

ENHR  
in  
**South Africa**

Council on Health Research for Development  
( COHRED )

# ENHR IN SOUTH AFRICA

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## EXECUTIVE SUMMARY

This monograph is divided into four chapters and is intended to provide information that can be used as a basis for the evaluation of the ENHR process in South Africa.

**Chapter One** describes the background to the political endorsement of ENHR in South Africa, the historical state of research in South Africa, through to the establishment of a Task team appointed by the Minister of Health, and the recommendations made by post-task team workshop participants.

**Chapter Two** describes the state of health research in South Africa and provides information on the sources of health research information, an overview of the nature of the research undertaken and the major organisations involved in health research funding.

**Chapter Three** describes the activities implemented by the various organisations within the ENHR Framework, including those of the Department of Health, the Medical Research Council, the Health Systems Trust and the Department of Arts, Culture Science and Technology.

**Chapter Four** provides an outline of the evaluation criteria for the ENHR process in South Africa.

**Chapter Five** provides a summary of the methods and criteria used for priority setting and the results of the National Congress on Priority Setting in Health Research in South Africa, held in Pretoria, in November 1996.

## LIST OF ABBREVIATIONS / ACRONYMS

<b>ANC</b>	African National Congress
<b>CBO</b>	Community-Based Organisation
<b>CERSA</b>	Centre for Epidemiological Research in South Africa
<b>COHRED</b>	Council on Health Research for Development
<b>CSIR</b>	Council for Scientific and Industrial Research
<b>DACST</b>	Department of Arts, Culture, Science and Technology
<b>DNE</b>	Department of National Education
<b>DOH</b>	Department of Health
<b>ENHR</b>	Essential National Health Research
<b>FRD</b>	Foundation for Research Development
<b>HEALTHLINK</b>	A computer-based information system
<b>HELINA</b>	The Health Information Conference
<b>HBU</b>	Historically Black University
<b>HIER</b>	Health Information, Evaluation and Research
<b>HSDU</b>	Health Systems Development Unit
<b>HSRC</b>	Human Sciences Research Council
<b>HST</b>	Health Systems Trust
<b>HWU</b>	Historically White University
<b>MRC</b>	Medical Research Council
<b>NGO</b>	Nongovernmental Organisation
<b>NITR</b>	National Increment for Training, Education and Research
<b>NPPHCN</b>	National Progressive Primary Health Care Network
<b>RDP</b>	Reconstruction and Development Programme
<b>RISMAC</b>	Regional Institutional Support Management Committee
<b>UNDP</b>	United Nations Development Programme



## CHAPTER ONE — BACKGROUND

### Introduction

This chapter attempts to:

- Provide background information on the global development of ENHR
- Document the historical context of health research in South Africa
- Provide an overview of the process and strategy used in South Africa with regard to ENHR implementation
- Summarise the recommendations of the ENHR task team and workshop participants.

### Background to ENHR: Global Context

Essential National Health Research (ENHR) is an integrated strategy for organising and managing health-related research. It is a process whereby a country can direct its research towards its greatest health problems. Its goal is to promote health and development in a manner which achieves equity and social justice. The ENHR strategy aims to make use of the full range of health research methodologies including epidemiology, social and behavioural research, clinical and biomedical research, health systems research and policy analysis.

ENHR encompasses two forms of research, namely country-specific and global research. The former refers to policy-directed research which seeks to address in the short or medium term the priority health problems of a specific country. Global research, on the other hand, takes a longer-term view of these and other priority world health problems, seeking to address fundamental causes of ill-health through, for example, new vaccine development or recombinant DNA technology.

The innovation of ENHR rests in its emphasis on addressing priority health problems in an integrated manner using whichever range of methodologies is appropriate, and its commitment to linking research with implementation.

ENHR can be equated with both country-specific research and global research, but the proportions will differ depending on the situation within each country.

This could be represented as follows:

**ENHR = (x) country-specific research + (y) global research**

(Where  $x+y=1$  and the values for x and y vary from country to country)

In South Africa, which is a unique mixture of a developing and developed country, this relationship will have to be determined.

### Development of Essential National Health Research

The first international conference on Health Research for Development was hosted by the Nobel Institute and took place in Stockholm, Sweden, in February 1990, to consider the report of the Commission on Health Research for Development. The Commission had been



established in 1987 to recommend how research might improve the health and well-being of the peoples of the world and identify the strengths, weaknesses and key gaps in health research.

The commission concluded that research is an essential link between human aspiration and action and that there are many ways in which research can be applied to improve health. Research to support informed and intelligent decision-making for health action is of the highest priority. Good health is a driving force for development based upon equity and social justice.

The focus for health research should be national and each country, no matter how poor, should have a health research base that will enable it to grasp its own health problems and enhance the impact of limited resources. The process of setting priorities for national health research must be inclusive and involve scientists, decision-makers and representatives of the people as equal partners. The resulting national health research agendas should serve as a starting point for global health research efforts. The Commission called this concept Essential National Health Research (ENHR).

The Nobel conference endorsed the Commission's report and recommended the creation of a Task Force on Health Research for Development, with a life not exceeding two years. The Task Force would carry forward the advocacy and support of the Commission and bring forward proposals for a long-term arrangement. The secretariat of the Task Force was housed in the UNDP Geneva offices. By 1993, eighteen countries were implementing ENHR strategies and another 18 were considering doing so. A second conference was held in March 1993 in Geneva and provided an appropriate conclusion for the activities of the Task Force.

## History of Health Research in South Africa

The history of health research in South Africa suggests that the implementation of ENHR represented not so much innovation as a reawakening of the pioneering concepts of the late 1930s and early 1940s. For visionaries like Dart, Cluver, Gale and the Karks, research and careful documentation were fundamental to probing the frontiers of public health. Consequently a strong tradition of community-based research was established in institutes like the Social Medicine Research Unit at the University of Cape Town, the South African Institute for Medical Research, and the Institute of Family and Community Health in Durban, all supported by the Council for Scientific and Industrial Research (CSIR).

Many of the precepts of this public health research geared towards equity disappeared with the introduction of the apartheid policies of the 1950s. Disillusioned, many leading figures left South Africa to play significant roles in public health in other parts of the world, and the character of health research in South Africa changed from being predominantly community focused towards laboratory-based research in the 1960s and 1970s.

The Medical Research Council (MRC) was established as a statutory body to coordinate medical research in 1969, and assumed many of the health research functions which had until then been the responsibility of the Council for Scientific and Industrial Research. A system of 'framework autonomy' for all statutory research councils (CSIR, MRC, Human Sciences Research Council (HSRC), Mintek and the South African Bureau of Standards) was introduced in 1987 which provided greater management discretion but expected less reliance on State funding in return.

Under this new arrangement, the importance of basic research would continue to be recognised, but greater emphasis was placed on the marketability and applicability of the research undertaken. In line with this policy, the South African Medical Research Council Act (No.19

of 1969) was replaced with new legislation which sought to associate health research more explicitly with improvements in health and quality of life.

## Process and Strategy for ENHR in South Africa

A study conducted in 1991 by the Medical Research Council for the Henry J. Kaiser Family Foundation highlighted the deficiencies in public health research, particularly with regard to policy-directed health systems research. This finding led to the establishment of the Trust for Health Systems Planning and Development (Health Systems Trust) funded jointly by the Department of Health and a number of external donors. Its mission was to support the process of health sector restructuring by encouraging appropriate health systems research and research skills development. Furthermore an earlier IDRC study identified the lack of a coherent health research policy as an additional problem.

Based on these studies, the process of the adoption of ENHR in South Africa commenced with discussions between interested parties in 1991. ENHR was later discussed at an African National Congress (ANC) national workshop in November 1992, at a national policy conference (by non-governmental organisations) in December 1992, and then at the ANC national executive level in February 1993. The ANC officially adopted ENHR as a policy in its health policy document.

In 1993, five representatives of organisations involved in community-based research in South Africa attended the Geneva conference on ENHR. The representatives at this conference were from the Health Systems Development Unit (HSDU, an NGO), the Medical Research Council (a statutory council), the Health Systems Trust (HST), SAHSSO (a democratic professional-based NGO) and the National Progressive Primary Health Care Network (NPPHCN, also an NGO).

The main ENHR elements of concern for the NGO sector were those of community participation and capacity building. The concerns of the MRC in its role as funder and participant of medical research were related to the reallocation of resources from biomedical research to applied community-based research as well as the interactions between the other science councils in South Africa engaged in health research.

In April 1994, the MRC and the alliance of progressive health NGOs, in line with the ANC endorsement, also endorsed the ENHR. During December 1994 the new Department of Health took the initiative by organising a national meeting of stakeholders in research to plan the implementation of ENHR. This national workshop served to raise the awareness of ENHR among the participants and highlighted the concern of many role-players regarding the future of health research in South Africa. It indicated that most were willing to consider the role of ENHR in South Africa and its relevance to their particular constituency.

In March 1995, the Minister of Health appointed a National Technical Committee to further develop recommendations for putting Essential National Health Research into practice.

The mandate of this committee was as follows:

- Identify issues and questions raised at the December 1994 meeting for further deliberation or investigation
- Investigate appropriate answers to questions raised at the December 1994 ENHR meeting
- Develop options for the way ENHR could be coordinated, funded and implemented in South Africa

- Identify the total budget for health research in South Africa from statutory sources and determine how these resources could be maximised to support health service management.

The seven elements of ENHR as defined by the Council on Health Research for Development (COHRED) are a logical framework within which to consider this topic in a South African context. The recommendations of the National Technical Committee were discussed at a further workshop during 1996 and the final consolidated options are presented within this framework.

### **Promotion and Advocacy**

Cogent arguments must be advanced to support the need for ENHR in South Africa. This is necessary in view of the strong and vested interests that seek to maintain the status quo.

- \* It is a research management strategy that maximises health research investment
- \* It is a research strategy that will address the burden of disease and the equity of health in the country
- \* It will promote health and development on the basis of equity and social justice
- \* It will address the current imbalances in the distribution of health research.

Similar to the international strategy outlined earlier, it is proposed that a Task Force, together with the Chief Directorate for Information, Epidemiology and Research of the Department of Health, should promote and facilitate the setting up of the ENHR process and mechanism.

### **Essential National Health Research Mechanism**

There are various possible mechanisms for initiating and sustaining ENHR. Other functions of this mechanism would be priority setting, mobilisation of funds for health research, stimulating demand for research results and evaluation of ENHR. In a South African context the following mechanisms could be seriously considered:

- Central government establishes an **ENHR Unit** and assumes similar functions to those of the MRC and HST
- The **MRC** alone becomes the ENHR mechanism
- The **HST** becomes a semi-autonomous division within the MRC and assumes the ENHR function
- A **Health Research Council** assumes the functions of the statutory councils, HST and other non-government bodies and thus assumes the ENHR mechanism. This body would have equal representation from health services, researchers and the community. In addition the HRC would set national priorities and broad funding allocations to each of these entities
- A mandated, but non-statutory, coordinating body (**ENHR committee**), with representation from service providers, government, the research community and civil society, assumes the ENHR function similar to the HRC.

