

# **Health Research Capacity Building in South Africa: Current knowledge and practices**

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# Health Research Capacity Building in South Africa: Current knowledge and practices

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## List of abbreviations

ADDRP	Applied Diarrhoeal Disease Research Programme
AIDS	Acquired Immune Deficiency Syndrome
CB	Capacity Building
CBI	Capacity Building Initiatives
COHRED	Commission on Health Research and Development
ENHR	Essential National Health Research
HIV	Human Immune Virus
HDIs	Historically Disadvantaged Individuals
HSR	Health Service Research
HST	Health Systems Trust
IHPP	International Health Policy Programme
INCLIN	International Network for Clinical Epidemiologists
JHSRP	Joint Health Systems Research Project
ODA	Overseas Development Agency
SADC	Southern African Development Community
TDR	Tropical Disease Research Programme
UKCC	UK Central Council for Nursing, Midwifery and Research
UNICEF	United Nations Children Fund
WHO	World Health Organisation

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## Executive Summary

This review describes the current experiences of capacity building in health research in South Africa by identifying recent interventions from which lessons can be drawn to inform and support the ENHR Committee in strengthening and implementing the health research policy for South Africa.

### Objectives of the research:

1. To conduct a review of internship programmes and identify lessons which the ENHR can use to promote such programmes in South Africa
2. To conduct a review of existing institutional staff capacity and illustrate which approaches appear effective
3. To identify, document, and analyse research initiatives aiming to build capacity amongst health professionals
4. To conduct a review of international initiatives and identify factors contributing towards their successes.

### Methods

An audit of initiatives providing health research capacity building was conducted. Although 70 institutions were identified, only 17 institutions consented and participated in the audit. The information collected was on the profile, type and duration of health research capacity initiatives provided, funding sources, types of skills provided, profile of participants, recruitment and marketing plan, and monitoring and evaluation patterns.

From this audit, nine initiatives were selected as case studies. These initiatives included five internship, two fellowship and two training programmes. This was done to obtain detailed information on contextual factors influencing the management and success of these programmes (such as recruitment, payment and retention procedures for interns/trainees; environmental culture; support and supervision) and to explore the extent to which these initiatives influence health policy.

Face-to-face interviews were held with staff from six research capacity building initiatives, targeting non-traditional researchers in order to establish factors pertinent to enhancing research capacity development.

### Results

The major sources of funding reported were the national government and international donors. The core skills outlined as key to capacity development in the South African cases are proposal writing, data collection, analysis and report writing. Training initiatives for health research occur through formal post-graduate education, hands-on practice through internship programmes and informally through involving health professionals in research.

The main challenges for capacity building included: funding for research capacity building programmes, the brain drain of senior researchers to other countries, lack of permanency of research as a career, low incentives in health research, inadequate understanding of research and the health system by academics and government officials alike, and weak collaboration and relationships between academics, researchers and health officials at all levels.

The six cases describing the initiatives targeted at non-traditional researchers show that the research conducted in these initiatives had limited components of capacity building. Health professionals (with no experience in research) are mainly involved in data collection and not in data analysis, report writing and dissemination. This limits their exposure to the research process and gaining skills in other areas of research. A need for structured training in all stages of the research process as well as the need to bring a concrete understanding of research to the level of nurses was expressed.

Exploring the concept of health research capacity building indicated differences in understanding of this concept. The way research capacity building was defined focused more on skills development and lacked focus on the role played by utilisation of skills and maintenance or retention of capacity. A few directors stated that research capacity went beyond training and encompassed the development of new knowledge and innovative ways to improve health.

The reviewed international cases demonstrate that capacity development should utilise and strengthen existing capacities. The review found that simply offering training was insufficient when trained individuals were not directly involved in research. Twinning arrangements of research groups to develop research capacity in local settings was seen as an important lesson to long-term genuine partnership.

### **Implications for South Africa**

It is evident from the South African cases that research currently conducted is driven by national or local health priorities. This is in line with the principles of health research policy and is one of the critical factors to successful Capacity Building Initiatives (CBIs).

The study shows that current efforts towards establishing partnerships between research and policy-makers are increasing and relationships are strengthening, but more effort is needed for these partnerships to be extended to districts and communities. The ENHR committee needs to develop guidelines to establish collective efforts at different levels.

