



AFRICA HEALTH SCIENCES UNIVERSITY INSTITUTIONAL RESEARCH PRIORITIES STRATEGIC PLAN: 2025 - 2029

Code: AHSU/002/2024

Version: 1.0

Draft Date: 3 November 2024

Review Date: 2 November 2027 (or earlier if required)

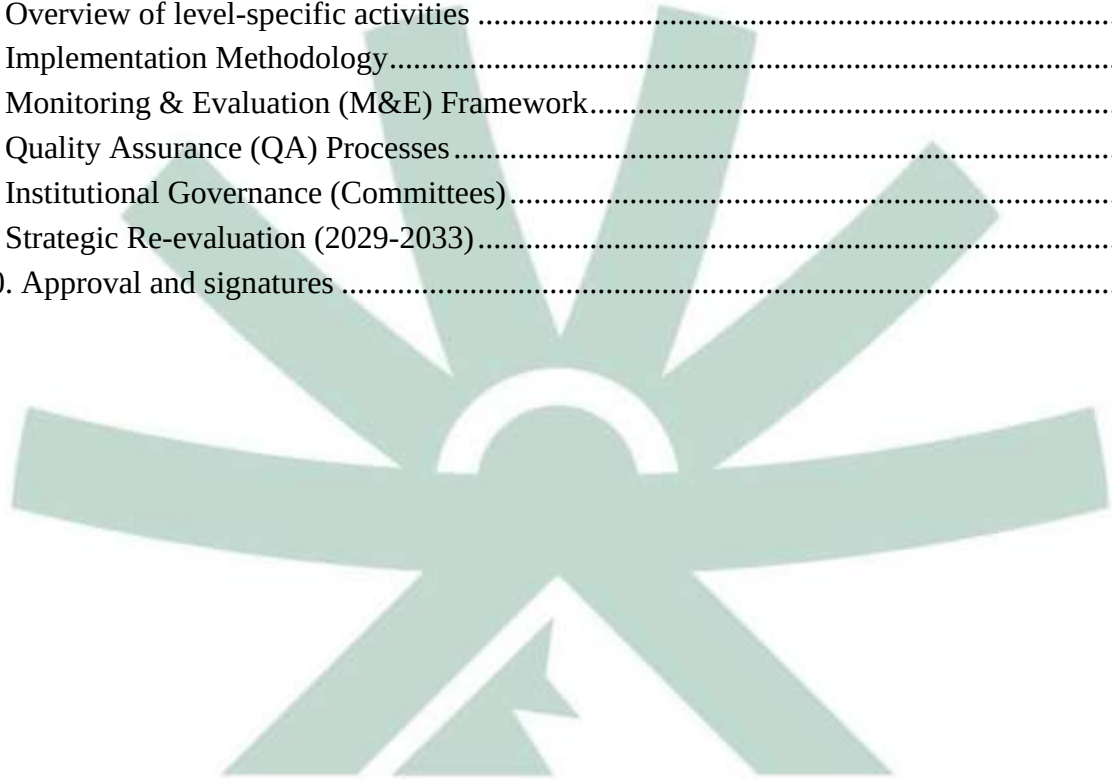
Policy Owner: Thesis, Research & Publication Committee & DVC / A&R Office

Responsible Offices: Research Directorate, Student Welfare Directorate & HR

Applies To: All AHSU students (undergraduates and postgraduates)

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AFRICA HEALTH SCIENCES UNIVERSITY – RESEARCH PRIORITIES

Period: 2025–2029

Focus: Capacity Building & Evidence-Based Medicine

1. Executive Summary

Africa Health Sciences University (AHSU) is a health sciences institution training the next generation of health professionals across medical disciplines and midwifery. The institution's mission encompasses excellence in clinical care, an emphasis on evidence-based medicine, and a commitment to the welfare of the Rwandan population and Africa as a whole. In alignment with this mission, AHSU recognizes research as a core institutional function essential for improving clinical outcomes, strengthening postgraduate training, and informing national health policy.

To achieve these objectives, the institution is building a robust research culture, as outlined in this document under a 5-year strategic plan. The framework outlined in this document provides a unified roadmap for institutional clinical research activities and transitions the AHSU from a teaching-only facility to a research-informed medical school. This document details a maturity model that seeks to progress from foundational to expert-level research through a rigorous, stepwise transition.

2. Background & Rationale

Like many other medical schools in resource-limited settings, AHSU has a "capacity gap", with faculty and residents facing high clinical load but low research output. Importantly, this gap does not reflect a lack of interest in research or its relevance among faculty and residents. Rather, it highlights opportunities to strengthen further institutional support systems, including expanded methodological training, more structured mentorship, and increased exposure to ethically rigorous, publication-ready research designs.

This strategy focuses on "Research for Health," whereby every project must contribute to solving medical challenges in Rwanda while simultaneously training the researcher in foundational skills (Biostatistics, Ethics, Writing).

The specific timeline will be divided into three research maturity levels: the Foundational Level, the Intermediate Level, and the Advanced Level. By adopting this model, the institution will focus on attainable, descriptive studies in the short term (Foundational - years 1–2) to build faculty/student capacity, eventually graduating to complex interventional trials by Year 5 (Advanced), which will be facilitated by the upcoming Clinical Trials Center of Excellence planned to be hosted at KFHR. The institution has sustained a 20% annual increase in research output, which we seek to maintain throughout this period.

