

annual report 2010



**INDEPTH Network** Better Health Information for Better Health Policy

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## MESSAGE FROM BOARD CHAIR (Till September 2010)

My message this year is two-fold: a recap of the just ended year and a farewell message to the formidable team on the INDEPTH Board of Trustees.

2010 marks my third year and the final one of my tenure as Board Chair. As I prepare to step down from the Board and also as Chairperson, I do so with mixed feelings: sadness but perhaps more with a sense of fulfilment as I look back on three solid years of productive service.

Much achieved, much accomplished and yet so much more still waiting to be tackled.

First of all I take this opportunity to welcome aboard the new team of Board members who will serve under their able chairperson, Dr Kayla Laserson. There is not the slightest doubt in my mind that the current members have more than what it takes to guide INDEPTH Network through and into new and exciting directions and projects.

Over the last one year, considerable effort has gone into working to develop research in new and relevant areas. This has pushed forward the agenda of ensuring that meticulous detail and high standards in the conduct of research – (the trademark of INDEPTH) are upheld. I know it will take more effort on all INDEPTH member centres to sustain the high standards, but I have

every confidence that we will all rise up to that challenge and even excel beyond those standards.

Working and Interest Groups pursued their areas of interest with selfless effort and passion, bringing together interesting perspectives from experienced scholars as well as young scientists with the requisite zeal to acquire knowledge. In the process, INDEPTH has continued to mark its footprints in health research in Africa, Asia and globally.

Worthy of comment is the historic 10th Annual General Meeting (AGM) held in Accra in September 2010, which brought together over 300 scientists from 33 different countries spread across the five continents of the world. It will surely go down in the history of the network as one of the very best and perhaps the most productive (without prejudice or bias) scientific gathering to be organized in a developing country.

Soon after the spectacular AGM, and almost as a direct consequence of its success, membership of the INDEPTH Network grew in number from 38 to 42 Health and Demographic Surveillance System (HDSSs) in 19 countries, with potential members waiting on the sidelines to apply – before a most commendable development indeed.

Our research initiatives continue to demonstrate to policy makers the need for and importance of pursuing evidence –based policy formulation. My hope is that despite difficulties and challenges, INDEPTH Network will strive to ensure that the findings from its high quality research will increasingly affect and influence policy at all levels and in as many of its member countries as possible.

Data analysis and sharing across centres and within and without the network also registered much progress, with some centres making data available through the INDEPTH Shared Access Repository (iSHARE) project. I am confident that there will be more progress in the ensuing years.



Dr. Seth Owusu-Agyei  
Board Chairman, INDEPTH Network  
Director, Kintampo HRC,  
Ghana

## MESSAGE FROM INCOMING BOARD CHAIR (FROM OCTOBER 2010)

I wish to thank all of the INDEPTH Centre Leaders and my fellow Board members for giving me the opportunity to serve INDEPTH in such a special and significant capacity. I feel honoured as the first woman to chair the INDEPTH Board. I know I can count on a team that will certainly steer the INDEPTH ship to greater successes...

I am keenly aware that I am stepping into the shoes of a very dynamic and energetic immediate past chairman. I am also mindful that today INDEPTH stands at a very crucial point in its lifetime as the critical need for and relevance of its work in setting national, international and global health and developmental policies and agendas is more pronounced than ever before.

The urgent need for funding at a time when sources of funding are not readily available should ordinarily make me nervous. However I am encouraged by the leadership of the current Executive Director, the secretariat team and INDEPTH's track record and ability to raise funds. I am optimistic that the proposals to be submitted in the coming year will be favourably considered by our dedicated and committed funders, who have brought INDEPTH this far and continue to make significant contributions towards our research activities and overall growth.

My immediate thoughts go to the major Strategic Award Proposal that is being prepared for submission in 2011:

**“Informing global efforts to improve the health and wellbeing of low and middle-income populations: The INDEPTH Network of Health and Demographic Surveillance Systems”**. Much work has

gone into the preparation of this proposal, and many of my colleague Centre Leaders, members of the Scientific Advisory Committee, and members of the INDEPTH Secretariat are making very valuable inputs. I am fully convinced that the focus on our demographic core work producing data on: births, fertility, migration, and mortality, linked to the innovative strategic directions that the proposal seeks to explore will be a major attraction to the funder and also provide the necessary leverage for other interested strategic partners to come on board. I am also excited about the Network's continued initiatives in data linkage, child mortality, evaluation of the impact evaluation of interventions, and the ever increasing and collaborative work linking demographic data, routine health facility data, and health outcomes across Centres. The Board is fully committed to supporting INDEPTH's push to receive and share mortality data, including cause of death data, in a timely fashion for the global community to see and use.

At various levels, much of INDEPTH's

research is proving to be in great demand and every effort will be made under my tenure to increase the visibility and use of the INDEPTH platform, to ensure increased engagement with international and national policy makers, and to reach out to local communities where INDEPTH's impact should be felt the most.

To my colleagues on the Board, all INDEPTH Centres, the SAC and the INDEPTH Secretariat, I know it will be a fruitful year and I look forward to working with each and every one of you.



Dr. Kayla Laserson  
Director, KEMRI/CDC  
Kisumu HDSS, Kenya  
New Board Chair

## MESSAGE FROM EXECUTIVE DIRECTOR

There is so much to recall in the past year and I would not like to belittle or leave out any of the several landmarks that were recorded. At the same time also time and space constraints will not permit me to mention everything and as such I am compelled to restrict myself to the major events.

The past year further demonstrated in many ways the value and maturity of INDEPTH. Not surprisingly my first comment is on the successful 2010 AGM which firmly endorsed the uniqueness of INDEPTH Network as an initiative of scientists from low-middle-income countries fully engaged in advancing research and promoting its application to improving the living standards of populations in their countries. The high standards of this 10th AGM (quantitative and qualitative) is indicative of the extent to which INDEPTH has become recognised as a constructive voice in the conduct of health research.

The two large INDEPTH projects: Malaria Clinical Trials Alliance (MCTA) and INDEPTH Effectiveness and Safety Studies of Anti-malarial Drugs (INESS), have and continue to prove how the involvement of our indigenous scientists can add more value to efforts at dealing with malaria and expediting anti malarial drug deployment.

MCTA in particular has recorded enormous and significant changes in the malaria treatment landscape in the four years of its existence, resulting in the availability of state-of-the-art facilities at the various trial sites. It has also strengthened clinical trial capacity through shared results of real on-the-ground trial activities and best practices.

Now in its second year of implementation, the INESS project is assiduously working out a platform that will systematically enable the assessment of the effectiveness and safety of new malaria treatments so as to reduce the time gap between the licensing of a new drug and its introduction into the health system. I eagerly look forward to the progress that will be made in the subsequent years.

In the past year INDEPTH paid particular attention to capacity strengthening in the area of data analysis and also took data sharing very seriously by further expanding the iSHARE project with more centres signing on to the platform as a demonstration of their readiness to generate and share quality data.

We are positively expectant of the day INDEPTH will be able to announce mortality rates (for example) in its entire member centres simultaneously, and that day is surely coming considering the tremendous



strides being made on the INDEPTH **PopStats** project which would be launched in 2011.

INDEPTH publications also increased in number during the year 2010, a vindication of our decision to move away from monographs and concentrate more on supplements.

The list of achievements goes on and on. Not everything can be commented upon in such a short message, but none-the-less I still would want to add that there is much excitement at the Secretariat over the new areas that we hope to venture into such as Antibiotic Resistance, Indoor Pollution and Climate Change among others.

As I bring the curtain down on the year, permit me to register my appreciation to all INDEPTH members for a truly rewarding and productive year. Nothing could have been achieved without our collective efforts and I am happy that such effort was always forthcoming whenever needed.

