



The Africa Chapter is raising awareness of OHDSI in Africa to improve interoperability and promote collaboration across Africa and globally

OHDSI in Africa and Partnerships with European Institutions

Cynthia Sung^{1*}, Agnes Kiragga^{2*}, Kofi Agayre³, OO Aluko⁴, David Amadi², Daniel Ankrh⁵, Chidi Asuzu⁶, Adam Bouras⁷, Geert Byttebier^{8,9}, Aize Cao¹⁰, Ahmed El-Sayed, Chris Fourie¹¹, Yacob Gebretensae¹², Nega Gebreyesus¹³, Jay Greenfield¹⁴, Lars Halvorsen¹⁵, Jared Houghtaling^{15,16}, Katherine Johnston¹⁷, Andrew S. Kanter¹⁸, Mack Kigada¹⁹, Sylvia Muyingo², Maureen Ng'etich², Michael Ochola², Henry Ogoe²⁰, Bolu Oluwalade²¹, James Orwa²², Mariette Smith¹⁷, Amelia Taylor²³, Marleen Temmerman^{9,22}, Jim Todd^{24,25,26}, Marc Twagirumukiza⁹, Daniel M Wanga², Andrew Williams¹⁶ and the OHDSI Africa Chapter

¹Duke-NUS Medical School SGP ²African Population Health Research Center KEN, ³Nayaho Medical Center GHA, ⁴Obafemi Awolowo University NGA, ⁵Korle-Bu Teaching Hospital GHA, ⁶Duke Medical School USA, ⁷CDC USA, ⁸Medaman BV BEL, ⁹Ghent University BEL, ¹⁰Meharry College of Medicine USA, ¹¹Western Cape Provincial Health Data Centre ZAF, ¹²Sapienza University of Rome ITA, ¹³USAID USA, ¹⁴CODATA FRA, ¹⁵EdenceHealth NV BEL, ¹⁶Tufts University School of Medicine USA, ¹⁷University of Cape Town ZAF, ¹⁸Columbia University, USA, ¹⁹Digulab KEN, ²⁰Publicis Sapient GHA, ²¹Children's Hospital of Philadelphia USA, ²²Aga Khan University KEN, ²³Malawi University of Business and Applied Science MWI, ²⁴London School of Hygiene and Tropical Medicine GBR, ²⁵Catholic University of Health and Applied Sciences TZA, ²⁶National Inst for Medical Research, TZA *Chapter Co-leads

Background

Africa faces significant health challenges from a high burden of infectious diseases, maternal health issues, and rising incidence of non-communicable diseases. African governments are striving to establish efficient systems for sharing health data and promoting interoperability among various repositories as health data are increasingly migrating to electronic data capture. The OHDSI framework for data standardization and collaboration through a federated approach, as well as the extensive suite of programs for quality checks, visualization and rigorous analysis of observational data can accelerate efforts of African entities to strengthen health information systems and analyze large health data sets, both within and across African countries, to generate evidence for improving health systems and patient care, in a manner that is privacy protecting, transparent in methodology, and economical through use of open-source tools.

Methods

Africa Chapter members are spreading awareness of OHDSI to other African researchers, health data custodians and government officials, using the Value Proposition document written by Chapter members in 2023. Chapter members have begun the process to obtain permission to do an OMOP ETL of a specific healthcare database in their country. At Chapter meetings, more experienced members are transferring their knowledge and experiences, as well as introducing synthetic datasets, to give members who are new to OHDSI an opportunity to become familiar with OHDSI tools. The OHDSI Africa chapter is seeking to build collaborative relationships with other data science programs such as DS-I Africa, African Open Science Platform and VODAN.

Results

African countries represented among OHDSI Africa chapter members



- Institutions in Rwanda, Kenya, Malawi, Tanzania, and South Africa have created OMOP versions of local health data.
- The LAISDAR project located at the Rwanda Biomedical Center contains 3.6 million unique subjects in OMOP CDMs transformed from OpenMRS and OpenClinic EMRs at 15 hospitals.
- The INSPIRE network at the African Population Health and Research Centre (APHRC) carried out ETLs to the OMOP CDM using data from the Health and Demographic Surveillance System in Kenya, Tanzania and South Africa.
- APHRC is collaborating with UK institutions The Alan Turing Institute and London School of Hygiene and Tropical Medicine, CODATA (France), I-DAIR (Switzerland) and institutions in Cameroon, Ethiopia and Senegal on a Wellcome Trust funded project "Data Science Without Borders", which will conduct research using data harmonized to the OMOP CDM.
- The Virus Outbreak Data Network (VODAN) Africa has established data science partnerships in 12 African countries and invited OHDSI Africa Chapter members to meet at Leiden University (Belgium) on 04 Jun 2024 to discuss a plan for collaboration.

