edn. Washington, DC: The World Bank and Oxford University Press, 2006, 87–103.
3. World Health Organization. *Toward Better Leadership and Management in Health*. Geneva, 2007.
4. Chen L, Evans T, Anand S *et al.* Human resources for health: overcoming the crisis. *Lancet* 2004;**364**:1984–90.
5. Hongoro C, McPake B. How to bridge the gap in human resources for health. *Lancet* 2004;**364**:1451–6.
6. Rowe AK, de Savigny D, Lanata CF *et al.* How can we achieve and maintain high-quality performance of health workers in low-resource settings? *Lancet* 2005;**366**:1026–35.
7. Barnum H, Kutzin J. *Public Hospitals in Developing Countries: Resource Use, Cost, Financing*. Baltimore: John Hopkins University Press, 1993, 335.
8. Bradley E, Hartwig KA, Rowe LA *et al.* Hospital quality improvement in Ethiopia: a partnership-mentoring model. *Int J Qual Health Care* 2008;**20**:392–9.
9. Hartwig K, Pashman J, Cherlin E *et al.* Hospital management in the context of health sector reform: a planning model in Ethiopia. *Int J Health Plann Manage* 2008;**23**:203–18.
10. Brookfield S. Adult learning: an interview. In: Tuinjman A (ed). *International Encyclopedia of Education*. Oxford: Pergamon, 1995.
11. Rogers E. *Diffusion of Innovations*, 5th edn. New York: The Free Press, 2003.
12. West E, Barron DN, Dowsett J *et al.* Hierarchies and cliques in the social networks of health care professionals: implications for the design of dissemination strategies. *Soc Sci Med* 1999;**48**:633–46.
13. Heifetz RA. *Leadership without Easy Answers*. Cambridge, MA: Belknap Press of Harvard University Press, 1994, xi, 348.