Our funders and other strategic partners deserve more than a pat on the back. Some have been supporting us since the inception of INDEPTH and are still willing to move forward with us. We appreciate your continued commitment and pledges to remain with us through thick and thin.

The INDEPTH Board of Trustees has in no mean way helped to ensure that there is efficient and effective co-ordination of affairs. To them, members of the Scientific Advisory Committee and Secretariat staff I say while it has been worth the effort we must still take advantage of the larger opportunities that beckon to us in the coming years.



Dr. Osman Sankoh  
Executive Director, INDEPTH Network  
Accra, Ghana

## **INTRODUCTION**

### **INDEPTH's Vision**

INDEPTH will be an international network of longitudinal demographic research institutions that provides health and demographic data to enable developing countries set health priorities and policies based on the best available evidence and to guide the cost-effective use of tools, interventions and systems to ensure and monitor progress towards national goals.

### **INDEPTH's Mission**

To harness the collective potential of the world's community-based longitudinal health and demographic surveillance initiatives in low and middle income countries to provide a better understanding of health and social issues and to encourage the application of this understanding to alleviate major health and social problems.

### **INDEPTH's Strategic Objectives**

1. To support and strengthen the ability of INDEPTH centres to conduct longitudinal health and demographic studies in defined populations
2. To facilitate the translation of INDEPTH findings to maximise impact on policy and practice
3. To facilitate and support research capability strengthening relevant to INDEPTH activities
4. To stimulate and co-ordinate multi-site applications to research funding bodies for specific research activities

### **INDEPTH's Key Strategies**

During the year 2010, the INDEPTH Secretariat continued with its key strategies of promoting effective running of the Network by facilitating knowledge sharing among centres, helping to disseminate data and research outputs, convening analysis and capacity building/strengthening workshops and coordinating multi-centre research collaborations. Additionally, the Secretariat continued to facilitate cross-centre scientific visits, promote on-site training courses and internships and intensify efforts to standardize research methods and tools. The secretariat also continued to support website development, dissemination of models for survey design, data processing and analysis and quality control. These were complemented with continuous efforts to establish and build collaborations with other institutions, particularly the universities, in order to harness their comparative advantage in training for the benefit of member centres.

## WORKING GROUPS

INDEPTH effectively utilises its Working Groups to venture into areas of interest to the Network. These groups are expected to act as generators and incubators for multi-centre research. All HDSS members are encouraged to identify issues, conduct research, perform analyses, and help shape the future of the Network. Several working groups were successful in raising funds to implement projects. These are described under Funded Projects.

### I. Adult Health and Ageing

After several years of careful and rigorous field research the 1st phase of work on Adult Health and Ageing concluded with the publication of a major supplement entitled **“Growing Older in Africa and Asia: Multicentre study on ageing, health and well-being.”** This work was borne out of a collaboration between INDEPTH and WHO modelled along the lines of the WHO multi-country Study on Global AGEing and Adult Health (SAGE). The project involved collection of primary data from eight health and demographic surveillance systems centres in Africa (Nairobi, Agincourt, Ifakara and Navrongo HDSS centres) and in Asia (Purworejo, Vadu, Matlab and Filabavi HDSS centres).

Upon the conclusion of the field work the

scientists spent close to two years carefully analysing the data which culminated in the publication of the supplement in October 2010. A total of ten papers were published in the supplement with foreword written by Dr. Osman Sankoh, Executive Director, INDEPTH Network and Ties Boerma, Director, Health Statistics and Informatics, WHO. Dr. Richard Suzman, Director, Division of Behavioural and Social Research, NIA/NIH, provided his perspectives as guest editor.

Topics treated in the supplement included the health status and quality of life of adults, self-assessed health, health inequities among adults and the elderly in both rural and urban populations among others.

This project provided for the first time an empirical analysis of determinants of health related to adults and elderly populations at the individual and household level in low-and middle-income countries. It also provided an opportunity for testing methodological innovations in assessing health such as the vignettes. The data used for the publication of the supplement were simultaneously published as freely public access data available through the Global Health Action (GHA) website [www.globalhealthaction.net](http://www.globalhealthaction.net)

### ii. Migration and Urbanisation

In 2010 following the review and approval of

a proposal it submitted, the Migration and Urbanisation Working Group (MUWG) successfully launched the 2nd phase of its work: "Multi-centre Analysis of Dynamics in Migration and Health (MADIMAH). This new phase is a sequel to the 2009 work which resulted in the publication of the first monograph entitled *"The Dynamics of Migration, Health and Livelihoods: INDEPTH Network Perspectives"*.

## **SCIENTIFIC PRODUCTS**

### **I. INDEPTH Fertility Monograph**

Work on the fertility monograph took off in earnest with a launch in 2008 and saw many centres expressing interest in contributing data to the monograph. The monograph is utilizing existing data collected at the centres to understand the dynamics of fertility in Africa and Asia. Some progress was registered under the leadership of Jean-Christophe Fotso of the Nairobi Urban HDSS (Kenya). The editorial group held a few meetings with the centres. A number of manuscripts were reviewed and by the end of 2009 fourteen (14) of them had been revised and resubmitted. With its longitudinal data from the INDEPTH centres the monograph will contribute to understanding long-term trends and levels of fertility across the developing world. The

editorial group included William Muhwava (Africa Centre, South Africa), Clifford Odimegwu (Agincourt HDSS MRC/Wits, South Africa) and Abdur Razzaque (Matlab, Bangladesh). Ayaga Bawah of INDEPTH Secretariat also assisted with additional technical support.

### **ii. Cause of Death Supplement**

During the year 2010, work was revived on the cause of death monograph which had earlier come to a standstill. With support from the Secretariat most of the centres that initially presented chapters revised their chapters for publication as a special supplement.

### **iii. Second Edition of INDEPTH Mortality Monograph**

Since its publication in 2002, the first INDEPTH Monograph on Mortality has generated a lot of interest and has been widely cited. Five years later, in 2007, INDEPTH constituted an editorial team to revise the 2002 monograph. A template was prepared and a call sent out to centres to elicit interest in contributing data for the project. There was overwhelming response as 27 centres immediately expressed interest and submitted data.

The additional data collected would further enrich the new volume, especially since the data reflects trends of mortality in addition

to levels and patterns. The editorial group with strong support from the Secretariat convened several meetings to work on the data for a second edition of the monograph. This edition will have separate chapters on child and adult mortality, as well as causes of death at the participating centres.

Preliminary results from this work were presented at various international conferences, including the Population Association of America (PAA) meeting in Detroit, USA, the International Union for the Scientific Study of Population (IUSSP) in Marrakech, Morocco, as well as at the 9th INDEPTH AGM in Pune, India. These meetings provided good feedback on the project.

In 2010, a series of analyses meetings were conducted including a major workshop in June where a total of 33 datasets were submitted for analysis by scientists from over 25 member centres. When completed two strategies are envisaged: a condensed journal article for publishing in a high impact scientific journal and a monograph with all centre specific chapters fully elaborated.

#### **iv. Cause of Death Determination**

Considerable efforts have been made to speed up work in the area of the determination of causes of death based on verbal autopsy data. In 2010 various interventions, including provision of small

sub-grants to member centres to speed up the coding of their data.

For standardisation purposes the Secretariat encourages the use of InterVA, a tool developed by Prof. Peter Byass of the University of Umeå, Sweden and team to help determine causes of death using Bayesian probabilistic methods. The Secretariat funded a workshop on this tool and funded the centres to help code their symptom-level data to allow for the use of the InterVA tool.

