INDEPTH Network – An Overview

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INDEPTH Network
Better Health Information for Better Health Policy

Established in 1998 with 17 HDSSs
Currently 52 HDSSs in 20 countries
39 HDSSs in Africa
11 HDSSs in Asia
2 HDSS in Oceania

Senegal (3)
The Gambia (2)
Guinea-Bissau (1)
Burkina Faso (5)
Ivory Coast (1)
Ghana (3)
Ethiopia (5)
Uganda (3)
Kenya (5)
Tanzania (3)
Malawi (1)
Mozambique (2)
Nigeria (2)
South Africa (3)

India (3)
Bangladesh (3)
Thailand (1)
Vietnam (3)
Indonesia (1)
Papua New Guinea (2)

Over 3,800,000 people under surveillance
In Ghana

Navrongo: 1993
...to support research on the determinants of morbidity, mortality and fertility in Ghana's northern regions

Kintampo, 2000
..to conduct public health research and develop health research capacity...

Dodowa, 2005
To take part in identifying and carrying out priority research to help address policy, planning and implementation needs of the GHS.
Sustainability

- 45 Research Centres – 52 Field Sites

1. University Research – 21
2. Long-term National/International Collaborations (IHI, Tanzania; IRD, Senegal; Wellcome Trust/KEMRI, CDC/KEMRI, Kenya) – 14
3. Ministry of Health – 10

- Funding for HDSS work: Core / Project
More than a decade of INDEPTH development

- Numerous gaps addressed by INDEPTH research:
  - from unrecorded trends in mortality and cause of death to life-course research
- Standardised survey instruments developed – e.g. Verbal Autopsy
- Multi-site analyses increasingly use harmonised variables and integrated datasets.
Age-sex-time standardised cause-specific mortality fractions (CSMF) for major cause of death groups for children aged 1-4 years at 18 INDEPTH sites during 2006-2012.
Cause-specific in Africa and Asia: evidence from INDEPTH HDSS Data
INDEPTH Builds on Two Competitive Advantages

- **Ensuring efficiency:** leverage both ongoing data collection and the teams across the network
- **Increasing quality:** link top scientists across the 45 member centres
- **Maximising impact:** merge data across sites and assessing implications for science, practice and policy

**Longitudinal Data (HDSS):**

Enabling true analysis of changes, correlations and cause & effect

**Network of Centres:**

Leveraging capabilities from one centre across entire network.
Examples of Observed Exposed Intervals

1. Birth (in DSA) → Move in → Move out → Move in → Move out → Death (in DSA)
2. Birth (not in DSA) → Move in → Move out → Move in → Move out → Death (not in DSA)
3. Birth (in DSA) → Move out → Move in → Move out → Move in → Death (in DSA)

Observed Exposed Interval: Life
HDSS participants

In Community / Population

- Residential Unit
  - part of/resident at
  - resident at
- Household
- Individual
- Homestead / Compound

Unique ID given to individuals
Prospective monitoring – the core

Verbal autopsy for cause of death

Measure characteristics of environment or household members (e.g. SES, vaccines, HIV, nutrition)

Capturing episodes of disease and hospital admission

RURAL - URBAN

INITIAL CENSUS

ENTER

DYNAMIC COHORT (updated through cycles of enumeration)

EXIT

DEATH

OUT-MIGRATION

BIRTH

IN-MIGRATION

INDEPTH Network
Our Research Strategy

• INDEPTH conducts research and strengthens global capacity to conduct studies that use the key demographic outcomes measured by HDSS:
  - fertility, all-cause and cause-specific mortality, morbidity and mobility.

• Priority is given to:
  - Outcomes that are measured poorly by other data collection systems
  - Answering questions that require research in more than one HDSS.
Research Framework

RESEARCH AREAS

1: Epi-demographic transitions
   • producing comparable indicators on levels, trends and transition dynamics

2: Social and economic determinants of health inequalities
   • investigating relationships between poverty, social determinants and health inequality

3: Health and welfare systems
   • investigating implications of epi-demographic change for health and social systems

4: Health across the life course
   • examining social/physical/genetic factors and health, change over the life course, pathways to risk or resilience, intergenerational effects

Influences across the life course

Populating level

Individual level
Infants – children – adolescents – adults – older persons
INDEPTH Strategic & Working Groups

### Strategic Groups

1. Research to Policy
2. Capacity Strengthening and Training
3. Data Analysis - Cause of Death, Mortality, Morbidity
4. INDEPTH Data Management Programme

