Health Research in Developing Countries

A collaboration between Burkina Faso and Germany
Foreword

The Institute of Tropical Hygiene at the University of Heidelberg has a long and fruitful tradition concerning health research in developing countries. Since the foundation of the Evaluation and Project Consulting Working Group (EVA PLAN) in 1987 many health research projects in numerous developing countries world wide have been carried out including baseline studies, controlling and evaluation of projects, teaching and education in health measures. These activities were supported by the German Association of Technical Cooperation and the Credit Bank for Reconstruction of the German Federal Ministry of Development.

Already in 1986 a first health project was started in cooperation with Burkina Faso and others followed in the further years which led to a very fruitful continuous collaboration. A highlight was the establishment of the “Sonderforschungsbereich 544: Control of Tropical Infectious Diseases” by the German Research Foundation (DFG) at the University of Heidelberg in 1999. With this a basic financial sponsorship of the Nouna Health Research Center could be realized.

Based on the great experience of the scientists of the Institute for Tropical Hygiene of the University of Heidelberg in health projects in developing countries since 1986 and the intensification of the cooperation with highly acknowledged scientists in Burkina Faso in the last years not only single research projects but already a whole programme of health research could be developed. A highly remarkable scientific outcome of these efforts has been arranged in the submitted commemorative publication, edited by Heiko Becher and Bocar Kouyaté. I want to congratulate all authors of this publication. This is for me a wonderful demonstration of collaboration between scientists in the international field which is concerned with health problems that urgently have to be solved. I hope this will not only motivate those scientists who are already committed to go ahead working in this field but will also activate young scientists to go into this important field of research.

October 2004

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Foreword

Ce document que vous avez entre vos mains est le témoin d’une coopération scientifique et technique exemplaire dans le domaine de la recherche en santé entre le Ministère de la santé de mon pays et l’Université de Heidelberg en Allemagne. Cette coopération autour du Centre de Recherche en Santé de Nouna (CRSN) a permis non seulement de créer de la capacité dans le domaine de la recherche en santé mais aussi et surtout de fournir régulièrement des informations aux décideurs pour mieux orienter notre politique de santé. Les publications contenues dans ce document illustrent la richesse et la qualité de la production scientifique du CRSN de 1999 à 2004.

C’est pourquoi, je voudrais exprimer ma gratitude à toutes les institutions de coopération scientifiques aussi bien nationales que bilatérales ou multilatérales qui ont apporté leur contribution à l’édification de ce centre de recherche qui constitue aujourd’hui une référence au Burkina Faso et dans la région. Je ferai une mention spéciale pour le réseau des sites de surveillance démographique dans les pays en développement appelé INDEPTH. Par son dynamisme, INDEPTH a permis un échange scientifique fructueux entre le CRSN et d’autres institutions similaires en Afrique, en Asie et bientôt en Amérique Latine.

Enfin, j’exprime le vœux qu’à l’instar du Centre de Recherche en Santé de Nouna, notre volonté de faire de la recherche en santé un outil au service du développement devienne une réalité de tous les jours.

Prof. Jean Gabriel OUANGO
Secrétaire Général du Ministère de la Santé du Burkina Faso
Octobre 2004
Foreword

The CRSN is a remarkable success story. Hundreds of kilometers away from the capital or any other major city, the Center was built up from scratch through the firm commitment of the Burkinian Ministry of Health and the University of Heidelberg. With the generous and far-sighted support of the Land of Baden Württemberg, it has established itself as a regional center of excellence for health research. It has assumed a leading role in the network of some 30 similar research institutions from the south (INDEPTH). The research output described in this book speaks for itself.

More than any other comparable research center we know Nouna has consequently pursued a holistic view of research, combining disciplines that rarely “talk” to each other: anthropology and molecular biology, geography and economics, mathematics and sociology, demography. The term from the improving health: from gene to society is not a euphemism but has become a strong leitmotif for the Center. The demographic surveillance system, meticulously and rigorously refined over the years not only provides a precise population denominator for studies, but also serves as a platform bringing different strands of research together.

Setting up research capacity in many relevant disciplines might be considered in our modern days as “lack of focus”. However, it was done not only by choice, but also dictated by necessity, since the health problems poor countries face cannot and will not be solved through single “silver bullet” interventions, but only through the carefully orchestrated innovations in health systems and interventions. Since the research focus “Tropical Medicine” (TMH) and the special research grant (SFB) “Control of Tropical Infectious diseases (SFB 544)” at Heidelberg University try to achieve a similar interdisciplinary approach to health research, there clearly is a meeting of the minds. There is also a strongly personal aspect to this collaboration: many researchers on both sides became friends over the long years of collaboration. This adds the dimension of the heart to that of the mind and makes this collaboration so durable and creative.

We would like to thank the staff of the Center, particularly Dr. Bocar Kouyaté; its visionary leader, congratulate them on their success against many odds and look forward to an ever closer cooperation.