## **FUNDED PROJECTS**

### **I. Sexual and Reproductive Health**

Several reproductive health and family planning interventions have been implemented in Africa and elsewhere with the aim of improving reproductive health and survival (maternal and child). Yet, little is understood about their demographic and health impact in Africa. This is due to the lack of requisite data to evaluate their impact.

INDEPTH's potential to utilize its Health and Demographic Surveillance Systems (HDSS) member centres in Africa to evaluate the demographic and health impact of reproductive health and family planning interventions is enormous since longitudinal

The following projects were funded:

Title	P.I	HDSS
<i>Prevalence and determinants of unwanted or mistimed pregnancies among HIV negative versus positive women in Western Kenya</i>	Isabella Nyang'au	Kisumu HDSS
<i>Trends and determinants of sexual and reproductive health behaviors of adolescents in Magu HDSS, Magu, Tanzania</i>	Doris Mbagu	Magu HDSS
<i>Fertility, Family Planning, Child Health and Survival, and Household Economic Outcomes</i>	Dr. Jean Christophe Fotso	Nairobi HDSS
<i>An investigation of the relationship between fertility and economic wellbeing in the Kassena-Nankana District of Ghana</i>	Dr. Cornelius Debpuur	Navrongo HDSS
<i>Adolescent Reproductive Behaviour and Fertility in the Rakai HDSS Area</i>	Tom Lutalo	Rakai HDSS

data collected at the centres provide a unique opportunity to do such evaluation in a much more rigorous manner than has been the case so far.

In order to utilize existing and, to a limited extent, collect additional data where necessary to examine the impact of family planning and reproductive health interventions in selected African HDSS centres, a call was put out by the secretariat in 2010.

This work is being funded through a grant from The William and Flora Hewlett Foundation.

#### **ii. Demographic and Health Transition at INDEPTH member Centres**

The shift from high to low levels of mortality and fertility now famously called the demographic transition, occurred over a century ago in the developed world. The transition, it is argued, started with a drop in mortality rates to be followed later by fertility rates. The decline in both mortality and fertility in the developed countries of Europe and North America has been attributed to an increase in socioeconomic development and its resulting spin-offs. Associated with the demographic transition is the epidemiological transition.

The INDEPTH Network utilizing its network of centres in Africa, Asia and Oceania, is undertaking a systematic study of demographic shifts in the developing world. The project has the following objectives:

1. Explore demographic and health transitions at selected INDEPTH centres
2. Document changes in health and demographic transitions using data from the participating centres.
3. Compare transitions between the African and Asian centres and also between different sub-regions in Africa.
4. Compare the experience in the developing country-settings to what happened in the developed countries at the time of their transition.
5. Examine the implications of the transitions on the health care systems (to consider the possible cost implications: infrastructure - human and physical; health financing; education awareness and promotion implications).

There was an analysis workshop in June and a progress report was presented at the 2010 AGM in Accra. Funding for the project was through a grant from the International Development Research Centre (IDRC), Canada.

#### **iii Vaccination and Child Survival**

The vaccination and child survival project led

by Professor Peter Aaby of Bandim HDSS, Guinea Bissau, initiated a number of activities in 2010. These included an inventory of vaccination data collected by each of the participating centres. A workshop was organized to discuss new data that needed to be collected to allow for measurement of the project objectives.

The project is the success of the Vaccination and Child Survival Working Group to examine the impact of vaccinations on child survival at INDEPTH HDSS. DANIDA has provided two-thirds of the funds needed for a project entitled ***“Monitoring and assessing the impact of vaccinations and other childhood interventions for both boys and girls”***. The remaining one-third of the funds was provided by the European Union through its Commission.

The initial centres that constituted the Working Group are Ballabgarh and Vadu (India), Navrongo and Kintampo (Ghana), Matlab (Bangladesh), Nairobi and Kilifi (Kenya), Nouna (Burkina Faso), Farafenni (The Gambia), Iganga/Mayuge (Uganda), Rufiji and Ifakara (Tanzania).

As part of the project, five scientists will be jointly enrolled to pursue PHD courses through a local university in their home countries and a counterpart university in Denmark.



#### **iv. INDEPTH Effectiveness and Safety Studies for Antimalarials in Africa (INESS)**

The increased production of efficacious medicines in particular antimalarials need to be complemented with efforts to ensure that these drugs will be up taken and used properly in African health systems. INESS is a newly formed platform that will facilitate this mission by generating a body of evidence on phase IV of antimalarials that will help policy makers make an informed decision. Thus the objectives of INESS are:

- To develop and maintain Phase IV safety and Effectiveness Studies Platform in Africa
- To assess the effectiveness of new malaria treatments and its determinant in real life setting in Africa.

The consortium consists of Health and Demographic Surveillance Systems of (Navrongo, Kintampo, Dodowa, Rufiji, Ifakara, Manhica and Nouna), Swiss Tropical Institute (STI), Centre for Disease Control (CDC), School of Public Health (SPH)-Ghana and INDEPTH Network. In 2010 a number of activities were carried out both in terms of setting up the platform and carrying out research/activities. These activities are: Strengthening of Health and Demographic Surveillance centres (HDSS), Research on health system effectiveness, Safety monitoring, Training and capacity building, Advocacy and media sensitization, Governing structures and management and

Collaboration and linkages.

One of the main objectives of INESS is to strengthen the HDSS role in health systems observatory. A number of activities were carried out in 2010 to develop the HS-HDSS linkages ranging from collection of biometric data at household level to implementation of the health facility linkage in the health facilities. Research in health systems effectiveness in relation to antimalarials is the main activity of INESS. This complex undertaking is intended to generate data that will eventually be used to calculate the conditional probabilities for determining the population effectiveness of antimalarials. The modules implemented include; access and costing, population parasite prevalence, targeting and provider compliance, patient adherence, community acceptability and therapeutic efficacy.

The current unmet need in pharmacovigilance is a serious bottleneck in determining and establishing `the safety profiles of especially new drugs. INESS has seized the opportunity to address this and in 2010 several trainings were undertaken to improve the capacity for safety monitoring on both spontaneous reporting and Cohort Event Monitoring (CEM). In order to maintain and sustain the INESS platform in future, it is equally important to build a body of professionals who will be able to carry out

as well as train others in phase IV studies. In this regard in 2010 a number of Trainer of Trainers workshops (TOT) were conducted for the different modules using set tools and SOPs.

Subsequently, the body of evidence generated from the platform needs to be utilized in order to effect policy changes, without which, all this work would be redundant. Advocacy and communication forms an important aspect of INESS. In 2010 a number of activities were carried out in the area of advocacy and communication. One major activity was the training of journalists from Ghana and Tanzania in the area of malaria reporting in the print and electronic media. Lastly, INESS collaborated with a number of stakeholders with similar interests such as MMV, AMF, WHO-TDR, DNDI, RBM, MIP etc.

#### **iv. Epilepsy**

Under the leadership of Prof. Charles Newton of Kilifi Health and Demographic Surveillance System centre, five INDEPTH centres comprising Kilifi (Kenya), Agincourt (South Africa), Iganga-Mayuge (Uganda), Kintampo (Ghana) and Rufiji (Tanzania) collaborated to undertake studies to examine the burden of epilepsy at the centres. The study which is currently in progress is funded by the Wellcome Trust. The project is an example of an INDEPTH

study initiated by a centre-scientist.



A field worker colle

### **INTEREST GROUPS**

The Secretariat has encouraged the establishment of various groups proposing cross-site activities. The Secretariat normally funds one or two of these groups that demonstrate a high potential to raise funds, to convene proposal development workshops. The following are some interest groups that have demonstrated great promise:

#### **I. Antibiotic Resistance**

In 2010 this interest group conducted two major workshops to start the process of developing a proposal. The first workshop hosted by Chakaria centre was held in Bangladesh to discuss and define key issues of importance in the area of research on antibiotic resistance. Subsequently, a second workshop comprising a smaller

group was held in Mozambique to further deliberate on the questions and develop a Letter of Intent (LOI) which was eventually formulated into a full proposal for funding. Currently the proposal is at an advanced stage.