The current approaches to capacity building as described in this report, seem to be limited to increasing the range of research activities and culture of decision making based on evidence as outlined by the health research policy documents for South Africa. However, an audit to confirm this finding in all health capacity building initiatives in South Africa should be conducted. Most importantly, a common understanding of the concept of research capacity building needs to be reached to inform the activities that are planned by the CBIs.

Different models of CBI need to be established, in particular those that build capacity amongst women and black researchers and communities. These should be evaluated to measure the impact and cost. Provision of adequate funding to support CBIs needs to be explored. In addition, recruitment and retention of research staff is critical for the survival of CBIs.

Partnerships (locally, within the SADC region and internationally) and linkages can be sought with established organisations like INCLEN and COHRED. This collaboration will assist in building of critical mass, local ownership and thus increase sustainability of development and improve donor coordination. Moreover, this will enhance sharing of information about the process and developing global thinking in the field of public health and ENHR.

## Introduction

The Essential National Health Research (ENHR) framework has been identified as a useful tool for promoting health development (COHRED 2000; Horton 2000; Trostle 1992). The Commission on Health Research for Development proposed health research as an essential link to the promotion of equity in development. This is in line with the goal of “health for all” through the primary health care approach declared by the nations of the world at Alma Ata in 1978 that envisaged an equity oriented health strategy (Varkevisser, Mwaluko & Le Grand 2001). Therefore, the ENHR strategy is an integrated and systematic approach for organising and managing country-specific and global health research in order to promote health and development based on equity and social justice.

There is growing recognition that research evidence should provide the basis for influencing health policy reform. However, many health personnel remain unaware of the importance of research in health policy making (Lee, Tinevez and Saeed 2002). According to Hildebrand (1997), a review of cases in relation to capacity issues, confirmed that a low level of human resource development and extensive social conflict are amongst the most important causes of large capacity gaps.

Given this background, it became mandatory that developing countries prioritise health research in their development agenda. These countries carry the most burden of disease yet the research resources for addressing these health problems remain disproportionately low (Chandiwana 1992; COHRED 2000; Varkevisser *et al.* 2001). For instance, in 1992 the amount of research resources for health problems of developing countries was only 4.4% of the global research development budget, while the global burden of disease in these countries accounted for 90%. Complicating this problem is the well-known fact that public health research is still an underdeveloped area for most of these countries. These issues have set the foundation for most of the research capacity building initiatives that are in place in some developing countries.

The ways in which capacity development has been defined has undergone an evolutionary change in the past two decades. (COHRED 2000; Horton 2000; Ramalingaswami 1993; Sitthi-armon & Somrongthong 2000; Trostle 1992; WHO 1983; WHO 2000). The initial understanding was based on the perception that to support research implied only funding studies and that the emphasis was on individual training. It was later evident that to support research capacity implied funding the multiple prerequisites to performing research including technical skills and technology, career paths and computers, peer reviews and publications. This latter description of research support shows the complexity of the goal of capacity building, which goes beyond just funding a research proposal. Trostle (1992) also asserts that the emphasis that was put on research capacity building had an underlying assumption that there was no capacity to begin with hence its need to be built.

The current thinking, links capacity to performance. Thus, improvement and development of capacities are in turn linked with strategic management to ensure that performance directly reflects the objectives of the organisation and the system (Higginbotham 1992; WHO 2000). Consequently, capacity development is defined as the ability of individuals, organisations or systems to perform appropriate functions effectively, efficiently and in a sustainable manner. When applied to health research, this translates to enabling both individuals and institutions to define health problems, set objectives and priorities, build sustainable institutions and organisations and identify solutions to key national health problems (Sitthi-Armon & Somrongthong 2000).

The South African Health Research Policy (2001), provides a context upon which health research can contribute meaningfully to health and development. The mission of this policy is to conduct research that “improves health and well-being of the South African community”. Two of its goals

are to develop capacity to conduct and use research findings and to encourage the use of evidence-based knowledge in practice (Health Policy, 2001).

Without a greater effort in increasing research capacity, the demand for research will decrease significantly as many countries will fail to achieve the ENHR goals. These goals are to conduct research on country specific health problems and contribute to regional and global health research based on equity and social justice. Hence, it is important to monitor the progress and to document lessons learned in the improvement of capacity building across countries.

