

METHODS NOTE · Peer-reviewed · Published · Live dashboard figures

Africa's Youth Researcher Pipeline and Structural Inequities in Clinical Trial Leadership: Implications for Uganda and the African Continent.: Youth Researcher Pipeline

Osadebamwen Nibokun Eghaghe, Amumpaire Olivia, Kanyesigye Edith, Sebudde Nicholas, Musoke Muhammad, Mahmood Ahmad, Christine Muhumuza, Shamim Nabidda, Samuel Munyole, Bruce Tukamushaba, Njongang Vigny Njeodo, Ruchius Philbert, Amina Fidow Mohamud, Michael Antwi Bosiako, Fadumo Said Hassan, Adrine Nyamwiza, Ronnie Ssenfuma, Joy Osifo, Rhoda Chikula, Muhammad Murtala Yusuf, Tulengerayo Joshua, Natinael Berhane, Mukisa Paul Brian, Anna Nakirabira, Derrick Tumwesigye & Kirabo Justine

Methods Note · Volume 2

Published 2026-06-06 · Diamond open access · CC BY 4.0

Article 89 · Volume 2 · Published 2026-06-06 · DOI: not assigned

KEY WORDS Youth researcher pipeline; clinical trials; Africa; Uganda; research capacity; structural inequities; global health; research leadership; ARIMA forecasting.

Abstract

BACKGROUND Africa is home to the world's youngest population, offering a powerful opportunity to nurture the next generation of scientists. In Uganda, this potential is especially important given the country's high burden of infectious and noncommunicable diseases. Yet, research priorities, funding, and leadership often remain externally driven.

Evidence suggests that limited institutional support, constrained funding, and insufficient mentorship continue to restrict locally led research. **AIM** To explore whether gaps in the youth researcher pipeline reflect primarily a lack of training or deeper structural inequities in how research is funded, governed, and led. **METHODS** We conducted a cross-sectional audit of interventional trials registered on ClinicalTrials.gov through April 2026, comparing African countries with the United States.

Registry data were analyzed to identify trends, and ARIMA forecasting was used to examine changes over time. **RESULTS** We identified 3,515 trials across Africa compared with 159,433 in the United States, highlighting a stark imbalance. Although trial activity in Africa grew 17.1-fold between 2000–2005 and 2021–2025, the gap with high-income countries remains substantial.

CONCLUSION The findings suggest that the limited youth researcher pipeline is not only about training, but also about unequal systems that shape who leads research. Strengthening mentorship, funding access, and institutional support is essential for enabling African researchers especially young scholars to lead work that addresses their own health priorities. **KEYWORDS** Youth researcher pipeline; clinical trials; Africa; Uganda; research capacity; structural inequities; global health; research leadership; ARIMA forecasting.

Interactive dashboard figures

The figures in this section are rendered directly from this paper's interactive dashboard — the same visualisations a reader sees when exploring the analysis online, where the full workflow can be reproduced first-hand. **Interactive dashboard:** <https://mahmood726-cyber.github.io/africa-e156-students/governance-justice/dashboards/youth-researcher-pipeline.html>