All these options have merit but on balance the committee recommended the Health Research Council option. The non-statutory ENHR committee option was supported by the follow-up workshop to discuss the technical committee report.

The 1996 workshop participants defined the purpose of the ENHR mechanism as a mechanism that would be responsible for formulating policy and structures on ENHR, monitor and evaluate ENHR, mobilise research expertise, coordinate private and public efforts in health-related research, facilitate curriculum development and ensure research decentralisation to the

provincial levels, recruit funding from health research ensure interdisciplinary and multi-sectoral participation, and manage and facilitate private, public and academic partnerships.

The executive functions of the Council would be to:

- develop action plans
- allocate funds
- add value to research through health system support, coordination and networking liaison with health services and information dissemination
- develop interactions with the private sector
- provide technical support to the DOH.

In contrast to the task team's report, 1996 workshop participants recommended that the ENHR mechanisms should not be a statutory council but rather a commission or office fully representative of all stakeholders, complementary to existing institutions mandated by government, and accountable to all stakeholders.

### **Priority Setting**

Participants at the 1994 workshop recommended that the guiding principles for priority setting should be in line with that of the RDP. Workshop participants also identified some priority areas for research which included water and sanitation, AIDS, violence, women's health, health systems research, development research and intersectoral research. However, some concern was expressed that, in view of the lack of data on the burden of disease, other research areas could not be identified.

The more detailed task team report recommended that:

- Priority setting is a continuous process which should be guided by the burden of disease
- the process should be goal-oriented and draw upon relevant role players at various levels of involvement in health research
- the process should be a dynamic interaction between the various levels, e.g. regional, national, provincial and district, so that the priorities reflect the needs of the community
- Funding should follow priority setting, and evaluation should be carried out to ensure that the process itself has a desired output
- A framework needs to be developed to ensure that the process is effective and that roles are assigned to organisations best equipped to fulfil mandates at various levels.

The 1996 workshop participants ruled against the proposed split of basic and applied research, but recommended that more emphasis be placed on the involvement of civil society at the district level, that priorities should be solution-oriented rather than disease-oriented, that the priority-setting body should be accountable to an inter-governmental department body, that the linkages between district level and national level need to be strengthened and an intersectoral mechanism needs to be developed to which a priority-setting committee would be accountable, and that the national priority setting committee should be coordinated at various levels by the national priority-setting body.

### **Capacity Building**

- South Africa requires a strong research base in order to address the most basic needs of our society
- A culture of research and technology is essential for the future development of the country. Well-trained scientists and technologists are a prerequisite for general development in the country

- Government should make a concerted effort to ensure that the present infrastructure is maintained
- Education of the majority of the population in science is a priority investment for the country
- Capacity-building should be included as central to all research planning and execution.
- Strategy for human development should be underpinned by a well-coordinated health systems analysis to determine needs, priorities, staff requirements and plans for the future
- South Africa should build capacity especially for technology applications needed to address health priorities
- Research should be action-orientated to inform the country regarding strategies to be undertaken
- Research should be cost-effective, efficient and economical
- The development of effective health policy should be informed by research.

In view of the effect of apartheid on the capacity for health research amongst the majority of the population, there is a need for the development of a strategy for human resources development at historically disadvantaged institutions. This could include mentorship, modelling and linkages between historically advantaged and historically disadvantaged institutions, and a career structure for researchers should be developed.

The comments and criticisms of the 1996 workshop participants with regard to capacity building were aimed at providing the details of the level at which capacity building should be directed, for example: individual, community, institutional/organisational, provincial, national and regional (Southern African).

The workshop participants recommended that the underlying principles of capacity-building strategies aimed at the various levels should include among others a participatory approach to research and should focus on historically disadvantaged groups. They should also foster an understanding of ENHR among researchers, create an interest in and a supportive environment for research, strengthen the ability of health services to participate and utilise research, foster an ethical approach to research, develop a research culture within the ENHR framework, and enhance the capacity for synthesising information, co-ordinating policy options and enabling the formulation of a systematic health research policy.

Further detailed strategies for capacity building were also made by the 1996 workshop participants. These included: mentorships, internships and apprenticeships, review curricula for health workers, providing career pathing and financial incentives, encouraging the return of emigrant researchers, involving communities from the outset in research projects, establishing centres of expertise, incentives for collaboration between institutions, hiring researchers within the health services, linking regional academic and research institutions with health services, establishing an equity fund for capacity building and establishing regional agreements for training.

### **Networking**

There is a need to identify potential role-players with regard to networking and creating added-value networks for research in South Africa. The following actions are recommended:

- Define all role-players and develop intersectoral functional networks based on common interest and functionality
- Use electronic communication such as e-mail to foster networking
- Adapt HEALTHLINK, which is a low-cost, off-line, computer-based information system, to allow transfer of information, especially down to rural community or district level. This

could be an effective management tool as well as a mechanism for distance learning and capacity building

- Develop a central Information Centre on Health Matters, possibly situated in the Department of Health, which collects and collates research data from all available sources inside and outside the country. On-line access to research databases should be promoted using electronic communication networks such as the Internet. This is a vital function to support the activities of the ENHR mechanism, and it should be intersectoral and cross-disciplinary.

Neither the 1994 nor the 1996 workshop participants discussed the issues of networking, but the task team identified the major role-players.

### **Funding for Health Research**

There are major gaps in the information relating to expenditure on health research by statutory councils (all of which fund health-related research to some degree), the corporate sector and universities and technikons. Much greater clarity is required on health research expenditure in order to implement and evaluate an ENHR strategy.

Funding for health research was found to be maldistributed and tending to favour certain institutions with a bias toward basic research. In the light of this it is recommended that:

- An incentive-driven process to encourage more public health research will be more effective than any prescriptive system with coercion
- A system of tendering for research identified as a priority could allow for a fairly rapid redistribution of resources for health research, both among institutions and among types of research methodologies
- The Department of Health could control public funds for public health research, while the Department of Arts, Culture, Science and Technology (DACST) could be responsible for funding for basic science research
- The Department of Health could coordinate public health research activities, but could employ a variety of funding strategies to ensure:
  - \* that research addresses health service needs;
  - \* that all funding sources can be optimally mobilised;
  - \* and that research results and recommendations are documented and disseminated.

(There is opposition to this proposal, particularly from tertiary and research institutions, as the delineation between public health and basic research is seen as artificial)

- Equal baseline funding for all universities and technikons. The latter, at a lower baseline level, would ensure that the infrastructural support needed to sustain research activities would remain, but that greater competition in securing research funding would be fostered
- Most funding for health research would occur within the framework of Essential National Health Research without dictating to any institutions what research may or may not be done
- Funding of health research via an ENHR mechanism should be an alliance of funders (DACST, DOH, Education and the private sector).

The 1996 workshop participants reached consensus on the issue that the current funding system was not conducive to involving other researchers outside of the science councils. In order to

overcome these problems the recommendation was that funding mechanisms should be diversified in contrast to the centralised funding recommended by the task team. In addition, the participants recommended that a situational analysis needed to be undertaken to determine the needs for coordination and integration of research funding.

In contrast to the task team recommendation that the DOH should control funding for health research, the 1996 workshop participants recommended rather that the DOH be more involved in assisting the DACST to determine health research priorities, in advocating for funding and in negotiating for funding between the different government departments. The funding agencies should be made more user-friendly through changing the process of awarding grants, and the tendering process needed to be reviewed to achieve equity between organisations. They also recommended that baseline funding needed to be earmarked by the Department of National Education specifically for capacity building, and that an intensive review of appropriate accountability mechanisms needed to be developed for the funding process.

In addition, the recommendation of the task team to separate funding for basic and applied research was rejected, but no alternative suggestion was made. In the same vein, while there was general agreement on incentive-driven research, no strategies were proposed by the workgroup.

### **Evaluation**

Evaluation as an element of the ENHR strategy was approached in terms of both process and outcome. The task team recommended that:

- The ENHR mechanism be formally instituted, with responsibility assigned to an appropriate part of the ENHR mechanism
- adequate funding be provided for the evaluation component
- the evaluation and monitoring should include indicators of input, process and output as well as the longer term outcomes.

The 1996 workshop participants agreed entirely with the task team's recommendations but it was suggested that the evaluation process be linked to the accountability mechanisms.

### **Conclusion**

The recommendations made by both the task team and the workshop participants have been implemented by different organisations in South Africa and these are outlined in Chapter Three.





## CHAPTER TWO — THE STATE OF HEALTH RESEARCH IN SOUTH AFRICA

### Introduction

This chapter attempts to characterise health research in South Africa, by describing:

- sources of information about health research
- the nature of research (in overview)
- researchers
- the research areas funded by organisations involved in research systems support.

### Sources of Information

There is no central database on health research in South Africa, and information is often unreliable and incomplete. Arguably, the largest funder of health research in South Africa, namely the pharmaceutical industry, is reluctant to disclose either the magnitude of funding or the nature of research funded. Universities, the largest recipient of research funding, generally do not keep updated records of research underway and rely largely on publication of research results to gauge progress. Some of the main sources of information which, when viewed together, provide some sense of health research in South Africa, are presented below.

#### **Department of Education Survey**

Every second year, the Department of Education conducts a survey of the funding and nature of research at tertiary institutions. Its classification of health research into ‘basic,’ ‘applied’ or ‘technology development’ is not particularly helpful in characterising research, but the survey does provide a breakdown of funding subsidies to universities and technikons for research. This is a valuable guide with which to monitor efforts to eliminate inequity in the funding of historically white and black universities, and to promote greater research capacity with technikons.

#### **Review of Published Literature**

Reviews of published literature are not an accurate method of capturing all health research, as they exclude much of the work commissioned by the pharmaceutical industry and research not published in peer-reviewed journals. For example, a considerable amount of health systems research is operational work at local level, which is very unlikely to be accepted by journals. However, publication review remains a useful indicator for judging research, in the absence of more comprehensive methods. The first issue of a new journal, the *South African Journal of Public Health*, was to be published late in 1996. This should provide a channel for publishing and disseminating more research related to public health.

#### **Health Expenditure Review**

Expenditure on health research was quantified in the course of a national review of health expenditure and financing in South Africa in 1994.<sup>1</sup> Later evidence showed that this review underestimated total funding, as the diversity of funding sources is much greater than was initially thought and expenditure by pharmaceutical companies proved to be more than was originally assumed.

### **Directory of Health Systems Research in South Africa**

For the last three years, the Health Systems Trust has published a Directory of Health Systems Research, based on responses to a widely-circulated questionnaire. This Directory summarises current research and provides details of contact addresses and collaborating partners. It has demonstrated the extent and diversity of health systems research being conducted in South Africa, often unheralded and little known.

