

# Guest editorial

Elizabeth Bradley, Jeannie Mantopoulos, Erika Linnander and Jeanne Kagwiza

Elizabeth Bradley is based at Yale School of Public Health, Yale University, New Haven, Connecticut, USA.

Jeannie Mantopoulos and Erika Linnander are both based at Global Health Leadership Institute, Yale University, New Haven, Connecticut, USA.

Jeanne Kagwiza is based at College of Medicine and Health Sciences, University of Rwanda, Rwanda.

## Health management education and professional development in low-income settings

Effective management of health facilities and agencies is particularly critical in settings where resources are limited to ensure that outcomes are maximized given the modest inputs available. With modest infrastructure, fewer healthcare professionals and limited supplies of commodities, creative means of managing such scarce resources are needed to meet the healthcare needs of often large and impoverished populations. The papers in this supplement describe a set of quality improvement and strategic problem solving projects that demonstrate the positive and significant impact of good management on a range of outcomes including hand hygiene, hospital acquired infections, wound care practice and medical documentation to facilitate effective communication among medical teams. These solutions, catalyzed by effective management, were developed *in situ* to ensure local relevance, feasibility and sustainability without substantial injection of additional resources.

The establishment of educational programs that both impart the knowledge and also allow for the practical skill development of strong health managers is paramount to health system strengthening efforts. Few such programs exist in low-income countries, particularly on the African continent. In Rwanda, a special effort has been made through the Human Resources for Health program run by the Rwandan Ministry of Health to develop a two-year, executive-style Masters in Hospital and Healthcare Administration (MHA) ([Yale Global Health Institute, 2016](#); [Binagwaho \*et al.\*, 2013](#)). The MHA includes classroom-based courses delivered in blocks (intensive short-term sessions) as well as mentored field work completed in the hospital setting, typically the hospital in which the student is employed as a manager or director. Both clinicians and non-clinicians have completed the MHA curriculum, and many of the field-based projects have involved teams of staff at the hospital sites, suggesting development opportunities for not just the enrolled student but also his or her colleagues.

Courses in the MHA cover the following competencies, which are core to health management ([Bradley \*et al.\*, 2015](#)):

- strategic thinking and problem solving;
- human resource management;
- financial management;
- operations management;
- performance management and accountability;
- governance and leadership;
- political analysis and dialogue; and
- community and customer assessment and engagement.

Curricular materials are available from the first author upon request. The two-year master's degree program (Kebede *et al.*, 2010; 2012) culminates with a capstone project in which students must define a problem, use data to identify and prioritize its root causes, develop an objective, design a strategy to meet the objective, apply interventions to implement the strategy and evaluate the impact of the interventions on the stated objective and other outcomes. Throughout, students learn how to lead groups to set objectives and engage others in work that accomplishes those objectives, as well as to use data in decision making, both to hold people accountable and also to monitor progress, evaluate the success of selected strategies and adapt as needed. The capstone model, common in many professional schools in higher-income settings, represent an important shift away from the more traditional "thesis" required by many schools of public health in lower- and middle- income settings toward a more applied and equally rigorous strategic analysis and engagement of teams toward objectives.

Feedback from the MHA program has been largely positive, although many students wish more time were available to spend on each segment of the learning, a common challenge in the design of rigorous in-service educational programs. Particularly incisive have been comments from students and their co-workers about how the course and skills empower graduates to understand data, to anticipate problems and to convene groups to solve practical programs. The critical thinking needed to develop strategies is appreciated and is reported as a skill that promotes life-long learning and helps graduates in any role they subsequently take in the hospital or larger health system. The value of the MHA is evidenced by the endorsement of both the University of Rwanda and the Ministry of Health, as they continue to send senior managers from government hospitals to become MHA trained.

Similar educational programs have emerged – some at the certificate rather than the degree level – in Ethiopia (Kebede *et al.*, 2010; 2012) and Liberia (Rowe *et al.*, 2010). Both in Ethiopia, which began the first MHA on the continent in 2008 at Jimma University, and in Liberia, which implemented a health management certificate program in 2009 at Mother Patern College of Health Sciences, students completed both classroom learning and mentored field work, and demonstrated practical results from their training. Additionally, both countries used the programs and graduates to help implement needed reforms (McNatt *et al.*, 2015; Cleveland *et al.*, 2011) in the hospital and county health sectors including reforms related to supply chain, human resources management, nursing standards and management practices. Overall, such programs have been evaluated positively (Kebede *et al.*, 2010, 2012; Rowe *et al.*, 2010). In Ethiopia in particular, three universities now offer this degree and several more plan to offer the MHA in the near future so that the country creates capacity for a steady pipeline of new health management graduates to equip their growing health sector.

These examples provide concrete, practical approaches to building a pipeline of skilled health managers, often an underdeveloped cadre of healthcare professionals. Such focus on management education for those working in the health sector is a foundational step to delivering accessible, high-quality care in resource-limited settings.

## References

Binagwaho, A., Kyamanywa, P., Farmer, P.E., Nuthulaganti, T., Umubyeyi, B., Nyemazi, J.P., Mugeni, S.D., Asiimwe, A., Ndagijimana, U., Lamphere McPherson, H., Ngirabega Jde, D., Sliney, A., Uwayezu, A., Rusanganwa, V., Wagner, C.M., Nutt, C.T., Eldon-Edington, M., Cancedda, C., Magaziner, I.C. and Goosby, E. (2013), "The human resources for health program in Rwanda – new partnership", *The New England Journal of Medicine*, Vol. 369 No. 21, pp. 2054-2059, doi: [10.1056/NEJMSr1302176](https://doi.org/10.1056/NEJMSr1302176).

Bradley, E.H., Taylor, L.A. and Cuellar, C.J. (2015), "Management matters: a leverage point for health systems strengthening in global health", *International Journal of Health Policy and Management*, Vol. 4, pp. 411-415, doi: [10.15171/ijhpm.2015.101](https://doi.org/10.15171/ijhpm.2015.101).

Cleveland, E.C., Dahn, D.T., Safer, M., Podesta, M. and Bradley, E. (2011), "Introducing health facility accreditation in Liberia", *Global Public Health*, Vol. 6, pp. 271-282.

Kebede, S., Abebe, Y., Wolde, M., Bekele, B., Mantopoulos, J. and Bradley, E.H. (2010), "Educating leaders in hospital management: a new model in Sub-Saharan Africa", *International Journal for Quality in Health Care*, Vol. 22, pp. 39-43.

Kebede, S., Mantopoulos, J., Ramanadhan, S., Cherlin, E., Gebeyehu, M., Lawson, R. and Bradley, E.H. (2012), "Educating leaders in hospital management: a pre-post study in Ethiopian hospitals", *Global Public Health*, Vol. 7, pp. 164-174.

McNatt, Z., Linnander, E., Endeshaw, A., Tatek, D., Conteh, D. and Bradley, E.H. (2015), "A national system of monitoring the performance of hospitals in Ethiopia", *Bulletin of the World Health Organization*, Vol. 93, pp. 719-726.

Rowe, L.A., Brilliant, S.B., Cleveland, E., Dahn, B.T., Ramanadhan, S., Podesta, M. and Bradley, E.H. (2010), "Building capacity in health facility management: guiding principle skills transfer in Liberia", *Human Resources for Health*, Vol. 8 No. 5.

Yale Global Health Institute (2016), Rwanda, available at: <http://ghli.yale.edu/rwanda> (accessed 10 June 2016).