REPORT

13th INDEPTH Scientific Conference

11-13 November 2015

Addis Ababa, Ethiopia

ISC 2015 delegates in a group picture after the opening ceremony.

The 13th INDEPTH Scientific Conference (ISC 2015) was held at Ghion Hotel in Addis Ababa from 11-13 November 2015. The three-day conference was on the theme "Health and Demographic Research to inform the Post 2015 Development Agenda".

The conference had more than 15 sessions, which covered various topics including Vaccination, Population and Health Policies, Socio-economic Disparities, Antibiotic Resistance, Maternal and Child Health, Clinical Trials, Community Health, Health Systems, Family Planning, Population Dynamics, Policy Engagement, Innovation in HDSS and Data Methods.

- About 200 abstracts were submitted online in response to the call for abstracts: 145 oral submissions, 41 Young Scientist (YS) presentations, and 7 poster submissions. The

number of submissions varied significantly by centre with some submitting more than 6 abstracts, some submitting only 1, and others making no submission. The abstracts were sent to members of the INDEPTH Scientific Advisory Committee (SAC) for review. Less than half of the abstracts were accepted for presentation at the conference: 69 out of 145 abstracts for oral submissions and 14 out of 41 submissions for YS. Among the abstracts accepted for presentation, 42 received funding for oral presentations and 10 YS were funded. Over 100 oral presentations were delivered during the 2015 ISC among which were 92 scientific. *Details are available in the here* http://indepth-network.org/images/stories/isc_program_final.pdf *and the presentations at this link:* http://indepth-network.org/isc-2015-presentations

Prof. Oche Oche makes a contribution during one of the ISC sessions.

ISC 2015 was co-hosted by the universities of Addis Ababa, Gondar, Jimma, Haramaya and Mekelle which run the HDSSs Butajira, Dabat, Gilgel Gibe, Kersa and Kilite Awlaelo respectively. INDEPTH received support from WHO-Ethiopia, the Federal Ethiopian Ministry of Health, Sida, Wellcome Trust and Hewlett Foundation. The conference had 279 participants from 25 countries in four continents. It was preceded by the following activities:

SAC Meeting

The meeting of the INDEPTH Scientific Advisory Committee (SAC) was held on Monday 9 November 2015. Nine SAC members attended: Prof. Peter Byass (SAC Chair), Dr. Jocalyn Clark, Dr. Halima Mwenesi, Prof. Anna Mia Ekstrom, Prof. Anastasia Gage, Prof. Harry Campbell, Dr. Cheryl Moyer,

Prof. Don de Savigny and Prof. Philippe Bocquier. The INDEPTH Executive Director Prof. Osman Sankoh also attended. The SAC met again on 10 November 2015, with a focus on the Comprehensive Health & Epidemiologic Surveillance Systems Initiative (CHESS).

Key Issues Discussed

- Secretariat responses to SAC recommendations of last SAC meeting: How Secretariat engages with Science; Funding issues; Role of the SAC; INDEPTH membership and Authorship
- Working and Strategic Groups
- New INDEPTH Strategic Plan 2017-2021
- INDEPTH Enhancement Grant Proposal
- New issues: Neonatal mortality, NCDs, CRVS, INDEPTH role in SDGs and climate change
- Venue for next ISC in 2017
- CHESS: SAC agreed a way forward for its implementation should the Sida funding go through

More details on the SAC sessions on Appendices 1 and 2

SAC Member's Participation at ISC

Members of the SAC also chaired, made presentations or were discussants in various sessions during the ISC. They included:

i. Prof. Peter Byass: Chaired a session - Profiling INDEPTH Critical Projects1 and Presented - *Generating cause of death data in LMICs. The INDEPTH cause of death study*

ii. Prof. Anna Mia Ekstrom: Chaired sessions - Clinical Trials, Transition/Population and Environment/Household Poverty and Family Planning. She was a Discussant in a session - Profiling INDEPTH Critical Projects2

iii. Dr. Jocalyn Clark: Chaired a session - Vaccination, was a Discussant in another - Transition and its implications post 2015

iv. Dr. Halima Mwenesi was a Discussant in a session - Population Health Policies 1

v. Anastasia Gage: Chaired a session - Community Health/Health Systems, was a Discussant in Fertility Planning and Sexual Behaviour session

vi. Dr. Moyer: Chaired a session - Population Dynamics and was a Discussant in a session - Community Health/Health Systems

vii. Prof. Don de Savigny: Chaired a session - Innovation in HDSS Data, and was a Panelist in a discussion - HDSS and CRVS in LMICs – Potential for Policy

viii. Prof. Philippe Bocquier: Chaired a session - Population and Health Policies 2, and was a Discussant in another - Transition/Population and Environment/Household Poverty and Family Planning. He also Presented - *Building Evidence on aging in LMICs- the INDEPTH study* on behalf of Prof. Steve Tollman

ix. Prof. Barbara McPacke: Chaired a session - Global Health and Development Agenda
x. Prof. Harry Campbell: Discussant in a session - Global Health and Development Agenda

The SAC Chair also presented to the Board of Trustees on 10 November 2015.

Young Scientists

INDEPTH over the years has been organising pre-ISC training for upcoming and young scientists of member HDSSs. This training is to build scientists capacity to be able to publish papers in high impact journals. This year the training was held on 10 November 2015. The ultimate aim of this workshop was to assist nine young scientists to transform their draft papers to publishable papers. The training was facilitated by Justine Davies and Zöe Mullan, journal editors from *The Lancet Diabetes and Endocrinology* and *The Lancet Global Health* respectively. *For details on the training see Appendix 4.*

Young scientists pose for a photograph with workshop facilitators at the 2015 ISC in Addis Ababa, Ethiopia. From left, front row: Mohammad Abubakar Siddik (Chakaria HDSS), Dr. Martin Bangha (INDEPTH Secretariat), Editor In Chief of the Lancet Diabetes & Endocrinology journal Dr Justine Davies, Editor of The Lancet Global Health Zoë Mullan, Isaiah Agorinya (Navrongo HDSS), Irene Tampuri Azindow (Kintampo HDSS), Alfred Kwesi Manyeh (Dodowa HDSS), and Samuelina Arthur (INDEPTH Secretariat). From left back row: Ivan Kasamba (Kyamulibwa HDSS) Noah Kasunumba (Iganga/Mayuge HDSS), Abere Shiferaw Alemu (Kersa HDSS), Peter Sifuna (Kombewa HDSS) and Mark Otiende (Kilifi HDSS).