## **Aim and Objectives**

The ENHR committee in South Africa commissioned the Health Systems Trust to explore current practice and understanding of health research capacity development. It recognised that without greater research capacity, it would not be possible to meet the goals of the health research policy. In addition, there was a concern that there was insufficient focus on promoting research to inform practice due to the absence of a culture of research amongst health practitioners.

This review aims to describe the current experiences of capacity building in health research in South Africa by identifying recent interventions from which lessons can be drawn to inform and support the ENHR Committee in strengthening and implementing the health research policy for South Africa.

Specific objectives are:

1. To conduct a review of internship programmes.
2. To conduct a review of existing institutional staff capacity and illustrate which approaches appear effective.
3. To identify, document, and analyse research initiatives aiming to build capacity amongst health professionals.
4. To conduct a review of international initiatives and identify factors contributing towards their successes.

The report is structured into four distinct sections. The objectives and method used in each section will be outlined in each respective section.

### **Section 1: Formal health research capacity building initiatives in South Africa**

A mini-audit of local internship, fellowship and training programmes.

### **Section 2: Informal health research capacity building initiatives in South Africa**

A rapid review of selected local capacity building initiatives targeted at non-traditional researchers.

### **Section 3: International health research capacity building initiatives**

A literature review of international research capacity building initiatives.

### **Section 4: Key Findings and Recommendations for South Africa**

This section draws lessons from the three sections above and gives recommendations that can be useful for South Africa.

## Section 1: Health research capacity building initiatives in South Africa

### Background

This section provides a general description of formal research capacity building initiatives. It is divided into a quantitative and a qualitative component. The quantitative component outlines the profile of initiatives identified by a mini audit, while the qualitative component describes nine initiatives in detail and looks at the contextual factors and the impact of these initiatives on health policy.

### 1.1 Quantitative Component

#### Methods

A mini audit of institutions providing health research capacity building initiatives was conducted during May and June 2002. This was done to identify various initiatives that are underway in South Africa and for the research team to identify those that could be selected as case studies. Seventy institutions were identified as housing both formal and informal health research capacity building initiatives. The identification process included electronic database searches and use of the snowball technique (i.e. identified initiatives were requested to provide the research team with contact details of other capacity building initiatives that they were aware of). A self-administered questionnaire was sent to the institutions with a covering letter outlining the purpose of the study. The questionnaire collected data on the following: organisational profile (e.g. staffing levels); types of initiatives; organisational management issues such as the source of funding for the initiative, and the profile of programme participants. To encourage responses, follow-up was done by e-mail and telephonically.

The response rate was very poor. Of the 70 questionnaires sent to institutions, 17 were returned representing a 24% response rate. The institutions that declined to complete the questionnaire cited the following reasons:

- They were unfamiliar with the work and the role of the local ENHR committee.
- They did not perceive the review as relevant to their organisations thus did not foresee the benefits in participating.
- They feared that the information could be misused or their programmes misrepresented in the report.
- A few respondents stated that their programmes could not be classified as building health research capacity.

#### Results

A descriptive analysis was conducted on 17 institutions. Although the profile of the initiatives cannot be generalised, it does provide an indication of the current description of capacity building initiatives in health research in South Africa.

#### Profile of Institutions

*Staffing Levels:* The staff complement in small and large institutions ranged between 3 and 189 staff members. More than two thirds of the institutions had a staff complement of more than 12 people. Staff levels included management (unit or initiative director), professional or academic

(senior and junior research staff) and support staff (administrators). The median number of personnel was 14.

*Types of health research capacity building initiatives offered:* post-graduate academic programmes (n =10), internship programmes (n=14), health research courses/diploma (n=7), women in health research programmes (n=4) and research fellowship for historically disadvantaged individuals (n=1). The duration of post-graduate academic programmes is usually two or three years, while duration of other research projects and internship programmes vary based on availability of funds.

*Management of initiatives:* Only 6 of the 17 institutions reported that their initiatives were managed within the institutions. Eleven initiatives were managed by funders within and outside the institutions.