Heidelberg, October 2004

Prof. Rainer Sauerborn
Speaker of TMH Research Focus

Prof. Hans-Georg Kräusslich
Speaker of the SFB Collaborative grant
Preface

The constitution of the WHO states in the first article: “The objective of the World Health Organization shall be the attainment by all peoples of the highest possible level of health”. In few places of the world this aim has been achieved. For Sub-Saharan Africa in particular, there is a long way to go. And within Sub-Saharan Africa some countries are better off than others. Burkina Faso is one of the poorest countries with high population density and limited natural resources resulting in poor economic prospects for the majority of its citizens.

Fortunately, there are efforts of various kinds to improve the situation. In the course of globalisation, most of these efforts are international. This book describes the results of a collaboration between health scientists in Nouna / Burkina Faso and Heidelberg / Germany. It gives an example of systematic efforts to develop research partnerships and structures for capacity building between an institution in the north (University of Heidelberg, Germany) and a developing country in the south (Burkina Faso). It shows how such a collaboration can contribute to achieve the objective of the WHO as stated above. Some practical difficulties that arise for research institutes in developing countries are described in a letter to THE LANCET in the year 2000:

Sir—In response to Richard Horton’s report on building research capacity in less-developed countries,1 we draw on our collaborative experience with a health research centre of rural west Africa. Burkina Faso is one of the poorest countries in Africa, and research is not very high on the national agenda. There is generally little motivation for physicians to engage in research, and despite the north-south exchange of scientists, remains poorly developed. Thus, we are encouraged by the decision of the Ministry of Health of Burkina Faso to create and support the Centre de Recherche en Santé de Nouna (CRSN); a national centre of excellence for biomedical and health-systems research.

The CRSN was established in October 1999, in the small town of Nouna in north-western Burkina Faso. The centre is financially, logistically, and educationally supported through a training arrangement with an alliance of scientific groups working on tropical disease control at the University of Heidelberg, Germany. Electricity reached Nouna only 3 years ago and access to telephone lines is limited. Although the capacity of the CRSN has grown substantially to roughly 30 staff members, including nine national senior scientists and several regularly visiting scientists from collaborating institutions in Europe, the communication conditions remain largely inadequate. People working at the centre and all their activities rely on only one telephone line, which is generally busy from the early morning to the late evening. Moreover, electricity supply and internet access are frequently interrupted, and new machinery can only be acquired in the scarce limited technical infrastructure of the region. Thus, in reality, our scientists usually have access to the internet only during eight hours, if at all. Finally, most scientists from French-speaking countries face major language barriers that could be overcome only by English-language courses, as well as funding for participation in international conferences on research.

We agree that the internet and e-mail has greatly improved the working conditions of scientists in sub-Saharan Africa. However, there remain substantial room for improvement of technical infrastructures and enhancement of the contents of joint ventures in research before scientists in less-developed countries have roughly equal opportunities for research and publication as those in more-developed countries, and before a truly mutual exchange of information is possible.

M. Bassile and colleagues (Centre de Recherche en Santé de Nouna, PO Box 99, Nouna, Burkina Faso) and Department of Tropical Hygiene and Public Health, Ruprecht-Karls-University, Germany


Five years after the official founding of the Nouna Health Research Center (CRSN) it is time to look back, and to look forward for new projects to come.
What has been achieved so far was only possible with the technical support of INDEPTH Network and the financial support of institutions and foundations. The Ministry of Research, Sciences and Art of the federal state Baden-Württemberg, Germany, generously contributes to maintain the infrastructure of the CRSN. A special research grant by the German Research Foundation (DFG) with the title “SFB 544 - Control of Tropical Infectious Diseases” has been in place for almost sixth years. It greatly helped to conduct projects in different fields of health sciences such as clinical research, epidemiology and health systems research.

This book is structured into five chapters beginning with an introductory chapter. In the first section of this chapter, the leading persons who build up and maintained the collaboration between Nouna and Heidelberg describe the history from 1970 until today. This is followed by a brief description of the data and information exchange between both institutions. The next section describes the INDEPTH network in which Nouna is embedded. The last two sections of this chapter give a more general overview on specific ethical issues which arise in health research in developing countries, and on routine health information systems. Chapter two is devoted to clinical research and begins with an overview on studies on malaria and AIDS which were performed or are ongoing. The other subsections are reprinted papers from this area, presented in chronological order of publication. Similarly, chapter three deals with epidemiological studies, with an introduction and subsequent reprints of scientific publications, and chapter four which gives scientific results on health system research. Finally, chapter five presents results of and ongoing studies on biochemistry-based health care research which will gain further importance in the next future of this collaboration.

We thank our colleagues from both institutions who supported us in all stages of this project and they are too many to be mentioned here by name. The secretarial support of Ms Elke Braun van der Hoeven is gratefully acknowledged, as well as the editorial support by the Springer Verlag, and the excellent collaboration with the editor, Mr. Clemens Heine. We also thank the publishers of the articles reprinted in this volume who generously allowed the reproduction. We hope this book will motivate others to build up, to maintain and to further develop collaborations of similar nature.

**Bocar Kouyaté, Nouna, Burkina Faso**

**Heiko Becher, Heidelberg, Germany**

**October 2004**
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