

# Piloting A Demographic Health Surveillance (DHIS 2) System For Visceral Leishmaniasis

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1. Drugs for Neglected Diseases initiative.  
2. World Health Organization

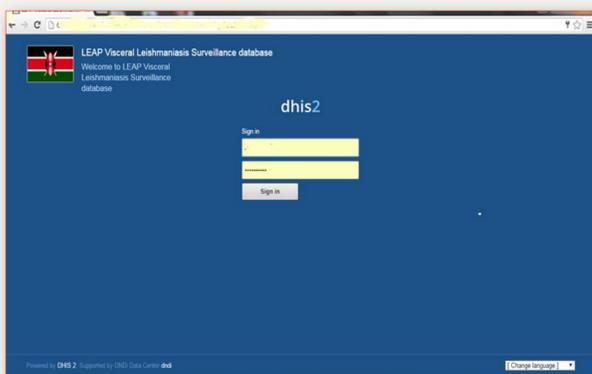
## INTRODUCTION

The District Health Information System 2 (DHIS2) is a tool for the collection, validation, analysis, and presentation of both individual (tracker) and aggregated data, tailored to integrated health information management activities. DHIS2 is a modular web-based software package built with open source Java frameworks, developed by the Health Information Systems Programme (HISP) in collaboration with University of Oslo. Visceral Leishmaniasis (VL) is not captured in the DHIS2 regional database, and therefore devising ways of aggregating available data from clinical trials and general patient records into the DHIS2 national database is crucial for surveillance.

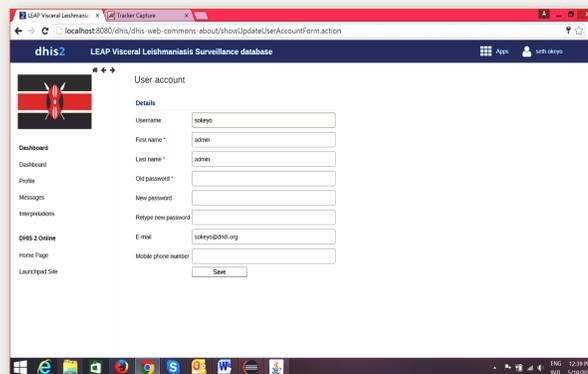
## METHODS

DHIS2 runs on Tomcat Server and PostgreSQL. We set up the VL surveillance program with different stages: enrolment and demographics, initial treatment outcome, and follow up visits. In this system, a patient is enrolled and data is collected as individual data elements; data indicators are built to help aggregate the data and are thereafter used for generating reports. The system is programmed to visualize data and display reports in its dashboard, which can then be used to present data.

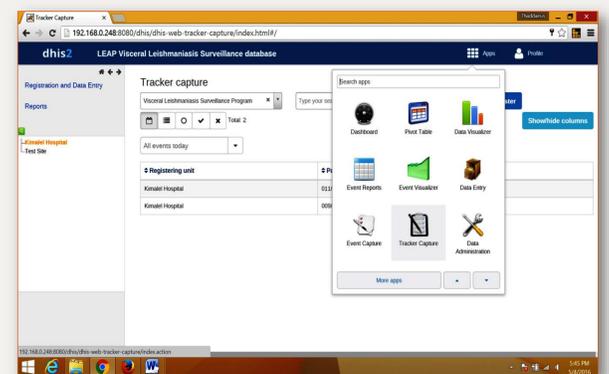
Log in screen



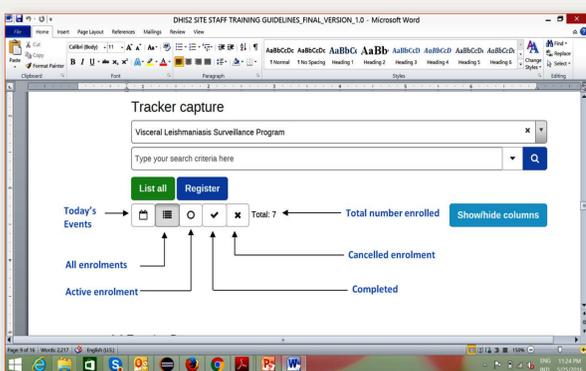
Changing password on log in



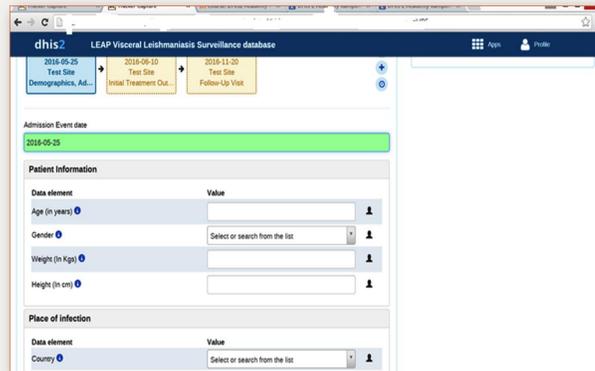
Selecting Tracker module



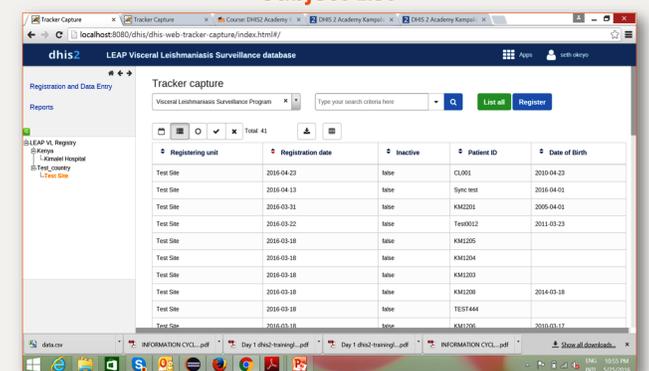
Subject status screen



Data entry screen



Subject List



## OBJECTIVES

1. To develop programs for the user interface: demographics, treatment and follow up.
2. To test upload of patient data to a central database from the remote computers.
3. To validate DHIS 2 and user roles and restrictions
4. To verify data collected for patient variables match database.
5. To analyze pilot data and presentation of individual and aggregated data.

## CONCLUSION

DHIS2 system is an open source tool that can be customized and expanded to capture detailed individual surveillance data and shared in reports. This data is useful for tracking neglected tropical diseases such as VL.

The pilot demonstrated that DHIS2 can be easily used in collecting VL data and get integrated into the national database. This allows for integration surveillance data with national and international databases e.g. MOH & WHO

## RESULTS

Piloting DHIS2 has enabled us to set up a system that uses the programmed set of indicators to aggregate data, thus enabling us to produce reports on the data. Users can select the report in the form of pivot tables, charts and graphs, and in GIS mapped data.

## REFERENCES

1. <https://www.dhis2.org/individual-data>
2. <http://www.clinicaltrials.gov/ct2/show/NCT00934492>
3. [http://www.journaldatabase.org/articles/phase\\_i\\_trial\\_evaluation\\_safety.html](http://www.journaldatabase.org/articles/phase_i_trial_evaluation_safety.html)
4. <http://apps.who.int/trialsearch/trial.aspx?trialid=PACTR2010020001771828>
5. <http://clinicaltrials.gov/ct2/show/NCT00890695>
6. <http://www.fda.gov/RegulatoryInformation/Guidances/ucm125067.htm>