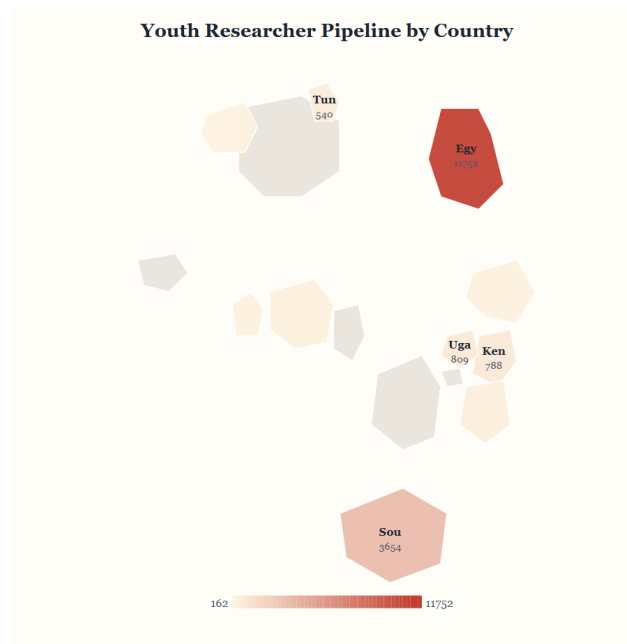


Figure 1. Youth Researcher Pipeline by Country Rendered directly from the article's live interactive dashboard.

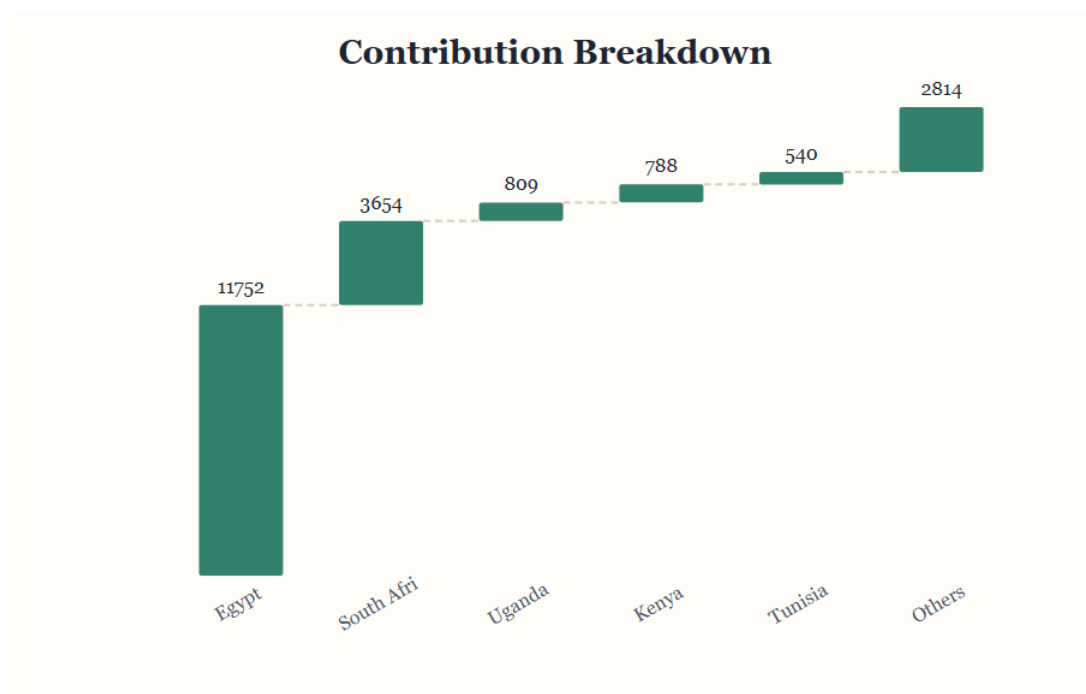


Figure 2. Contribution Breakdown Rendered directly from the article's live interactive dashboard.