### **Directory of MRC-supported Research**

The Medical Research Council publishes a directory of research which it funds or carried out itself. This includes details of research being conducted within MRC Units in universities.

### **Annual Reports**

Annual reports from statutory research councils, the DOH and other organisations give some sense of current research. The Health Systems Trust discloses fully the nature and extent of funding of all research it supports on an annual basis.

The National Department of Health is currently negotiating with statutory research councils and other organisations to establish a central database for health research. This should be functional by 1997.

## **The Nature of Research**

Given the absence of a central database of health research in South Africa, it is difficult to provide an accurate profile of the nature of research being undertaken in South Africa. The biennial Survey of the Department of Education categorised health research conducted in tertiary institutions during 1991/2 as follows (**Table Chapter Two — -1**):

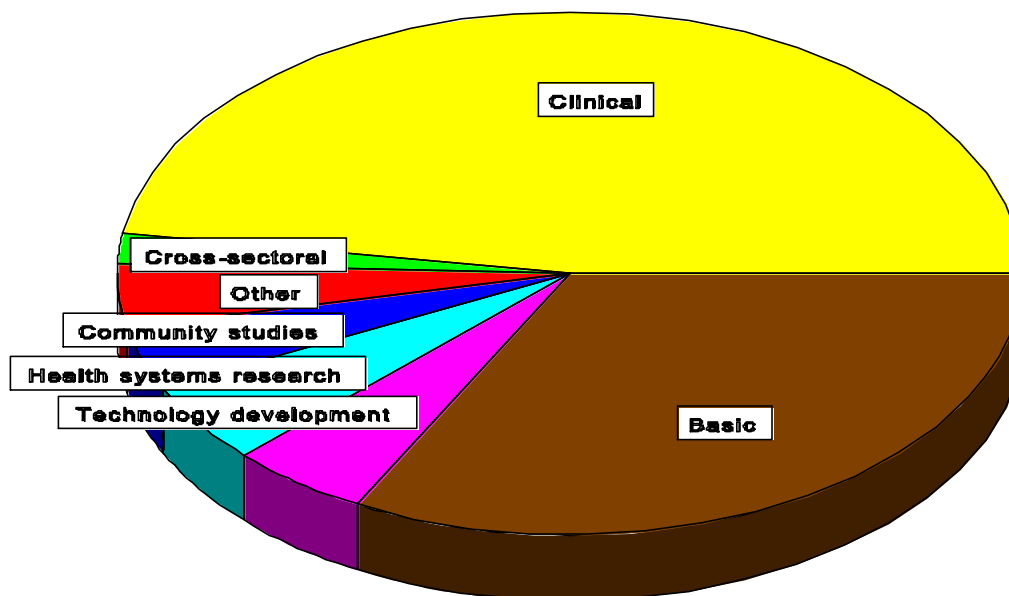
**Table Chapter Two — -1 Classification of health research at tertiary institutions 1991/2**

<b>NATURE OF RESEARCH</b>	<b>PERCENTAGE</b>
Basic research	29
Applied research	59
Technology development	12

Source: Dept of National Education and Training Survey 1991/2

Of all health research conducted during 1991/2, only one fifth (23%) was categorised as 'comprehensive medicine and oncology' (including community health, epidemiology, geriatrics, nutrition and radiotherapy). While this categorisation permits some understanding of the predominant methodologies employed by health researchers, it provides little guidance as to whether this research addresses, in the main, problems which are health priorities in South Africa.

**Figure Chapter Two — -1 Nature of health research published by South African authors, 1994**



**Source: Analysis of Medline publications, 1994**

One indicator of a tenuous relationship between health researchers and planners is the predominance of clinical and basic disciplines in published research. Together, these accounted for over four-fifths of the 720 publications by South African authors listed in Medline in 1994 (Figure Chapter Two — -1).

This disproportion does not necessarily imply that existing capacity in clinical and basic disciplines should be downscaled, but points to a pressing need to develop research capacity in health systems research, technology development, community-based epidemiology and cross-sectoral studies.

During the last few years, there has been a deliberate effort to align health research more directly with the health priorities of the country, primarily through the principal health research systems support agencies, namely the statutory Medical Research Council (MRC) and the non-governmental agency, the Health Systems Trust.

### **Research Supported by the MRC**

The MRC was established as a Science Council by the MRC Acts of 1969 and 1991. The powers and functions of the MRC include provision of funding to universities, technikons, colleges etc., in aid of research and technological development as well as infrastructure development. Currently the MRC funds research in 21 different areas and includes research on nutrition, women's health, health and development, HIV/AIDS and STDs, infectious diseases, molecular medicine, health technology development, clinical and experimental research, health promotion and disease control, mental health and substance abuse, among others.

### Research Funded by the Health Systems Trust

The Health Systems Trust (HST) is an NGO which receives financial support from the British Overseas Development Agency, the Kaiser Foundation<sup>2</sup>, the Kagiso Trust, the Rockefeller Foundation, the Commission of the European Union, the Independent Development Trust and the Department of Health. The Health Systems Trust is the principal funder of health systems research.

Research projects supported by the HST include those in health economics, information systems, policy research in support of informed decision-making, health district development and legislation development at the provincial level. In addition, evaluation research was supported in the areas of mental health programmes, maternal and child health, and nutrition.

### A Profile of Researchers

Universities are by far the largest sector undertaking health and health-related research, with smaller amounts being undertaken by the Medical Research Council and other statutory councils, and the pharmaceutical sector. The Health Systems Trust has specifically attempted to encourage new nodes of research within the health services, non-government organisations and technikons (Table Chapter Two — -2).

**Table Chapter Two — -2 Expenditure on health research, 1991/2**

Research Sector	Million Rands	%
<b>Government sector</b>	<b>59.5</b>	<b>30.0</b>
Dept of Health	5.9	3.0
Medical Research Council	41.2	20.7
Other govt depts	7.6	3.8
Other autonomous govt institutions	4.8	2.4
<b>Tertiary education sector</b>	<b>111.4</b>	<b>56.1</b>
<b>Business sector</b>	<b>23.6</b>	<b>11.7</b>
Pharmaceuticals*	11.3	5.6
Other	11.9	6.0
<b>Non-profit</b>	<b>4.5</b>	<b>2.3</b>
<b>TOTAL</b>	<b>190.0</b>	<b>100.1</b>

\* Pharmaceutical sector expenditure now recognised to considerably more than documented here

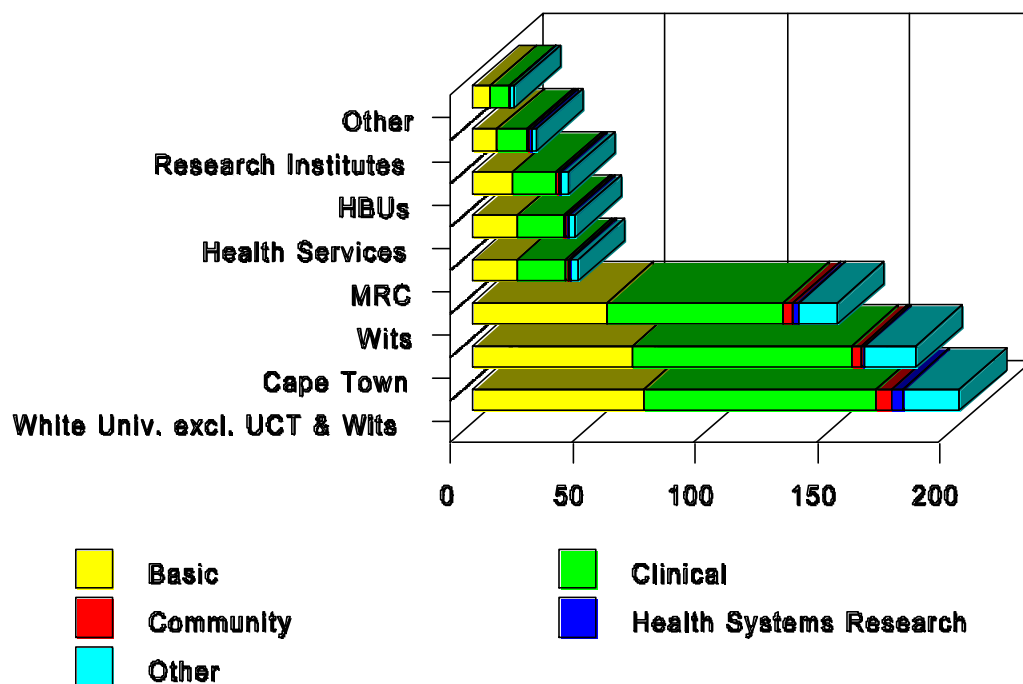
Source: Department of National Education Survey, 1991/2

Despite inadequate information, it is clear that the historically black universities (HBUs) are doing considerably less research than other universities — the result of skewed funding patterns and inadequate resources over many years (Figure Chapter Two — -1).

Shifting research to the HBUs will require concerted and deliberate effort, and realistically may take many years to fully redress inequities.

It is clear that resources are being shifted towards previously disadvantaged institutions, not only from government, but also from other national and international funders. This change needs to be carefully managed and these institutions need to develop a clear vision of their future and a strategy of how their priorities will be addressed.

**Figure Chapter Two — -2 Published health research 1994, by institution**



Source: Analysis of publications, Medline 1994.

However, there remain other problems which prevent extensive research agendas within HBUs, many of which lack experienced research staff, due to the fact that their original mission was to teach and not to undertake original research. There are therefore very few full-time research positions, leaving only the most enthusiastic to undertake research, often on top of full teaching loads which are exacerbated by increasing class sizes. There is thus a need to develop practical research skills, including proposal development, research design and project management, computer literacy and report writing skills. This can be assisted by research skills development within the universities and also by developing linkages between institutions.

Other organisational categories which require considerable support include technikons, health services and non-governmental organisations. In 1991/2, only 1.1% of total subsidies for research from the Department of Education was allocated to technikons, as opposed to 98.9% for universities. The Health Systems Trust has placed special focus on attempting to promote the use of information for planning within health services, and has actively encouraged the development of health systems research capacity amongst health workers. Similarly, it has promoted practical research within non-government and community-based organisations.

## Funding for Health Research

**Table Chapter Two — -3** shows that the allocation of research funding towards historically black universities has begun, although the fruits of this new investment are likely to take several years to manifest themselves.