Hosted by the Manhica HDSS on behalf of INDEPTH Network and ReAct, this workshop took place from the 27th to 28th October 2010. The main objectives of the workshop were to review and strengthen the objectives and methodologies and to develop a full pre-proposal on antibiotic resistance contained in the letter of intent (LOI).

In all 11 participants attended. The following INDEPTH members and collaborators were represented at the workshop:

Chililab (Vietnam), Kintampo (Ghana), Kisumu (Kenya) and Manhica (Mozambique),

The collaborating institutions were: APUA (USA), CVD (Mali), EARSS/ReAct (Netherlands) and CRESIB (Spain).

The discussions centred on the use of antibiotics, the emergence of antibiotic resistance in community and hospital settings that are associated with genetic resistance determinants, disease burden

associated with antibiotic resistance and assessment of antibiotic quality.

At the end of their deliberations the group decided to include the following objectives in the final pre-proposal:

- Assessing community perceptions, health seeking and treatment behaviour regarding antibiotic use;
- Assessing the quality of antibiotics and the sources through which drugs are prescribed and dispensed;
- Strengthening laboratory capacity in the area of microbiology diagnostics;
- Assessing the antimicrobial resistance in community and hospital settings;
- Identifying genetic relevant resistance determinants of particularly public health importance;
- Determining disease burden associated with antibiotic resistance (morbidity, mortality, and economic impact).

Under the scientific guidance of Dr. Andreas Heddini work on the antibiotic resistance was borne out of the fact that increasing resistance to the most commonly used and affordable first line antibiotics has become one of the important health threats of the 21st century. This is because antibiotic resistance leads to treatment failures, increased morbidity and mortality and escalates the already high health-care costs. The problems associated with antibiotic

resistance are particularly aggravated in low- and middle-income countries, where the high infectious disease burden is worsened by erratic access to antibiotics.

Monitoring antibiotic resistance through INDEPTH centres will provide a unique opportunity to obtain the much needed data from these parts of the world where the situation is largely unknown.

#### **ii. Chronic Obstructive Pulmonary Disease (COPD)**

The group's work is premised on the fact that exposure to indoor pollution is a major risk factor in a significant number of respiratory tract infections, asthma, lung cancer, chronic obstructive pulmonary disease (COPD), cataract and blindness. Amongst these, acute respiratory infections amongst children and COPD amongst adults seem to be of major concern. Whilst tobacco smoking is the major risk factor for COPD in the western world, in developing countries the major risk factor is believed to be exposure to biomass fuel though this has not been thoroughly studied in African and South-Eastern countries.

Given that COPD mortality is predicted to almost double by the year 2030, there is a dire need to conduct such epidemiological

studies in these regions of the world to determine the true burden of chronic respiratory diseases due to exposure to indoor air pollutants. This will help deepen understanding of the burden of non-communicable chronic respiratory diseases, and ultimately provide information to assist policy makers to devise strategies for their prevention and management.

#### **iii. Health Systems Research**

Health systems research has gained considerable prominence in the recent past, given the importance of health systems factors on effective health delivery. WHO defines health systems to broadly include "all the activities whose primary purpose is to promote, restore, or maintain health" It thus includes the personnel, institutions, commodities, information, financing and the governance strategies that support the delivery of prevention and treatment services. Achieving the MDGs thus depends to a large extent on effective functioning health system.

Unfortunately developing countries face many challenges when it comes to their health systems. It is within this context that INDEPTH has placed high premium on health systems research. As part of its health systems research agenda and with support from IDRC Canada, INDEPTH has developed a proposal to look at household

healthcare financing. The proposal is to pilot test how the HDSS could be utilized to monitor need for, utilisation and access to care at the household level. Jane Goudge, affiliate of Agincourt HDSS and James Akazili of the Navrongo HDSS centre, will lead the initiative if funded.

The Interest Group met at the Accra AGM with John Alkpa as coordinator. The meeting at the AGM deliberated on areas of research to focus on.

Currently, fifteen INDEPTH centres across Africa and Asia have developed a comparative cross-country protocol to undertake longitudinal investigation of household costs of illness and livelihood impact in eight low-and-middle income countries in Africa and Asia with varying health-care financing and social protection mechanisms. The aims are to:

1. Measure the changing costs of illness (both the loss of income and costs of seeking care) for households at each DHS centre over a 3 year period;
2. Measure changing patterns of households' morbidity by disease and assess the relative importance of different diseases in generating cost burdens over the same period;
3. Examine households' interaction with the health system and assess livelihood impacts in order to understand the extent

and the process by which the costs of illness lead to impoverishment;

4. Determine the extent to which existing health financing mechanisms in each site (such as community based insurance, social health insurance, free care, exemptions, and cash transfers) protect households from impoverishment.

The interest group is looking for a funder.

### **iii. Tuberculosis**

The goal of the Tuberculosis (TB) Working Group is to conduct TB cross-site work which will maximize the use of the HDSSs to conduct TB research in developing countries. The initial work planned is to:

- Link TB patient registers to the HDSS data. Since most HDSS's do not collect TB related data, and especially from adults, a primary step is to link HDSS data and TB register data from the clinics in/around the HDSSs.
- Conduct initial analyses to determine how to proceed

In 2010, the Secretariat supported two meetings of the group: a workshop at Kisumu and a meeting at the 2010 AGM to discuss potential areas of work.

Subsequently the group developed a questionnaire to take inventory of what the centres were already doing, as well as facilities and human resource capacities

## 1. THE 10TH ANNUAL GENERAL AND SCIENTIFIC MEETING, ACCRA, GHANA

The 10th Annual General and Scientific Meeting of the INDEPTH Network, was held in Accra, Ghana from September 27th -30th, 2010 under the theme: *Lessons for the future direction in demographic and health research in developing countries*. The AGM was organized on behalf of INDEPTH Network by the Secretariat and the INDEPTH member centres in Ghana: Dodowa, Kintampo and Navrongo HDSS. The meeting offered an opportunity for INDEPTH Network to reflect on its achievements, challenges and the way forward.

### Opening Ceremony

The official opening was performed by the Ghanaian Minister for Environment, Science and Technology, Ms. Sherry Ayithey. In attendance were the Director General of the Ghana Health Service, Dr. Elias Sory, Dr. Johnny Gyapong, Director of Research and Development and Dr. Gloria Quansah-Asare, Director for Family Health, all of the Ghana Health Service.

The Minister, who represented the Vice-President of the Republic of Ghana, noted the Vice-President's satisfaction with the contribution of Ghana's three (3) HDSS Centres in shaping national health policies. She recommended the establishment of

HDSSs in the urban areas to conduct research into the health needs of those populations.



Members of the high table with the Ghanaian Minister for Environment, Science and Technology, Ms. Sherry Ayithey, delivering the opening speech

### Participants at the 10th AGM

Over 300 participants from 33 countries attended. Also participating were 18 young scientists whose participation was fully funded by the INDEPTH Network.

### Scientific Presentations



AGM 2010 Participants in Accra

INDEPTH's decision to shift focus from monographs to electronic publications was accepted as a more strategic move towards giving the Network's resources wider international reach. Following a very keen competition among five excellent research papers, the INDEPTH Prize of US\$3000 was awarded to the paper authored by Ndirangu J, Newell ML, Tanser F, Herbst K, Bland R. entitled *"Decline in early life mortality in a high HIV prevalence rural area of South Africa: evidence of HIV prevention or treatment impact?"*. The poster presentation entitled *"Levels and factors associated with homicide- related deaths in a rural South African Population"* by Otieno, G.; Tanser, F.; Edmore, M. of Kisumu Health and Demographic Surveillance System was adjudged as best poster.

