International collaboration in postgraduate training

The global shortage of qualified health workers is particularly severe in low-income countries. The experiences from the recent Ebola outbreak in West Africa demonstrate how lack of capacity and fragile health services may rapidly have global consequences. Long-term, joint efforts to develop robust and well-functioning health systems may also be a source of learning for high-income countries such as Norway. International, institution-based cooperation in postgraduate training for doctors can unite solidarity with mutual benefit to society.

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The Global Health Workforce Alliance and the World Health Organization (WHO) estimate that 12 million more health workers are needed to achieve universal health coverage. The shortage leads to increasing inequalities in health (1). Norway engaged politically in the work with the WHO global code of practice for international recruitment of health personnel (2). However, numerous factors other than international recruitment to high-income countries contribute to the skewed distribution of health workers within and between countries and regions. Health and education are priority areas in the new sustainable development goals. Still, training of personnel or the establishment of teaching institutions receive less attention in the current policy debate. The capacity for both graduate and postgraduate medical training is inadequate, and even with an increase in the number of training institutions, there is a shortage of teachers and specialists to provide supervision and guidance (3). Health workers need medical knowledge and skills, ethical and moral competence as well as problem-solving ability as part of a team. Conditions such as access to equipment, resources and leadership are crucial for the quality of their work (4).

Cooperation at the institutional level to improve the quality, capacity and content of the health services is a policy aim in Norway, and the Norwegian Medical Association has recommended this as a cornerstone (5). Norwegian doctors are widely involved in global health activities (6). The Norwegian Medical Association's Committee on human rights, climate change and global health (7) wished to garner experiences from cooperation with regard to postgraduate training. Information about project design, funding, challenges experienced and perceived benefit for the Norwegian institutions was obtained by email questions to project leaders, meetings and at the 2013 GLOBVAC Conference. Volunteers from outside the committee have contributed to this effort. This article summarises the feedback received, and is intended as a starting point for a further debate about the strengths and weaknesses of current models for cooperation and to provide insights guiding further work in the Norwegian Medical Association.

Institution-based cooperation

Embedding the cooperation in institutions facilitates mutual benefit and, not least, a long-term perspective (8). This is an area that unites political initiative with the involvement of the health trusts and teaching institutions as well as the doctors' personal commitment. However, insufficient coordination and sharing of lessons learned between projects and institutions may reduce the benefit for Norway and for the partner country, as has been reported from the UK (9).

The feedback we received indicates that various models for cooperation were applied (Table 1). The projects were supported by the hospital management, and had varying endorsement by the local health authorities and local educational institutions. There were varying combinations of joint short courses, procedure training in partner countries, and continuous supervision with or without exchange of personnel between the institutions.

Three short courses were accredited for continuous professional development (CDP) by the Norwegian Medical Association in 2014. The infectious disease and microbiology course in India also admits Indian doctors from rural areas, and the Norwegian course fee has funded overseas postgraduate diplomas in tropical medicine for Indian doctors. Both Haukeland University Hospital and the Vestfold Hospital Trust cooperated with the Black Lion Hospital in Addis Ababa, Ethiopia. The postgraduate training included ultrasound/endoscopy and has several procedure components (10). The course built on previous cooperation in the area of burns/plastic surgery, neurosurgery and medical/technical assistance. The Faculty of Medicine at the University of Bergen cooperated with universities in Tanzania, Ethiopia and India on master's programmes in internal medicine, plastic surgery, radiology, nephrology and cardiology. A total of 58 master's students from Tanzania and Ethiopia graduated in the period 2006–2014 (11).

Table 1 further outlines the diversity of funding sources. Frequently, these funders were not coordinated. In Norway, international health cooperation is usually administered by the Ministry of Foreign Affairs through either FK Norway or the Norwegian Agency for Development Cooperation (Norad). Exchange of personnel followed the FK Norway policy aims and procedures for exchange between institutions, with an emphasis on personal learning and insight. The European ESTHER alliance brings together several similar international programmes (12, 13). Norad administers Norwegian development assistance in a number of areas: education and research were included in the Norwegian Programme for Capacity Development in Higher Education and Research for Development (NORHED) in 2011 (14). Cooperation between hospitals and teaching institutions has been funded through Norad's programme as well as Norwegian Embassies, health trusts, or the Norwegian Ministry of Health and Care Services (the Barents cooperation) (15).