**Table Chapter Two — -3 State subsidy from the Department of Education, allocated for all research at South African universities in 1992/3 and 1995/6**

	1991	1995	% Change
Cape Town	64,682,000	39,064,360	-40
Durban-Westville	11,791,000	15,656,482	33
Fort Hare	*	9,469,983	
Medunsa	9,693,000	11,898,035	23
Natal	57,895,000	36,456,559	-37
North	3,359,000	18,002,132	436
North West	*	13,106,084	
Orange Free State	46,354,000	22,794,003	-51
Port Elizabeth	11,833,000	9,920,702	-16
Potchefstroom	20,215,000	16,550,427	-18
Pretoria	76,598,000	54,192,430	-29
RAU	42,295,000	20,569,774	-51
Rhodes	14,667,000	9,909,823	-32
Stellenbosch	52,175,000	33,662,419	-35
Transkei	*	14,593,375	
Unisa	34,135,000	42,686,202	25
Venda		6,389,616	
Vista	8,361,000	16,591,943	98
Western Cape	9,779,000	17,007,143	74
Witwatersrand	77,023,000	46,943,527	-39
Zululand	3,920,000	7,864,390	101
<b>TOTAL</b>	<b>544,775,000</b>	<b>463,329,409</b>	<b>-15</b>

\*Former Homeland's allocation was from the Department of Foreign Affairs and not the Department of Education

Source: Minnaar PC. Report to the Medical Research Council 1995

A review of health research finance and expenditure prepared for the South African Health Expenditure Review estimated that South Africa spent R2.8 billion on research in the financial year 1991–1992, representing 1.04% of the Gross Domestic Product. Of this amount, roughly R200 million (6.9%) was spent on health research, considerably less than research expenditure in the fields of engineering (33.7%) or agriculture, biology and forestry (14.1%). However, this percentage probably reflects a significant underestimation of the private sector's contribution.

Data presented by Johan Niehaus (Ciba-Geigy) in 1994 estimated the amount spent by multinationals on drug trials alone in South Africa to be in the order of R100 million (US\$22 million) per year. In addition, some of the research conducted by statutory councils

other than the Medical Research Council may be classified as “health research”. An estimated R3-5 million (\$750 000 – R1 million) is spent annually by the Human Sciences Research Council on health-related research, and R30–40 million (\$7-9 million) is spent by the Council for Scientific and Industrial Research on what could broadly be described as public health research (related mainly to environmental improvement). Expenditure on health-related research carried out by the Agricultural Research Council, mainly with regard to food safety and security, amounts to about R20 million (\$6 million) annually.

Taking these factors into account, it is estimated that R310 million was spent on health research in the 1992–1993 financial year, equivalent to 1.03% of the total expenditure on health care in South Africa. This figure is considerably below the figure of 2% of national health expenditure recommended by the Commission of Health Research for Development.

## The Excellence of Research Capacity

Excellence of research capacity is outlined in **Table Chapter Two — -4.**

**Table Chapter Two — -4 Researcher ratings as at October 1995**

UNIVERSITIES	A	B	C	Y	P	NR	TOTAL
Cape Town	15	43	70	12	5	10	155
Witwatersrand	9	34	69	13	2	17	144
Natal	6	24	49	18	3	9	109
Rand Afrikaans	5	10	11	9	1	8	44
South Africa	2	5	5	–	–	1	13
Orange Free State	1	11	42	17	1	9	81
Pretoria	1	22	55	12	3	23	116
Stellenbosch	–	15	40	15	4	4	78
Rhodes	–	9	19	6	–	3	37
Potchefstroom	–	7	24	8	1	8	48
Durban-Westville	–	4	14	–	–	6	24
Port Elizabeth	–	4	13	6	–	10	33
Western Cape	–	–	5	2	–	2	9
Fort Hare	–	–	3	–	–	3	6
North	–	–	3	–	–	–	3
Zululand	–	–	3	1	–	1	5
Transkei	–	–	2	1	–	2	5
MEDUNSA	–	–	2	–	–	3	5
North West	–	–	1	–	–	1	2
Vista	–	–	–	1	–	1	2
<b>TOTAL</b>	<b>39</b>	<b>188</b>	<b>430</b>	<b>121</b>	<b>20</b>	<b>121</b>	<b>919</b>

**KEY:** A-rating: academic is recognised as a world leader in his/her field  
 B-rating: academics have attained international recognition for work  
 C-rating: work is of international standard  
 Y-rating: awarded to young researchers with a doctoral degree who have the potential to become established researchers by the next evaluation  
 P: refers to the number of President’s awards made to young scientists of exceptional quality  
 NR: refers to the number of academics for whom applications were submitted, but were not rated

Source: Foundation for Research Development, 1995.

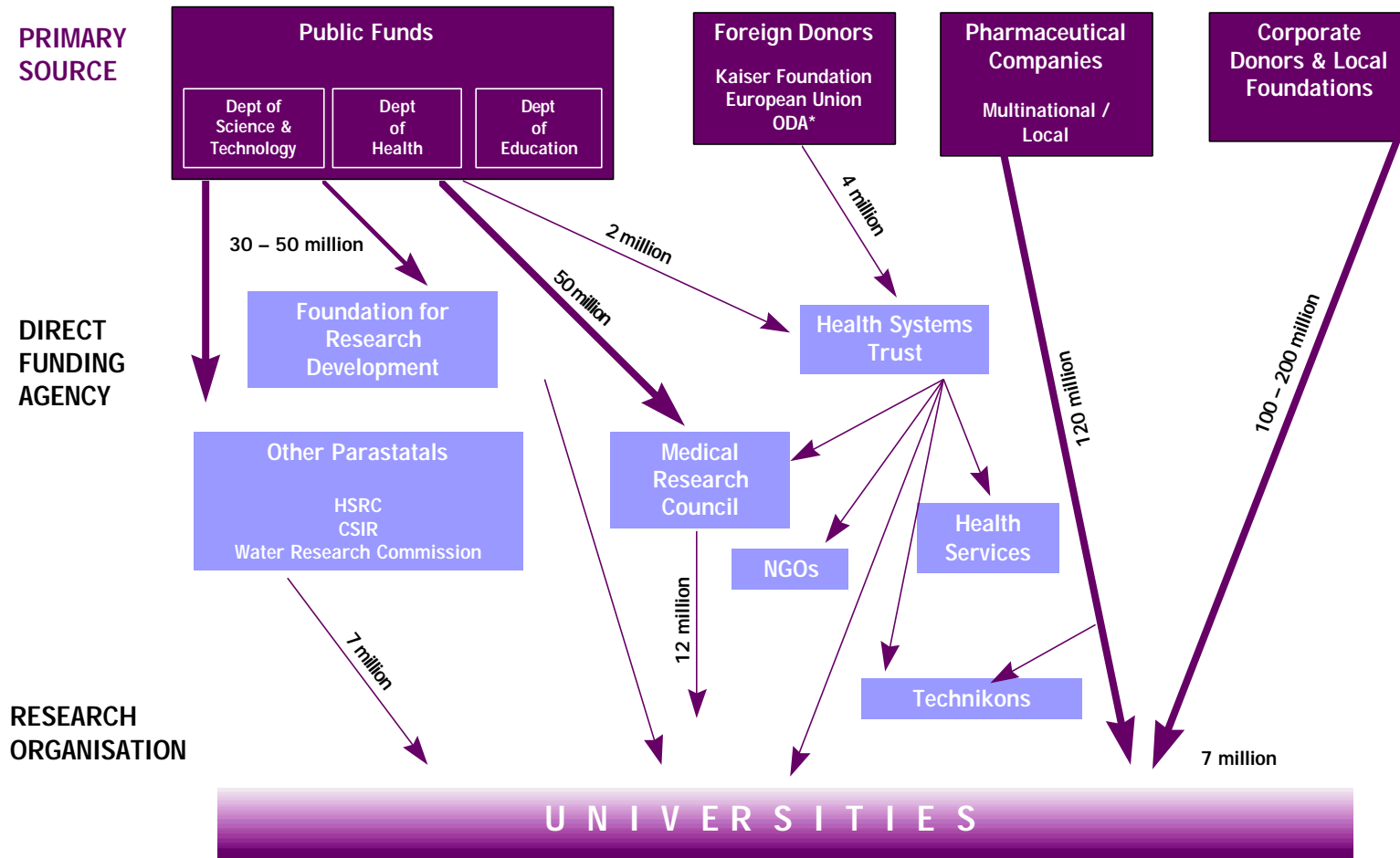
Not surprisingly, representatives from established institutions have expressed concern that the reallocation of resources towards institutions with limited research capacity may jeopardise the existing pools of expertise, and place South Africa on the slippery slide to research mediocrity. These concerns merit careful consideration. It is likely that an allocation formula based purely on capitation is too simplistic, and is unlikely to sustain existing capacity. A combination of per capita baseline funding and a system of tendering (requests for proposals) appears to be a better option. This will have to be accompanied by a deliberate process of support to less established institutions in order to ensure equal opportunity in the tender process.

## Organisations Involved in Research Systems Support in South Africa

Funding flows for health research and key health research support organisations are presented in **Figure Chapter Two** — -3.



Figure Chapter Two — -3 Funding Flows for Health Research in South Africa 1996



\* Renamed in 1997: DFID, UK Department for International Development.

Each of these organisations represented in **Figure Chapter Two** — -3 are described in turn:

### **Department of Arts, Culture, Science and Technology**

The Department of Arts, Culture, Science and Technology is the principal funder for all statutory science councils, including the Medical Research Council. This Department (DACST) has published a White Paper which recommends the integration of the numerous science councils, and the establishment of a national Research Foundation responsible for providing funding and research systems support. Existing statutory councils will retain their intramural research function, and will provide research systems support to tertiary institutions.<sup>3</sup>

### **Department of Health**

The Department of Health supports research in health through the National Increment for Teaching and Research which subsidises research at the Academic Hospitals. In addition the Department also has funds available for commissioning research as well as offering financial assistance to NGOs.

An innovative funding partnership is that between the Department of Health and a number of South African and foreign donors in funding health systems research through the autonomous non-government Health Systems Trust. The contribution from the Department of Health has levered substantial additional funding for policy-related research.

### **Department of Education**

The DACST White Paper envisages that the Department of Arts, Culture, Science and Technology will assume much of the responsibility for funding, previously held by the Department of Education. This funding constitutes roughly half of all health research funding in South Africa, and attention needs to be focused on aligning this expenditure more with the health needs of the country.

### **Foreign Donors**

A wide range of foreign donors have made considerable contributions, particularly in the fields of health systems research.

### **Pharmaceutical Companies**

Local and multi-national pharmaceuticals invest over R100–150 million (\$22–33 million) in health research annually, primarily through drug trials.

### **Corporate Donors and Local Foundations**

A wide variety of corporate foundations and non-government organisations (e.g. Cancer Association) support specific research projects. The magnitude of this funding and extent of this research cannot be quantified at present.

### **Medical Research Council**

The MRC is a statutory council established under the terms of the Medical Research Council Act of 1969 (amended in 1991), and is tasked with supporting health research in South Africa, to promote the improvement of health and the quality of life.

During the last year, the MRC has been undergoing a process of restructuring its research and funding activities. The goal of the reorganisation is to make the best possible use of public resources, which parliament gives to the MRC to fulfil its statutory duty of conducting and supporting research which can contribute to improving the health of the nation.

The MRC's research programme has been divided into seventeen research Thrusts, which are being grouped into content and bridging Thrusts. It is proposed that, in the future, all the MRCs research funding for work within the scope of a Thrust will be channelled through the Thrust mechanism, i.e. funding for in-house research, MRC units and research conducted at universities and institutions outside the MRC.