*Location of institutions:* Six institutions were based in Gauteng, six in the Western Cape, three in the Free State, one in KwaZulu-Natal and one in the Eastern Cape.

*Sources of funding:* The major sources of funding reported were the national government and international donors. Five institutions reported receiving additional funding from the private sector and provincial government departments. Two initiatives based in academic institutions reported receiving funds from other departments within the university.

*Fundraising approaches:* Funding was secured through writing grant proposals and submitting these to appropriate local and international funding agencies, submission of research articles for publication in peer reviewed scientific journals, application for university research grants and service agreements with government departments.

*Recruitment procedures:* The majority (n=15) of the institutions recruited participants from historically black universities and from historically white universities. Some institutions (n=7) recruited participants from historically black and white technikons. In 2002, the enrolment number of participants ranged between 1 and 500 with a median of 50 and a mean of 59. Institutions mainly offering postgraduate academic programmes reported the largest numbers of students enrolled.

*Sustainability:* Factors mentioned as affecting the sustainability of initiatives were finance (n=15); commitment to human resource development (n=14); strong technical support within the institutions (n=11); and the presence of a designated officer responsible for coordination of the initiative (n=11). When asked how the institutions ensured their sustainability, fund-raising was mentioned as a key activity by all institutions. Ensuring a good standard of research, good publications and increasing the number of enrolments were other activities mentioned by academic institutions. Strategic planning and quality improvement were mentioned least of all.

*Marketing of programmes:* The programmes were advertised through the public print and electronic media and by word of mouth.

*Participants:* The majority (n=11) of the institutions reported that more than 50% of the participants in their health research capacity building initiatives were people from previously disadvantaged backgrounds.

*Skills acquired in programmes:* The skills include: proposal development, data collection, data analysis, research report writing, and presentation of results.

*Supervision:* Various forms of supervision were used by the institutions to build research skills. These included regular contact sessions and routine monthly meetings.

*Empowerment and support:* Research projects and research linked to intervention, mentorship programmes and support to attend short courses were reported as main approaches used in internship programmes. For academic programmes, periodic exposure to project or institutional seminars or meetings and conferences were approaches used for supporting participants.

*Career directions for participants:* Nine institutions reported that their participants had remained in the academic environment, eight reported that their participants had joined the public sector where they had taken up management positions, five institutions reported that their participants had opened independent consultancies and four reported that their participants had joined the private sector. A few noted that their participants had joined the NGO sector, international organisations or had moved out of the health sector.

*Monitoring and evaluation:* The majority of institutions (n=13) reported that their programmes had been formally evaluated. The most recent evaluation of nine of the institutions had been conducted in 2001. The evaluation periods varied between institutions, however, the majority reported conducting annual evaluations. Seven institutions had external evaluations, two conducted internal evaluations and four conducted both internal and external evaluations. None of the institutions granted permission for their evaluation reports to be reviewed by the research team.

In summary, the low response rate limits the generalisation of the description represented by an audit. A formal audit might help to identify accurate retention rates, and career directions of participants after completing capacity building initiatives.

## 1.2 Qualitative Component

### Methods

Nine initiatives were purposively identified from the audit reported above. Contacts were made with these initiatives through directors and/or course conveners after which dates for interviews were set. These initiatives were housed within training and research institutions. Of these nine initiatives, five are internship, two are fellowship and two are training programmes<sup>1</sup>. Face-to-face interviews were conducted with program directors or course conveners and senior research staff. Where possible, programme participants or interns were also interviewed. A semi-structured interview guide was used and it collected information on:

- The context within which these programme take place in terms of:
  - Strengths and weaknesses of these programmes.
  - Recruitment, payment and retention procedures for interns/trainees.
  - Environmental culture and its effects on involvement of interns/trainees.

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<sup>1</sup> In this context, the internship programmes are defined as programmes that recruit graduates with a potential to become researchers and who are willing to learn about research by assisting in appropriate research activities. The programme may also incorporate a postgraduate study opportunities for interns. Fellowship programmes are defined as programmes that recruit graduates that have limited research experience and are given an opportunity to be actively involved in research while pursuing mostly, doctoral studies. In this instance, the fellows become principal investigators in research. The training programmes are defined as programmes specifically designed for individuals wishing to go through a research and teaching career path. The programme offers postgraduate study as means to achieving this goal.

