The INDEPTH Network

www.indepth-network.org

Please use the slides as you deem fit...
INDEPTH Governance Structure
Governance & M&E

• INDEPTH Board meetings
  o regular newsletters to the Board
• INDEPTH-Funder teleconferences; visits by funders
• INDEPTH audit by KPMG (previously PWC)
• Weekly newsletters to Centre Leaders
• Quarterly newsletters to the INDEPTH family
INDEPTH Membership & Effectiveness

• 43 member institutions running 49 HDSS field sites
• 32/49 HDSSs on INDEPTHStats
• 26/49 HDSSs on INDEPTH Data Repository; 10 potentials
• 6/49 on the new OpenHDS; 15 in preparation
Expanding Footprint of HDSS

Number of Sites (Bar) vs. Millions of Lives Under Surveillance (Line)

- Member HDSS Sites


Lines and Bars represent the increasing number of sites and surveillance lives over time.
Over 3,800,000 people under continuous surveillance in INDEPTH Network

INDEPTH Member HDSS Sentinel Surveillance Countries

Senegal
The Gambia
Guinea-Bissau
Burkina Faso
Ghana
Nigeria
Senegal
The Gambia
Guinea-Bissau
Burkina Faso
Ghana
Nigeria

INDEPTH Resource Centre, Accra

Ethiopia
Uganda
Kenya
Tanzania
Malawi
Mozambique
South Africa
India
Bangladesh
Thailand
Vietnam
Indonesia
PNG

Through INDEPTH to diverse countries and continents
HDSS equation for the denominator

Initial Census
(Unique ID given)
(Rural/Urban/Peri-Urban)

Enter

Dynamic Cohort

Out-migrate after 6 months

Follow up of pregnancies and their outcomes

In-migrate after 6 months

Ideal cycles of enumeration 2-4/year

Verbal Autopsy on all deaths
SAC: 1. WHO 2016
2. Annual VA operation

SAC: a key concept

Health and Demographic Surveillance System

INDEPTH Network
Population Data Structure – HDSS Participants

Unique ID given

Individual

- Date of Birth
- Place of Birth
- Sex
- Parents
- Source of income

Household

- Headship
- Members
- Income

Measurements

Residence

Health Facilities

Measurements

Dwelling

- Type
- GPS location
- Owner

Measurements

INDEPTH Network
Outputs from an HDSS / CHESS

**CORE**
- All cause mortality rates
- Cause-specific mortality proportions & rates
- Life table probabilities
- Fertility rates
- Migration rates

**ADDITIONAL**
- Population characteristics
- Household characteristics, assets and wealth indexing
- Health status / disease burdens
- Access, use and impact of health services
- Health seeking behaviours for severe and fatal conditions
- Environmental contexts, risks, exposures
- Household food security
- Impact of poverty reduction strategies
- Impact of health interventions
Strategic Groups

1. Data Analysis
2. Capacity Strengthening
3. Research to Policy
4. Data Systems
5. Migration, urbanisation & health
The Working Groups that were effective

1. Adult health & aging
   • NIH grant

2. Fertility
   • EVIDENCE

3. Vaccination & child survival
   • EC/DANIDA grant

4. Antibiotics resistance
   • Wellcome Trust grant

5. Malaria
   • INESS – Gates Foundation grant

6. Environment & health
   • Submitted applications

7. Health Systems
   • iHOPE – Gates Foundation grant

8. Maternal & Newborn Health
   • ENAP – CIFF/LSHTM grant

9. Education
   • Submitted an application

10. Genomics
    • AWI-Gen: NIA grant
Grant proposal development

- 20 proposals submitted
- 13 thematic areas
- 11 funders
- Total amount - $71,333,516 (at least 20% to core)
- 4 led by the Secretariat
Secretariat led proposals

1) Malaria: treatment, testing & tracking
   Comic Relief & GSK; £822,801; 2017-2019 (Funded, April 2017)

2) INESS on CHESS
   EDCTP; €3,000,000; 60 months (awaiting news)

