

Implementation of an Alzheimer's Disease and Related Dementias Study in Uganda

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Introduction

- Global ADRD Interest:** Growing focus on investigating Alzheimer's Disease and Related Dementias (ADRD) prevalence and etiology in previously unstudied regions.¹
- African Data Gap:** Current African studies estimate a 2.3–20% dementia prevalence, but data are sparse (N=12 published studies), with most limited to a single timepoint.²
- Implementation Need:** While ADRD research is prioritized in low- and middle-income nations, literature rarely addresses real-world implementation and infrastructure in rural Africa.
- Presentation Purpose:** Outlines international tools, SOP development, measurement selection, training, adaptation, and the current status of an ongoing ADRD study in rural Uganda.

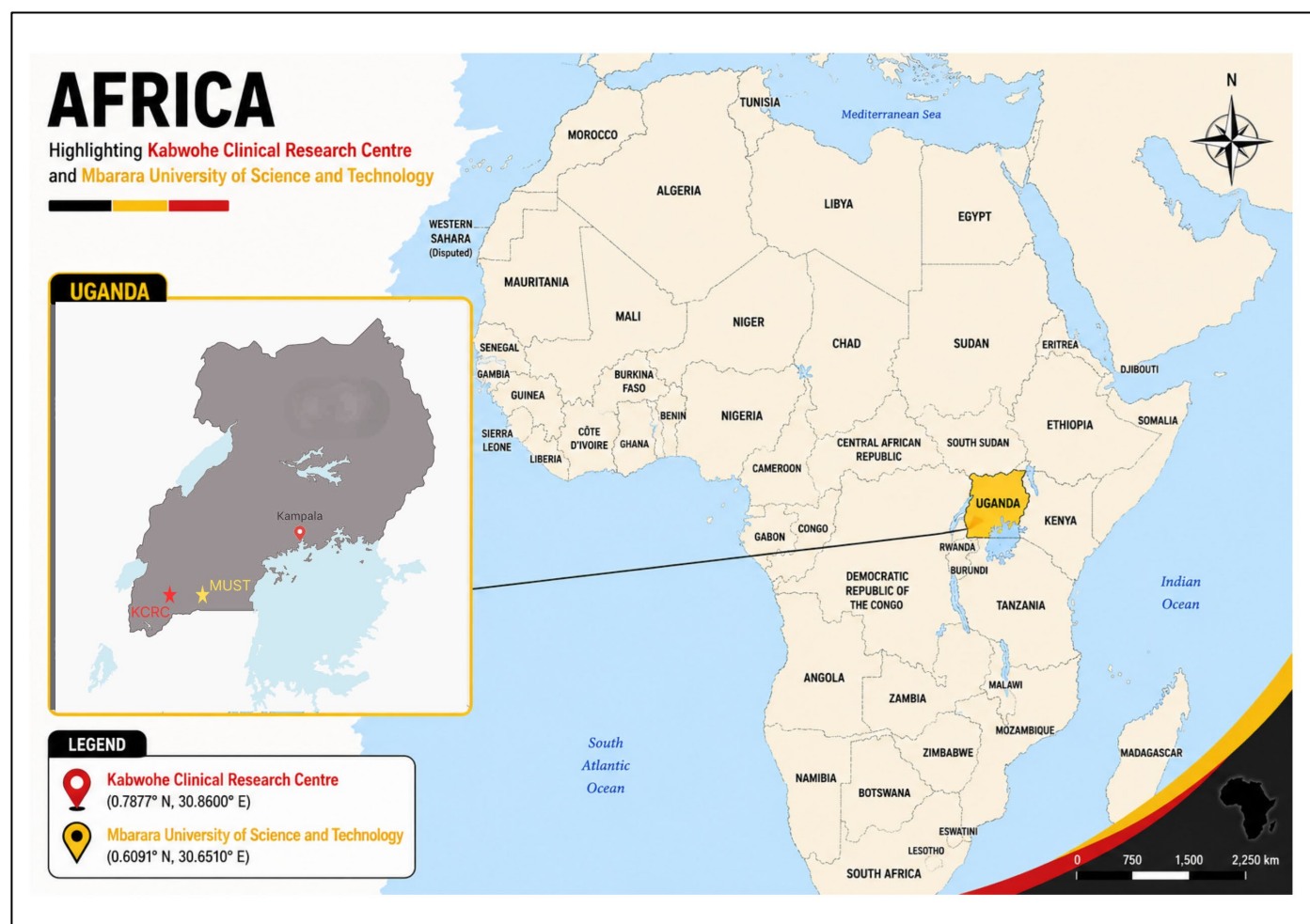
Background & Current Tools

