

Data Visualization Q&A – Additional Questions

Jessica Posner: For that last example, if an org misses a target by X percent, what should they do? Is there an example of how a map can help them figure out what steps to take? Where the 'leak' is coming from?

Answer: An example of a target for an indicator for the Zambia dashboard is:

Percentage of HIV-infected pregnant women who receive ARVs to reduce the risk of mother to child transmission – with a target of 87%

We will display the results of this indicator on a map at the provincial and LGA level, coloring the provinces and LGAs based on percent bands where the highest meets or exceeds the target, say in a dark color and those areas who are farther and farther away from the target lighter colors (using a gradient). For this kind of map visualization, we can easily see areas where the target is met or not met. You'll be able to mouse over the location to see the exact percentage.

Claudia Castellán: What software did Zambia used?

Answer: Software components used:

| Software Component | Responsible for |
|---|---|
| Operating System: Ubuntu 14.04.01 Long Term Support | Operating and managing server calls |
| Database: PostgreSQL Database 9.4.1 | Holding data in the staging and productions databases |
| Web framework: Django 1.8 | Providing services for from which code is called |
| Java and Javascript | Programming language and user interface scripting |
| OpenHIM Mediator | Used as the mediator between the dashboard database and the |
| Mapping software | Home grown using shape files |
| Graphing software | Hicharts and/or D3js |

Abdoulaye OUATTARA: Have you a link to do a training course on geography-referencing?

Answer: I don't know of any courses specifically on geography-referencing. If you are referring to matching the names and geocodes of master facility lists with shape files, it is often a time-intensive manual process that includes doing spell checks by hand in excel, using google maps to verify coordinates, and sometimes (if possible) going into the field to manually record geocoordinates. Often times if health facilities are not easily identifiable through Google Maps, approximate geocodes can be recorded based on nearby landmarks (such as schools).

Fern Greenwell: In Zambia there is an ART patient tracking system, SmartCare. Have there been efforts to integrate data from this individual-level source into dashboard indicators?

Answer: SmartCare and the data provided by SmartCare is a data source that was discussed at length and would provide a lot more precise information than the aggregated DHIS 2 data. Unfortunately this cannot be used as a data source at this time because the data is not available in a central repository accessible via the web. To access the data, the SmartCare team would need to manually extract the data. SmartCare is working on a central repository now, so this may be a source we can consider in the future. Furthermore, only 40% of the sites use SmartCare and while those sites are large, it's not a broad enough sample set for this project.

Abdoulaye OUATTARA: What are the difficulties met in the use of referencing of the geographical data in developing countries?

Answer: The most common difficulties are spelling differences and incorrect or missing geocoordinates. Often, there is not a standardized spelling of names of facilities or locations, which can lead to data not being matched when trying to pull them into a GIS. In terms of incorrect or missing geocoordinates, this can be a big problem. Sometimes when the facilities from an MFL are plotted on a map we find facilities in the middle of lakes, in other countries, etc. As GIS mapping becomes more commonplace, the hope is that developing countries will spend more time ensuring that geocoordinates are collected for all health facilities and that all geocoordinates are accurate.

Abdoulaye OUATTARA: Can we reach certificates trainings on the use of maps for the Monitoring of data visualization for decision making in HIV Program?

Answer: Yes! There is an online MEASURE Evaluation course on this exact topic. Here is the link: <http://www.measureevaluation.org/measure/resources/publications/ms-15-106/>

Vikas Dwivedi: Excellent presentation, congratulations!! I was wondering if there were any non-digital examples that were identified as part of this review.

Answer: All of the examples we included as a part of this review were digital. We were specifically interested in the use of data visualization software in HIV decision making, thus were looking at digital examples; however, the South Africa GIS mapping ultimately produced paper-based maps.