#### **Poster Exhibitions and Centre Profiles**

Twenty six INDEPTH member Centres and potential members displayed centre profiles during the AGM, thus providing an opportunity for participants to view these profiles during breaks between the sessions. Young scientists sponsored by INDEPTH to the AGM purposely for poster presentations also displayed their posters.

#### **The General Assembly**

The General Assembly marked the peak of the AGM and it was attended by all participants with the Board Chair Dr. Seth-

Owusu Agyei steering affairs. The Executive Director, Dr. Sankoh on behalf of the Board and the Secretariat reported on the activities for the year 2010.

The Executive Director informed the General Assembly of the Board's decision that by virtue of the range and depth of discussions at the INDEPTH Annual General and Scientific Meeting, the annual event will henceforth be known as **INDEPTH SCIENTIFIC CONFERENCE**. To this end, the **11th INDEPTH SCIENTIFIC CONFERENCE** takes place from 24th to 27th October 2011 in Maputo, Mozambique.

The General Assembly ended with a commitment to take monitoring and evaluation (M&E) more seriously. Participants also agreed to increase cross-site studies, and encourage more centres to participate in the study on Adult Health and Ageing. Members were reminded that the data they hold is virtually a gold mine that can be put to various useful purposes.

#### **Election of New Board Members**

During the AGM the centre leaders held elections to elect new members to the Board of Trustees. At the end of the elections Dr. Margaret Gyapong, centre leader of the Dodowa Health and Demographic Surveillance System in Ghana



AGM 2010 Pa

was elected onto the Board of Trustees. All other members retained their positions. The new Board then elected Dr. Kayla Laserson centre leader of Kisumu Health and Demographic Surveillance System in Kenya as its Chair. She is the first woman to serve in that position having taken over from Dr. Seth Owusu-Agyei who had completed his term of service. Dr. Sanjay Juvekar from Vadu Health and Demographic Surveillance System in India was elected as Vice-Chair.

#### **Presentation of Service Awards**

At a dinner and awards night some personalities received high commendation for making significant contributions to INDEPTH by serving on the Board of Trustees and the Scientific Advisory Committee. The following received service awards in various categories:

- **Dr. Wendy Ewart** for outstanding contribution to the INDEPTH Network as chair of the Scientific Advisory Committee and member of the Board of Trustees 2006-2009.
- **Dr. Seth Owusu-Agyei** for outstanding contribution as Chair of the Board of Trustees 2007-2010.
- **Dr. Cheikh Mbacke** for outstanding contribution as member of the Board of Trustees 2006-2010.
- **Dr. Anand Krishnan** for outstanding contribution as a member of the Board of Trustees 2007-2009.

- **Dr. Thomas Williams** for outstanding contribution as a member of the Board of Trustees 2007-2009.
- **Prof. Bruce Macleod** for outstanding contribution as member of the Scientific Advisory Committee 2008-2010.
- A special recognition award was given to **Prof. David Ross** for initiating the acronym **INDEPTH**.

#### **Meet the Press**

At a press briefing the Director General of the Ghana Health Service, Dr Elias Sory, advised the media to be circumspect in handling research information and not rush to reproduce news stories from questionable sources that have the potential to alarm the public about diseases.



General Assembly in s



### Field Trip

As part of the AGM activities, participants visited the Dodowa Health and Demographic Surveillance System (HDSS) centre. The Director of the centre, Dr. Margaret Gyapong, gave an overview of the activities of the centre. Participants went into five groups based on the following specific interest areas: data management and how to link HDSS data with the health service information system, community entry and photo taking for the INDEPTH Effectiveness and Safety Studies study (INESS), interaction with the district hospital staff, surgeons and clients, operations of the national health insurance and the Community Health Compound (CHPS Compound).



Prof David Ross  
1st right  
admiring his award

### Concluding Remarks

On behalf of the funders group, Michael Chew from the Wellcome Trust praised INDEPTH for bringing together so many scientists from developing countries to share health research experiences and findings. He said the presence of representatives from all the Health and Demographic Surveillance Systems (HDSS) was a clear demonstration of the INDEPTH philosophy of being a vibrant network with great interconnections. He encouraged the scientists to continue researching important issues and areas that have the potential to change the lives of people.

Dr. Abraham Hodgson, centre leader for Navrongo HDSS, on behalf of the host centres attested to the success of the meeting and reiterated the importance of data sharing within the network.

Finally, other commentators including an independent assessor were in agreement that there had been excellent preparation towards the meeting. However, there was a general observation that there should have been more time for extensive, in-depth and provocative discussion of the presentations. It was recommended that the network should consider publishing more supplements and also make greater use of open access so as to give wider circulation to research outputs.



Journalists being briefed by Executive Director Dr. [Name] and the leaders of the three [Name] centres.

## **2. SCIENTIFIC ADVISORY COMMITTEE MEETINGS**

The Scientific Advisory Committee (SAC) provides guidance, scientific review and leadership to the Secretariat and the Board, by maintaining focus on critical health, population and social issues and areas of greatest potential impact. The SAC provides advice and recommendations on the research and development portfolio of the Network. In 2010, the SAC had one face-to-face meeting in Accra, Ghana, during the AGM in addition to two telephone conferences. A number of SAC members relinquished their membership in 2010 and were duly replaced. The SAC now has the full complement of its membership. The Secretariat will continue to tap into the knowledge and rich experience of the SAC members and hopes to get them more involved in scientific activities in the ensuing years.



**i. Scientific Development and Leadership Programme**

The flagship of INDEPTH's capacity strengthening initiatives is the Scientific Development and Research Leadership programme organized through the 18 months MSc. programme in population-based field epidemiology. This programme has since its inception supported 20 Msc. Students from 20 centres. Currently there is one continuing student (Ms. Doreen Nabukalu from Iganga/Mayuge HDSS in Uganda) scheduled to complete the course in June 2011, and two new students: Abdul Ramadhani from Ifakara HDSS (Tanzania) and Alfred Manyeh from Dodowa HDSS (Ghana) joining the programme. The programme is operated by the School of Public Health, University of the Witwatersrand, in Johannesburg, South Africa and focuses on five areas: epidemiology, biostatistics and data management, demography and other social sciences, information technology for demographic and health surveillance and leadership.

**ii. Developing a Masters level degree for HDSS data managers or Research Data Management (RDM) track**

Maintaining large scale prospective databases, data archiving, and data sharing in clinical, health and population studies requires well-trained data scientists with a

sound understanding of scientific principles and processes in clinical and population-based studies. Consequently, INDEPTH is currently building on its previous initiatives to develop a new track in Research Data Management (RDM). This track with the aim to develop research data management as a specialist qualification with specific reference to HDSS is expected to be embedded in the existing MSc. in Population Field-based Epidemiology.

Graduating data scientists from this programme are expected to lead data management teams, guide data management activities from data collection through to data processing, analyse data for publication including the developing data structures and applying data management software in collaboration with scientists during the various stages of a research project. To facilitate this new track, INDEPTH HDSS learning centres for the field-based component will be increased from three to five.

In furtherance of this programme, in November 2010 a curriculum development workshop was held at the School of Public Health, University of Witwatersrand in Johannesburg, South Africa with the following objectives:

- Outline the learning objectives to be achieved in the RDM track

- Identify the current MSc modules that should be included in the RDM track
- Identify the key new topics that should be included in the track

The outcomes of this workshop will inform the curriculum development of this new track.

