Data analyst meeting

Date: 12-14th October, 2017

Venue: Miklin Hotel, Accra

Hosted by: INDEPTH Resource and Training Centre

Participants at the Data analyst meeting: from left: Dr. Fank Odhiambo (Kenya), Mr. Karim Derra (Nanoro HDSS, Burkina Faso), Prof Jacques Emina (DRC). Ms. Elizabeth Awuni (Dodowa HDSS, Ghana), Prof. Philippe Bocquier (Université Catholique de Louvain SSH/IACS, Belgium), Prof. Osman Sankoh (INDEPTH Resource and Training Centre, Ghana), Ms. Samuelina Arthur (INDEPTH Resource and Training Centre, Ghana) and Dr. Momodou Jasseh (Farafenni HDSS, The Gambia)
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Objectives of the Workshop

- Review tables and charts proposed by sub-groups for inclusion in the report;
- Conduct data analyses, populate and finalize all adopted tables and charts;
- Prepare subgroup-specific report outlines;
- Identify potential post-doc or Master’s students to assist in the drafting of the reports and assign tasks accordingly.

Expected Outputs

- Tables and charts reviewed
- Tables and charts adopted and included in the report
- Sub-group report outlines developed
- Post-doc/Master’s students identified to assist with the report writing.

Report from day one (12th October, 2017)

Welcome address
Osman gave a welcome address and thanked all participants for their support for the group. He informed that multi-centre publications have become very necessary when it comes to funding. Funders are always asking for multi-centre work by INDEPTH and not just the individual work done by the HDSSs. It therefore becomes imperative for the group to work and produce a scientific report from which papers can be published. This group exist to change the face of multi-centre publications of the Network. The group will also need to showcase their work during the INDEPTH 20th anniversary which is scheduled for 2018.

Remarks from the team leaders

Momodou talked about the objectives and the expected outcome of the meeting which is listed above. He also stressed on the targets outline agreed on at Kampala meeting. The following action items with dates were discussed. He urged team members to work together to be able to get the results per the dates agreed on.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Next face-to-face meeting</td>
<td>March 2017</td>
</tr>
<tr>
<td>Draft codes and tables</td>
<td>March 2017</td>
</tr>
<tr>
<td>Final data</td>
<td>July 2017</td>
</tr>
<tr>
<td>Second progress review meeting</td>
<td>November 2017</td>
</tr>
<tr>
<td>Draft ready for review</td>
<td>May 2018</td>
</tr>
<tr>
<td>Final draft ready for printing</td>
<td>July 2018</td>
</tr>
</tbody>
</table>

Reassignment of some group members
The following reassignment of group members were done:

- Migration- Frank was added to the group
- Mortality- Elizabeth was added to the group
- Burden of disease-Elizabeth was added to the group

**Update from the Sub-group**

*Burden of diseases (Frank and team)*

The team did not have much to report on. Based on the data availability, the suggestion was to use interVA-4 data and then update with current years. The INDEPTH Resource Centre already have 22 datasets which have gone through plausibility checks. Ten (10) new datasets in interVA-4 format have also been received which has to go through checks. These datasets can be used for the report and then use other methods like insilicone, smartVA etc later if sites are able to use the current WHO VA tool for data collection. The team suggested regrouping of age groups to enable the team do more analyses.

- Samuelina to send the interVA-4 datasets to Frank
- Frank to contact Kobus/Peter on other issues regarding the datasets.

*Migration (Philippe and team)*

Philippe informed that he was overwhelmed by the number of tables/graphs/chart he is getting for this report especially with datasets from 29 HDSSs. It difficult to tell the story from his initial analyses. His suggestion was for the group to agree on what to be included and what not to be included. He suggested the following:

- Group data in five year period.
- Simple descriptive analyses
- Mean (levels, period effect, age/sex effect)
- Cluster analyses (outliers-able to give reasons for the outliers). The team have to agree on what should be considered in the cluster analyses
- Geo-specific analyses- To know what is happening in the various countries, regions and continent.

*Mortality (Momodou and team)*

The team will run year by year trend analyses and also for 5 year period. The following analyses will be done:

- Child mortality (by sex, region, 5year period etc). Area chart for each region will be included.
- Adult mortality-We can look at young adult (15-40), old adults (40-60) and elderly (60+).
- General adult mortality
- Life table- Will be done using 95% confidence interval
- Regional patterns of mortality by sex.
This report can be used to check what the sites have done so far with regard to the MDGs and also as basis for monitoring the SDGs. Preface of the report will spell out how the analyses was done in an agreed format.

