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## ORIGINAL RESEARCH PAPER

# Working collaboratively to support medical education in developing countries: The case of the Friends of Moi University Faculty of Health Sciences

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## A B S T R A C T

**Context:** Developing and sustaining medical schools in developing countries can be challenging. Some collaborations between medical schools in developing countries and one or more medical schools in developed countries have been helpful. However, medical schools in developing countries can be vulnerable to the sudden withdrawal of funds (particularly if they have only one partner). Also, uncoordinated support from multiple partners can lead to problems.

**Objectives:** We describe the 15-year experience of a unique “Friends” consortium, which was established between Moi University Faculty of Health Sciences (“Moi”) in Kenya and four medical schools in developed countries.

**Methods:** Information about the Friends’ activities with Moi and their relationships with each other was collected from key members of each institution during the annual Friends meeting and through e-mail correspondence.

**Results:** Each school, under the leadership of a few individuals, has maintained a continuous collaboration with Moi. Most of the focus has been on education. Some institutions have been able to expand their activities. Others have maintained more limited but



steady support. Coordination of activities of the partner institutions has been facilitated by annual joint meetings, leading to clarity about needs to be met as well as ways to avoid overlap.

**Discussion:** We believe that effectiveness of the individual efforts of each institution have been enhanced through working cooperatively. Ongoing problems include gaps in support at Moi, with uneven program development in some areas.

**Conclusions:** We have learned that working together cooperatively has increased the effectiveness of individual efforts, and encourage others to consider adopting a “Friends” consortium model through actively contacting other partners. National or international health education organizations may be able to play a role in facilitation of these relationships.

**Keywords:** education, medical; developing countries; Africa; Kenya; international cooperation

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## Context

Medical schools in developing countries face major challenges, including low levels of funding, shortages of academic staff, and overall problems with sustainability which can threaten the very survival of these institutions. This problem has been addressed in part by organizations, institutions and individuals in industrialized countries who have worked together with colleagues in developing countries (Armstrong, 2003; Clunie, McCaig, & Baravilala, 2003; Gujral & Nassanga, 2002; Halstead, Tugwell, & Bennett, 1991; Macfarlane, Evans, Muli-Muslime, Prawli, & So, 1999; Nicoll et al., 2001; Risley et al., 1989; Treloar, 1998). The model of “twinning” has been promoted in the medical literature (Leather et al., 2006; Macdonagh, Jiddawi, & Parry, 2002; Nicoll et al., 2001; Parry, 1999; Richards, 2006). “Twinning” is defined as “the establishment of a formal link between a specific department/institution in (a developed country) and a corresponding department/institution in the developing world” (Macdonagh et al., 2002). Some organizations, such as the Tropical Health and Education Trust (THET) (Parry & Parry, 1998), actively promote twinning and facilitate contact between developing country institutions with particular needs and appropriate donor institutions (Parry, 1999).

While twinning offers many benefits, medical schools in developing countries remain vulnerable to the possibility that their partners will withdraw their support and/or funding. The case of the foundation and early support of Malawi School of Medicine, which nearly closed when most donor support was withdrawn (in many cases abruptly or due to changes in the philosophies of the donors), has been described in the literature (Broadhead & Muula, 2002; Guenter, 2002; Muula & Broadhead, 2001; Muula & Broadhead, 2002). In order to shield themselves as best they can from withdrawal of support, medical schools in developing countries often participate in a number of parallel independent twinning relationships. This poses its own challenges including the potential for lack of coordination, overlap and duplication of efforts, and conflicting advice.

This paper describes the experiences of a collaboration between Moi University Faculty of Health Sciences (“Moi”) in Kenya and four medical schools in developed countries in which the four partners actively coordinated their activities to provide optimal support to the developing country partner and enhance its capacity for sustainability.

## Methods

Acting on a suggestion from the coordinator of the yearly “Friends” meetings, the first author contacted the principal individuals at each institution involved in the collaboration, asking for information about the history of each school’s relationship with Moi, their



administrative arrangements, the activities that were the focus of collaboration, funding, relationships with other Friends, and any problems and limitations that were encountered. One of the authors of this paper, Barasa Khwa-Otsyula, then Dean of Moi University Faculty of Health Sciences, was also asked about the strengths and limitations of the collaborations. To ensure accuracy and solicit additional comments, drafts of the paper were circulated to each partner.

In reviewing the Medline-referenced literature in 2003 and 2007, we found that a Friends-style collaborative relationship between donor institutions and a medical school in a developing country has not been previously described.