#### **Moving Beyond the Masters to Doctoral Level Training**

As a medium to long-term goal to strengthen scientific research leadership and in line with expressed needs, INDEPTH is making every effort to create career paths for young HDSS scientists by facilitating their transition from MSc to PhD level training.

One INDEPTH fellow, Ms Rhoune Ochako, received a fellowship to pursue a PhD at the Regional Institute of Population Studies (RIPS), in Accra, Ghana under a cost-sharing agreement with RIPS.

#### **iii Workshops**

In 2010, the Secretariat placed much emphasis on strengthening the capacities of its member centres in order to enhance their scientific and administrative productivity. In this regard the following workshops were organized for member centres:

### **INDEPTH Data Quality Workshop**

INDEPTH encounters a lot of difficulties obtaining data from member centres for Network cross-centre projects. Even though centres generate and store large volumes of data, it is difficult to get data in a desirable or user friendly format. Because data are collected in heterogeneous formats and data systems, pooling them together into a common format has remained a major challenge. Over the past few years INDEPTH has grappled with defining an appropriate framework for sharing data collected at INDEPTH member HDSSs with the broader scientific community

INDEPTH has piloted several data sharing initiatives, the most recent being the INDEPTH Shared Access Repository (iSHARE), where data in different formats and from different sources are standardized through an ETL (Extract Transform and Load) process. In all these efforts, the common challenges identified are data management and data quality. INDEPTH has already invested significant resources to help address the data management deficiency of its members. The INDEPTH Data Quality workshop was organized to identify a framework for addressing the data quality problem, by defining a minimum set of data quality indicators that should be applied to data collected at member centres.

The workshop was held from the 11th to 13th May 2010 in Accra, Ghana with Dr. Abraham Kobus Herbst from the Africa Centre (South Africa) as the lead facilitator. He was ably supported by Mr. Ben Clark from Magu HDSS (Tanzania) and Professor Basia Zaba from the London School of Hygiene and Tropical Medicine.

The specific objectives of the workshop were to:

- create a common understanding of data quality in the context of health and demographic surveillance
- learn from the experience regarding data quality in the iShare initiative
- gain practical experience in measuring data quality in HDSS databases
- derive and agree on minimum data quality metrics for INDEPTH sites
- apply a minimum set of common data quality metrics to own HDSS database
- discuss the form and content of site data quality improvement projects and INDEPTH's role in promoting such

A total of 23 participants mainly demographers, data managers and HDSS scientists from 15 INDEPTH members, the Secretariat and two collaborating institutions attended. The following INDEPTH member centres were represented at this workshop.

Agincourt, Africa Centre & Dikgale (South Africa), Butajira (Ethiopia), Chililab (Vietnam), Dodowa, Knitampo & Navrongo (Ghana), Iganga (Uganda), Karonga (Malawi), Magu (Tanzania), Matlab (Bangladesh), Mekong (Cambodia) and Vadu (India).

### **INDEPTH OpenHDS Training Workshop**

The **OpenHDS project** is an IDRC funded initiative that aims at using demographic data to improve the quality of routine health reporting at the community level. It envisages collaboration between software developers from Ifakara Health Institute in Tanzania and University of Southern Maine in United States. The initiative seeks to develop an open source Health and Demographic System that will support the data management needs of multiple INDEPTH research centres.

Officially started in early January 2010, the development of OpenHDS was to be implemented in different phases, with each phase producing a product to be tested at selected HDSSs. The first phase which is core HDSS system development is to test the functionality of the HRS2 in a Web based environment with database independence. A workshop was organized to bring together data managers, demographers and software developers from HDSS centres to examine the system and provide feedback.

A three-day workshop was also held in Nairobi, Kenya from 24th to 26th November, 2010. The facilitators were Mr Henry Mwanyika (Ifakara Health Institute), Mr Tumaini Kilimba (Ifakara Health Institute) and Dr Ime Asangasi (University of Oslo, Norway).

The aims of the workshop were to:

- Introduce OpenHDS to participants
- Give participants a hands-on experience
- Demonstrate migration from HRS platform and one non-HRS platform to OpenHDS
- Agree on migration requirements so that interested HDSS members can prepare for pilot and eventual migration
- Obtain feedback from participants on how to improve OpenHDS
- Launch the OpenHDS Community

Participants who attended were from the following 11 INDEPTH member centres:

Chililab (Vietnam), Ifakara (Tanzania), Magu (Tanzania), Chakaria & AMK (Bangladesh), Mekong (Cambodia), Nairobi & Kisumu (Kenya), Nanoro (Burkina Faso), Navrongo (Ghana) and Vadu (India).



Workshop Participants

### **Malaria Clinical Trials Alliance (MCTA)**

The Malaria Clinical Trials Alliance (MCTA), a project of the INDEPTH Network has for the past five years been championing clinical trials capacity development in Africa with support from the Bill & Melinda Gates Foundation. This has enabled the conduct of the largest phase III malaria vaccine trial.

The first three years of MCTA focused on infrastructural development with a short-term goal of building human capacity such as GCP training, ACRP accreditation, malaria microscopy, diagnosis and cross-site fellowships to prepare for the conduct of the largest phase III malaria vaccine and drug trials. Research centres were supported to develop strategic plans and mentored by senior research scientists who have been involved in centre development.

The final years focused on long-term sustainability support such as

implementation of centres strategic plans for diversification of research portfolio, the establishment of phase I clinical trial facilities and long-term human capacity development.

Eleven sites which were selected to conduct the phase III RTS, S malaria vaccine trial were upgraded into centres with newly constructed clinical trials facilities. Most of the centres are now competitive enough to attract more research grants and to successfully conduct clinical trials that meet international standards. A number of these centres have increased their clinical trials working space to enable them meet GCP and GCLP standards in the last three to five years. MCTA provided a new entity that most of the centres never had before - appropriate periphery health facilities for recruiting or following up a large number of study participants within the community and also use the facility for routine general health care such as child welfare clinics, antenatal and curative health care services.

Three new Phase I facilities were provided for Kenya, Tanzania and Ghana to extend the scope of clinical development to have Phase I studies in humans.

In five years, MCTA witnessed tremendous improvement in interactions between the centres, the Ministries of Health and policy

makers, leading to the exchange of ideas and various forms of collaborations.

Some useful lessons have been learnt that can be built upon in a second phase of the project. First, the success story of MCTA has proved that even with limited resources, a great deal of success can be achieved through a guided infrastructure development and improvement in human capacity in the development of sites in sub-Saharan Africa. Through the MCTA intervention, the continent can now boast of African scientists that are leading efforts to eliminate and eradicate malaria and develop new drugs, vaccine and tools against the major diseases.



The expectations are that the second phase of the project will leverage the capacity that has been built by providing the much needed epidemiology transition data and platform for the evaluation and monitoring of the impact of malaria eradication strategies deployed so far.

The MCTA project team is grateful to the Bill & Melinda Gates Foundation for supporting such a groundbreaking venture in Africa.

The MCTA team is also grateful to the MCTA Board in keeping faith with the vision and to the sites; the MCTA team wishes them success in their future endeavours.



**i. Staff**

In 2010 the secretariat continued to increase in staff capacity with one recruitment:

Mrs Jeannette Quarcoopome (Ghanaian)  
Communications and External Relations  
Manager

**Secretariat Staff Retreat**

Secretariat staff, from the 9th to 10th April 2010 went to the Holy Trinity Spa at Sogakope in the Volta Region of Ghana for a retreat. Staff took the opportunity to work on the 2010-2014 Strategic Plan for the Network and also engaged in various team building exercises.