Conclusion

Awareness of OHDSI is growing in Africa with several African institutions successfully implementing the OMOP CDM and OHDSI tools. Several OHDSI Africa Chapter members are poised to do OMOP CDM implementations at their institutions. Despite the availability of vast amounts of health data in Africa, these remain siloed in different organizations and captured in varying formats and terminologies. Facilitating knowledge transfer from experienced OHDSI members, within Africa and globally, to those less familiar with OHDSI tools, will expedite interoperability and capacity building in Africa. **Funding is urgently needed to empower African scientists to lead this transformative effort.**



Join the OHDSI Africa Chapter biweekly meeting Monday at 10 AM ET



Background color codes for different OHDSI poster categories

Observational
data standards
and
management

Methodological
research

Open-source
analytics
development

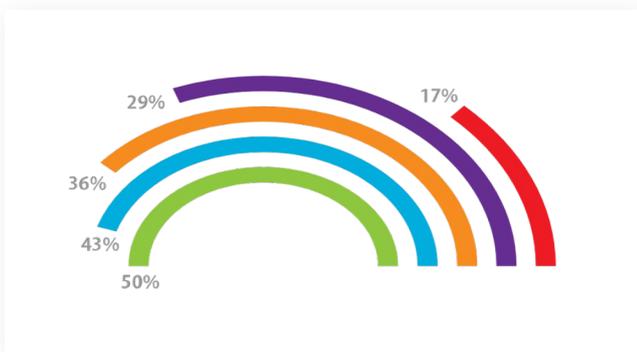
Clinical
applications

Main finding goes here (plain English). Emphasize the important words.

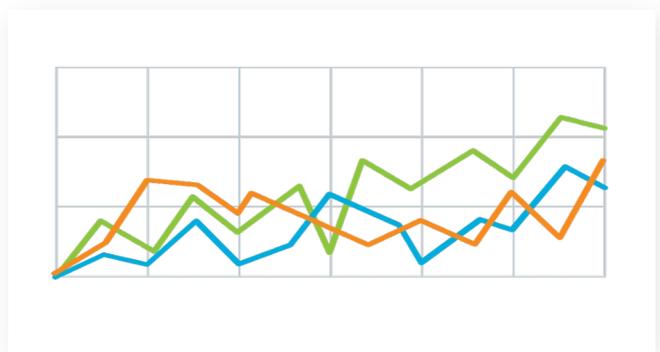
Title: Investigating the dynamics of X on Y.

Background: 70,000 people needed a portrait-orientation style layout for #betterposter, according to the Open Science Framework download counts.

Result 1: Quickly explain what the graph shows.
Help people think.

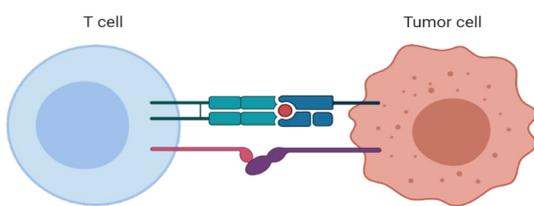


Result 2: Big figures are easier to skim at a distance,
and more accessible.

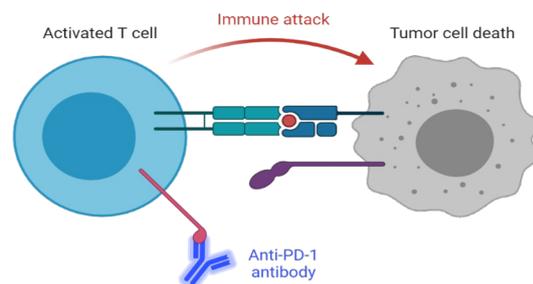


Methods

1 Immune checkpoint **inhibits** T-cell activation.



2 Anti-PD-1 antibodies permit T cell activation



Limitation: This is only one interpretation of findings that suggest effective posters are uncluttered, have big figures & text, and include callout boxes with takeaways. It is missing your personality and creative flair.