Many respondents point to the problems presented by the parallel organisation in the NORHED programme and FK Norway and that coordination could be beneficial. Doctors who participate in the exchange of health workers funded by FK Norway

Table 1 Types of cooperation and funding sources. The following health trusts are discussed in the overview of the FK Norway/ESTHER programme: Haukeland University Hospital, Oslo University Hospital, University Hospital of North Norway, Vestfold Hospital Trust and Hospital of Southern Norway. Partnership projects have included specialties in the fields of general surgery, neurosurgery, orthopaedics, obstetrics and gynaecology, paediatrics, internal medicine, microbiology, radiology, pathology, ophthalmology, psychiatry and rehabilitation. The postgraduate training programme in orthopaedics and general surgery in Malawi did not include any exchange of personnel to Norway, but undertakes exchange with India regarding clinical work

Organisation	Length	Content	Institutions	Target group	Funding
Short courses	2–3 weeks	Microbiology Infectious diseases Third world medicine Theory Laboratory work	Norwegian health trusts Local units of the Norwegian Medical Association Local hospitals	Postgraduate training and continuous professional development.	Norwegian course fee
Procedure courses	8 × 1–3 weeks	Procedure training Practical and theoretical specialist examination	University hospitals Health trusts	Doctors Support staff	Health trusts Voluntary work
Master or postgraduate training	1–2 years	Clinical work Exchange Master thesis	Faculties of medicine	Doctors	NOMA (2007–13)
Exchange	6–9 months	Clinical work	Health trusts	Doctors and other personnel groups Registrar alone or with specialist	FK Norway The ESTHER programme
Specialist training without exchange	2 years	Clinical work Local research projects	Health trusts	Norwegian specialists Support staff	NORHED FK Norway Private donors

cannot attend relevant courses and training at universities and university colleges in Norway. Correspondingly, the NORHED programme is based on institutional cooperation between universities and university colleges, whereas postgraduate training takes place in the hospitals/health trusts. Similarly, many hospitals in low-income countries have no formal affiliation to universities. However, the training and the quality of the clinical work may be certified by regional and global professional networks (16).

Surgery in Malawi

Postgraduate training in orthopaedic and general surgery at Kamuzu Central Hospital (KCH) in Malawi is an example of complex organisation and funding over a period of time. There has been a shortage of qualified specialists, and 97 % of 40 public surgical consultant positions were vacant in 2013 (Malawi Ministry of Health, public website). A Norwegian specialist in general surgery or orthopaedics has been working at Kamuzu Central Hospital since 2008 to provide continuous supervision and guidance. The hospital training programme has enrolled 14 Malawian registrars (17), and by increasing the available staff the training programme enhances both surgical capacity and quality (18). The project was initially funded by the Norwegian Embassy, later by FK Norway and their ESTHER project, and since 2014 by NORHED. The equipment necessary for modern surgery was donated by Haukeland University Hospital or funded by private donors. The programme has evolved from an institutional cooperation between Kamuzu Central Hospital and Haukeland University Hospital to a national training programme for surgeons in Malawi under the auspices of the University of Malawi College of Medicine and the College of Surgeons of East, Central and Southern Africa (COSECSA).

The training programme in Malawi did not originally include South-North exchange of health workers. A cooperation agreement between Haukeland University Hospital and the Christian Medical College (CMC) in Vellore, India, entails a six-month period of orthopaedic training in Vellore. Malawian doctors can be authorised in India and will be able to work in a modern, well-functioning institution while the clinical setting is more similar to their home country.

Practicalities

The exchange programmes include personnel who perform tasks requiring government authorisation. Norwegian participants are granted local authorization if they are to undertake clinical work in the partner country receive local authorisation. Participants from abroad are not granted Norwegian authorisation. To be a guest observer in Norway may be of limited relevance and learning potential for foreign doctors with long clinical experience, and exchange periods of up to 12 months represent long absence from understaffed departments. A period of one to six months at Norwegian hospitals may be useful to gain experience of functioning organisations and provide valuable professional and social experience with teamwork, as well as an opportunity to build an international network. Planning, clear learning objectives, supervision, a responsible and engaged contact person/supervisor, as well as procedure training are essential to ensure the benefit of this type of secondment.

The Norwegian Medical Association's collective liability insurance covers Norwegian members if they are working in one of the world's poorest countries. The health trusts do not have separate liability insurance agreements for Norwegian or foreign health personnel. Haukeland University Hospital covered the balance between the relatively low FK-salary and the established minimum wage tariff for the Norwegian doctors, as well as personal insurance, vaccines and other expenses. Employment in Norwegian health trusts provides better social security and rights in case of long-term injury or illness, as regulated by the Norwegian social welfare laws as well as union agreements. Participants from partner countries receive living expenses for their secondment in the host country as well as a daily allowance. Some home visits are funded if the participants have their own family.

Several of the projects have invested in a joint residence complex for the Norwegian participants. The Norwegian employer can thereby deal with security more easily, and the arrangement facilitates a social and professional network for adults and family members.

Several of the project leaders point to difficulties with arrangements regarding formal documentation such as temporary residence and work permits, import of equipment etc. This must be dealt with in an orderly manner by the local partner institution, and project resources must be sufficient to account for the workload. Similarly, it is important that the Norwegian partner institution provides competent support for project leaders with regard to project design and practical organisation.