*Population Projections (Karim and team)*

The team informed that short term population projection (15 years) by sites with particular attention to:

- Population by age and sex
- School age of children
- Births by age of mother
- Deaths by major COD
- Major area: Africa, Asia, Oceania
- Periodic years: 2015, 2020, 2025 & 2030
- Age group (conventional) & sex
- Recommendation is for a short term projection rather than long term (15 years)

Projections (based on empirical data) & compare to other general projections at the national or local

The team will be using the following methodology in the table

<table>
<thead>
<tr>
<th>Projection starting year</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Projection horizon</strong></td>
<td>15 years (2015-2030)</td>
</tr>
<tr>
<td><strong>Projection methodology</strong></td>
<td>cohort-component method</td>
</tr>
<tr>
<td><strong>Projection scale</strong></td>
<td>Single years of age (1-1)</td>
</tr>
<tr>
<td><strong>Age groups for outputs</strong></td>
<td>Conventional 5-year age groups</td>
</tr>
<tr>
<td><strong>Projection variants (scenarios)</strong></td>
<td>Low, Medium, High for fertility, mortality and migration</td>
</tr>
<tr>
<td><strong>Data required</strong></td>
<td>Population distribution by age and sex</td>
</tr>
<tr>
<td></td>
<td>Fertility, mortality, and net-migration rates by age and sex</td>
</tr>
<tr>
<td></td>
<td>Life table</td>
</tr>
<tr>
<td><strong>Software</strong></td>
<td>Spectrum v. 5.50</td>
</tr>
</tbody>
</table>

Suggestion: Philippe suggested the following:

- Stimulation for the events (births, death and migration).
- The team should not include 2015 as it close to the observed years.
- The team should do away with the scenarios which is usually used by the UN to project into the future (i.e. 2090 and more). We cannot use the low, medium and High scenarios.
- Projection using regression should be ok for this report.
Note: Leaders for fertility (Bawah) and Population dynamics (Sam) were not around to give update of their work.

Presentation of standardized dataset

Philippe presented the standardized dataset to participants and he also sent the do-file to all the participants.

Report from day 2 (13th October, 2017)

Day 2 started with a recap of day’s one activities.
The team agreed that for the group to make progress, there will be the need for members at the meeting to be assigned to do certain task for the sub-groups. That will help the team to move forward with the analyses. The following people were assigned to create do-file for the below sub-groups:

**Do-file for the sub-groups**

**Do-file for mortality**
- Karim - infant and child mortality do-file
- Elizabeth - adult mortality do-file
- Momodou - life expectancy do-file
- Frank - life table do-file

Osman, Martin and Jacques were assigned to the Population Dynamics sub-group. Osman also suggested we invite Clementine Rossier (University of Geneva) and Valerie Delaunay (Niakhar HDSS) to work with the fertility sub-group since they are leading the fertility working group of the Network. Again, Donatien was to be maintained in the fertility sub-group to help review report from the fertility sub-group.

Population dynamic reports should be the first item in the consolidated report.

**To be considered in the Fertility analyses**
- Total births (by age of mothers)
- Sex Ratio at birth
- Age-specific fertility rate (ASFR)
- Total fertility rate (TFR)
- Mean age at birth
- Adolescent fertility rate

**Do-file for fertility**
- Frank - ASFR, total births and total fertility do-file.
- Momodou - mean age at birth do-file
- Karim - adolescent fertility do-file

**Do-file for Migration**
- Philippe was to work on the migration do-file

**Skype call**

The team had a Skype call with Kobus, Sam and Soura. Momodou updated them on what has been done so far. On burden of disease, Frank reported that he received 22 interVA-4 datasets plus 9 new datasets
in interVA-4 format from INDEPTH Resource and Training Centre. He was to contact Peter for the codes for the 22 datasets as Kobus only prepared the datasets in standard format. Frank will work with Kobus and Sam to have the 10 new datasets in standard format. Sam assured the team of his willingness to lead the population dynamics sub-group. Do-files were to be shared with the entire group when finalized together with the standardized dataset.