This is a significant change and will provide new opportunities for focusing a broad range of skills on priority questions for the country and ensuring that research results in improved health outcomes.

The restructuring exercise has involved inputs from key stakeholders from the academic sector, state departments, other Science Councils and the private sector. The final plans are being debated and will take into consideration the recommendations from the White Paper on the future of Science and Technology in South Africa.<sup>4</sup>

### **Foundation for Research Development (FRD)**

The FRD is a research agency established to support innovation and develop new researchers. Unlike the MRC, it does not conduct any intramural research, but funds researchers primarily within universities.

### **Other Statutory Councils**

These include the Human Sciences Research Council, the Council for Scientific and Industrial Research, the Agricultural Research Council and the Water Research Commission. The structure and function of these organisations is likely to change soon if the DACST White Paper meets with general approval.

### **Health Systems Trust**

The Health Systems Trust (HST) is established as a non-government agency for health reform in South Africa. It is recognised within public sector services, research and academic institutions, and non-government organisations as a funder of policy-relevant health systems research, as a clearing-house for information related to health and health care in South Africa and a major resource for capacity-building in health management, research and planning.

## Summary of the Current State of Health Research in South Africa

In summary, the state of health research in South Africa may be characterised as follows:

- \* Roughly 1% of total health expenditure is spent on health research. However, spending by pharmaceutical companies accounts for about half of this.
- \* Clinical and basic research predominates, due largely to the under-development of disciplines such as health systems research, technology development and community-based studies.
- \* Existing disciplines need to be supported, while particular attention should be given to previously neglected areas.
- \* Particular emphasis needs to be placed on strengthening the capacity of historically black institutions, as well as technikons, health services and non-government organisations.
- \* A deliberate strategy to develop a new cohort of black researchers is needed to redress past inequities.

## CHAPTER THREE — IMPLEMENTATION OF ENHR IN SOUTH AFRICA

### Introduction

The process of implementing the ENHR strategy in South Africa to date has been based on the recommendations of the participants of the two workshops and the task team report. In line with these recommendations, several organisations have reoriented their activities within the framework of ENHR, viz:

- (a) The Department of Health (DOH)
- (b) The Medical Research Council (MRC) and other science councils
- (c) The Health Systems Trust (HST)
- (d) The Department of Arts, Culture, Science and Technology (DACST).

This chapter summarises the ENHR-related activities undertaken and proposed by the four agencies mentioned above, within the framework of the ENHR elements.

### The Activities of the Department of Health (DOH) in Implementing the ENHR Process

The DOH has utilised three main criteria to identify stakeholders for its ENHR activities, namely:

- i. Health Research undertaken at an organisation or institution
- ii. Organisational interest in research results, especially with regard to policy formulation and/or clinical/operational management
- iii. Funding of health research.

Based on these criteria, 6 science councils, 11 universities, 5 technical colleges, 10 non-governmental organisations, 1 parastatal organisation, 4 government ministries, 1 private-sector organisation, 6 professional associations and the National Health Department with its nine provincial departments, and the parliamentary Portfolio Committee on Health were identified as the major stakeholders for Health Research in South Africa.

The primary method utilised in interacting with the stakeholders involved personal meetings with the heads or deputies of the institutions and organisations.

Interaction with industry was through a representative of the South African Pharmaceutical Physicians Association and the Pharmaceutical Manufacturers Association. In addition, a questionnaire has been distributed to industry with the aim of determining the health research priorities.

### **Funding**

Issues that were raised by stakeholders with respect to funding included: the lack of coordination between the DACST and the MRC funding processes, the lack of a comprehensive audit of the way health research monies are spent, the paucity of mechanisms for maximising efficiency of research funding and the preservation of current funding.

In attempting to address these issues, the DOH has initiated discussions with the two major government departments involved in direct funding of health research, viz the Departments of National Education (DNE) and of Arts, Culture, Science and Technology (DACST), with the aim of creating a coordinated approach to the funding of health research and capacity building at the national level. In addition, the Chief Director of the HIER represents the DOH on the funding Committee of DACST that makes recommendations on the funding allocations of the Science vote in Parliament.

The budget of HIER has been allocated in a manner that will allow it to commission and assign operations research that is required by the national DOH as well as by the provincial departments.

Moreover, the DOH also offers financial assistance to organisations which are involved in health research that will impact on the priority programmes identified by the national DOH. For example it has recently, with the aid of an NGO, contributed to a reproductive health research fund.

Other discussions with Government departments focused on mechanisms of formal collaboration on areas of mutual interest, and mechanisms for developing intersectoral governmental consensus on funding for research and capacity development.

In terms of improving the auditing of research, discussions with Science Councils have focused on producing formal agreements between the councils and the DOH on issues regarding priority health research and technology development, formalised mechanisms of interactions, defined roles and responsibilities, and improved accountability and auditing mechanisms.

### **Priority Setting**

The methods for research prioritisation which many stakeholders should:

- \* include criteria that reflect the quality of life and political acceptability
- \* involve grassroots civil society participation.

These opinions were shared by a large number of stakeholders.

In an attempt to define health research priorities, the DOH hosted the first Essential National Health Research Congress in November 1996 and to this end has developed criteria and a process for the priority-setting process. Participants at this congress include all the organisations identified above.

Within the provinces and the national DOH, the Directorate Health Systems Research has been involved in identifying the priority health systems research needs for informed decision-making through the establishment of research committees at the provincial and national levels.

### **Advocacy and Networking**

Identified as obstacles to effective advocacy and networking were the paucity of dissemination of key clinical and systems management results to all stakeholders, and the lack of information exchange from the science councils and industry to other stakeholders as well as the lack of information dissemination on disease distribution.

To this end the DOH discussions with professional associations and the nursing colleges have focused primarily on the development of mechanisms for the dissemination and utilisation of research results. In principle, professional associations have agreed to allow the DOH a time

slot at the annual meetings of professional associations to present key clinical management research results.

Moreover, as part of its operational plans, the Directorate Research Coordination and Management has planned a publication that will provide a review of current and planned research on a specific health issue. This publication will focus on research that has major impacts on service delivery as well as clinical management. It will also identify the gaps in key areas of research and will serve as a tool to disseminate information to all research institutions.

### **Capacity Building**

A bridge needs to be established between basic and applied research which includes areas such as health promotion, community health research, health systems and community-based research. Other problems identified included the lack of time and the lack of technical capacity for developing research publications. Many of the issues raised were also related to the fact that the science vote had no coordinated funding mechanisms for research and capacity building included in it.

With respect to these issues, the DOH itself now funds capacity building and research through the National Increment for Training, Education and Research (NITR) and is in intensive negotiations with other DOH directorates to earmark the funding for internships in health research. Moreover, the Directorate Human Resources Development of the DOH has specifically identified research capacity building as part of its policy strategy.

### **Coordination and Management of Research**

Some of the matters that were raised with respect to the coordination and management of research include the lack of research audits and the duplication of research, the issue of whether institutions should specialise in different disciplines of research, the lack of formalised collaboration and accountability mechanisms between the DOH and other government departments and science councils, the lack of coordinated health systems research in South Africa, and the lack of a mechanism for coordination. Other issues raised related to the lack of a national ethics committee and of standardised ethics guidelines.

Through the establishment of the Chief Directorate Health Information, Evaluation and Research, the DOH has begun the process of establishing one formal mechanism for coordinating ENHR activities within South Africa. This chief directorate consists of three directorates, namely Health Systems Research and Epidemiology, National Health Information Systems and Research, Coordination and Management.

In attempting to address some of the other management issues, the DOH has produced concordats with various science councils with the aim of formalising the relationships between autonomous councils and the DOH in terms of accountability and the matching need to build research capacity and resources.

The Directorate Health Systems Research aims to establish research committees at the provincial level to determine the key operations research needs of provinces and to commission required research. In addition, the directorate also provides assistance in developing evaluation frameworks for the DOH programme, policies and planning, and in drawing up guidelines for policy and research implementation.

In order to ensure a more coordinated approach to health research in South Africa, the Minister of Health will appoint an elected ENHR committee which will advise the DACST on

allocations of funds for health research from the National Research Foundation. This committee was to be constituted at the Congress in November 1996.

Particular mention must be made of the discussions held with the private sector, since they have implications for policy formulation with an impact on health research in South Africa. Discussions focused mainly on issues such as the extent and responsibility of legal liability; quality control of clinical trials and research; issues related to conflict of interest with respect to the funding of research at Universities; ethical guidelines in the context of the new constitutional right of informed consent; mechanisms for interaction between the DOH, universities and the private sector; and the question of research funding and publication of results. A response to a discussion document on these issues is still outstanding from the private sector.

In an effort to coordinate research at the policy level, a draft Health Research Policy proposal has been developed and is being disseminated to all the stakeholders for discussion.

### Activities of the MRC and Other Science Councils that Impact on the ENHR Process

The Community Health Research Group of the MRC, including the Centre for Epidemiological Research in South Africa (CERSA) had adopted some elements of ENHR as early as 1990 and have applied them to varying degrees across their national programmes. The Executive Management Committee of the MRC officially endorsed the strategy in 1993 as one that should apply to all MRC-supported research that currently receives high priority.

In 1995, in attempting to prioritise health research, the MRC had within its own research programmes and through consultation with various levels of stakeholders, identified 21 major 'thrust' areas for intra-mural research funding and management.

With respect to networking, the MRC has engaged in several activities which include networking among academic institutions through workshops, convening a loose umbrella organisation of science councils known as RISMAL (Regional Institutional Support Management Committee) to provide access to provincial departments of South Africa's science and technology base, and have co-hosted HELINA, the health informatics conference.

Other activities in terms of information dissemination include the packaging of various databases, e.g. SAMED, ECRI, and the establishment of a World Wide Web page, and collaboration with the Cochrane Collaboration Centres, an establishment of household health posts.

In 1994, the MRC established a Research Capacity Development Group in response to the growing need to address deficiencies in research capacity, due to historic imbalances during the apartheid era in South Africa. Historically black universities, technikons and nursing training colleges will be targeted for support in research infrastructure development, promoting faculty professional development in research, enhancing student research skills and strengthening research curriculum development and training within the institutions.

The MRC has a policy of ensuring that 20% of all requests for proposals, bursaries and fellowships is allocated to people from disadvantaged communities. The MRC has also been involved in faculty development courses at HBUs, and has assisted in building partnerships between the historically black and historically white educational institutions and the Schools of Public Health for research collaboration and skills transfer.



The MRC is also to establish an MRC research unit at MEDUNSA, one of South Africa's historically black universities. The unit is to focus on diarrhoeal diseases.

In terms of funding, the MRC has since 1992 refocused the areas of funding and reoriented them primarily from basic research toward capacity development and research support. Capacity building currently receives 12.5% of all MRC funding, and includes the granting of scholarships through the establishment of centres for research excellence at HBUs and seminars and training courses at various tertiary institutions.