## Results

In 1989, Moi University Faculty of Science was established in Eldoret, Kenya, under the direction of the Founding Dean, Haroun Mengech. Mengech helped to ensure that the medical school had a strong community focus and used problem based learning methods (Westberg, 1999). During the planning phase, Mengech and others approached and received support from 3 medical schools - University of Maastricht Faculty of Health Sciences (“Maastricht”) in The Netherlands, Linköping University Faculty of Health Sciences (“Linköping”) in Sweden, and Ben-Gurion University of the Negev Faculty of Health Sciences (“Ben-Gurion”) in Israel. All 3 schools belonged to The Network, an international group of schools dedicated to promoting community-oriented health professions education (Kaufman, van Dalen, Majoor, & Mora Carrasco, 2004; Schmidt, Neufeld, Nooman, & Ogunbode, 1991).

Representatives from Maastricht and Linköping University first became aware of the support from the other universities during a chance meeting in Eldoret. Wanting to complement and not conflict with each other’s support of Moi, they decided to meet with representatives of Ben-Gurion at the Network’s next annual meeting (Majoor, 1991).

Around the same time, a group of doctors from Indiana University (“Indiana”) in the U.S. who were interested in international health approached Moi to establish an ongoing working relationship (Voelker, 2004). Upon learning about the institutions in The Network who were working with Moi, the Indiana doctors made contact with Maastricht and agreed to communicate regularly with all the Network partners about activities. This “Consortium of Moi Supporters” has become known as “Friends of Moi” (or “Friends”).

**Table 1: Timeline – “Friends of Moi”**

Mid 1980s	<ul style="list-style-type: none"> <li>• Planning, approaching Maastricht, Linköping, Ben-Gurion</li> </ul>
1989	<ul style="list-style-type: none"> <li>• Establishment of Moi University Faculty of Health Sciences</li> <li>• Approached by individuals from Indiana University</li> </ul>
1990 - 1994	<ul style="list-style-type: none"> <li>• First meeting of Friends at The Network conference (1990)</li> <li>• Description of “Consortium of Moi Supporters” published in The Network newsletter (1991)</li> <li>• MUNDO – facilitated funding (Maastricht’s office for development cooperation)</li> </ul>
1995-1999	<ul style="list-style-type: none"> <li>• Swedish International Development Agency Funding (Linköping)</li> <li>• Dutch grant (for support of higher education) – 7 years</li> <li>• Brown University and University of Utah start working together with Indiana</li> </ul>
2000-2004	<ul style="list-style-type: none"> <li>• \$15 million grant (Indiana) for upscaling of HIV activities (2004)</li> </ul>



The individual activities of each partner are described briefly below and in Table 2, followed by a discussion of the collaboration.

### *Support of Medical Education*

**Linköping** was invited by the Ministry of Health in Kenya to visit the newly established medical school at Moi in 1989. Since the first contact, the successive Deans at Linköping and Moi have been in charge of promoting mutual collaboration. The Dean at Linköping appointed Inger Sandstrom as a coordinator for the collaboration. She has served in this position since the beginning of the project and is supported by an “Eldoret Supporters Club” composed of other interested faculty members. The partnership has focused primarily on preclinical medical education, including faculty development and curriculum development. Attention has also been given to the development of physical facilities.

Linköping’s collaboration with Moi has been supported financially by the Swedish International Cooperation Developing Agency (SIDA). Linköping’s support is limited by its dependency on this external SIDA funding and by the small number of Linköping staff members available for activities with Moi.

The Deans at **Maastricht** and Moi first established contact in the mid-1980s. One of the authors of this paper, Gerard Majoor, was appointed coordinator for Maastricht and has served in this position throughout the collaboration between the two schools. Like Linköping, Maastricht has focused on preclinical medical education and faculty development. Maastricht has also supported Moi faculty members who have done masters and doctoral level studies in education. The extent to which Maastricht has been able to support Moi has been dependent on its own ability to secure funding. Maastricht was assisted in its efforts by a 7-year grant awarded in 1995 through the Dutch government.

### *Support of Occupational Health*

Ben-Gurion is one of the institutions that Mengech visited during the planning phase for the new school. Early on, Moi approached Ben-Gurion for support. Several Ben-Gurion faculty members have worked with the faculty, administration and students at Eldoret since the early years to initially develop and later assist with the teaching of a course in occupational medicine for the 4th year students. They have also assisted with program development in physical therapy. Although there is no one person at Ben-Gurion who is responsible for promoting the relationship between Ben-Gurion and Moi, several faculty members have had continuous contact with Moi and serve as liaisons for additional initiatives.