- Support and supervision of interns/trainees.
  - Influence of research on policy.
- Factors pertinent to enhancing research capacity development.

## Results

### Profile of Initiatives

Eight initiatives were located within academic institutions and one within a science council. Four initiatives were based in the Western Cape, three in Gauteng, one in the Eastern Cape and one in the Free State. Three were established in the early 1990s, 3 in mid 1990s, 2 in late 1990s and 1 in late 1980s. The research areas on which most initiatives focused were health systems research, while one institution focused on health economics and one on environmental health.

### Perceived strengths and weaknesses

Factors mentioned as enhancing the programmes were the ability to provide various skills, exposure to different opportunities, a supportive environment and a having unique focus area. These are outlined below:

#### STRENGTHS

<b>Skills</b>	<ul style="list-style-type: none"> <li>• Collective writing and publication</li> <li>• Production of a range of outputs from the project</li> <li>• Computer literacy</li> <li>• Developing research skills: data collection, entry and analysis:</li> <li>• Acquiring management, teaching, networking, presentation and facilitation skills</li> <li>• Application of social sciences and public health methodologies</li> </ul>
<b>Opportunities</b>	<ul style="list-style-type: none"> <li>• Exposure to whole research process (conception to publication) and people</li> <li>• Ability to enrol for postgraduate studies</li> <li>• Collaboration with other research institutions</li> <li>• Collaboration with the Department of Health—facilitated translation of research into policy and practice</li> <li>• Support to attend conferences, short-courses and workshops</li> <li>• Participating in national projects</li> </ul>
<b>Environment</b>	<ul style="list-style-type: none"> <li>• One-on-one mentorship</li> <li>• Direct project supervision</li> <li>• Involvement in all stages of the project</li> <li>• Positive culture of development which nurtures interns while instilling independence</li> <li>• Open door policy</li> <li>• Team approach to projects</li> <li>• Involvement in other projects being conducted by the research institution</li> <li>• Employment contract longer than one year</li> </ul>

The weaknesses ranged from issues related to funding and retention of participants, limited exposure to various research methods, lack of capacity for adequate support of participants, limited

programme lifecycle, undefined programme expectations and outcomes, and inaccessibility of training institutions. These are outlined in the table below:

### WEAKNESSES

Limited funding and inability to retain participants	<ul style="list-style-type: none"> <li>• Limited funding for the programme (focus is on the project rather than capacity building)</li> <li>• The programmes are donor dependent</li> <li>• Limited funding to support fellows to attend courses to facilitate their development</li> <li>• Lack of incentives e.g. pension, medical aid attached with employment package</li> <li>• Imbalance in salaries between private, public sector and academic institutions</li> </ul>
Limited exposure to develop range of skills and to the research environment	<ul style="list-style-type: none"> <li>• The skills required and exposure to new skills is defined by the research and project conducted</li> <li>• Limited opportunities to collaborate with other departments</li> </ul>
Lack of capacity for support	<ul style="list-style-type: none"> <li>• Limited time for senior staff to give adequate support</li> <li>• Difficulty to recruit staff to provinces that are less developed</li> </ul>
Limited time for participants to develop	<ul style="list-style-type: none"> <li>• Limited time for studying while involved in research projects or full-time work</li> <li>• Lack of career path linked to the programmes</li> </ul>
Undefined expectations and outcomes	<ul style="list-style-type: none"> <li>• Lack of clarity regarding outcomes and outputs of the capacity building program</li> </ul>
Inaccessibility of the programme/ institutions	<ul style="list-style-type: none"> <li>• Long distances to get to the research institutions housing some of the programmes</li> </ul>

### Perceived challenges facing programme directors

#### i) Long-term nature of research capacity building

Most directors mentioned that there was a gap between an individual's training and the development of an independent researcher. Internship or training programmes are only an entry point into research. The building of research capacity requires a long-term investment in individuals. The need to balance capacity building with the survival of the host institution, ensuring that there are sufficient senior level researchers to write proposals and secure funding while supporting upcoming researchers, was viewed as another challenge by directors. They mentioned difficulties in raising funds for capacity building programmes within their research projects. The lack of funding was perceived to further make the research environment "*inaccessible to black people*".