3) Conduct rigorous post-licensure effectiveness and safety studies on
   Pyramax and other interventions against malaria
   The Gates Foundation; $1,182,415; 2017 (successful)

4) How do accountability processes within education systems enable or
   inhibit the raising of learning outcomes – Ghana and Zimbabwe?
   ESRC UK; £689,612; 2018-2020 (awaiting news)
CHESS = HDSS+

HDSS Core: all-cause & cause-specific mortality

HDSS+ (comprehensive package – expands HDSS)

• Communicable (disease & pathogen specific) morbidity
• Non communicable disease morbidity
• External causes / injuries morbidity
• Risk factors for above mortality & morbidity
• Health systems & policies contexts
• Other contexts - e.g. education

SAC: A transformational agenda
Crystalisation phase funded by Sida

Comprehensive Health and Epidemiological Surveillance System (CHESS)

- Sentinel Population & Events
  - Household Data Sources
  - Health Facility Data Sources
  - Indicator Grouping
  - Diagnostics
  - Outputs
  - Outcomes

- ANC Pregnancy Registers
- Community Case Management
- Incidence Sample Cohort & mobile reporting
- HDSS Visits (Whole sentinel population)
- Individual ID Assigned

- Specimens
- Morbidity
- Mortality
- Context

- Laboratory
- Etiologic Agents for Symptomatic and Asymptomatic
- Clinical Data
- Cause of Death
- Deaths
- Risk Factors

- Data Management, Integration, Analysis & Sharing
- 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

Electronic ID used throughout process
Data Linkage & Quality Assurance
Capacity Strengthening and Training across the components
Capacity Strengthening and training

- Masters Training
  - 51 funded students in all; (None funded in 2016, seven continuing students) – About $2M spent

- PhD training (direct or nested in Working Groups)
  - 8 Students (Two funded in 2016 & one successful completion)

- Data management support (Training workshops for data managers)
  - Three workshops: OpenHDS for 5 centres & Data management for 20+ centres in Dubai and Pune

We want to be able to support more...
INDEPTH Member Centre Publications by Year
(1998-2015) n=4,323

• The Lancet, Nature, Science, IJE, BMJ...
• KEY: multi-centre publications (Working Groups & Projects)
• Acknowledging INDEPTH / identifying with INDEPTH

2016: counting ...
Similar trend...
AUTHORSHIP ISSUES...
INDEPTH Repository: Shared Individual Level Data in 2016

Cause of Death
- 111,910 Deaths
- 98,429 Verbal Autopsies
- 22 Sites

PLOS One recognises INDEPTH Repository for publication datasets

1600 downloads
800 – Africa
250 – Asia

26 Sites
20 Sites
13 Sites
6 Sites
INDEPTH Analysis of data on INDEPTHStats
Meeting in Kampala – Strategic Group on Data Analysis

• Population structure
• Fertility
• Mortality (morbidity)
• Cause of death
• Migration

✓ Produce a report on the available data on INDEPTHStats
✓ Do annual updates

SAC: Annual update accompanied by a high-level commentary piece published in a journal
INDEPTH continues to play a key role in the data sharing debate

• INDEPTH publications on data sharing have appeared in
• Kobus Herbst and Osman Sankoh invited to several international workshops to present INDEPTH’s example
• INDEPTH hosted a workshop led by Chatham House in Accra to discuss data sharing (*Product: a joint statement*)
• INDEPTH co-organised a workshop in Cape Town by many funding organisations (*Product: an NIH report*)
• INDEPTH hosted IHME in Accra – Ebola preparedness (*Product: a joint paper in Emerg Inf Diseases*)
Policy Engagement
Research to Policy Country Meetings

Ethiopia

India

Ghana

Tanzania
## NEW STRATEGIC PLAN

### Our Vision

<table>
<thead>
<tr>
<th>2013-2016</th>
<th>2017-2021</th>
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<tr>
<td>INDEPTH will be an international network of HDSS centres that provides data to enable LMICs set health priorities and policies based on the best available evidence, and .... to ensure and monitor progress towards national goals</td>
<td><strong>INDEPTH will be a trusted source for evidence supporting and evaluating progress towards health and development goals</strong></td>
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**NEW STRATEGIC PLAN**