ISC Opening Ceremony

The meeting was opened on Tuesday 11 November 2015 at Ghion Hotel in Addis Ababa by Dr. Amir Aman, State Minister of Health of the Federal Democratic Republic of Ethiopia. Proceedings started with a show from a cultural group from the University of Addis Ababa.

Prof. Wakgari Deressa, Dean of the Faculty of Public Health at Addis Ababa University (AAU), was also the Master of Ceremony, welcomed foreign delegates to Ethiopia. The Vice President for Research and Technology Transfer Dr. Tassew Woldehanna, made welcoming remarks on behalf of the President of AAU. He gave a brief background of AAU, from its humble beginnings in 1950 when it was established as the University College of Addis Ababa (UCAA).

Prof Marcel Tanner.

The Board Chair of INDEPTH Network, Prof. Marcel Tanner, thanked all delegates. Among other things, he said that for many years the Network insisted on the quality of data but now was determined to promote and synthesize what it was doing and contribute its expertise to meet local, national and global health challenges.

State of the Network Address

Delivering his State of the Network address, the INDEPTH Executive Director Prof. Osman Sankoh said the conference was an opportunity to show “what we have done and what we want to do and for you to contribute.”

He talked about three strategic objectives of INDEPTH and the Network's expanding footprint, informing the conference that the Board had approved the 6th HDSS in Ethiopia, Arba Minch, making Ethiopia the country with the largest number of HDSSs.

Prof. Sankoh (pictured) gave a summary of INDEPTH activities, explaining the Working Groups strategy, and thanked core funders of INDEPTH Sida, Hewlett Foundation and Wellcome Trust for their support. He said he was happy the investment approach has worked, where the Secretariat invests core funds to generate more funding from grants.

The ED urged member HDSSs to contribute data (those who are yet to do so) to the INDEPTH online data archives to make it accessible to other researchers and policymakers. He also talked about the Network's future direction where INDEPTH will also capture information from health centres in addition to data currently generated through HDSSs, through the CHESS innovation.

On the Network's sustainability, he said an organisation that was almost 20 years old should not be planning for 1 or 2 years. He said one of the strategies to get out of the situation was to establish INDEPTH Endowment Fund.

Keynote Address

In his opening address, the Guest of Honour, State Minister of Health, Dr. Amir Aman, urged researchers to make quality data available to policymakers to use in making decisions that would improve the lives of people. He asked researchers to employ more innovative ways of collecting and sharing data by taking advantage of advances in science and technology.

"Policymakers would like to make important decisions based on quality data that are provided in a timely manner to improve the lives of people," he said, adding that HDSSs in Ethiopia had contributed a lot of evidence to policy which is aiding planning at various sectors in the country.

The opening ceremony was followed by a presentation on the new Ethiopian Health Sector Transformation Plan (HSTP) made by a representative of the Federal Ministry of Health. Next was a highlights on HDSS work in Ethiopia: *Ethiopian Universities Research Centers Network Experiences, Challenges and Future Directions,* a presentation made by Mr Fasil Tessema representing the Network of HDSSs in Ethiopia.

Federal Health Minister at Dinner

On Thursday evening 12 November 2015 the Ethiopian Federal Ministry of Health hosted dinner for ISC 2015 delegates at Ghion Hotel. In his speech, the Ethiopian Federal Ministry of Health, Dr. Kesetebirhan Admasu (left), reiterated his Government's resolve to use research evidence for decision making.

Ethiopian Federal Ministry of Health, Dr. Kesetebirhan Admasu (right) exchanges views with INDEPTH Board Chair Prof. Tanner exchanging views.

Ethiopian Federal Ministry of Health, Dr. Kesetebirhan Admasu.

He said Ethiopia was implementing an ambitious five-year Health Sector Transformation Plan (HSTP) which puts a lot of emphasis on information revolution, which he said, did not only target IT, but changing the mindsets people including health workers and the policy making community to value information.

The INDEPTH Board Chair, Prof. Marcel Tanner, thanked the ministry for its support to the ISC 2015. He said INDEPTH was positioning itself to become a big player in national and international health policy dialogue. He said the Network was getting ready to develop the new strategic plan as the current one 2013-2016 ends next year. Prof. Tanner said the process will involve all important stakeholders.

Speaking at the function, the INDEPTH Network Executive Director, Prof. Osman Sankoh, commended Ethiopia for being a leader among INDEPTH member countries, by having the highest number of HDSSs.

Panel Discussion:
HDSS and CRVS in LMICs – Potential for Policy and Looking at New Collaborations

The panel discussion was held on 13 November and chaired by Dr. Peter da Costa from Hewlett Foundation in Kenya. It began with a presentation by Rutuja Patil from Vadu HDSS, India entitled "Overview of INDEPTH's role in policy process". The panelists included Dr. Raj Mitra, from UNECA, Ethiopia; Prof. Don de Savigny of INDEPTH SAC and Swiss TPH in Switzerland and Dr. Mark Collinson, Agincourt HDSS, South Africa.

Don de Savigny and Raj Mitra in the background.

Some of the issues raised in the discussion include:

Research to Policy

- Policy is not linear, it is an iterative process
- Need for HDSSs to document all transitions that have happened from research to policy. A lot of research has been done but most of them just show scientific issues, methods etc. (All HDSS sites have to summarise their own examples to understand the impact of their research on policy)
- What processes have been involved in every site to bring about the impact? This process need to be documented and could be used as examples for other sites. The vitamin A example of Bandim HDSS could be similarly used
- Lets document our work to pass on lessons, Osman and team can help
- Documenting evidence should involve every researcher NOT from up down – all should take part
- INDEPTH has tremendous potential for innovations just need to work together
- One strength of INDEPTH is that it can get expertise from different contexts around the world

Registration of Vital Statistics

- We have to move from the laboratory to the community
- Scandal of invisibility: Many Africans are born and die without leaving any trace in any legal record and official statistics
- CRVS (Civil Registration of Vital Statistics) will be very useful in a lot of areas: Voting, security and a lot of other information which vital to good governance
- Why people are not coming to register? What is the incentive to register for instance, a death?
- Involve religious and community leaders and link to religious and cultural ceremonies with birth certificate and immunization – A child is not given any religious or cultural right until the parent shows a birth or immunization certificate
- Who is responsible for registration of individuals? HDSS sites or CRVS? (HDSS and CRVS are there but not talking to each other, now we see an opportunity)
- Many ministries have to work together in CRVS system that is why it becomes complicated
- The total process of effect of HDSSs on policies is very complex. Many entities are part of this process. We need to discuss how these entities could come together. Need to work with national and district CRVS – stop working in silos
- INDEPTH can play very big role in CRVS: Verbal Autopsy work done by INDEPTH is of tremendous importance. Because there is no way we are going to have enough physicians, statisticians in all rural areas