Limited funding has been a major limiting factor in the development of cooperation between the two universities. Faculty members at Ben-Gurion often use their own vacation time and funds to travel to Kenya.

### *Clinical education and support of clinical services*

The beginnings of the relationship between **Indiana** in the United States and Moi differed from that of the other Friends. In the late 1980s, four physicians in the Division of Internal Medicine, who had worked in developing countries and wanted other Indiana staff and students to experience the same satisfaction they had felt, decided to establish a collaboration between Indiana and a medical school in a developing country (Voelker, 2004). At first the relationship with Moi was “nested” in the Division of General Medicine. Now it is directed by the Assistant Dean for International Affairs.



**Table 2 Individual activities of each “Friends” Institution with Moi**

	<b>Linköping</b>	<b>Maastricht</b>	<b>Ben-Gurion</b>	<b>Indiana</b>
Start of relationship	Approached by Moi	Approached by Moi	Approached by Moi	Individuals at Indiana sought out school to collaborate with
Individuals involved at donor institution	-Supported by Deans at LiU and Moi -Same coordinator since inception -“Eldoret Supporters Club” meetings several times a year	-Continuous appointment of an individual in charge of promoting relationship -Several longer-term placements of Maastricht staff at Moi	-Continuous contact by a number of interested faculty members who play a “liaison role” -No “one” person in charge of the relationship	-Started with 4 interested internists who visited Kenya. -Directed by Assistant Dean for International Affairs -Currently continuous presence at Moi
Focus	-Preclinical Medical education (community)	-Preclinical Medical education (problem-based learning)	-Occupational medicine -Physical therapy	-Clinical education -HIV clinical care
Activities	-Faculty development -Institutional development -Financial support -Development of medical and nursing curriculums -Staff and student exchanges	-Faculty development -Institutional development -Support of Masters and PhDs for Moi faculty -Development of postgraduate training in family medicine	-Development and support of Year 4 course in occupational medicine -Training of Moi physicians in anaesthesiology and neonatology -Research in pediatric infectious diseases -Student exchanges	-Faculty development, support and exchange -Support of clinical education -Work-study & scholarships for students -Development of HIV/AIDS clinical services
Development of physical facilities and infrastructure	-Library -Computer facilities	-Skills laboratory -Teaching laboratory -Learning resources center		-Construction of operating theaters -Development of electronic outpatient records
Funding	-Mostly Swedish International Development Agency (SIDA)	-Grants facilitated by MUNDO (development cooperation arm of Maastricht) -7-year grant from Dutch Government (1995)	-Limited local funding -Self-funding and use of vacation time by individuals	- Initially local “lay” community, various philanthropy groups, US government groups & International organizations - 2004: \$15 million grant for development of HIV/AIDS clinical services
Limitations	-Dependent on External Funding -Small number of involved faculty members	-Dependence on external funding	-Limited external funding	
Other comments				-Currently working in collaboration with Brown U and University of Utah on HIV-related activities



Initially, the main focus of the collaboration was on medical education in the clinical years. During the first 10 years this effort was supported by various grants as well as local churches and other organizations in Indiana's community. The award of a \$US15 million grant in 2004 enabled Indiana to expand into helping Moi develop its HIV services. Since the mid-to-late 90s, Brown University and the University of Utah (both in the United States) have contributed to work at Moi on different aspects of HIV/AIDS care and research. Indiana has described its collaborations with Moi in the medical literature (Voelker, 2004).

Other than being part of the Friends collaboration, there is no one model common to all of the donor institutions' relationship with Moi. The individual relationships have been overseen and promoted by individuals, departments, or at the level of the Dean. The source and amount of funding has also varied from self-funding to local funding to larger grants at the national level. As is common with grant support, ongoing funding has not been absolutely assured from year to year. Relationships have generally "started small", with subsequent development varying from "small but steady" to "dramatic growth".

### *Friends of Moi work together*

Since 1991, the Friends of Moi have met every year during the annual meetings of what is now called The Network: Towards Unity for Health. The Dean of Moi creates the agenda. Typically the agenda focuses on the practical issues of running a medical school. As Dr. Mengech stated, "We present our needs and they say what they can offer the next year (Westberg, 1999)." The group reviews the activities of all partners during the previous year, and they plan for activities for the upcoming year, paying particular attention to complementing the activities of their partners and avoiding overlaps. Attendees openly discuss disagreements and work towards solutions, with the needs of Moi, as expressed by Moi's Dean, being the ultimate arbiter. The funding availability for collaborative activities at each institution is discussed. Allowances are made between the institutions when extra funding is available or when shortfalls or loss of funding occur. All of the Friends cannot be present at every annual meeting. However, Moi's Dean communicates the outcomes of the meetings to all the Friends and regularly keeps Friends informed about the school's activities. In addition, Friends keep in touch by e-mail communication between meetings.