Select Current Global Studies and Tools

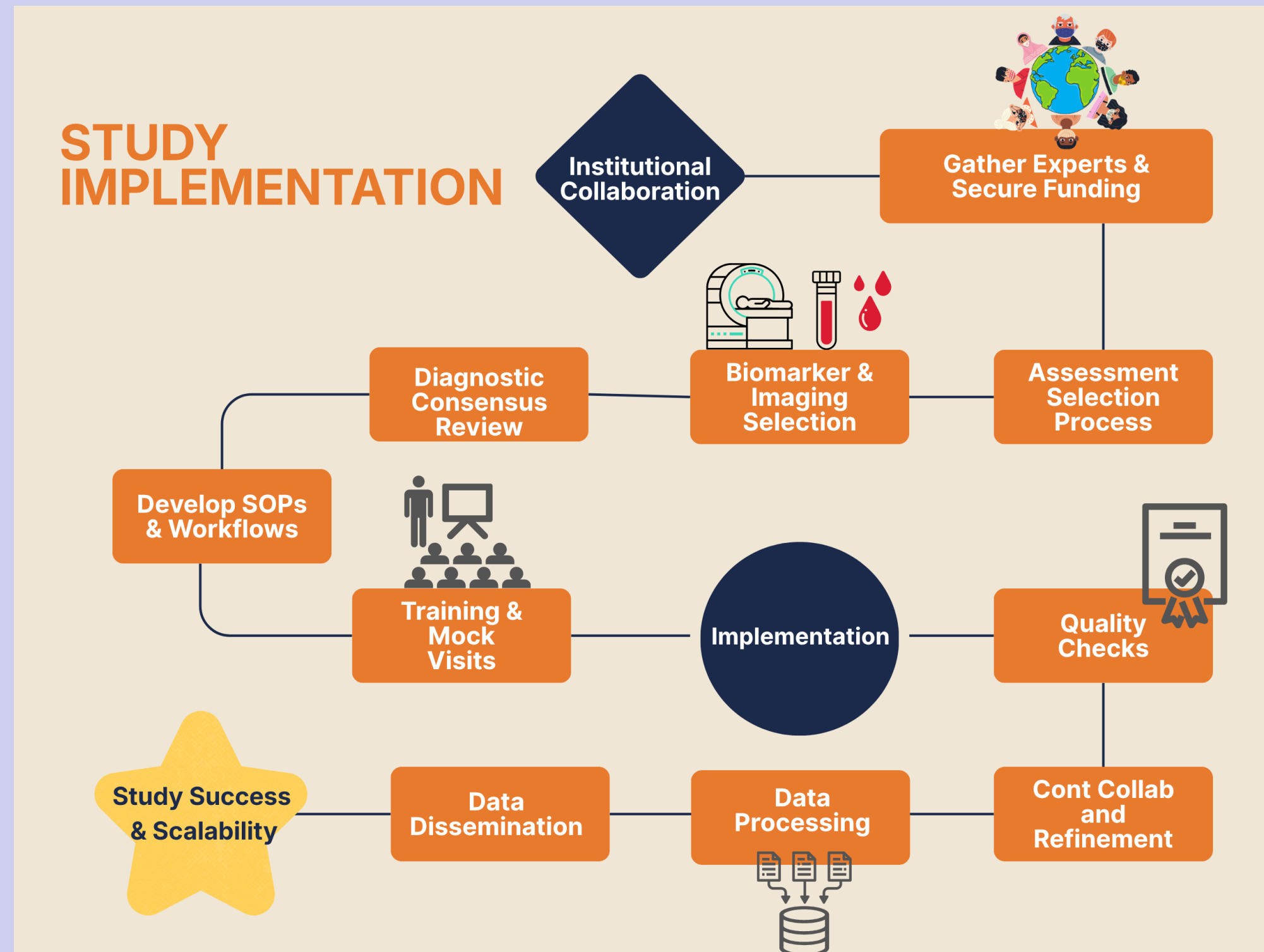
- Fingers World-Wide Study.** Interventional multimodal lifestyle study aimed at risk reduction, now with 70 countries and follow up visits occurring up to 11 years.
 - Africa-FINGERS** focused primarily in Kenya and Nigeria³
- Harmonized Cognitive Assessment Protocol (HCAP).** Network to harmonize dementia research protocols globally
 - Implementation started in rural Kenya and South Africa locations.⁴
- World Health Organization (WHO)** Global Action Plan on Dementia. 10-year advocacy plan to raise awareness, reduce risk, improve diagnosis.
 - Sub-Saharan African countries have not implemented, and initial funding ended in 2025.

Methods

- Leverage an existing aging, HIV, and CVD study by partnering with MUST, MGH, South Texas ADRC, and collaborating sites.
- Build from existing tools, modify, and expand.