As its mechanism for evaluation, the MRC has finalised a system of performance management for scientists involved in the intramural and extramural research.

### Activities of the HST that Impact on the ENHR Process in South Africa

The HST, as an NGO, has been involved in the ENHR process from an early stage and has to date been involved in various activities that impact on ENHR. The focus of the HST is on operations and policy research.

With respect to capacity development, the HST has funded projects which involve twinning arrangements between institutions and the funding of interns. The Health Systems Trust encourages and supports research skills development amongst disadvantaged groups, including the historically black universities and technikons. Proposal development workshops have been run by the HST throughout many of the HBUs and many individuals have been supported in their proposal development and research. Interns from disadvantaged groups have also been attached by the HST to established researchers, while linkages have been developed and supported between more and less experienced research groups. All proposals supported by the HST are expected to include skills/capacity development components.

The Health Systems Trust has also launched a national proposal development competition for nurses and environmental health officers to encourage health research amongst two groups which in the past have been largely excluded from research activity.

Networking is encouraged through annual report-back workshops, through the monthly UPDATE journal and research review documents, and the HEALTHLINK system. Priority areas identified by the HST include human resources development, health information systems, reproductive health and the evaluation of DOH policies.

### Activities of the DACST that Impact on ENHR Activities

The DACST, as a governmental funder of science and technology in South Africa, recently released its White Paper which has implications for the ENHR process in South Africa especially with regards to funding, priority setting and evaluation and monitoring.<sup>5</sup>

The major elements discussed in the White Paper refer to the establishment of a National Research Foundation (NRF) which will be advised on research funding issues by advisory groups from different sectors. It was envisaged that the ENHR Committee, to be constituted at the November 1996 ENHR Congress, would play a role in this process.

The White Paper on Science and Technology has also made recommendations with respect to funding which include the establishment of an innovation fund as an incentive for researchers to engage in priority research activities, as well as a peer review mechanism for the evaluation of published research.

These recommendations have influenced the functions of the ENHR mechanisms for management and coordination as well as that of evaluation, as outlined in the draft Health Research policy.

## Conclusion

The ENHR process in South Africa, while at a stage of infancy compared to other countries, is fast gathering momentum, especially in terms of priority setting, establishment of an ENHR mechanism and networking. Areas that require more attention include developing a formal, national evaluation framework and a coordinated funding policy.

## CHAPTER FOUR — EVALUATION OF THE ENHR PROCESS IN SOUTH AFRICA

### Introduction

This chapter provides information on:

- \* The process indicators for the evaluation of ENHR in South Africa
- \* The outcome indicators for the evaluation of ENHR in South Africa.

ENHR has been accepted as a philosophy in a number of countries in the developing world, including South Africa. A number of attempts have been made to evaluate both the adoption of the philosophy and the benefits of the policy.

The task team had suggested several indicators for evaluation which are presented in **Table Chapter Four — -1** and **Table Chapter Four — -2**.

### Process Indicators

The indicators for the adoption of the philosophy (re process indicators) have been somewhat easier to define than the indicators of success (re outcome indicators). The task team had recommended a number of process indicators based on the seven fundamental elements of ENHR. In each case the indicators are fairly broad and relate to setting up structures and the measurement of the numbers of individuals and organisations involved in the particular activity. The indicators (**Table Chapter Two — -1**) were to be consolidated and accepted by the ENHR Congress. Details have also to be obtained on the mechanism of data collection for the evaluation of the process.

### Outcome Indicators

The outcome indicators are much more difficult to determine and measure. At present these indicators have not been identified, since the ENHR philosophy relates to priorities for the country and at present a number of different activities are under way to address these problem areas.

In South Africa, the government has adopted the Reconstruction and Development Programme (RDP) which also addresses the priority developmental areas in the country and attempts to achieve equity and social justice. The Department of Health also places major emphasis on the Primary Health Care approach, in an attempt to make health care accessible to the majority of the population and to provide an efficient and cost-effective service.

These major activities have the same goals as the ENHR philosophy, and therefore to objectively determine outcome indicators for the ENHR would be difficult.

However, attempts have to be made to obtain interim outcome indicators that could clearly monitor the specific approaches that have been adopted. We have recognised the importance of evaluating the process in order to set the framework within which the outcome indicators are formulated.

The Task Team has made an attempt to identify some of the outcome indicators (**Table Chapter Four — -2**). The proposed ENHR Committee would have as part of its terms of reference to determine the indicators and to monitor the progress of ENHR in South Africa.

**Table Chapter Four — -1 Evaluation of ENHR in South Africa**

**1. ADVOCACY AND PROMOTION OF ENHR**

- Advocacy by recognised leaders
- Strategic Meetings, Workshops, Forums, etc
- Publicity generated for ENHR
- A National Policy Statement on ENHR — adopted by the Government
- A public announcement of an ENHR plan
- Changes in the subject matter of publications
- A more balanced geographic portfolio of ongoing research
- Evidence of research findings implementation

**2. ENHR MECHANISM**

- Clear definition of an ENHR mechanism
- Clear description of the steps required to establish this
- Key groups and institutions embarking on these steps according to a negotiated and specified time frame
- New form of organisation linking researchers and policy-makers

**3. PRIORITY SETTING**

- Setting up an inclusive competent forum at National and Provincial level to inform the research agenda
- Regular meetings and acceptable participation at these fora
- Publicly stated agenda of research priorities
- Introduction of new and modified institutional forms and relationships to facilitate ENHR
- Greater role of DOH in setting National Essential Research priorities

**4. CAPACITY BUILDING**

- ENHR capacity building is both an end in itself and an input indicator
- Output indicators include:
  - \* Numbers of masters and doctoral students
  - \* Dissertations or theses completed
  - \* Availability & growth in diplomas in neglected key disciplines at undergraduate and postgraduate levels
  - \* District or Provincial managers trained

**5. NETWORKING**

- Number of networks created nationally
- Effect of networks through expanded demand for research from stakeholders
- Increase in capacity development at HBUs
- Increased private sector partnerships
- Viable units of management support for operations research at Provincial level

**6. FUNDING OF ENHR**

- Measured shifts in allocation of current expenditures
- Increase in financial assistance for health research within Science Councils
- Sustained change in financial flows

Table Chapter Four — -2 Evaluation ENHR — Output and Outcomes

#### **FUNDING**

- Sustained changes in **financial flows**

#### **CAPACITY DEVELOPMENT**

- Expanded **research capacity** at historically black universities
- Growth in degree and diploma **courses in neglected disciplines**
- Viable units of '**management support**' (or 'operations research of health systems research') in Provincial and District Health Departments

#### **NETWORKING**

- Positive developments in **institutional collaborations** including **private sector** partnerships
- **New forms of organisations** linking policy-makers and researchers
- A more balanced **geographic portfolio** of ongoing research

#### **PRIORITISATION**

- Increases in **strategic research**
- Greater role by the **Department of Health** in setting the ENHR agenda

#### **ADVOCACY AND PROMOTION**

- Expanded **demand for research** from policy-makers, managers and providers; NGOs and CBOs as well as communities

#### **EVALUATION AND MONITORING**

- A steady expansion in **monitoring and evaluation** of health programmes at all levels: National, Provincial and District
- Evidence of research findings that are being **implemented**
- Matching priorities against research efforts
- Appropriateness of projects as well as outcome
- Long-term evaluation of outcomes and impact assessments on the priorities to enable redirection of ENHR institutions

## CHAPTER FIVE — PRIORITY SETTING AND ENHR IN SOUTH AFRICA

### Introduction

This chapter provides information on:

- the aims and objectives of the National Congress on Priority Setting in Health Research in South Africa, held in Pretoria, in November 1996
- the participants in the Congress
- the methods and criteria used to identify priorities
- the priority health problems identified
- the research questions identified.

### Aims of the National Congress on Priority Setting in Health Research

The aims of the Congress were:

- to identify health research areas that address priority health problems
- to develop a process for consensus building
- to facilitate the establishment of an ENHR Committee.

An ENHR working group was established in September 1996 to assist in the development of the criteria and process of prioritisation. The working group was composed of representatives of the MRC, the Human Sciences Research Council (HSRC), the HST, the Medical Association of South Africa (MASA) and the Department of Health (DOH).

### Participants

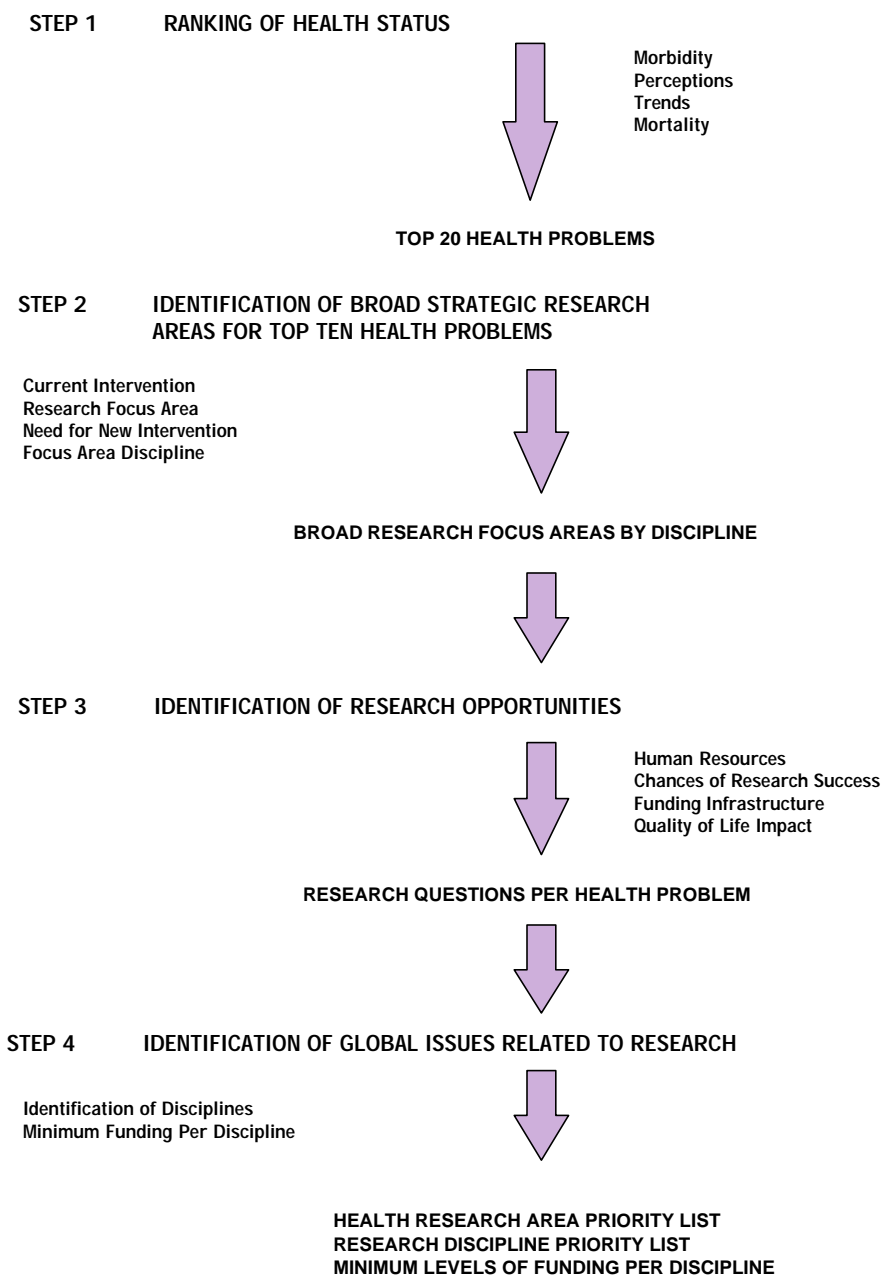
In November 1996, the DOH hosted the first ENHR Congress on Priority Setting in South Africa. The participants at the Congress represented 77 organisations and included representatives of Science Councils, universities, NGOs, government departments, the private sector and external funders.

