An OpenMRS Module

OpenMRS is an open source EMR used in over 23 countries throughout the world, including 400+ installations in Nigeria.

Now, that is a lot of data! Access to that information could answer some very important questions about population health.

Our add-on module allows users to obtain data such as:

- Disease burden statistics in a country or region
- Trends in diagnoses that inform medical policy.

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A collaboration between
Moravian College
and Merck

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This project was a result of a partnership between Merck and Moravian College based on mutual interest in OpenMRS. Students from the senior capstone course designed the prototype, and a team of summer research students implemented the module. Two of the summer students became interns, and one of the seniors has become a full-time employee of Merck.

Through this experience, students were exposed to a wide variety of technologies they would not normally see in the undergraduate curriculum. They also had the opportunity to apply skills developed in an academic setting to a real-world problem.

OpenMRS has expressed interest in the module, and this collaboration will continue during the 2014-2015 academic year.

**HOW IT WORKS:**
The OpenMRS core supports a modular design, which allows our module to function as an optional add-on to an active instance of OpenMRS. The module supports parameterized queries to provide anonymized data. Users can obtain data from one or more instances of OpenMRS to aggregate data to answer questions about population health.

**EXAMPLE: REGIONAL DATA**
A government official wants to know how cities are coping with various diseases. His sends a query to OpenMRS instances at seven different cities with parameters that specify the diseases of interest. By tallying the results, the official is able to visually compare the disease burden between the cities and see that Dar.es.Salaam has the largest number of cases for all three diseases.

**EXAMPLE: TRENDS OVER TIME**
A hospital administrator wants to see the trends in disease burden during an 8-month period. For the nine diseases of interest, she queries her hospital’s OpenMRS instance for the disease burden for each month. Graphing the data, she discovers that the cases of influenza have decreased while the number of cases of viral meningitis have risen.