Report from day 3 (14th October, 2017)

Recap of day 2 activities
Creating of do-files continued. The agreed to have a template for the analyses

Sub-group outline

Mortality

1. Introduction

2. Childhood mortality (1q0, 4q0, 5q0 at 5% CI)
   - By sites, region, sex and period

Note: We should do more of graphs and then tables as a supplement material online. We could do graphs for sex(male/female)
3. Adult mortality

- Same graphs as the childhood mortality
- 3 graphs
4. Adolescent mortality

- By sites, sex, region all on one graph

5. Life Expectancy

- Same as that for childhood mortality
- 4 graphs for all sites (e₀, 15, 40, 60)
- Each site, region

Note: the sub-group should include cluster mortality analyses (4 component of the cluster analyses).

- Phillippe suggested that sub-group use mqx.
- Philippe will work on life table with mqx
- 4-5 clusters- do average profiles for the clusters.
- By sites, periods
**Fertility**

1. Age specific fertility rate (ASFR)
   - By period, sites, regions
2. Total Fertility Rate
3. Mean age at birth/Median age birth
4. Adolescent fertility (age group 10-19 years)
**Migration**

- In-migration (periods)
- Out-migration
- Net-migration

Thirty (30) graphs for males and females. Each has 3 indicators (in-migration, out-migration and net-migration)


Projections

- Description of the sites
- Sites, period analyses
- Population pyramid (2015 - First and 2030 - last period)
- Growth rate - For each site by periods
- Life table
- Life expectancy
- Age specific mortality rate (ASMR)
- Age specific fertility rate (ASFR)

Note: We should indicate what are the output and also the inputs.

Projection inputs

- Life tables
- Life expectancy
- ASMR/ASFR
Projection output

- Age pyramid 2015, 2030 for each site
- Age dependency ratio
**Dynamics**

- Fertility-TFR

Note: The team agreed that Projection and dynamics should be merged to have one report. There will be the need for introductory chapter for this.
Areas the team will love to include in the analyses in the future (Areas of aspiration)

Migration- The team wanted to have information on origin of migration, type of destination, reasons but the data do not allow that. Sites can include these in their data collection for future use.

Way forward
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<tbody>
<tr>
<td>Introduction</td>
<td>N/A</td>
<td>Resource Centre (Osman)</td>
<td>Collating all the reports from the sub-groups</td>
<td>Finalization and circulation of report to all members</td>
</tr>
<tr>
<td>Mortality</td>
<td>Momodou (look for Post Doc)</td>
<td>Elizabeth Martin</td>
<td>Momodou (cluster) Philippe</td>
<td>Momodou</td>
</tr>
<tr>
<td>Fertility</td>
<td>Karim</td>
<td>Karim Valerie/Clementine Martin</td>
<td>Karim (cluster) Valerie/Clementine</td>
<td>Clementine</td>
</tr>
<tr>
<td>Migration</td>
<td>Philippe</td>
<td>Philippe (will look for post Doc)</td>
<td>Philippe Carren</td>
<td>Carren</td>
</tr>
<tr>
<td>Dynamics and projections</td>
<td>N/A</td>
<td>N/A</td>
<td>Karim Sam</td>
<td>Sam</td>
</tr>
<tr>
<td>Burden of disease</td>
<td>Frank Sam</td>
<td>Frank (has a post-Doc-Sammy) Sam</td>
<td>Sam (Dynamic and Projections)</td>
<td>Frank</td>
</tr>
</tbody>
</table>

Note: The team is targeting to have something published in The Lancet Global by 1st July, 2018. A draft is expected by May. The team will have to check with the Lancet if they can include information on all the sub-groups (for example migration, Population dynamics and projection etc).

<table>
<thead>
<tr>
<th>Activities</th>
<th>Timelines</th>
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<tr>
<td>Finalized Summary</td>
<td>May, 2018</td>
</tr>
<tr>
<td>Submission to the Lancet Global</td>
<td>June, 2018</td>
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<tr>
<td>Internal review</td>
<td>June-July</td>
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<td>Review by SAC</td>
<td>August-September, 2018</td>
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<tr>
<td>Addressing of comments</td>
<td>September</td>
</tr>
<tr>
<td>Final draft of the report ready for printing</td>
<td>September, 2018</td>
</tr>
<tr>
<td>Publication of the big/overall report (Osman to check on that)</td>
<td>N/A</td>
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Pictures from day 3 meeting

Data analyst discussing the outline for the sub-group analyses.
Dr. Momodou Jasseh (middle) explaining and demonstrating how figures/graphics will appear in the consolidated report of the data analyst group.