### Identified Priorities

The method and criteria for the identification of health research priorities are outlined in **Figure Chapter Five — -1**.

**Figure Chapter Five — -1 Process and Criteria for Prioritisation**

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Due to time constraints, research opportunities and strategic research areas were identified for the top ten health problems and these included: violence/injury, tuberculosis, nutrition, HIV / AIDS, STDs, cancers (all), diarrhoea, respiratory infections, mental health (excluding substance abuse) and malaria. **Table Chapter Five — -1** shows the priority health problems identified by congress participants.

The criteria and questions that were asked for Steps 1 and 2 are presented below. For Step 1 in the **Ranking of priority health problems/disease**, identification of the major health problems was made on the basis of the following four criteria:

#### *Mortality*

Mortality data were presented jointly by the MRC and the Central Statistical Services (CSS). These data were presented in order to provide an objective measure to the prioritisation process.

#### *Morbidity and Years of Potential Life Lost (YPLL)*

Morbidity data were based on hospital discharge rates. **Table Chapter Five — -2** represents the ranking by estimated YPLL for South Africa for 1994.

#### *Trends in Disease Profile*

The DOH presented the data on health status trends, which provided the opportunity to take into account the importance of specific conditions that could be the early phases of an epidemic.

#### *Perceptions of Participants*

The vast experience of the participants and the perceptions of the community were also used as a criterion for prioritisation.

### **Method for Ranking Priority Health Problems**

Participants were randomly allocated to ten working groups, after the plenary session, and were asked to rank the top 20 health problems, based on the four criteria.

After a period of discussion within the working group, each participant was asked to reassess his or her choice of the top 20 diseases. The discussions included identification of any obvious gaps in the identified diseases and classification of diseases.

At the end of the discussion period, the facilitator was tasked with compiling the group vote per working group, based on inverse score ranking of the total votes per health problem area.

### **Method for Step 2**

An attempt was made to identify broad research areas within the 'TOP 10' diseases. This exercise was not meant to endorse the TOP 10 diseases. A similar exercise is needed for the other priority health problems identified.

Participants were self-assigned to 'expert groups' based on interest in a specific topic. Seven expert groups were asked to consider the following questions in the determination of their broad research areas :

## **Criteria for Step 2**

*What are the current interventions available to address the problem?*

*Are these interventions successful?*

*In what way are these interventions not successful?*

*Is a new intervention indicated?*

*What type of research is required for the 'new' intervention, by discipline?*

## **Results Step 2**

The groups identified the detailed research questions in Step 2, which should have been identified in Step 3. The results presented here indicate that participants saw the separation of Steps 2 and 3 as being an artificial device and would rather see these two steps as a single step.

Despite the amalgamation of Step 2 and Step 3 by participants, the objective of obtaining a **preliminary** list of research questions by consensus, from participants of various backgrounds, was encouraging, and did achieve the Congress aim of consensus building.

Prioritisation on a problem-oriented basis indicates a need for a variety of different interventions to achieve equity in health, which endorses a holistic approach to health research.

The detailed results of Step 2 which identify the broad research areas by discipline, are presented in **Tables 5-3 to 5-6**<sup>1</sup>.

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<sup>1</sup> NOTE — A number of the research questions outlined in the tables can be classified into one or more research type categories; and these research types should not be seen as water-tight compartments.

**Table Chapter Five — -1 Congress-Identified Priority Health Problems**

DISEASE / HEALTH PROBLEM	
1. INJURY / TRAUMA / VIOLENCE (INCL. RAPE)	24. EDUCATION
2. TB	25. SANITATION
3. NUTRITION	26. CHILD HEALTH
4. HIV / AIDS	27. LIFESTYLE
5. STDs	28. ASTHMA
6. CANCER (ALL)	29. CAPACITY BUILDING
7. DIARRHOEA	30. GERIATRICS
8. RESPIRATORY INFECTIONS (INCL. COAD)	31. ARTHRITIS
9. MENTAL HEALTH (EXCL. SUBSTANCE ABUSE)	32. PHYSICAL DISABILITY
10. MALARIA	33. ORAL HEALTH
11. DRUG ABUSE	34. ENVIRONMENTAL EXPOSURE
12. CARDIOVASCULAR DISEASE	35. CLINICAL & EXPERIMENTAL RESEARCH
13. DIABETES	36. ANAEMIA
14. HYPERTENSION	37. INFANT MORTALITY
15. MEASLES	38. MOLECULAR BIOLOGY
16. TEENAGE PREGNANCY	39. PARASITIC DISEASE
17. PERINATAL MORTALITY	40. TRADITIONAL MEDICINE
18. NON-INTENTIONAL INJURY	41. IMMUNISATION
19. SMOKING	42. SAFE MOTHERHOOD
20. HEALTH SYSTEMS	43. HEPATITIS
21. WOMEN'S HEALTH	44. HEALTH INFORMATION
22. OCCUPATIONAL INJURY	45. RENAL DISEASE
23. EMERGING INFECTIOUS DISEASES	46. AGEING

The priorities identified show a strong concordance with the *Reconstruction and Development Programme (RDP)* priorities, but a very poor correlation with the health problems identified by the use of YPLL. See **Table Chapter Five — -2**.

**Table Chapter Five — -2 Comparisons between Top Ten Health Conditions, as ranked by Congress participants 1996, YPLL estimates for 1994 and the RDP**

CONDITION	CONGRESS RANK 1996	YPLL RANK 1994	RDP PRIORITY
INJURY (ALL CAUSES)	1	1	NO
TB	2	5	YES
NUTRITION	3	8	YES
HIV / AIDS	4	NOT RANKED IN TOP 10	YES
STDs	5	NOT RANKED IN TOP 10	YES
CANCER	6	NOT RANKED IN TOP 10	YES
DIARRHOEA	7	3	YES
RESPIRATORY INFECTION	8	4	NO
MENTAL HEALTH	9	NOT RANKED IN TOP 10	YES
MALARIA	10	NOT RANKED IN TOP 10	NO
SEPTICAEMIA	NOT RANKED IN TOP 50	10	YES
PERINATAL CONDITIONS	17	2	YES
STROKE	14	6	YES
IHD	14	7	YES
DIABETES	13	9	YES

In the next step of the process, the research questions were identified for the top ten health problems, and the questions covered the gamut of research methodologies from policy, basic, and social to clinical.

**Table Chapter Five — -3 Broad Research Questions by Discipline, for STDs / HIV / AIDS, TB and Malaria**

RESEARCH TYPE	DISEASE CONDITION		
	HIV / AIDS	TB	Malaria
<b>Basic Research</b>	<ol style="list-style-type: none"> <li>1. Rapid test</li> <li>2. Congenital STD detection</li> <li>3. Syndromic treatment</li> <li>4. Asymptomatic detection</li> </ol>	<ol style="list-style-type: none"> <li>1. Rapid diseases diagnosis</li> <li>2. Detection of MDR</li> <li>3. Detection in children</li> <li>4. Detection of re-infection vs reactivation</li> <li>5. Determination of specimen quality</li> <li>6. Identification of BCG strains for vaccine development</li> <li>7. Identification of individual susceptibility</li> </ol>	<ol style="list-style-type: none"> <li>1. Development of appropriate diagnostic guidelines</li> <li>2. Identification, behaviour and susceptibility of vectors</li> <li>3. Outbreak predictions</li> <li>4. Improved diagnostics for malaria</li> </ol>
<b>Clinical Research</b>	<ol style="list-style-type: none"> <li>1. Congenital STD detection</li> <li>2. Syndromic treatment</li> <li>3. HIV treatment</li> <li>4. Vaccine development</li> <li>5. Vertical transmission drug development</li> </ol>	<ol style="list-style-type: none"> <li>1. Alternative drug delivery systems</li> <li>2. BCG vaccine efficacy</li> </ol>	<ol style="list-style-type: none"> <li>1. Efficacy, acceptability and type of therapy and prophylaxis</li> </ol>
<b>Social Sciences</b>	<ol style="list-style-type: none"> <li>1. Condom usage</li> <li>2. Asymptomatic detection</li> <li>3. Patient behaviour</li> <li>4. Health worker issues</li> <li>5. Vertical transmission</li> <li>6. Socio-economic impact assessment</li> </ol>	<ol style="list-style-type: none"> <li>1. Identification of environmental and social determinants of disease</li> </ol>	<ol style="list-style-type: none"> <li>1. Increase in community cooperation with malaria control programmes</li> </ol>
<b>Health Systems, Public Health &amp; Policy Research</b>	<ol style="list-style-type: none"> <li>1. Policy development and evaluation</li> <li>2. Socio-economic impact assessment</li> <li>3. Models of care</li> <li>4. Asymptomatic detection</li> <li>5. Health worker issues</li> <li>6. Post exposure prophylaxis</li> <li>7. Ethical and legal issues</li> </ol>	<ol style="list-style-type: none"> <li>1. Identification of environmental risk factors</li> <li>2. Feasibility of on-site treatment</li> <li>3. Improved information systems</li> <li>4. Systematic review of efficacy</li> <li>5. Case holding patterns</li> <li>6. Identification of service organisations</li> </ol>	<ol style="list-style-type: none"> <li>1. Efficacy, appropriateness and quality of surveillance systems</li> <li>2. Appropriate diagnostic guidelines</li> <li>3. Health care workers' attitudes to identification and treatment</li> <li>4. Outbreak prediction</li> <li>5. Cross-border control of malaria</li> </ol>