Mark Collinson

ISC 2015 Key Outcomes

- 279 delegates including:
- 2 ministers
- 53 INDEPTH-funded participants
- 70 self-funded participants
- 9 Board members
- 9 SAC members
- 33 centre leaders
- 20 Ethiopian Universities with 14 University Presidents and 6 University Vice presidents
- New partners: Stanford University
- Editors of reputable journals: The Lancet, Lancet Endocrinology
- Funders: Sida, Hewlett Foundation, Packard Foundation
- Over 50 presentations made

Editor of The Lancet Global Health Zoë Mullan and Editor of The Lancet Diabetes & Endocrinology journal Dr Justine Davies, making a presentation.

Funders Session

This meeting was held on Thursday 12 November 2015, convened by Hewlett Foundation, attended by representatives of Sida, Packard Foundation, INDEPTH Board Chair and members, SAC Chair, INDEPTH Executive Director, one centre leader and managers from INDEPTH Secretariat. The meeting focused mainly on:

- Reflections on State of the Network
- CHESS
- Development of the Strategic Plan 2017-2021; and
- Harmonization of INDEPTH-Network reports for Funders

The session was very fruitful as the Board Chair and ED took the opportunity to clarify some issues particularly those related to the CHESS initiative and the new strategic plan 2017-2021 for the Network.

Hewlett Foundation's Kristen Stelljes said she was very pleased that policy engagement was so much on the agenda this time as compared to the last ISC in Johannesburg. Dr. Maria-Teresa Bejarano of Sida expressed her appreciation on what she had experienced during the ISC 2015 saying there have been a lot of developments at INDEPTH. There was also an agreement on the harmonization of INDEPTH-Network reports for Funders.

Dr. Peter da Costa, a consultant with Hewlett Foundation said there was a huge opportunity to use INDEPTH's body work to engage in policy through translation and sharing experiences. He gave an example of the vaccine studies in Guinea Bissau that Bandim Centre Leader Prof. Peter Abbey shared in an earlier session.

Prof. Michele Barry from Stanford University (left) follows proceedings in one of the sessions. She led a team of 6 senior faculty members from Stanford at the ISC. They included Prof. Mark Cullen, Prof. Stephen Luby, Prof. Ami Bhatt, Prof. Eran Bendavid and Prof. Marcella Alsan.

Independent Assessment of ISC 2015

Prof. Carel IJsselmuiden, the Executive Director of the Council on Health Research for Development (COHRED) presented an assessment of the conference during the closing session on 12 November 2015.

He talked about how much more INDEPTH could get out of a gathering like the ISC. He suggested that the Network look further into who else they can involve in future meetings, and not the same people all the time. He also proposed a number of activities that could take place at an ISC and make it more attractive, including Multi-sectoral, short, intense ‘so-what’ sessions; ‘Off programme’ sessions like CEO lunches, Skills trainings and Market place for software and tools.

Carel said there was so much talk about research utilization to policy and practice during the sessions. He said many policies in countries like South Africa there are already many policies which have not been implemented, so INDEPTH should go beyond encouraging research uptake.

On the observations that government support to research was minimal or nonexistent, he said researchers should not expect much from health ministries because these had so many competing priorities – disease, hospitals, malnutrition etc so research is far down the list.

Appendix 1

SAC Meeting 9 November 2015 Addis Ababa

Peter Byass [chair]; Osman Sankoh, Don de Savigny, Jocelyn Clark, Anna Maria Ekstrom, Cheryl Moyer, Phillipe Bocquier, Harry Campbell, Halima, Mamusu Kamanda, Samuelina Arthur, Martin Bangha.
David Ross has extensive WHO commitments so is stepping down as SAC member .

Review of Secretariat responses to SAC recommendations at last SAC meeting

How Secretariat engages with science
Issues are:

- Critical mass: need 2-3 scientists in the secretariat
- Staff changes over time
- Academic development of scientific staff

Secretariat has experience in systematic reviews
Network publications not prioritised by Centre leaders
Focus is on funding / productivity through Centres and Working Groups rather than Secretariat

- Example of Peter Waiswa raising funding through a WG (works well for him as he had a Karolinska base (joint PhD programme with Makerere) and clear academic development within the projects; postdoc in the Secretariat may have been less good for his academic development

Centres are autonomous and may have their own funding and may not wish to share this information with the Secretariat – potential for conflicts of interest within the INDEPTH network

Funding
SIDA 60% and Wellcome Trust 25%

Wellcome Trust

- WT criticism a few years ago that the secretariat is "not productive" in terms of multicentre publications; and don't have senior enough scientists to run large programme grants
- WT plans many of the most successful Centres (including Kilifi, Karongo, Agincourt etc)
  - Plan to go back with enhancement grants to work on the amalgamated data
  - Exemplar is Peter Byass VA project

Role of the SAC

- SAC can propose multi-site projects in their areas of expertise and interest – this is to be encouraged
- need institutional links with secretariat to get meaningful senior external input into projects
- there is an element of conflict of interest and there could be concerns about degree of independence of SAC so need for transparency); suggestion to have conflicts of interest statements
- SAC have a capacity strengthening function

INDEPTH core membership and associate membership

- Wide range of performance across Centres (weaker Centre represent reputational risk to INDEPTH)
- SAC desire to have minimum core membership by adding iSHARE data sharing (or roadmap to achieving this) to core membership requirements

Authorship

- Individual recognition especially junior authors is critically important – example of CHESS paper in Lancet Global Health
- Journal needs to construct the meta-data appropriately
- NML or PubMed needs to be aware to this requirement and needs to be asked specifically to do this – this can be done quickly
- Importance of contributorship statements for each Centre
- If several multi-centre papers then there should not all have the same first author