Both the NORHED programme and FK Norway permit some procurement of equipment and improvement of infrastructure. However, scarcity of infrastructure and equipment may quickly limit the development of the health service and the opportunity for personnel to utilise new knowledge and skills. A fund to support improvements in infrastructure and more costly medical equipment may improve the benefit from the project. It is also essential to ensure training of other groups of health personnel.

Continuity and supervision

The FK Norway model entails an exchange period of 6–18 months for each participant. Norwegian project leaders emphasise that it takes at least six months before the contribution made produces a positive benefit to the partner institution. Shorter secondments may provide personal learning and experience for Norwegian participants, but raise concern for the disadvantages and burden of medical tourism (19). Visits from Norway to partner hospitals must have clear objectives and confirmed benefits for the cooperation partner. Individual tourists and hospital officials tend to forget that the burden of short visits and obligations for hospitality in understaffed departments can compromise the clinical care (9).

Exemption must be granted from the FK Norway regulations if the same doctor works in several assignments during the project period. This rule creates wider opportunities to participate, but may impede continuity over time. Further, FK Norway has a youth profile and wishes to facilitate exchanges for the age group 25–35 years. The partner hospital generally needs experienced clinicians, and Norwegian registrars or specialists are usually older than 35 years.

If the project includes exchange of Norwegian registrars, sufficient supervision must be provided in the partner country. The Department of Ophthalmology at Haukeland University Hospital has solved this problem by virtue of the specialist and the registrar travelling together. The exchange programme in other specialties has had registrars on exchange for periods of six months and specialists on a shorter assignment, often linked to leave for continuous professional development (CPD). A CDP-leave period for a senior consultant in Norway is usually 3–4 months, and such short assignments require clear task descriptions and good routines for continuity to improve the benefit for the partner hospital. In Addis Ababa the same group of specialists from the Section of Gastroenterology at Haukeland University Hospital has been responsible for teaching periods of one to three weeks over a period of four years.

Mutual benefit

Institutional cooperation increases the availability of postgraduate training in the home country. Research from Malawi and Ethiopia reports that postgraduate training can be a key factor in recruitment and retention (20–22). The doctors attain a training that corresponds to the setting, while they can avoid travelling abroad during a time of life when they are establishing a home and family. This may improve long-term retention and availability of specialists (23).

All the project leaders in Norway emphasised the value inherent in personal learning and insight for the participants, the solidarity with their colleagues, and perceived benefits for patients/local communities in the partner countries. Norwegian participants experience a change from everyday Norwegian life. They attain useful clinical experience as well as important perspectives on other areas such as ethical dilemmas, resource distribution and organisation of health services. To work in international teams was emphasised as a benefit of the exchange programmes.

The benefit of including global health in medical graduate and postgraduate training receives increasing international attention (24, 25). The former chief executive of the NHS England, part of the National Health Service (NHS), Lord Nigel Crisp, points to several examples of mutual learning (26). The NHS has summarised experiences with international partnerships in order to contribute to coordination and improved quality of institutional cooperation. The report describes advantages to the individual participant, the health system and the institutions. The participants acquire better academic and practical knowledge, improve their ability to work under demanding circumstances and in teams, and the cost to the enterprise is small. The experience can also represent good leadership training and help improve communication with patients (8). It is crucial in terms of the benefit to the partner country that the leaders from the North have previous experience from similar work (9).

Research-based evaluation and local needs

At present there are few available publications reporting research-based evaluation of institutional cooperation. Exceptions to this are the study of patient outcomes after the establishment of a thoracic surgery facility in Arkhangelsk (27) and the study of health services for mental illness in Cambodia (28). The lack of objective outcome measures was highlighted in the evaluation of the first period of the Norwegian FK-ESTHER programme (29). The international knowledge base would be improved if experiences were more widely published and disseminated (9). Discussion of personal experiences is important, but will not provide a sufficient body of knowledge to evaluate the benefits and outcomes of the partnership project (30).

Experiences from capacity building in research reveal that it takes 6–10 years to develop sufficient institutional capacity to independently apply for funding and run projects (31). It is realistic to assume that a similarly long-term perspective is needed for the establishment of good clinical environments with a capacity for teaching, training and supervision. Research may be essential to study, as well as prioritise according to the local disease burden, to monitor quality of treatment and enable the long-term recruitment of doctors for teaching and clinical work.

Conclusion

Improved training capacity is essential to achieve the global objectives for a larger and better-qualified health workforce. Institution-based cooperation provides a long-term perspective and mutual benefit for the institutions. Norwegian authorities should emphasise this in the policy documents and call for collaboration and exchange of experiences between the Norwegian institutions. More research-based evaluation can facilitate local capacity building and retention as well as contribute to system learning relevant for the Norwegian health services.

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