**Our Mission**

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<th>2013-2016</th>
<th>2017-2021</th>
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<td>To harness the collective potential of the world's community-based longitudinal 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</td>
<td>To lead a <em>coordinated approach</em> by the world’s health and demographic surveillance systems to provide <em>timely longitudinal evidence</em> across the range of transitioning settings to <em>understand and improve population health and development policy and practice</em>.</td>
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## NEW STRATEGIC PLAN
### Our Strategic Objectives

<table>
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<th>2017-2021</th>
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<td>1. To support and strengthen the ability of INDEPTH member centres to conduct longitudinal health and demographic studies in defined populations.</td>
<td>1. <em>Enhance the INDEPTH Network's capabilities:</em> improve and expand the underlying longitudinal tracking platform</td>
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<td>2. To facilitate the translation of findings to maximise impact on policy and practice.</td>
<td>2. <em>Conduct population-based research, leveraging its longitudinal tracking:</em> stimulate, facilitate and conduct cutting-edge multi-centre research</td>
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<tr>
<td>3. To facilitate and support research capability strengthening</td>
<td>3. <em>Enrich and guide policy that is community responsive and closely linked to the SDGs:</em> INDEPTH will continue to generate evidence and facilitate the translation of INDEPTH findings to enrich and provide evidence on policy, programmes and practice</td>
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<td>4. <em>Strengthen capacity of INDEPTH member centres and researchers</em></td>
</tr>
<tr>
<td></td>
<td>5. <em>Build effective partnerships:</em> national and international partners including statistics offices, local government, health and development ministries and agencies, as well as relevant research and educational institutions</td>
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1. Implement CHESS at all sites to deepen the longitudinal platform to answer new scientific questions: make morbidity surveillance routine

2. Provide timely metrics based on real data: make the best out of INDEPTHStats

3. Conduct studies across the life-course: from pregnancy to adult health and ageing; identify relevant practices and interventions

4. Expand the utility of the platform to generate and analyse SDG indicator baseline & dynamics; conduct safety and effectiveness studies of drugs and vaccines

5. Assess scientific- and policy-relevant determinants & context of outcomes:
   Nutrition, diet and food security; Environment, climate, indoor air pollution; Health equity, migration and poverty; Vaccines: safety, effectiveness and efficacy; Sex differentials/gender; Education-based analysis and interventions; Health system assessments
Capacity Issues 2017-2021

1. Strengthen the capacities of people and institutions

2. Expand the INDEPTH Scientific Development and Leadership Programme including the MSc programmes
1. Tailor, package and direct research outputs for different stakeholders to stimulate public appreciation of findings

2. Leverage engagement with policy makers to attract more funding for research-into-practice activities
Ensuring Financial Sustainability 2017-2021

1. Continue to look for both core and project support from funding partners.

2. Strengthen the efforts at building an INDEPTH consultancy that leverages the skills and advantage of the Network.

3. Growing the INDEPTH Endowment Fund
   • Construction of an INDEPTH Training Centre
Some Key Challenges... opportunities

Science:

*Leadership, new cross-site research opportunities / productivity*

Capacity:

Achieving tailored capacity strengthening

Funding

*Core support / Project funding / Network-Centre interests*

Policy Engagement and Communications

*Getting the INDEPTH brand*

*Engaging with policy makers at various levels*
Our Key Partners

- USAID
- Ministry of Health Ghana
- Doris Duke Charitable Foundation
- The William and Flora Hewlett Foundation
- Sida
- The Rockefeller Foundation
- Bill & Melinda Gates Foundation
- European Commission
- Medizinische Fakultät Heidelberg
- National Institutes of Health
- Wits Health Consortium
- Wellcome Trust
- University of Kwazulu-Natal
- Swiss TPH
- Statens Serum Institut
- UKH Hamburg