Discussion of Working Groups

Working Group New areas
Assign SAC members to specific Symposium sessions

Strategic Groups

<u>Cause of Death WG</u>

- Good response to calls for data sharing
- Data collection standards: WHO VA recommendations 2007; WHO 2012 instrument – very widely used now but not adopted by IHME / PHMRC; WHO 2014 standard including IHME / PHMRC; WHO 2014 includes all WHO 2012 with some additions so backwards compatible; essential that all groups follow this
- Data analysis: consensus now that this needs to be automated; discussion about how this is done; no models are perfect, all have strengths and weaknesses and will evolve over time; vital to
    - InterVA4 – fully compliant with WHO 2012; InterVA5 will be fully compliant with WHO 2014
    - IHME TARRIF and TARRIF2 but neither are fully compatible with either WHO 2012 or 2014
- INDEPTH needs to give clear guidance on how Centres should collect data in future; INDEPTH series publications are based on WHO 2012

Working Groups

<u>Adult / ageing – Steve Tollman</u>

- Successful in raising funding with Harvard initiative; no funding to Secretariat
- Ideally would like to see this WG expand its work into further INDEPTH Centres (currently only in 3-5) – eg in potential to monitor 25x25 goal

MN health WG

- Seed funding from SIDA; Peter Waiswa leader; now successful finding through ENAP / Joy Lawn - £800k from CIF (grant to INDEPTH with PW as a PI as part of larger grant including LSHTM)

Migration WG

- Substantial contribution to methods development (including 2 manuals)
- Internal migration much larger than international migration
- EU calls for later but not likely to support research on internal migrants

Environment WG

- WT have £75M for climate change and health – looking for ways to submit to this

Vaccination and child survival WG

- 2 grants ending in 2016; core funding to the group
- GAVI funding for additional analyses

Health Systems WG

- Rockerfeller grant for pilot which was completed successfully but no continuing interest of donor; BMGF funding now (PI James in Accra)

Trials WG

- Funding to develop an intervention; Kilifi and Ghana formative research but papers not submitted yet
- Plan to submit to WT and MRC calls (on adolescent health) for intervention research

Social Science WG

- WG has met a few times; interest in implementation research
- Social aspects of AMR is a theme within this
- Potential links with Stanford; University of Edinburgh (who have WT funding in this area)

New interests groups (challenged to prepare funding bids and if successful then can become a WG)

- Nutrition
- HIV/ AIDS
- Mental Health – proposal to Danish Research Foundation
- Sickle Cell – HEROS (coordinated donors planning meeting) presentation on SCD leading to an NIH call; small group to develop this area and developing an NIH proposal
- Climate and Health – with Andy Haines; interest form Umea University; needs for data of health effects of climate change

Discussion

- Falling mortality but don't have an equity WG to track equity over time as mortality falls; document what is happening / monitor development over time; methods are in place to do this; need to engage health economists (like Barbara McPake); need to engage economists with the INDEPTH data;

- Geospatial analytics – important new area with equity and health systems planning issue (granular needs); expertise in the Oxford malaria mapping group
- Need a description of the concept to propose as an interest group and identify a leader
- NCD risk factors trends – taken up by Adult / Ageing WG; STEPS applied within an HDSS is transformed as can link RF and outcome data longitudinally – so can do STEPS survey on over 40s / 50s and link with the outcome data

CHESS:

- SIDA (2016 $100k) to do a pilot
- SAC to give site selection criteria to do a pilot in 2016; need also commitment to do this from among Centres

iSHARE (PI Osman Sankoh / Cobus)

First WT grant to prepare the data and make it available

- Plan to submit for a £210k enhancement grant to make us of the data – has to be submitted by Jan 2016; good idea / less competitive funding source; avoid trap of adding too many aims given the level of the funding
- WT asking what is the innovation?

Proposal to focus on epi and demographic transitions

- Should not condition CHESS on being able to show the need for CHESS in this project
- Could be more detailed in terms of specific research questions
- Definitions of the various transitions are not uniform across disciplines – this could another aim to bring epi and demographic research groups together to develop a unified approach
- One product should be to describe in detail the transitions in the past 15 years and investigate to what extent this is as expected
- Present this as a "Big Data" analysis; ideally note why INDEPTH is in the best position to this (rather than external groups) or has additional data / insights that it can bring to this
- Would be better if it is was less descriptive and had an analytic component (with examples), including giving insights into mechanisms of the changes;
- mention that this could help inform how heath systems should respond to these changes;
    - DSS are in districts but don't document the dynamics of the district health system (plans and budgets) so not capturing the contextual dynamics (INES protocol developed to do this – this should be implemented longitudinally) – should be Demographic, Health and Health Systems observatories

Need to have a plan for the next substantial grants to the WT

INDEPTH Strategic Plan

- Current strategic plan has been very helpful but now needs to be updated to reflect eg CRVS and new SDG developments
- Launch in Oct / Nov 2016 at next AGM (likely in Kampala)

- Needs to be linked to strategic funding from SIDA and Hewlett – need some assessments of the risks from these sources (eg some of Swedish global health budget going to refugee activities rather than scientific projects; or funding moving to countries rather than networks)
- INDEPTH Presentation at SIDS science meeting in September
- Decision not to commission consultant facilitators to do this for INDEPTH
- SIDS funds the core and is interested in CHESS as a core activity
- Consider having a "3 word" mission summary
- Strategy to support the secretariat through large projects rather than reliance on core funding from a few donors
- INDEPTH passed benchmark tests and will get ~$2M new core support from 2016 with focus on INDEPTH giving data for national decisions making; need clear focus on national policy engagement; core support is to show new value and not just to sustain current activity; "Evidence for Change" focus
- Look at 2015 World Development Report – should be consulted in developing the new strategy

New ideas

- SDG tracking – will spawn hundreds of indicators, many of which will not be tracked; this could be taken on by INDEPTH2 and can this given insights into where these work or don't work or are on track or not on track? Is there a need for a new survey
- In a future based on in-country HIS and CRVS describe role of INDEPTH in strengthening / validating and accelerating these ambitions;
- Biometrics: what if all citizens will have a biometric – what will this mean? Can this be piloted in INDEPTH?
- ICT: how much of HHS work could be done by phone? Migration – how much of out-migration could be improved by the use of new ICTs?
- Geo-spatial analytics

CHESS

- What are the new opportunities for CHESS in these ideas? SAC input to design of the CHESS proposal; add in bio-samples element
- Linking with HFs – what are the key questions; many already have lab facilities; what are the key questions?
- SEED – have selected the sites (includes Manhica; possibly ICDDR,B / Matlab); focus on U5; specific aetiologies and vaccines don't know number of sites (criteria > 50/1000 CMR; had to agree to ship samples to Emory etc; cold chain in place); very extensive questionnaire to assess applicability to apply; don't know which INDEPTH Centres actually applied; 2 day meeting in Barcelona in Jan 2016; can we find out which INDEPTH sites are taking part in SEED