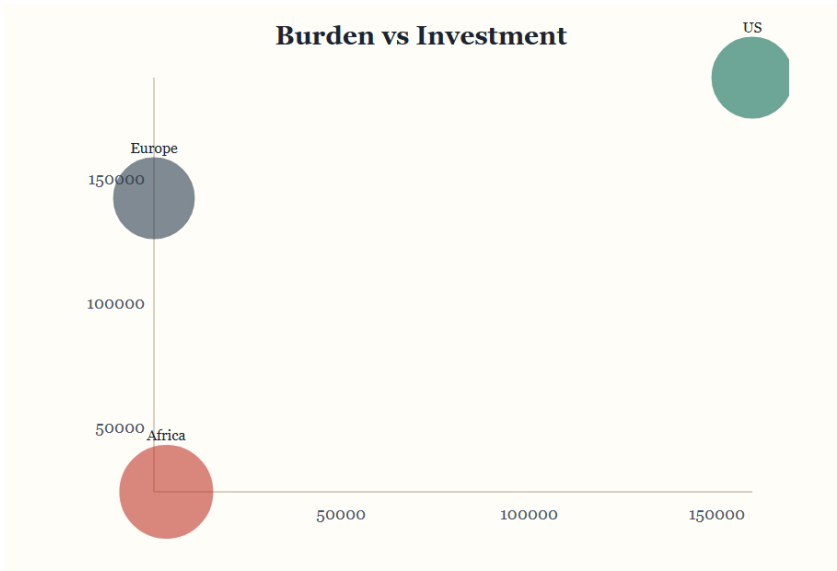


Figure 3. Burden vs Investment Rendered directly from the article's live interactive dashboard.

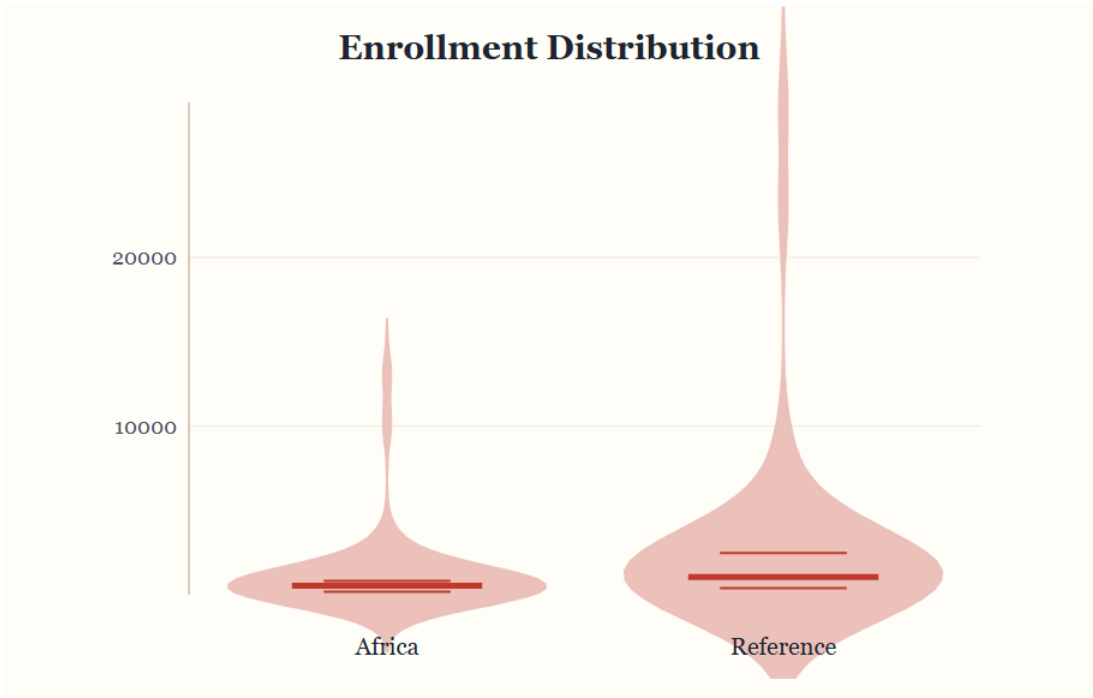


Figure 4. Enrollment Distribution Rendered directly from the article's live interactive dashboard.