## Discussion

When Moi established its medical school in the late 1980s, several medical schools in developed countries were approached independently, as no one institution could, at the beginning, provide the support that was needed to set up a new school. The model envisioned at the time was one of independent, parallel, twinning relationships that would hopefully develop along the lines described by The Tropical Health and Education Trust (THET). THET has published principles for successful collaborations, as well as examples of a number of successful one-on-one twinning partnerships (Leather et al., 2006; Macdonagh et al., 2002; Nicoll et al., 2001; Parry, 1999). These principles include a small, secure start with subsequent expansion, a long term view, a non-prescriptive focus on the needs of the developing country institution, and a focus on sustainability through development of capacity and skills (Parry, 1999).

The joining of Moi's partners into the "Friends of Moi" was never planned and took place by chance (or perhaps by serendipity). When the Friends of Moi collaboration was established in 1990, Dean Mengech at Moi and the Friends' institutions had to work out how to make the relationship work. At that time there was little or no precedent to guide them. There was no way of knowing at the time whether the Friends would work together cooperatively or even synergistically.



The success of the Friends collaboration has required open communication and effort on all sides. The successive Deans at Moi have nurtured the individual partnerships and coordinated the activities of the Friends. Each donor, has developed its own area of focus, based on its own expertise but balanced by the need to complement the activities of the other schools. This has not only allowed these areas to strengthen at Moi, but has led to the development of expertise in the Moi staff.

The greatest potential for overlap, disagreements, and competition has been between the universities of Linköping and Maastricht, which have both focused on preclinical education. Problems have been minimized, at least in part, because the pedagogical approach of the two universities has been quite similar, with the differences being described as “enriching” by former Dean Khwa-Otsyula. Also, Linköping has focused on supporting the Community Based Education and Service (“COBES”) Program, while Maastricht has focused on problem based learning in the pre-clinical years. However, since the various components of the curriculum have an impact on each other, there has been some overlap. Additionally, some activities, such as staff development, are by their nature cross-cutting. To deal with this overlap, Maastricht and Linköping have run workshops jointly. The annual Friends’ meetings, which is held in conjunction with The Network: TUFH meeting, has been key to the success of the collaborations. Speaking of the meetings that were held during his tenure as Dean, Khwa-Otsyula said that the annual meetings “provided a platform on which we were all updated about the development in ‘Innovative Medical Education’.” He continued, “Over the years, there have been many changes, and it was important that we were developing at the same rate.”

Indiana is not a Network member and did not fully share the pedagogical orientation of the other 3 schools. However its contributions to the clinical education program appear to have complemented Linköping’s and Maastricht’s contributions to the preclinical program. This suggests that institutions with different approaches and affiliations can take part successfully in a Friends model. The key to this success has probably been the open communication and cooperation between the schools during and between the yearly meetings.

The Friends see their consortium as one of mutual benefit flowing in many directions, rather than simply as one of donor and recipient institutions. All of the schools have benefited from joint research projects, joint application for funds, student and staff exchanges and an international perspective. While many of these benefits might take place through one-on-one partnerships, the benefits were multiplied by the inclusion of different schools.

Each collaboration has been carried out in the spirit of the principles promoted by THET, with a focus towards sustainability at the local level through institution building, faculty development and support of education. While these principles were probably essential to success, the Friends believe that the collaboration itself has helped to sustain each institution’s relationship with Moi, and strengthen each institution’s contributions.

The Friends have encountered a number of difficulties and limitations, which are also encountered in twinning relationships. At each Friends institution there is a relatively small pool of interested individuals. If, at some point, these people can no longer help shepherd the efforts of their institutions, their institution’s collaboration with Moi could potentially be in trouble. Ongoing activities and continuity have been limited by the uncertainties of grant-related funding. Development at Moi has also been uneven, with some areas well-supported and others not at all. Of note, not all institutions can attend every yearly meeting, and the degree of collaboration between meetings and “on the ground” in Kenya has been limited and is perhaps less than optimal.



## Conclusion

The acute shortage of doctors in many developing countries is likely to be increasingly addressed through expanding health professions education (Chen et al., 2006). Many institutions in the developed world may be called upon over the next few years to support the establishment of new medical schools. Unfortunately, the literature on how to successfully support the establishment of medical schools in developing countries is very limited. For this reason, examples of successful collaborations in establishing medical schools may be of particular value at this time.