- CHESS – should have complementary focus on adult health / adolescent health etc; WT may an interest in being complementary to SEED (and in "non malaria fever" in HF studies) – this should inform strategic approach to the WT
- CHESS meeting – 1) SIDS funding for pilot - $100k per site for 2 sites; need to be done in site that is doing some of this and doing full CHESS in a subset of population – site selection criteria to "quickly implement

CHESS" [eg member of ISHARE]; 2) write up a protocol document that describes implementation of CHESS – longer term objective – to be shared with all Centres to describe the "core"

- Meet in TANA 1 tomorrow

Look at new issues and advise / prioritise

- NN mortality
- NCDs
- CRVS
- Climate change

Proposal for a commentary on what failed wrt MDGs

Next ISC in 2017: two Indian candidate sites

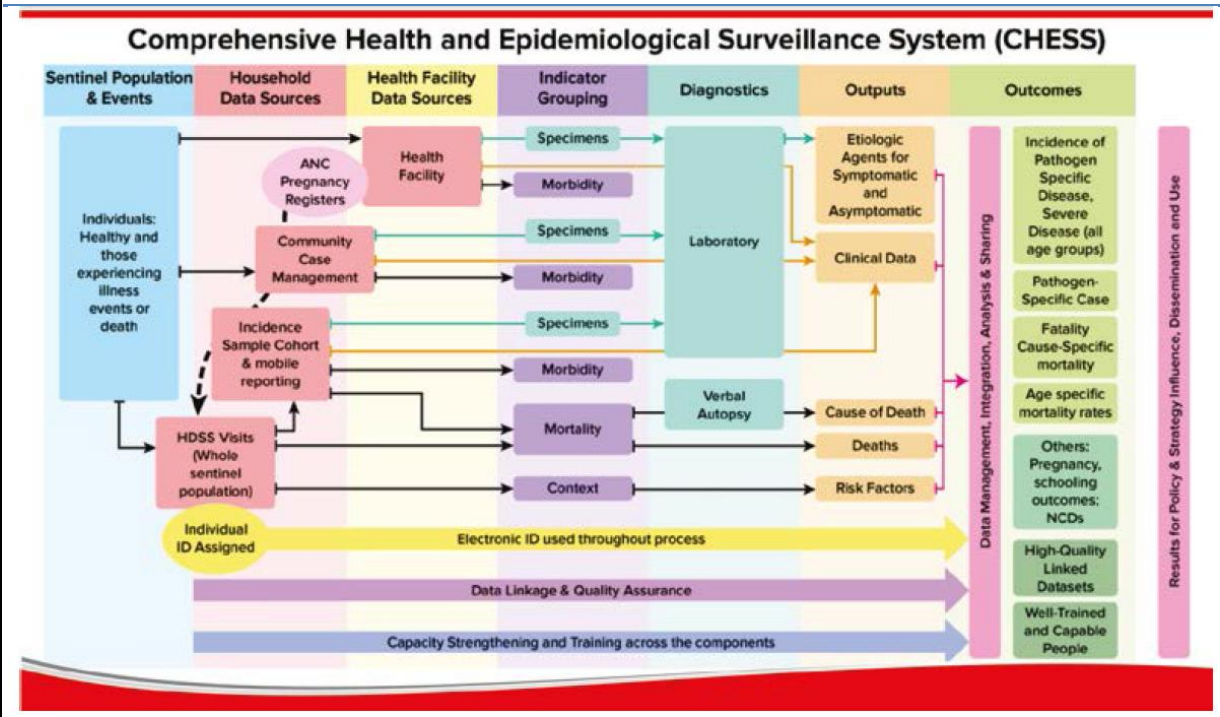
- include a session with an external outlook – "INDEPTH meets the world "
- organise a brainstorming event to look at the INDEPTH role in future world scenarios (not just a completely internal meeting);
- could also tackle issues for external groups such as whether INDEPTH data representative
- donors also looking for new visions / ideas to fund

SAC lunch on Thursday

Appendix 2

SAC Meeting 10 November 2015, Addis Ababa

Notes on the INDEPTH SAC Discussion of the Comprehensive Health & Epidemiologic Surveillance Systems Initiative (CHESS)



SAC Side Meeting to Discuss CHESS

Participating:
SAC: Cheryl Moyer, Don de Savigny (Chair & co-rapporteur), Stacey Gage, Anna-Mia Ekstrom, Jocalyn Clark , Halima Mwenesi, Harry Campbell (co-rapporteur), Philippe Bocquier
Non SAC: Kobus Herbst, Mamusu Kamanda

Purpose of meeting
To discuss / brainstorm criteria for site eligibility for a CHESS pilot project and immediate next steps.

Background:
Don de Savigny briefly reviewed the history of the concept to date, describing the development of the INDEPTH iSEED (Sentinel Epidemiology and Etiology Consortium) concept note for the BMGF CHAMPS project developed by INDEPTH and its SAC in June 2014. This was not short listed. Two full proposals were ultimately submitted to Gates by Emory University and the LSHTM with the former being approved for significant long-term funding. It is not yet clear which INDEPTH sites, if any, are working in the CHAMPS project.

Nevertheless, the long standing underlying interest of HDSS sites to do morbidity surveillance, and the effort expended in developing the iSEED concept note should not be neglected. Therefore INDEPTH signaled its intention to move forward in this direction via a letter to Lancet, endorsed by all sites. This is now called CHESS (Comprehensive Health and Epidemiologic Surveillance System) and constitutes a type of HDSS Plus, requiring a significant widening of the current HDSS core required for INDEPTH membership. INDEPTH, with possible funding from Sweden, is interested to do a pilot of these additional core elements in at least two HDSS sites and asked the SAC to provide advice on eligibility requirements and next steps.
To set the stage for discussions, we reviewed the proposed conceptual framework and workflow developed for iSEED and slightly modified by INDEPTH (extended to all age groups) for CHESS (see cover page).