**ii. 2010 Board of Trustees**

The Board of Trustees provides overall oversight for the activities of the INDEPTH Secretariat and the Network as a whole. The Board membership in 2010 was as follows:

**Members of the Board**

Dr Seth Owusu-Agyei  
(Outgoing Chair)  
INDEPTH Centre Leader,  
Kintampo HDSS, Ghana.

Dr Kayla Laserson  
(Vice Chair and Incoming Chair)  
INDEPTH Centre Leader,  
Kisumu HDSS, Kenya

Dr Andreas Heddini  
Swedish Institute for  
Infectious Disease Control,  
Sweden

Dr. Cheikh Mbacke  
Senior Consultant  
Population Programme,  
Hewlett Foundation, Senegal

Prof. Peter Aaby  
INDEPTH Centre Leader,  
Bandim HDSS,  
Guinea Bissau  
Dr Sanjay Juvekar  
INDEPTH Centre Leader,  
Vadu HDSS,  
India

Dr Ali Sie  
INDEPTH Centre Leader,  
Nouna HDSS,





Burkina Faso

Dr Honorati Masanja  
INDEPTH Centre Leader,  
Rufuji HDSS,  
Tanzania



Prof. Marcel Tanner  
Director,  
Swiss TPH,  
Switzerland



Prof. David Ross  
SAC Chair  
as co-opted  
member



Dr Osman Sankoh  
Executive Director  
INDEPTH Network Secretariat,  
Ghana



Dr Kofi Baku  
Senior Lecturer,  
University of Ghana,  
Ghana (Secretary)



**Profile of Incoming Board Chair,  
Dr Kayla Laserson**

Dr Laserson has been at the Center for Disease Control and Prevention (CDC) for 11 years. Currently, she is the Director of the KEMRI/CDC Field Research Station where she oversees a staff of over 950 individuals and a comprehensive research program in

HIV, malaria, tuberculosis, emerging infectious diseases, demographic surveillance, and programmatic service delivery of HIV care, treatment and prevention programs. Kayla is the overall principal investigator of the KEMRI/CDC demographic surveillance system, and a co-PI on a Phase III randomized placebo-controlled multicentre trial to evaluate the efficacy and safety of a rotavirus vaccine, a multicentre Phase III malaria vaccine trial, and two cohort studies, one among infants and the other among adolescents, to prepare the KEMRI/CDC demographic surveillance area for the advent of Phase III tuberculosis vaccine trials.

Prior to coming to Kenya, Kayla worked as the Deputy Chief of the International TB Branch in the Division of TB Elimination at CDC-Atlanta. There she supervised a team of medical epidemiologists in the provision of international program support to global tuberculosis programs, in particular to those countries providing the largest number of immigrants with tuberculosis to the US and those contributing the most to the global burden of tuberculosis. She was responsible for the design and conduct of international tuberculosis investigations, including all epidemiological analysis, and she conducted operations research training to build capacity to facilitate operational research to improve tuberculosis

programme performance and reduce the tuberculosis burden.

Specifically she was the chief CDC officer for National TB Program in collaboration with the Brazilian Ministry of Health; lead supervisor in the design of national studies to evaluate anti-TB drug resistance, the impact of anti-retroviral (ARV) therapy on the epidemiology of TB, and overall treatment outcomes in a national cohort of TB patients. Kayla was also the chief CDC officer for the U.S.Mexico Binational Tuberculosis (TB) Referral and Case Management Project.

This project was collaboration between international organizations, federal leaders and agencies, state and local TB controllers, and community-based/ non-governmental organizations that provide and facilitate TB care in the United States, Mexico, and along the US-Mexico border, to improve tuberculosis case management and continuity of care for migrants crossing the US-Mexico border while on tuberculosis treatment.

Dr. Laserson has a Doctor of Science (ScD) Degree and Master of Science (SM) from Harvard School of Public Health, Boston, MA. Kayla also holds a Bachelor of Arts (AB), History and Science from Harvard University. Dr Laserson has published widely in reputable scientific publications.

## **1. SHARING INDEPTH DATA ON THE WEB**

### **iSHARE A BOLD INITIATIVE FORWARD**

The INDEPTH Shared Access Repository: iSHARE ([www.indepth-ishare.org](http://www.indepth-ishare.org)) programme started in 2007 as a data sharing project to provide a platform for scientific exchange of research data and technical collaboration for three Health and Demographic Surveillance System (HDSS) centres in Asia: Vadu (India), Kanchanaburi (Thailand) and Wosera (Papua New Guinea). It was successfully launched in September 2008 with a grant from Sida/Globforsk.

### **OBJECTIVES**

The broad objective of iSHARE is to strengthen data collection systems within INDEPTH centres and facilitate sharing of data collected from heterogeneous sources on a web-based repository in a common format. Its specific objectives are to:

1. Define minimal and optimal data sets that allow data sharing and data analysis;
2. Develop and standardize a system of Unique ID amongst INDEPTH centres to allow for data merging and sharing;
3. Build institutional capacity through training of data managers and centre scientists in data management and extraction; and
4. Strengthen data collection systems at

INDEPTH centres and strengthen data sharing mechanisms.

The following minimum requirements were set by the Secretariat for prospective participants in the iSHARE data sharing project:

1. INDEPTH member centre.
2. Willingness to share data with the wider scientific community.
3. Sign a Memorandum of Understanding (MOU) with the iSHARE working group INDEPTH Network for data sharing.
4. At least three years HDSS data available.
5. HDSS data must include at least Individual, Birth, Death, In-migration and Out-migration.

In 2009 the project was expanded to include three INDEPTH African HDSS centres: Agincourt and Dikgale (South Africa), and Magu (Tanzania) making a total of six INDEPTH member centres.

The project was successfully completed in March 2010 with an additional grant from the Hewlett Foundation and was formally presented at the 10th INDEPTH AGM in Accra in September 2010.

By the close of the year 2010 Nairobi HDSS (Kenya), Chakaria HDSS (Bangladesh) and

AMK HDSS (Bangladesh) had also declared their willingness to join iSHARE.

An independent USA-based Information Communication Technology company (METADATA TECHNOLOGY) after critically evaluating the iSHARE project recommended that it should be adopted as the basis for any future INDEPTH Network data sharing effort.



The iShare team in a photo with the Executive Director, Dr Sankoh

## 2. COHRED – HRWeb/INDEPTH Platform

The project is an initiative of the Council on Health Research for Development (COHRED) in collaboration with NEPAD and the African Union. The aim is to partner with national systems and research institutions to create a platform that will provide technical and strategic support for health research and ultimately promote socio-economic development, health, science and technology across Africa.

As a partner in the Health Research Web, INDEPTH seeks to enhance its ability to keep abreast with health information. The following expertise is provided to countries and health institutions through the platform:

- Technical support in strengthening research governance and management structures.
- Support in building political commitment for research for health.
- Development of national research for research information systems - a vital tool for research governance and management.
- Learning and networking opportunities with partners across the continent.
- Advice and support to achieve long-term system strengthening.

## Expected Results:

When the platform is in full operation the following results are expected:

- Structures in place in several African countries for the effective governance and management of research for health.
- Creation of an African platform for the exchange of expertise on management of research and health research – at the national, regional and continental levels.
- Strengthening of African centres of excellence to support research for health governance and management across the continent.
- A package of practical tools, methods and experiences that countries and research institutions can use to optimise their governance and management of research - as a strategy to improve health, equity and development.



Participants of COHRED's first meeting in Accra, Ghana

### 3. INDEPTH PopStats

PopStats is a new tool developed by the INDEPTH Network for displaying and disseminating longitudinal health and demographic surveillance system data generated from its member centres in Africa, Asia and Oceania. It is intended to provide researchers, government officials, policymakers and the general public with basic health and demographic information that can guide their decision making.