#### ii) Inability to retain staff

The migration of researchers takes place both locally and internationally. The local research environment seems to be faced with difficulty in keeping staff within the research arena due to better opportunities elsewhere in terms of salaries, benefits, and career advancement opportunities. The international market also plays a role in recruiting trained and competent South African researchers, thus reducing the capacity to support junior staff in research. Due to financial constraints, efforts aimed at reducing migration have been limited. However, research institutions were finding other ways of dealing with such problems. Some of the programmes were reported to

be exploring systems that allow exit at certain points of development during the training, to ensure that new staff can be recruited and that staff that had gone through the programme were able to join other organisations with similar interest where they could use their acquired skills.

Another concern was that most initiatives were dependent on donor funds, thus when the project ended, staff could not be retained.

iii) Bridging the “underprivileged” gap

The challenge of changing the demographics of the research world was described as going beyond the internship, fellowship and training programmes. The directors identified the need for long-term strategies to ensure that there are black research leaders in different fields. Another challenge raised was that of recruitment procedures, which made accessibility of such programmes difficult for individuals from previously disadvantaged backgrounds. For example, open recruitment through mass media vs. recruiting only top performing students from certain institutions, creates further inequities.

iv) Sustainability of initiatives

The directors of the training programmes mentioned that the course cost was expensive for students to pay out of pocket and that most students relied on the support from scholarships acquired through provinces. To address this problem, the course convenor for one of the training programmes mentioned that they were exploring the possibility of establishing a scholarship programme for participants by securing financial support from international funders.

Another challenge mentioned was that the course participants come into the course with different levels of expertise and most of the participants lack numeric skills. This led to the development of supporting courses to enable participants to function well in their core course work. The lack of capacity and multiple roles of senior staff within the units were factors that were also mentioned as threatening the survival of training programmes.

The directors admitted that attention should also be given to development of better marketing strategies for certain health disciplines in communities and high schools in order to make school leavers aware of health research as a possible career option.

### 1.3 Discussion

The audit and initiatives reviewed highlight some key challenges of health research capacity building through various programmes. These challenges are related to the differences in understanding the concept of capacity building; the difficulties in translating research into policy and practice; financial base to sustain the programmes and retain the trainees; support for trainees and programmes; and monitoring and evaluation of programmes. These challenges are addressed below.

## Health Research Capacity Building

Health research capacity building is defined as process that enables both individuals and institutions to define health problems, set objectives and priorities, build sustainable institutions and organisations and identify solutions to key national health problems (Sitthi-Armon & Somrongthong 2000).

The results show that capacity building in health research is defined in different ways. Hence, many approaches are implemented to fit the various definitions. Some institutions see formal academic programmes as an effective way to build capacity, whilst others find involving participants in various research projects as effective models for capacity building. These approaches might need to be evaluated to measure their effectiveness in building independent health researchers or in ensuring that the health practices promoted are evidence based (Global Forum for Health Research, 2002).

Based on the case studies, few of the directors interviewed stated that research capacity goes beyond training and towards developing new knowledge and innovative ways to improve health. Most directors as well as interns seemed to have a limited understanding of what capacity building should entail. In some cases, exposure to various research methodologies and networking with experts in the field was perceived to be capacitating, while in others promoting research in the community was perceived as one of the components of building research capacity. While gaining understanding of the national and international health systems is necessary as a component of research capacity building, developing and conceptualisation of priority research projects based on the gained knowledge and understanding is essential.

The way in which research capacity building was defined, focused more on skills development and lacked the role played by utilisation of the skills and maintaining or retaining capacity. This indicates that the concept is generally perceived to be applicable to new staff in research, yet the process requires further development of supportive and mentoring skills for senior staff to be effective in supporting junior staff. It is also evident from literature that research capacity focuses more on “high performers” as individuals. Thus, goals and plans are developed around these individuals rather than developing long-term goals for institutions (Castillo, 2000).

## Influence on Policy and Practice

When participants were asked about the impact of their research activities on policy, many directors and participants stated that they felt that their research outputs were useful to national and provincial governments, non-governmental organisations (NGOs) and funders. In addition, they mentioned that most of their research projects were based on public health issues and needs of the community or country.