CHESS means expanding the core surveillance for HDSS+
Sites participating in CHESS will need to expand their core surveillance beyond:

- All cause mortality (current core)
- Cause-specific mortality (current core)

to include surveillance of:

- 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
-

This will require additional integration efforts:

- Linking population and health facility data
- Linking epidemiologic, demographic, clinical and laboratory data
- Linking households and environmental contexts
- Linking HDSS & CRVS
- Integrating data sets and analyses
-

Major new features

- Use of unique digital electronic & biometric personal IDs or National IDs (national is the preferred option);
- Use of sub-cohorts to follow morbidity incidence: e.g. daily reporting via tablet and mobile to CHESS; Use of active surveillance and being on call for incident cases triggering home visit team to take history and samples; working with iCCM; pregnancy registers, etc.;
- Collection of very minimally invasive clinical specimens on health and ill individuals;
- Managing biobank specimens.
-

Special issues

- Expanded ethics and IRB approvals
- Confidentiality
- Referrals during morbidity episodes
- Liabilities

Pilot site considerations

Rather than propose go-no go criteria we decided to list considerations that lower the incremental cost in terms of effort and finances to upgrade to CHESS requirements. Participation can then be by open competition. These considerations include:

- Passionate interest & ambition to move to CHESS style HDSS+
- Experience in linking Health Facility and HDSS data
- Use of DHIS2 (or Electronic Medical Records) at district or facility level
- Experience in notification of morbidity events at HH level
- Experience with biobanking
- Country with or moving toward linkable national unique IDs is an advantage
- Geo positioning of HHs & HFs
- Minimum HDSS population size of 75,000
- Ability to collect and manage very minimally invasive samples (e.g. dried blood spots, hair samples, etc) at population level
- Access to laboratory capacity (~58 tests can now be done on dried blood spots or microcapillary samples – listed in article by Cobus; could be set up as a biobank; early indication of disease incidence / baseline for prospective studies (Current Opinion in HIV paper); could be inexpensive if conducted in high throughput fashion
- Active iSHARE member
- Already migrated to OpenHDS
- Using automated real time VA coding (e.g. InterVA4)
- Experience in monitoring contextual data: e.g.
    - District Health System plans & budgets
    - Intervention coverage
    - SES – housing, energy, sanitation, water, assets, etc
    - Immunization status
    - Education
    - Care seeking behaviours
    -

Funding

We considered the major cost drivers of the CHESS HDSS+ additional work in terms of both up front investment costs & incremental / variable costs. These require quickly estimating costs of the large drivers such as:

- Data linkage - e.g. if staff need posting at HF level
- Cost for minimally invasive specimen work (e.g. USD 10 / person / year on sample)
- Cohort morbidity incidence surveillance operations
- Establishing and maintaining a biobank

We are concerned that the SIDA 200 K USD is probably inadequate for a two country pilot and discussed the idea of approaching funders for a larger envelope for full CHESS development in a larger number of sites. For example, an EU Horizon 2020 Multi-million USD proposal for at least 4 sites with potential northern partners if linked to participating sites such as:

    - LSHTM
    - Edinburgh

- Karolinska
- SwissTPH
- IRD
- FIND
- Oslo
- Umea
- Sanger
- ITM
- Heidelburg
- UcL

The Horizon 2020 funding programme on "Health, Demographic Change and Wellbeing" has a current call on "Big Data for Public Health policies": SC1-PM-19-2016:

> *"proposals should focus on how to better acquire, manage, share, model, process and exploit the huge amount of data to develop integrated solutions that support public health authorities in particular in long-term policy making and increase the ability to provide actionable insights at the point of care".*

Other possible funding sources could include the new MRC Health Systems call, JICA, Korea or a consortium of funders. If we go this route, we should consider asking to use the SIDA funding for the proposal development workshops with sites, and for doing some costing studies on the major cost drivers.

Immediate next steps

1. The INDEPTH Site Features Table needs updating so that the pilot site considerations can be assessed;
2. Find out about CHAMPS and which INDEPTH sites are involved;
3. Discuss the idea of SIDA funding leading to a larger donor proposal development effort, e.g. the EU Horizion 2020 for 2016-17 has calls that seem to fit this;
4. Consider and discuss using SIDA funding for larger proposal development; This would include using SIDA funding to do some costing field work for the additional elements for the larger proposal development;
5. Anna Mia Ekstrom can join SIDA meeting in December;
6. Plan a SAC conference call with INDEPTH on CHESS;
7. Use the SAC to assist proposal development;
8. Identify any site experience templates available to assist proposal development (e.g. on unique identifiers; South Africa: project linking heath and demographic data to social records / education etc with Mark Collinson; Kobus could share agreements with national (lab) authorities; ethical approvals for data linkage and sharing; Harry can share ethical approvals for collection and use of biological samples, SOPs for sample collection an processing).
9. Set up DropBox for SAC with a section for CHESS Proposal Development

Appendix 3

Maternal and Newborn working Group meeting at the 2015 ISC, Addis Ababa

The maternal and newborn meeting was held on the 12th November 2015 the second day of the INDEPTH Network Scientific Conference (ISC) in the Tana 2 hall, at the Ghion Hotel Addis Ababa, Ethiopia. The meeting was attended by delegates from various Health and Demographic Surveillance Sites (HDSSs). The meeting started with a welcome address by the Working group leader, Dr. Peter Waiswa. He presented the agenda (Appendix 1), then made a general presentation on maternal and newborn issues in Low and Middle Income Countries (LMICs) and the role INDEPTH is playing this regards.

Dr. Peter Waiswa then invited Joseph Akuze and Michael Ediau to make the presentations.

Joseph Akuze made a presentation on where the INDEPTH maternal and newborn group was come from since its establishment in 2010, what it has achieved so far and the challenges faced. For example the achievements like the UNEST supplement and other publications, securing funding, establishment of the steering committee among others and challenges like remuneration for the volunteers, communication with the sites. According to him, working group members have worked together to bring the group this far.

Dr. Waiswa making opening remarks

Another presentation by Michael Ediau on the Maternal and newborn working group strategic plan from 2016-2020. A lot has been done by the team in this regards and the team will be grateful to have those presents to look at the document and comments/inputs. Michael suggested that the current draft will be circulated to all members of the working group who will review and make comments and suggestions that will see the strategic plan improving and finally being used actively. Some of the suggestions were about drafting the activities for the working group.

Finally, Dr. Peter Waiswa talked about the funding from Children investment Fund Foundation (CIFF) through London school of Hygiene and Tropical Medicine (LSHTM). This funding is to implement the every newborn action plan (ENAP) metrics. A Request for Applications has been drafted by the leadership of the working group which will be circulated to the centres for expression of interest. Three to six HDSSs will be selected for the implementation of the project. The selection process will be done with criteria that have been

developed together with save the children, LSHTM, INDEPTH Network and Makerere University. The funding is for three years but can be extended to over five years based on the performance of the awarded site.