### Working Groups Investigating Important Scientific/Practice Questions

1. Adult Health & Aging
2. Environment & Health
3. Maternal & New Born Health
4. Migration, Urbanisation & Health
5. Social Science
6. Health Systems
7. Education
8. Vaccination & Child Survival
9. Antibiotics Resistance
10. Sexual & Reproductive Health
11. Malaria
12. HIV/AIDS
13. TB
Capacity strengthening & training efforts

- INDEPTH Scientific Development and Leadership Programme
  Masters (at Wits & elsewhere), PhD, Short Courses
- Training workshops:
  Scientific Writing, Data Management, Longitudinal Data Analysis, Proposal Development, etc.
- INDEPTH Fellows to Centres
- Technical exchange
- Mentorship (SAC, Centre to Centre networking, experts, etc.)
Looking into the future

Comprehensive Health and Epidemiological Surveillance System (CHESS)

Sentinel Population & Events

Individuals: Healthy and those experiencing illness, events or death

Household Data Sources

ANC Pregnancy Registers

Health Facility Data Sources

Health Facility

Community Case Management

Indicator Grouping

Incidence Sample Cohort & mobile reporting

Diagnostics

Specimens

Laboratory

Specimens

Clinical Data

Morbidity

Etiologic Agents for Symptomatic and Asymptomatic

Mortality

Verbal Autopsy

Cause of Death

Risk Factors

HDSS Visits (Whole sentinel population)

Context

Deaths

Outcomes

Incidence of Pathogen Specific Disease, Severe Disease (all age groups)

Pathogen-Specific Case

Fatality Cause-Specific mortality

Age specific mortality rates

Others: Pregnancy, schooling outcomes: NCDs

High-Quality Linked Datasets

Well-Trained and Capable People

Data Management, Integration, Analysis & Sharing

Data Linkage & Quality Assurance

Capacity Strengthening and Training across the components

Electronic ID used throughout process

Also look at: Sustainable Development Goals, CRVS, Health Systems
Linking Community data with health facility data. Activity Diagram for identification processes

The patient's details were searched in the following order:
1. Fingerprint Identification
2. Hospital ID
3. National Health Insurance ID
4. Name of Patient

Outcomes for patients whose details were searched by fingerprint were recorded.

Start Application

Has patient been enrolled?

YES

Was the patient's details found using fingerprint search?

NO

Use other identification techniques

Update fingerprint data

Retrieve patient's folder for routine healthcare

NO

Enroll Patient

Data collected during enrollment are:
1. Basic data
2. Fingerprint data
3. Passport-size photo

The first verification was to ask if s/he has ever been enrolled on the biometric application since the date

YES
INDEPTH Network Data Repository

Africacentre HDSS, South Africa
The service facility survey catalog provides access to data along with accompanying survey documents from facility level surveys conducted by the World Bank. Service delivery surveys are tools to measure the effectiveness of basic services such as education, health, and water and sanitation. The Africa Centre Demographic Information System (ACDIS) started data collection in January 2000. Read More »

Central Data Catalog
The Central Data Catalog is a portal for all surveys and datasets held in catalogs maintained by the INDEPTH Network and a number of contributing external catalogs.

Search the Central Microdata Catalog View all Surveys »

INDEPTH iSHARE2 Repositories

Network Catalog
ISHARE takes the next step, launching of all new Next Generation iSHARE2 Data Repository. Until then, bear with us as no data are currently shared. Please checkout this space regularly for updates

INDEPTH iSHARE2

As of November 18, 2012 the Library contains

2 surveys
2 citations
12 variables

FAQ’S
- How can I contribute to improving the catalog?
- Can you help with analyzing the data?
- Can I get help in implementing a survey catalog in my agency?

Click here for more...

NEWS
- 1st INDEPTH iSHARE2 workshop in Pune, India
- Call for INDEPTH members

Wellcome Trust Strategic Award

ISHARE 2 an INDEPTH project

INDEPTH Network
Better Health Information for Better Health Policy
Our core business deals with...

DATA
• Management, integrity, quality
• Documentation & standardisation
• Expand research collaboration
• Increase public access

SCIENCE
• Studies using existing HDSS data
• Multi-site research, trials, evaluation
• Methodological innovation
• Collaboration with partner networks

CAPACITY STRENGTHENING
Career paths:
• Masters-interns-PhDs-postdocs
• Research data management

enables
drives

requires

enables

drives

requires

strengthened
Some Key Challenges... opportunities

- Science:
  - Leadership, new cross-site research opportunities

- Capacity:
  - Achieving tailored capacity strengthening

- Funding
  - Core support
  - Project funding

- Policy Engagement and Communications
  - Getting the INDEPTH brand
  - Engaging with policy makers at various levels
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• Board / SAC / Centre Leaders / Working Group Leaders / Project Leaders /Collaborators / Secretariat

• All the HDSS teams and the communities and friends
Thank you