There were no specific examples given by both directors and trainees on how their involvement in research projects had influenced policy and practice. The most commonly mentioned career direction was a move in to the public sector. This move is beneficial for the public sector on the assumption that the participants apply their research skills and ensure that decisions made are based on evidence. Some of the institutions, through their research outputs, are well known to have made major contributions to health policy reform. Of interest is that report writing and dissemination of findings was mainly reported as a responsibility of the senior researchers. This would be a limiting factor in the involvement of interns or trainees in the process of influencing policy and practice. Although research reports were distributed widely to stakeholders, there is lack of follow-

up on usability and application of these in practice. In addition, directors reported that the research projects were conceptualised based on the country's priority areas however, none mentioned the involvement of, or consultation with policy-makers during the development of the research proposals.

### **Financial base**

The results indicate that most of these institutions are dependent on donor funding from national and international organizations for survival. The funding tends to be short-term, covering periods of up to two years, thus limiting the number of trainees that can be recruited and retained. The funds were not earmarked for capacity building, but rather for implementation of the research projects. In most cases, institutions require funds from multiple donors. While this helps to reduce dependency, it increases restrictions and financial administration as each donor has certain conditions. This has major limitations on the scope and time for building capacity. Institutions with grants lasting longer than one-year served to strengthen research capacity as trainees had the opportunity to learn by doing. International donors remain major funders but impose certain conditions which make it difficult to develop areas with less capacity, such as health finance and environmental health. The DoH however, was mentioned as a major national funder of the programmes. This is encouraging and reflects positively on the efforts ensuring that health research capacity is sustained in the country (Health Research Policy, 2001).

Salaries and benefits received by trainees varied from project to project. This was mainly influenced by the type and size of funding for each institution. However, inequities were identified in particular for interns where the salary scale varies from one institution to the next; and there was sometimes no standard format followed even within the same institution. Most directors of institutions did not seem to have a standard format of appraising trainees and most did not link performance to salaries. The interns or trainees also reported this as a weakness of their programme. This might have major implications for retention and motivation of interns or trainees to stay within the research field.

### **Support**

In the majority of initiatives, supervision and mentorship activities were combined. This might be due to limited staff working in the units. Most of the supervision was face to face, except for the training programmes where most communication was by telephone or e-mail. The degree of support in terms of guidance in development, opportunities explored and given to interns or trainees and reflection of progress varied across initiatives. Factors such as availability of funding, availability of guidelines on performance, perceived performance of an intern or trainee, assertiveness of intern or trainee and relationship between a supervisor and intern or trainee were identified as having an influence on the outcome of the meetings and development in general.

The environment within which the research centres or units were placed appears to have major implications on how they function, recruit, support and sustain their staff. For example, units within the academic environment received financial support from their faculties for retention of some of the staff. They use the policy and guidelines of the organisation to recruit, appraise and raise funds for their units. While this support can be positive, directors have also listed many barriers such as restrictions on salary scales and lack of benefits for contract staff.

## Monitoring and Evaluation

It is evident from the initiatives reviewed that a few had built-in systems for monitoring and evaluation in order to improve and put corrective measures in place. Directors interviewed, stated that they had used quantitative and qualitative methods in monitoring and evaluation, as well as measuring outputs. For example, the number of trainees enrolled, their perception of the programme together with the number of times they have been supported to attend conferences were used as indicators. Both internal and external reviewers conducted the evaluations. The evaluations were reported to have helped in transformation of the programmes to consider ways for retention of staff, creating incentives for good performance and an enabling environment for development. These processes provide good lessons for the country and other institutions if such exercises can be shared widely. Efforts need to be made to provide a platform for the exchange of lessons. It is through these channels that best practices will be identified and emulated and the concepts of health capacity building be discussed to formulate a framework that can be used in this country.

While some of the directors were mindful of the aims of monitoring and evaluation, some indicated they did not understand the motivation for such an exercise. In addition, because of the size of some programmes, some of the directors felt that it was unnecessary to document feedback they receive from their trainees. Because of the demand to acquire funding for survival, most directors reported not to have much time allocated for monitoring and evaluation of their programmes. In addition, none of the initiatives reviewed conducted exit interviews for staff leaving the programme.