Participants attending the MNWG meeting in Tana 2 Hall

Some of the members of the MNWG in a side meeting during the ISC dinner.

Steering committee meeting

After the main working group meeting, the steering committee met to discuss the way forward of the CIFF project and also to discuss other issues. The steering committee members present at the meeting included Sanjay Rai, Peter Waiswa, Joseph Akuze, Michael Ediau, Nega Asefa and Samuelina Arthur.

Peter made the remarks for the meeting and emphasized that in order for the MNWG team to work more effectively it needs to have a functional secretariat and needs to communicate more frequently. He also sent regrets from Kate Kerber who was not able to make it for the ISC because of a personal emergency she needed to attend to. Point of discussion for this meeting included:

- The funding from CIFF
- Review the maternal and newborn strategic plan
- Inviting members of the steering committee to a protocol writing workshop (for the CIFF grant)
- Source for additional funding for the working group
- Writing a cross-site paper on Verbal Autopsy (Sanjay, Nega, and Joseph)

What the committee needs to do is to complete the strategic plan and do a costing budget for the strategic plan to be submitted together to CIFF and other potential funders. The drafted call has to be circulated to the centre leaders for expression of interest. The team will then select the HDSSs based on the selection criteria for the project to begin. The project is expected to commerce early January.

The members suggested that they needed to have a monthly call in order to be more efficient. This will be initiated by members of the secretariat through and invitation.

The members also suggested that the MNWG steering committee needs to encourage center leaders not to change HDSSs champions for the working group activities frequently because it affects progress of the working group. The following action points were outlined:

- We need to include in the strategic plan measurable target to bench progress
- A monthly update of progress in each HDSSs will be beneficial
- A write up of neonatal paper by Sanjay, Nega, and Joseph to start
- Invite other experts in the field to join the steering committee.
- One site leader from Asia will be needed to join the working group membership

Selected pictures from the Conference

General overview of the ISC

The ISC started on the 11th and was concluded on the 13th, November 2015. This conference was attended by delegates from various departments, universities, HDSS sites among others. The conference started with entertainment welcoming everyone back home "to the cradle of man-kind". This was followed by various speeches from the INDEPTH board chair (Prof. Tanner Marcel), INDEPTH Executive Director (Prof. Osman Sankoh) and Ethiopia's Minister of Health (H.E. Dr. Kesetebirhan Admasu).

Prof. Osman mentioned that he was proud of the members of the MNWG for their selfless work and commended them about the CIFF grant. He asked the other working group members to emulate the same. He also mentioned London School of Hygiene and Tropical Medicine (LSHTM), Save the Children (SC) and CIFF as INDEPTH Network funders.

This was followed by a plenary session in the afternoon where all INDEPTH projects were profiled. During this session, Dr. Peter Waiswa was invited to talk about the Maternal Newborn Working group. He gave the general overview of the group, plans, and achievements and invited everyone to the MNWG meeting on day two of the conference.

Peter, Joseph, and Michael were able to hold meetings or interactions with several key people at the conference and some of these include;

- Meeting with all Ethiopian leaders of the six HDSS sites. The leaders from these sites were very enthusiastic about the RFA and collaborations in sourcing grants from possible donors like Save the Children, Gate foundation, USAID, Ministry of Health and UNICEF.
- Meeting with Osman and other INDEPTH staff (Martin Bangha and David Mbulumi). The discussions were around how to improve communication between the MNWG secretariat and the sites through using group emails setup from INDEPTH Network Secretariat and functional website for the group. Prof. Osman mentioned to the team that the MNWG has clearly outperformed the other groups and it is the only group that has a strategic plan (although still in draft form).
- We were also had lunch and break tea meetings with Prof. Peter Aaby (Leader of Vaccines working group), Prof. Anna Mia Ekstrom (representative from SIDA and Karolinska) and Prof. Gage Anastasia (a member of the INDEPTH Scientific Advisory Committee from Tulane University in USA). They were all enthusiastic to work with the MNWG on various issues like grant sourcing, publications among others.

Finally in this 13th ISC the INDEPTH Network has established a partnership with Stanford University to do research and capacity building. Luby Steve (sluby@stanford.edu) engineered this partnership and he welcomed members of the Network to write to him directly for any

future collaborations. Makerere University (Peter, Joseph and Michael), LSHTM (Joy, Hannah, and Harriet) and SC (Kate) need to have discussions and see how to strategically establish collaborations with Stanford team and the MNWG.

AGENDA

DAY 2: Thursday, 12 November 2015

Maternal Newborn Working Group Meeting

Venue: Tana Hall 2

Time: 15:30 – 17:30

Addis Ababa, Ethiopia

SN	TIME	ACTIVITY	SPEAKER
PROGRAM – DAY TWO; 12TH NOVEMBER, 2015			
1	15:30 – 15:35	Chairperson's remarks	Dr. Waiswa Peter
2	15:35 – 15:45	General Introduction to the Working Group	All
3	15:45 – 16:00	Updates	Joseph Akuze
4	16:00 – 16:15	Strategic Plan	Michael Ediau
5	16:15 – 16:30	Call for proposals around ENAP metrics	Dr. Waiswa Peter
6	16:30 – 16:50	Discussion	All
7	16:50 – 17:30	Steering Committee meeting	All

APPENDIX TWO: LIST OF PARTICIPANTS

Name	Site	Email
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Appendix 4

Pre-ISC 2015 Young Scientists training workshop

Photograph of Young scientists and facilitators at the 2015 ISC in Addis Ababa, Ethiopia. In the middle are Justine Davies (left) and Zöe Mullan (right) from The Lancet Journal. Behind Justine is the Capacity strengthening and Training Manager of the INDEPTH Network, Martin Bangha and at the extreme right is Samuelina Arthur from the INDEPTH Secretariat.

Introduction

INDEPTH over the years has been organizing pre-ISC training for upcoming and young scientists of member HDSSs. This training is to build scientists capacity to be able to publish papers in high impact journals.

The ultimate aim of this workshop is to assist a select number of young scientists to transform their draft papers to publishable papers. For this ISC, 45 Scientists submitted their papers for the Young scientists' category and 9 were eventually selected for the training.