Methods



Workflow

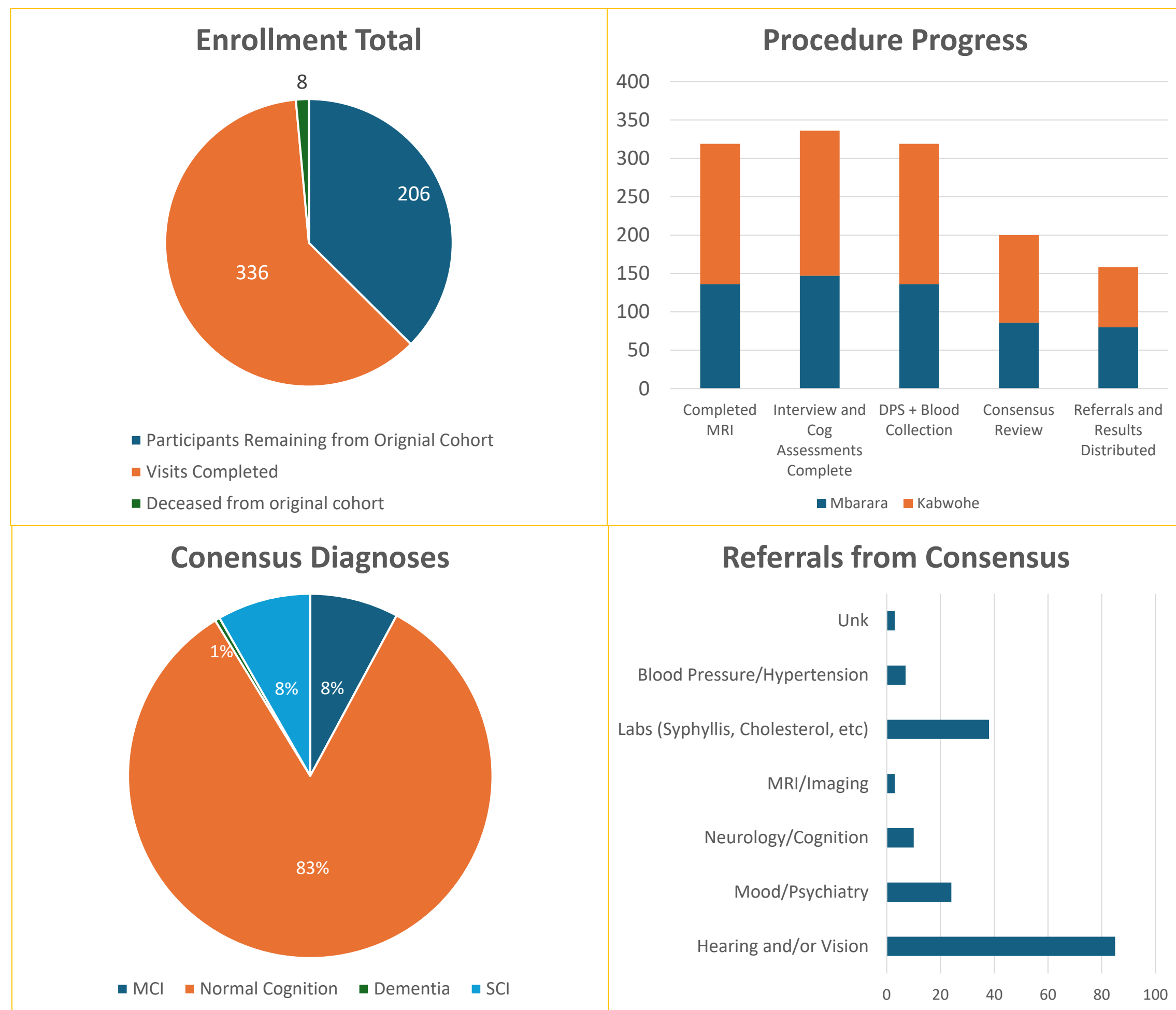
- Assessment Selection:** Systematic review and investigator panel selected cognitive, functional, neuropsychiatric, and risk/resilience indices.
- Cultural Adaptation:** Local bilingual experts culturally adapted and translated assessments into Runyakore.
- Clinical Standards:** Clinical exams, dementia assessment training, and multidisciplinary diagnostic consensus conferences were established aligned with ADRC standards.
- Biomarker Collection:** Implemented laboratory SOPs for clinical labs (TSH, CBC, A1C, Syphilis, Lipids, B12, HIV, CD4), plasma samples for ADRD biomarkers, and dried plasma spot (DPS) cards for ADRD testing.
- Neuroimaging:** Brain MRI protocols for collection, storage, and read were initiated.
- Collaborative Training:** Supported implementation via joint US-Uganda in-person and virtual training, featuring bidirectional professional development.

Results and Resources



*Additional sub-category SOPs available

Results (May 2026)



Conclusions and Future Directions

- Feasibility:** Real-world ADRD study implementation is feasible in rural low- and middle-income countries.
- Infrastructure:** Existing infrastructure and institutional partnerships are crucial for successful development.
- Training:** Multi-domain experts are integral to effective team training.
- Evaluation:** Funding, scalability, and dissemination models must be carefully reviewed.
- Future Directions:** Expanding to recruit a new subset of dementia participants and implement at-home data collection.

Acknowledgements, References, Resources

Resources

- Sharing of developed protocols and SOPs available upon request to foster further capacity building and cross-national collaborations.

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References