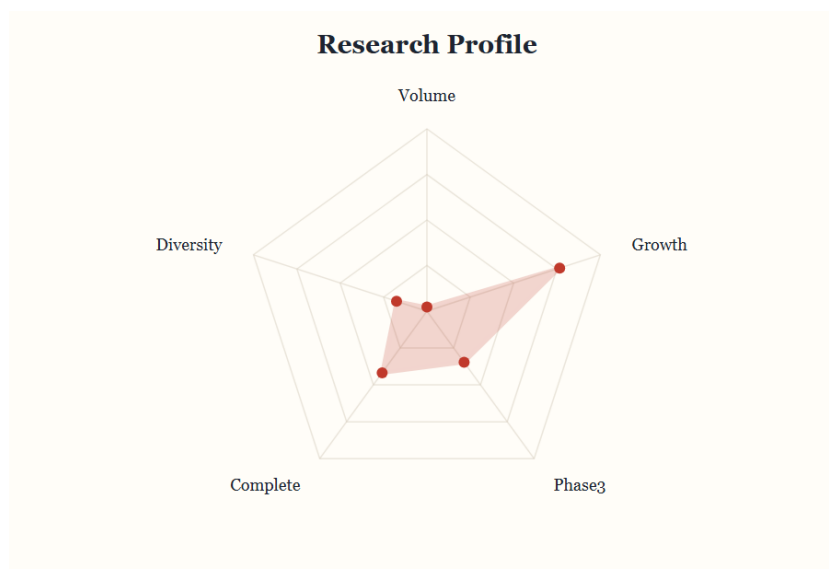


Figure 5. Research Profile Rendered directly from the article's live interactive dashboard.



Figure 6. Growth 2010-2026 Rendered directly from the article's live interactive dashboard.

HOW TO CITE

Osadebamwen Nibokun Eghaghe, Amumpaire Olivia, Kanyesigye Edith, Sebudde Nicholus, Musoke Muhammad, Mahmood Ahmad, Christine Muhumuza, Shamim Nabidda, Samuel Munyole, Bruce Tukamushaba, Njongang Vigny Njeodo, Ruchius Philbert, Amina Fidow Mohamud, Michael Antwi Bosiako, Fadumo Said Hassan, Adrine Nyamwiza, Ronnie Ssenfuma, Joy Osifo, Rhoda Chikula, Muhammad Murtala Yusuf, Tulengerayo Joshua, Natinael Berhane, Mukisa Paul Brian, Anna Nakirabira, Derrick Tumwesigye & Kirabo Justine. Africa's Youth Researcher Pipeline and Structural Inequities in Clinical Trial Leadership: Implications for Uganda and the African Continent.: Youth Researcher Pipeline. *Synthesis* . 2026;8(1). Article 89. Available at <https://synthesis-medicine.org/index.php/journal/article/view/89>. Licensed under CC BY 4.0. DOI: not assigned.

Reproducibility & data provenance. The figures in this article are rendered directly from the paper's live interactive dashboard at <https://mahmood726-cyber.github.io/africa-e156-students/governance-justice/dashboards/youth-researcher-pipeline.html>, where the complete analysis — data, methods and every estimate — can be explored and reproduced. This open path from published figure back to the underlying analysis is part of how the journal works. The article's text, authors, abstract, issue and licence follow the journal's published record.

Copyright (c) 2026 Christine Muhumuza, Mahmood Ahmad, Kanyesigye Edith , Amumpaire Olivia , Njongang Vigny Njeodo , Sebudde Nicholas , Musoke Muhammad , Bruce Tukamushaba , Shamim Nabidda , Osadebamwen Nibokun Eghaghe, Samuel Munyole, Ruchius Philbert, Amina Fidow Mohamud , Michael Antwi Bosiako , Marakiya Moetlediwa, Fadumo Said Hassan , Adrine Nyamwiza, Ronnie Ssenfuma , Joy Osifo, Rhoda Chikula, Muhammad Murtala Yusuf , Tulengerayo Joshua , Natinael Berhane, Mukisa Paul Brian , Anna Nakirabira, Derrick Tumwesigye , Kirabo Justine. Open access under the Creative Commons Attribution 4.0 International licence (CC BY 4.0): free to share and adapt with attribution.

Published in Synthesis

· synthesis-medicine.org