In most low-to-middle income countries where vital registration systems are incomplete, population-based data collected by health and demographic surveillance systems (HDSSs) constitute a most valuable source of such data. With the advent of PopStats, HDSSs health and demographic data collected during regular visits to households resident in a geographically circumscribed area will now be readily available to assist in policy formulation. The available data can be viewed either in tabular or graphical form. Basic indicators displayed by PopStats include:

- Crude birth and death rates
- Age-specific fertility and death rates
- Infant, child, and under five mortality rates
- Numerous other health and demographic indicators.

The indices can be displayed either by single centre over time, or across multiple centres over time and period.

#### Population Structure

The tool can display data showing the distribution of the population of each centre by sex and age in person-years and allows users to view the population pyramid for each of the centres.

#### Fertility

Fertility data presented by PopStats include the distribution of women aged 15-49 years and births corresponding to women in five-year age groups. These data should allow for the calculation of Age-Specific Fertility Rates (ASFR) and the Total Fertility Rates (TFR). Information is also provided on all births by centre and by year in order to allow for the construction of crude birth rates.

#### Mortality

Mortality indicators displayed in PopStats include age- and sex-specific death rates, crude death rates, infant, child and under five mortality rates.

It is expected that the tool will be further developed to provide information on causes of death as well.

The screenshot shows the INDEPTH Network website. At the top, there is a navigation menu with links for Home, Population, Fertility, Mortality, Migration, Feedback, Acknowledgement, and Contact Us. Below the menu are four main sections: POPULATION, FERTILITY, MORTALITY, and MIGRATION. Each section has a brief description and a 'More' link. The POPULATION section states: 'The data displayed here show the population of each centre by sex and age in person-years. These should allow you to derive the population pyramid for each of the centres.' The FERTILITY section states: 'Fertility data presented include the distribution of women aged 15-49 years and births corresponding to women in five-year age groups.' The MORTALITY section states: 'Mortality indicators displayed in PopStats include age- and sex-specific, death rates, crude death rates, infant, child and under five mortality rates.' The MIGRATION section has a 'COMING SOON...' message. Below these sections is the 'INDEPTH PopStats' heading, followed by a paragraph explaining that in countries where vital registration systems are incomplete, population-based data collected by health and demographic surveillance systems (HDSSs) constitute a valuable source of such data. It also mentions that PopStats is a new tool developed by the INDEPTH Network for displaying longitudinal health and demographic surveillance system data generated from its member centres in Africa, Asia and Oceania. At the bottom, there is a footer with the text '000948' and 'Copyright © 2010-2011 INDEPTH PopStats. All rights reserved.'

#### **4. Secretariat's Communication Strategy**

INDEPTH considers communication as central to its work. To this end the Secretariat in early 2010 worked extensively with a communications consultant to identify priority areas that needed to be addressed in order to enhance the organisation's communication methods. In August, a new communication and external relations manager took office and developed a dynamic, focused and well coordinated communications strategy to enhance INDEPTH's interaction with its identified publics and other audiences. The strategy which is anchored in the 2010-2014 strategic plan of INDEPTH sought to address the following gaps: insufficient relations between INDEPTH Secretariat and international agencies; weak links and limited joint activities with scientific networks and associations; Inadequate visibility and influence on the global health scene; the need for better management of relationship with funders in a more strategic and long-term way; inability to adequately facilitate translation of the Network's findings to maximize their impact on policy and practice.

In view of the above the strategy identified internal and external communication issues, primary and secondary audiences and recommends effective utilization of tools and channels for communicating with these audiences. These include: an electronic newsletter, an up-to-date website, periodic media briefings and releases, scheduled interviews, workshops, seminars, presentations, fliers and brochures as well as annual reports and social media networks.

In order to support the communication efforts of member centers, the strategy recommends the following: training to enhance the communication skills, knowledge and capacity of researchers and

staffers with communications responsibilities, such as workshops with focus on: skills and abilities to present and handle media interviews, presentation skills, packaging and presenting scientific research to lay audiences, taking and using photography and making effective use of media, websites, listservs etc.

In recognition of the centrality of public engagement to INDEPTH, the strategy earmarks the utilisation of policy briefs, breakfast meetings with policy makers to present case studies and research findings as well as meetings with officials of Ministries of Health, Science and Technology, medical associations and schools, universities, think tanks, civil society organizations in the health and environmental sectors, the media, etc.

#### **5. Update on INDEPTH MM&E**

During the year under review the Network made significant progress towards formulating and developing a comprehensive tool for monitoring and evaluation of its work at various levels for the following categories of its stakeholders:

- Members of INDEPTH Board
- Scientific Advisory Committee
- INDEPTH Network
- HDSS Centre Leaders
- Working Group Leaders
- The INDEPTH Network Secretariat

The metrics sets performance indicators that are result oriented and which conform to international standards. The metrics also make it possible for the organization to more clearly define the results to be achieved. Subsequently the metrics will be converted into web-based survey instruments available on the INDEPTH Website for completion by each of the identified groups. Results will be collated, analysed and presented at the 11<sup>th</sup> INDEPTH Scientific Conference in October 2011 in Maputo, Mozambique.

The INDEPTH Metrics for M&E was developed with funds from the William & Flora Hewlett Foundation.

## **6. Development of Network Proposals**

The year 2010 saw the Network adopting a very proactive approach to fundraising and proposal development. Using its time tested team work approach, proposals were prepared and submitted to various funders and development partners. Key among these was the Five Million Pounds (£5M) Strategic Award application made to the Wellcome Trust (UK).

The proposal seeks to achieve a profound shift in the INDEPTH Network from a credible high-potential research and training network to a world-leading African-Asian platform of health and demographic surveillance centres engaged in ground-breaking comparative and collaborative population-based, policy-oriented research.

The above objective is expected to be realized through an intensive, well-coordinated Network-wide effort to:

- Harness its scientific potential and accelerate the output of scientific knowledge to guide health and social policy, and support the evaluation of programmes and interventions at national, regional and international levels.
- Revitalize its approach to cross-site data management by applying best practice methods of harmonising, storing, curating and sharing epidemiological data from health and demographic surveillance systems (HDSS), and
- Boost training efforts that target persisting deficits in capacity by developing the skills of the most promising field scientists in research data management, measurement and study design.

Implementation will involve a series of systematic, well-directed efforts to enhance the capacity (management and governance) of the INDEPTH secretariat to energetically support a high-performance research network.



### **Notable Visitors to the INDEPTH Secretariat**

<u>Name</u>	<u>Organisation</u>
Michael White	Population Studies& Training Centre, Brown Univ. USA
George Adjei	Kintampo HDSS, Ghana
Flemming Konradson	Univ. of Copenhagen, Denmark
Melissa May	Global Campaign for Microbicides/PATH
Marilyn Aniwa	UAPS, Accra-Ghana
Eliya Zulu	AFIDEP/UAPS Nairobi
Kavi Bhalla	Harvard Univ, USA
Jerry Abraham	Harvard Univ,USA
Hon. Pascoal Manuel Mocumbi	MCTA Board Chair
Tom Nyirenda	European and Developing Clinical Trials Partnership
Abdul Rahman Lamin	UNESCO, Ghana
Jergen May	Bernard Nocht-Inst. Hamburg
Florian Marks	Int. Vaccine Inst.
Megan Lindow	Partnership for Higher Education in Africa
Mwihaki Mimura	Rockefeller Foundation, Nairobi-Kenya
Stefan Machuk	Rockefeller Foundation, USA
Jean-Marie Ngbich	Measure Evaluation Macro ICF, Mali
Yazoume Ye	ICF Macro, USA
Hon. Alhassan Azong	Office of the President, Ghana