Organization/participants:

The training started on the 10th November, 2015 from 9am -5pm in Addis Ababa, Ethiopia as part of the ISC pre-meetings. There were nine young scientists from nine HDSSs (Africa and Asia) and two facilitators Justine Davies and Zöe Mullan both journal editors from *The Lancet Diabetes and Endocrinology* and *The Lancet Global Health* respectively as well as representatives from the INDEPTH Secretariat and a few observers. The nine HDSSs included;

- Chakaria HDSS, Bangladesh
- Dodowa HDSS, Ghana
- Iganga-Mayuge HDSS, Uganda
- Kersa HDSS, Ethiopia
- Kilifi HDSS, Kenya
- Kintampo HDSS, Ghana
- Navrongo HDSS, Ghana
- Kombewa, Kenya
- Kyamulibwa HDSS, Uganda

The training started with a self introduction of participants. Justine Davies made a presentation on 'what editors look for in any paper'. According to Justine, Lancet is a family of high impact journals. Editors look at papers with scientific and medical eye. Increasingly, small numbers of papers are published by Africans in the Lancet. Thousands of papers are received every year but 96% of these submissions are rejected. The competition is very high when it comes to publishing in the Lancet. Lancet looks for research that will benefit readers, change the way we think about diseases. The Lancet looks for papers that are:

- 50% randomized control trials
- Meta-analysis
- Epidemiology studies

- Modeling and procedures
- Risk-new factors
- Basic Science

Lancet wants something new

- New treatment
- New population
- Global importance
- New knowledge of disease distribution
- New knowledge of the future

Abstracts should be read thoroughly by authors and so when submitting abstracts to any journal, the abstract of the papers should be able to sell the paper. Abstracts should be clear and concise and bring out the key issues in the overall manuscript. Research should be in context and should always follow the journal format.

Another presentation "*Excellence in ethics*" was done by Zöe Mullan. According to her, people publish because sometimes there are conflicting priorities. Publishers will want to publish good papers for journalists and other readers to get the story. There is a pressure to publish or perish and this affect the quality of papers submitted by authors. Don't be under pressure to publish. Publish when you are ready.

The nine young scientists presented their papers in turns. Comments and question were raised by facilitators and other participants. Their papers were assessed by the facilitators and comments/inputs were given to them to better the papers for journal consideration. Young scientists were made to showcase their posters for facilitators and scientific advisory committee (SAC) members to comments and also select the overall best poster. During the closing ceremony of the ISC, Mark Otiende (Kilifi HDSS) was adjudged the best poster for the young scientist's category with the paper "*Psychometric Evaluation of the Major Depression Inventory at the Kenyan Coast*".

Justine Davies (The Lancet journal) Presenting on the key issues to consider when submitting to the Lancet.

List of participants

Name	HDSS/Country	Tittle of paper
Abere Shiferaw Alemu	Kersa, Ethiopia	High Prevalence of Cryptococcal Antigenemia among HIV-infected Patients Receiving Antiretroviral Therapy in Addis Ababa, Ethiopia
Mark Otiende	Kilifi, Kenya	Psychometric Evaluation of the Major Depression Inventory at the Kenyan Coast
Irene Tampuri Azindow	Kintampo, Ghana	Hospitalization among adults resident in the Africa Centre Demographic Surveillance area in Rural KwaZulu-Natal: South Africa
Mohammad Abubakar Siddik	Chakaria, Bangladesh	Comparison of web based online registration of births, deaths, and migration with home visits in Chakaria, Bangladesh
Alfred Kwesi Manyeh	Dodowa, Ghana	Socioeconomic and demographic determinants of birth weight in southern rural Ghana: evidence from Dodowa Health and Demographic Surveillance System (DHDSS)
Noah Kasunumba	Iganga/Mayuge, Uganda	factors associated with under five mortality in Iganga/Mayuge districts, Uganda.
Isaiah Agorinya	Navrongo , Ghana	Predictors of Low Birth Weights in the Kassena-Nankana districts of the Upper East Region of Ghana
Ivan Kasamba	Kyamulibwa, Uganda	Service coverage and mortality along the HIV care cascade in rural Uganda

Tentative agenda

Pre-ISC Writing Workshop for Young Scientists)

Safari Hall, Ghion Hotel Addis Ababa, Ethiopia

Tuesday 10th November 2015

Tentative schedule Time	**Topic**	**Presenter**
09:00-09:20	**Welcome and introduction of participants, workshop objectives**	**Martin**
09:20-09:50	**"Why do editors make their decisions?"**	**Justine Davies**
09:50-10:20	**"Excellence in ethics"**	**Zoe Mullan**
10:20-11:20	**Q & A Session**	**Justine & Zoe**
11:20-11:40	***Health break***	
11:40-12:00	**Comparison of web based online registration of births, deaths, and migration with home visits in Chakaria, Bangladesh**	**Mohammad A Siddik (Chakaria, Bangladesh)**
12:00-12:20	**Socio-demographic determinants of birth weight in southern rural Ghana: Evidence from Dodowa Health and Demographic Surveillance System**	**Manyeh Alfred (Dodowa, Ghana)**
12:20-12:40	**Factors associated with under five mortality in Iganga/Mayuge Districts, Uganda.**	**Noah Kasunumba (Iganga/Mayuge, Uganda)**
12:40-13:00	**High Prevalence of Cryptococcal Antigenemia among HIV-infected Patients Receiving Antiretroviral Therapy in Addis Ababa, Ethiopia**	**Abere Shiferaw Alemu (Kersa, Ethiopia)**
13:00-14:00	***Lunch break***	
14:00-14:20	**Psychometric evaluation of the Major Depression Inventory used in a cross-sectional survey of young**	**Mark Otiende (Kilifi,**

	people in Rural Coastal Kenya	**Kenya)**
14:20-14:40	**Hospitalization among adults resident in the Africa Centre Demographic Surveillance area in Rural KwaZulu-Natal: South Africa**	**Irene Tampuri Azindow (Kintampo, Ghana)**
14:40-15:00	**Spatial Epidemiology of Tuberculosis in Kisumu and Siaya Counties, Western Kenya, 2013**	**Peter Sifuna (Kombewa, Kenya)**
15:00-15:20	**Trends in HIV service coverage and mortality along the HIV care cascade: results from a population based open cohort study in rural Uganda between 1990 and 2014**	**Ivan Kasamba (Kyamulibwa, Uganda)**
15:20-15:40	**Predictors of Low Birth Weights in rural northern Ghana**	**Isaiah A. Agorinya (Navrongo, Ghana)**
15:40-16:00	***Health break***	
16:00-17:00	**Review of posters in groups**	**All**
17:00-17:10	**Closing**	

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