**Table Chapter Five — -4 Broad Research Questions by Discipline, for Diarrhoea and Respiratory Infections**

	DISEASE CONDITION		
	DIARRHOEA AND RESPIRATORY INFECTIONS	ACUTE RESPIRATORY INFECTION	INFECTIOUS DIARRHOEA
RESEARCH TYPE			
Basic Research	<ol style="list-style-type: none"> <li>1. Vaccine development for HiB, measles and pneumonia</li> <li>2. Identification of antibiotic resistance</li> </ol>	<ol style="list-style-type: none"> <li>1. Identification of resistance factors in ARI?</li> </ol>	<ol style="list-style-type: none"> <li>1. Aetiology and strain identification</li> <li>2. Methods for the detection of Rotavirus and routes of transmission</li> <li>3. Diagnostic indicators to distinguish between osmotic and secretory diarrhoea</li> <li>4. New test kits</li> </ol>
Clinical Research	<ol style="list-style-type: none"> <li>1. Interaction of infectious agents with predisposing illness</li> <li>2. Improved compliance</li> <li>3. Vaccine effectiveness</li> </ol>	<ol style="list-style-type: none"> <li>1. Effectiveness of chemotherapy</li> <li>2. Clinical trials on pneumococcal vaccines</li> </ol>	<ol style="list-style-type: none"> <li>1. Rotavirus vaccine testing</li> <li>2. Cost-effectiveness of rotavirus vaccine</li> <li>3. Monitoring vaccine efficacy and standards</li> </ol>
Social Sciences	<ol style="list-style-type: none"> <li>1. Identification of lifestyle risk factors</li> <li>2. Identification of factors for compliance with therapy</li> </ol>	<ol style="list-style-type: none"> <li>1. Identification of ARI risk factors: housing, overcrowding, pollution</li> </ol>	<ol style="list-style-type: none"> <li>1. Identification of lifestyle risk factors: housing and sanitation</li> </ol>
Health Systems, Public Health & Policy Research	<ol style="list-style-type: none"> <li>1. Pollution avoidance</li> <li>2. Risk factor identification</li> <li>3. Assessment of vaccine cost, accessibility, availability and effectiveness</li> </ol>	<ol style="list-style-type: none"> <li>1. Identification of ARI risk factors</li> <li>2. Cost-effectiveness of chemotherapy</li> </ol>	<ol style="list-style-type: none"> <li>1. Cost-effectiveness of rotavirus vaccine</li> <li>2. Evaluation of Oral Rehydration Therapy</li> <li>3. Effective systematic reviews</li> <li>4. Monitoring of vaccine efficacy and standards</li> </ol>

**Table Chapter Five — -5 Broad Research Questions by Discipline, for Nutrition and Cancers**

RESEARCH TYPE	DISEASE CONDITION	
	NUTRITION	CANCERS
<b>Basic Research</b>	<ol style="list-style-type: none"> <li>1. Food safety</li> <li>2. Bioavailability of nutrients</li> <li>3. Malabsorption</li> <li>4. Competing nutrient demands</li> </ol>	<ol style="list-style-type: none"> <li>1. Improved detection of aetiology</li> </ol>
<b>Clinical Research</b>	<ol style="list-style-type: none"> <li>1. Interaction between substance abuse and nutritional status</li> <li>2. Development of nutritional status assessment methods</li> </ol>	<ol style="list-style-type: none"> <li>1. Risk factor identification for oesophageal cancers</li> <li>2. Effectiveness of cervical cancer treatment</li> </ol>
<b>Social Sciences</b>	<ol style="list-style-type: none"> <li>1. Food security KAP study</li> <li>2. Food accessibility</li> <li>3. Food security education and capacity development</li> </ol>	<ol style="list-style-type: none"> <li>1. Development of cancer prevention strategies</li> </ol>
<b>Health Systems, Public Health &amp; Policy Research</b>	<ol style="list-style-type: none"> <li>1. Prevalence rates of nutritional disease</li> <li>2. Development of nutritional status assessment methods</li> <li>3. Impact of programme implementation</li> <li>4. Development of monitoring tools</li> <li>5. Interaction between substance abuse and nutritional status</li> </ol>	<ol style="list-style-type: none"> <li>1. Improved surveillance system for identification of incidence and prevalence</li> <li>2. Effectiveness of cervical cancer screening programmes</li> <li>3. Cost-utility studies of interventions based on length of life, QOL and financial meta-analyses</li> </ol>

**Table Chapter Five — -6 Broad Research Questions by Discipline, for Mental Health and Violence/Injuries**

RESEARCH TYPE	DISEASE CONDITION	
	MENTAL HEALTH	VIOLENCE
<b>Basic Research</b>		
<b>Clinical Research</b>		
<b>Social Sciences</b>	<ol style="list-style-type: none"> <li>1. Identification and management of mental health problems among health care workers</li> </ol>	<ol style="list-style-type: none"> <li>1. Cost-effectiveness of clinical management of injury from violence</li> </ol>
	<ol style="list-style-type: none"> <li>1. Development of interventions for the integration of the disabled</li> <li>2. Development of culturally appropriate intervention</li> <li>3. Counselling skills for health care workers</li> <li>4. Development of community-based interventions</li> </ol>	<ol style="list-style-type: none"> <li>1. Resource needs of the criminal justice system to decrease injury rates</li> <li>2. Training and sensitising police in dealing with injury</li> </ol>
<b>Health Systems, Public Health &amp; Policy Research</b>		
	<ol style="list-style-type: none"> <li>1. Development of community-based interventions</li> <li>2. Incidence of teenage suicide</li> <li>3. Integration of mental health into PHC</li> <li>4. Integration of traditional healers into the Mental Health Services</li> <li>5. Economic impact of mental health on the society</li> </ol>	<ol style="list-style-type: none"> <li>1. Integrated intersectoral pilot programmes <ul style="list-style-type: none"> <li>• Use of trauma centres as a site for police presence</li> <li>• Impact of education and recreational facilities on sexual abuse and violence among youth</li> </ul> </li> <li>2. Training of HCW to deal with injuries</li> <li>3. Effectiveness of compensation system for all injuries</li> <li>4. Economic and social impact of injuries</li> <li>5. Development of cost-effective management interventions for dealing with injuries and violence</li> <li>6. Legislation effectiveness</li> <li>7. Development of a surveillance system and strategies for injury and violence prevention and legislation implementation</li> </ol>

The Congress also identified discipline-specific priorities which included issues such as funding, capacity development, networking and advocacy.

The Congress therefore achieved its aim of the establishing a preliminary list of priority health problems and urgent research questions. More importantly, this was achieved through consensus and the participation of basic scientists, clinical researchers, administrators, health service providers, funders and representatives of professional associations.

The Congress also provided participants with an insight into the prioritisation process, and it is hoped that the collective wisdom of the Congress will be used in the ongoing refinement of the process.



## The Future of ENHR in South Africa

The future of ENHR in South Africa is viewed with optimism by many stakeholders in South Africa. The Ministry and Department of Health (DOH) is committed to developing a clear and coherent research strategy. Soon after the new Department of Health was established, the Minister of Health appointed a special Ministerial Committee to advise on the ENHR process. In the space of a few years, significant progress has been made with regard to advancing the ENHR process.

Future steps will include the establishment of an ENHR Committee, the promotion and advocacy of health research, development of a health research policy, development of funding mechanisms for health research, priority setting for research and ensuring codes and high standards of ethics for health research.

The future of ENHR will be determined through a consultative process that will be coordinated by the first ENHR committee. Whilst the first ENHR Congress focused on the identification of research and advocacy for ENHR, the coordinating ENHR Committee will be required to take the process further.

This section outlines in broad terms the future of ENHR in South Africa. Clearly the future will be determined by the broad principles already established and elaborated upon in this document.

Some of the future activities are expected to be as follows:

### **Establishment of the ENHR Committee**

After broad consultation, a list of nominees generated from 95 stakeholder groups is being finalised for Ministerial appointment. Among the functions of the ENHR, it is proposed that the committee will also serve as an advisory board to the DOH and will advise the Department of Arts, Culture, Science and Technology. The ENHR Committee will advise both Departments on the process of restructuring and development of the Science Councils.

### **Promotion and Advocacy**

Evaluation of the Congress on priority setting indicates that advocacy and promotion of ENHR are urgently needed. Despite the numerous activities already held with respect to ENHR, it is evident that re-prioritisation of research activities still has some way to go. In South Africa it is expected that the DOH will support the ENHR Committee in this activity.

### **Draft Health Research Policy Proposal**

The DOH is drafting a health research policy for consultation with stakeholders after Ministerial approval. The objectives of the research policy involve promoting sustainable funding for health research in South Africa, and developing strategies that will foster equity in health research. Furthermore, the policy should improve the competitiveness of South Africans in health sciences and promote the establishment of an effective national health research management structure.

### **Funding of Health Research**

In terms of funding, the ENHR Committee is expected to advise the Department of Health and the Department of Arts, Culture, Science and Technology as well as others (the South African Military Services, the Department of Agriculture, the Department of National Education and the Department of Welfare) on the allocation of funds for research. Health research funding will be

based on priorities as identified through the ENHR process. Over and above these functions, the ENHR Committee would support initiatives to raise private sector funding for health research.

## Priority Setting

Priority setting will be one of the most important activities of the ENHR process. The process will aim to redress the existing and historical imbalances of funding for health research, which currently favours basic research. The new political dispensation in South Africa requires that the focus of health and health care be based on the equitable provision of services to populations that previously had limited or no access to basic health care. This new policy direction is a challenge to the research community, especially with regard to developing appropriate health systems research in order to move towards greater equity in health.

In terms of the process for priority setting, various options are being explored. In the last priority-setting ENHR Congress, many participants felt uneasy that the required expertise was not available. There was a feeling that validation and extension of priorities for the other health problems were necessary through the establishment of expert groups. It was felt that communities needed to be consulted regarding identified priorities. In future, there should be an even greater opportunity for broader consultation.

## The Role of the National Health Department

The future of health research in South Africa is favourable as the National Department of Health has committed itself to improving research through the creation of a Directorate within the National Department, which is concerned with Health Systems Research as well as the management and coordination of research. This implies a commitment of human and financial resources for health research from government. The DOH will be central to coordinating Essential National Health Research in South Africa. Two factors, in particular, support the implementation of ENHR strategies:

- ◇ Research Management is an integral part of the DOH structure
- ◇ Many organisations (such as the science councils) are geared towards implementing ENHR.

In addition, the DOH has set very specific objectives in the medium term. These include:

- ◇ A commitment to increase the health research budget to 1.5% of the total health budget
- ◇ A commitment to increase the involvement of established networks in ENHR-related activities to 50% of all research networks in the country.

## Challenges

There are numerous challenges which need to be addressed. Some of these will include the involvement of the private sector and the active involvement of the lay community in ENHR activities. The principal elements of the ENHR process such as consultation and advocacy will be important in achieving the objectives of ENHR. South Africa has experienced a long and difficult political and social history. This history negatively influenced the health status and health care of the majority. Despite the limitations, the new health care dispensation has, within a short period of time, been able to overcome many difficulties. Already improvements in

health and social indicators are evident. It is with the same enthusiasm, determination and optimism that the health research agenda is being addressed through ENHR.

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