

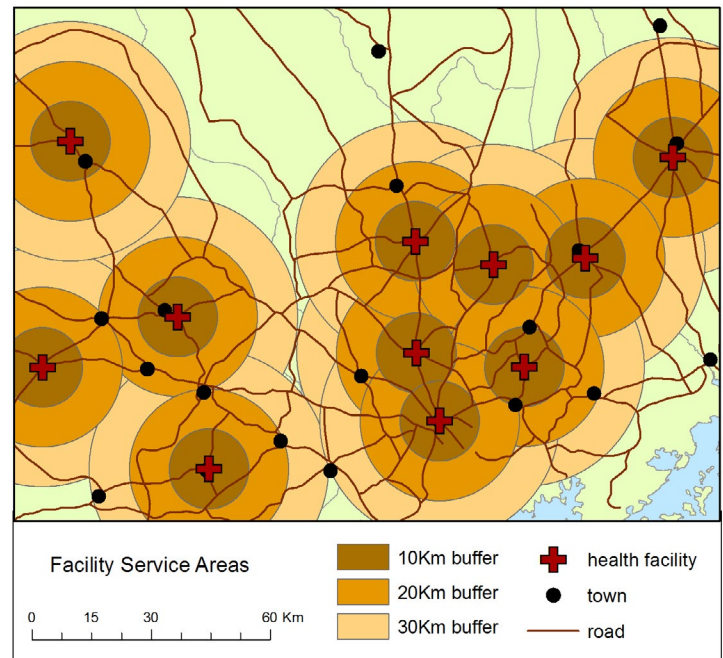
# How Geographic Information Systems Help Countries Develop and Maintain Master Facility Lists

An accurate list of health facilities referenced by their geographic location is a crucial tool for the health sector to be able to offer effective services in the areas where there is the greatest potential to achieve control of the HIV epidemic. MEASURE Evaluation—funded by the United States Agency for International Development (USAID) and the United States President’s Emergency Plan for AIDS Relief (PEPFAR)—is a global leader in this effort and has on-the-ground experience working with countries to build national master facility lists (MFLs).

An MFL is the keystone for integrating health information from different actors, programs, and monitoring systems. A clear plan for governance issues, such as updating and sharing data, is crucial. Through technical assistance, MEASURE Evaluation addresses technical issues related to data schemas and governance issues that control updates and use of such lists.

## Global Leadership

MEASURE Evaluation was a key contributor on the team that developed the scope, direction, and content of the “Master Facility List Resource Package: Guidance for countries wanting to strengthen their MFL” (available at [http://www.who.int/healthinfo/country\\_monitoring\\_evaluation/mfl/en/](http://www.who.int/healthinfo/country_monitoring_evaluation/mfl/en/)), which the DHS Program produced with support from USAID and PEPFAR. In partnership with WHO and the International Health Facility Assessment Network, MEASURE Evaluation developed a list of standard indicators for health facility surveys: “The Signature Domain and Geographic Coordinates: A Standardized Approach for Uniquely Identifying a Health Facility” (available at <https://www.measureevaluation.org/resources/publications/wp-07-91>). Nigeria, Rwanda, Tanzania, and other countries have used these indicators to enable facilities to be uniquely identified in MFLs and surveys. MEASURE Evaluation has also provided thoughtful, innovative leadership on preserving confidentiality with spatial data—an important consideration when data include information on health status. We have hosted international meetings on spatial data confidentiality and participated in expert meetings on that topic.



## Country Technical Assistance

One example of MEASURE Evaluation’s contributions is the MFL we developed for Ethiopia. It is the foundation of the country’s electronic health management information system (eHMIS). Using unique identifiers, the MFL is organized by the hierarchical linkage of health facilities with administrative health units and their placement within the political administrative units, allowing effective linkage of MFL data with an eHMIS report tracker, aggregate reports, and a decision support system with geographic information system (GIS) capabilities. With MEASURE Evaluation’s assistance, the Regional Health Bureau of Southern Nations, Nationalities and People’s Region fully owns and governs this system, from initial data collection through participation by districts, data verification, and updating.

For countries to assess the quality of often-large MFL data sets quickly and easily, with minimal in-house GIS expertise, MEASURE Evaluation created the “Spatial Anomalies and

Quality Diagnosis (SQUAD) Tool.” This tool can be used either with ArcGIS or QGIS (two major GIS programs) and comes with complete documentation and sample data. It is available at <https://www.measureevaluation.org/resources/tools/geographic-information-systems/squad-tool>.

MEASURE Evaluation offers USAID missions access to the following skills and opportunities:

- Expertise in GIS and routine health information systems and their use in developing MFLs
- Technical assistance in the development and use of MFLs
- Organizing and mentoring stakeholders to develop proper governance of MFLs
- Capacity-building workshops on GIS and routine health information system strategies to develop and use MFLs with staff from ministries of health, district health offices, and implementing partners
- Expertise in the ethical use of spatial data to preserve confidentiality and privacy
- Expertise in using GIS techniques, such as heat maps and clustering, to identify disease distribution at multiple scales and predict which populations are most vulnerable to a health risk

## About MEASURE Evaluation



Wayne Hoover, MEASURE Evaluation

MEASURE Evaluation, funded by the United States Agency for International Development (USAID), has a global mandate to help countries strengthen their health information systems (HIS). HIS are the backbone of all aspects of a country’s health sector—from strategic planning and policymaking to delivering services at health facilities. The project’s objective is to enable countries to generate high-quality health information at local, national, and global levels.

MEASURE Evaluation also helps countries improve their capacity for rigorous evaluation to determine what programs work and to identify HIS strengthening interventions that are effective. The project provides in-country resources, such as offices and staff, and short-term technical assistance where USAID might request support. The project works across the full range of disease- and service-specific health sectors: HIV, malaria, tuberculosis, maternal and child health, family planning, nutrition, water and sanitation, and infectious diseases.

MEASURE Evaluation’s history has been one of collaborative effort, with tailored responses to individual USAID mission needs, as well as integration of crosscutting USAID priorities such as gender, country ownership, and system sustainability. MEASURE Evaluation is implemented by the Carolina Population Center at the University of North Carolina at Chapel Hill, in partnership with John Snow, Inc., ICF International, Management Sciences for Health, Palladium, and Tulane University.

### MEASURE Evaluation’s Services

To learn more about our capabilities visit: [www.measureevaluation.org](http://www.measureevaluation.org), email: [measure@unc.edu](mailto:measure@unc.edu). Jason B Smith, PhD, Director for Health Systems Strengthening, John Spencer, Senior GIS Technical Specialist

To access all of the project’s capabilities statements, visit: <http://www.measureevaluation.org/about/services/capacity-statements>. To access MEASURE Evaluation resources, country governments should contact their local USAID mission. The mission, in turn, can contact the USAID AOR for MEASURE Evaluation, Kristen Wares ([kwares@usaid.gov](mailto:kwares@usaid.gov)).