We encourage institutions and even individuals, who are seeking to assist medical schools in developing countries, to consider using the Friends model. We have found that the model can include institutions offering broad-based support as well as individuals with limited resources. We have also learned that the contributions are most likely to be successful if they focus on the developing school's expressed needs and complement the activities of other partners.

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## References

- Armstrong, R. M. (2003). Australian medical schools and colleges working with developing countries. *Medical Journal of Australia*, 178, 26-29.
- Broadhead, R. L., & Muula, A. S. (2002). Creating a medical school for Malawi: problems and achievements. *British Medical Journal* 325, 384-387.
- Chen, L., Evans, D. B., Evans, T., Sadana, R., Stilwell, B., Travis, P., et al. (2006). *The World Health Report 2006: Working Together For Health*. Geneva: World Health Organization.
- Clunie, G. J., McCaig, E., & Baravilala, W. (2003). The Fiji School of Medicine postgraduate training project. *Medical Journal of Australia*, 179, 631-632.
- Gunter, C. A. (2002). Reviewer's comments: Establishing Malawi Medical College to meet country-wide health needs. *The Meducator*, 2(2), 35-36.
- Gujral, S., & Nassanga, R. (2002). UROLINK - benefits for trainees from both sides. *BJU International*, 89 (Suppl 1), 11-12.
- Halstead, S., Tugwell, P., & Bennett, K. (1991). The International Clinical Epidemiology Network (INCLIN): a progress report. *Journal of Clinical Epidemiology*, 44(6), 579-589.
- Kaufman, A., van Dalen, J., Majoor, G., & Mora Carrasco, F. (2004). The Network: Towards Unity for Health - 25th anniversary. *Medical Education*, 38, 1212-1218.



- Leather, A., Ismail, E. A., Ali, R., Abdi, Y. A., Abby, M. H., Gulaid, S. A., et al. (2006). Working together to rebuild health care in post-conflict Somaliland. *Lancet*, 368, 1119-1125.
- Macdonagh, R., Jiddawi, M., & Parry, V. (2002). Twinning: the future for sustainable collaboration. *BJU International*, 89(Suppl 1), 13-17.
- Macfarlane, S., Evans, T., Muli-Muslime, F., Prawli, O. L., & So, A. D. (1999). Global Health Research and INCLEN. *Lancet*, 353, 503.
- Majoor, G. (1991). Collaboration among institutions supporting a new school. *Newsletter: Network of Community-Oriented Educational Institutions for Health Sciences*, 16, 10.
- Muula, A. S., & Broadhead, R. L. (2001). The Australian contribution towards medical training in Malawi. *Medical Journal of Australia*, 175, 42-47.
- Muula, A. S., & Broadhead, R. L. (2002). Establishing Malawi Medical College to meet country-wide health needs. *The Educator*, 2(2), 30-34.
- Nicoll, A., Carter, E., Golden, B., Robson, J., Southall, D., & Williams, T. (2001). Developing sustainable international partnerships in child health and paediatric care. *Archives of Disease in Childhood*, 84, 315-319.
- Parry, E. (1999). The work of the Tropical Health and Education Trust (THET) in training for healthcare. *Transactions of the Royal Society of Tropical Medicine and Hygiene*, 93(4), 354-360.
- Parry, E., & Parry, V. (1998). Training for health care in developing countries: the work of the Tropical Health and Education Trust. *Medical Education*, 32, 630-635.
- Richards, T. (2006). Links between doctors across the world bring benefits. *British Medical Journal*, 332, 873.
- Risley, B., Foley, R. P., Nooman, Z. M., Richards, R. W., Ezzat, E., & Maklady, F. (1989). A collaboration between two innovative medical education programmes in Egypt and the United States. *Medical Education*, 23, 333-338.
- Schmidt, H., Neufeld, V., Nooman, Z., & Ogunbode, T. (1991). Network of community-oriented educational institutions for health sciences. *Academic Medicine*, 66, 259-263.
- Treloar, C. J. (1998). Evaluation of a national and international distance education programme in clinical epidemiology. *Medical Education*, 32(1), 70-75.
- Voelker, R. (2004). Conquering HIV and Stigma in Kenya. *JAMA*, 292(2), 157-159.
- Westberg, J. (1999). Making a difference: An interview of Dr. Haroun K. Arap Mengech. *Education for Health*, 12(1), 108-110.
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