Success will be measured using explicit indicators, including:

- Increased volume and quality of peer-reviewed publications
- Growth in the number of faculty and residents serving as Principal Investigators
- High-quality research protocols, enhancing ethical robustness and timely IRB review of protocols

- Demonstrated incorporation of research findings into clinical guidelines, quality improvement initiatives, or policy briefs submitted to the Ministry of Health.

Specific quantifiable indicators will be:

- A maintained 20% increase in annual research output from the institution;
- A reduced IRB protocol turnaround time of 3-5 days from the time of the IRB meeting
- Each unit of each department is to conduct 2-3 research studies continuously

This phased, capacity-responsive approach ensures ethical, rigorous, and sustainable research growth, positioning AHSU as a credible contributor to national and regional health evidence.

3. Research Pillars & Strategic Objectives

3.1. Research Pillars

The institution seeks to focus on five strategic pillars aligned with Rwanda's Vision 2050 and the global Sustainable Development Goals (SDGs), specifically SDG 3 (Good health and well-being) and SDG 4 (Quality education). Specific actions for each pillar at each level will be determined in collaboration with relevant institutional clinical departments. The pillars are:

- Pillar 1: Maternal & Child Health (MNCH)
- Pillar 2: Non-Communicable Disease (NCDs) and Metabolic Health: Mapping the rise of hypertension, diabetes, cancer, and other metabolic conditions.
- Pillar 3: Infectious Diseases & One Health: Monitoring antimicrobial resistance (AMR), viral and zoonotic trends.
- Pillar 4: Surgery, Trauma, and Perioperative Medicine
- Pillar 5: Innovative Approaches to Medical Education Research

Collectively, these pillars provide a structured yet flexible framework that supports discipline-specific inquiry, interdisciplinary collaboration, and the development of progressive research capacity, while ensuring alignment with the institutional mission, national health priorities, and global development goals.

3.2. Strategic Objectives

Pillar 1 – Maternal & Child Health

Strategic Objective: To contribute to the generation of context-specific, data-driven solutions that reduce preventable maternal and pediatric mortality and morbidity nationally.

Pillar 2 – Non-Communicable Disease and Metabolic Health

Strategic Objective: To improve the longitudinal management of chronic diseases and reduce the burden of preventable complications.

Pillar 3 – Infectious Diseases & One Health: Monitoring antimicrobial resistance (AMR), viral and zoonotic trends.

Strategic Objective: To strengthen institutional capacity for the early detection, surveillance, and management of endemic and emerging pathogens while fostering a "One Health" approach to zoonotic and environmental health threats.

Pillar 4 – Surgery, Trauma, and Perioperative Medicine

Strategic Objective: To optimize the surgical patient journey by generating evidence-based protocols that improve trauma response efficiency, enhance intraoperative safety, and reduce post-operative morbidity and mortality within the Rwandan healthcare context.

Pillar 5 – Innovative Approaches to Medical Education and Research

Strategic Objective: To generate innovative and evidence-based pedagogical strategies that optimize the training of medical professionals and to establish institutional mechanisms that safeguard the mental and professional well-being of the health workforce.

4. Overview of level-specific activities

Level 1: Foundational (Year 1-2)

Focus: Descriptive Retrospective Studies (Using existing hospital records)

Using a retrospective chart-review methodology, activities at this level will focus on auditing specific clinical services within each pillar.

Findings at this level will provide baseline evidence and identify gaps in care, which are critical for leading evidence implementation studies in the subsequent level.

Level 2: Intermediate (Year 3-4)

Focus: Prospective Observational and Implementation Science Studies

Longitudinal cohorts will be established based on research interests grown from the previous level. The emphasis will be on studies with evidence-implementation components utilizing known implementation science frameworks. Collaborations with local and international partners and faculty will be emphasized at this level.

Findings in this level will be used to refine hypotheses, assess feasibility, and generate preliminary data necessary to support pilot interventional studies, including pragmatic and/or clinical trials in the subsequent level.

Level 3: Advanced (Year 5+)

Focus: Interventional and clinical trials

Specific interventional, pragmatic, and clinical trials will be at the core of this level. With sustained collaboration with local and international partners, the institution will begin to establish itself as a national clinical research hub, attracting major research funding.

5. Implementation Methodology

We will reach these goals using a tiered approach to ensure attainability:

Phase	Methodology	Targeted Output
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Year 1-2	Descriptive: Clinical audits, Case series, Case report, Literature reviews	1 peer-reviewed paper per clinical unit/department/year
Year 3-4	Evaluative: Longitudinal cohorts and implementation science	Joint publications with international partners
Year 5+	Interventional, Pragmatic, and Clinical Trials	Successful extra-mural competitive grant applications

6. Monitoring & Evaluation (M&E) Framework

Progress will be tracked through the Digital Research Node (automated harvester) using the following Key Performance Indices, and will focus on:

1. Volume: Number of indexed publications (PubMed/Scopus), with emphasis on improved impact factor categories over the years of this strategy implementation.
2. Participation: Percentage of faculty acting as Principal Investigators (PIs).
3. Student Integration: Number of student theses converted into published abstracts/papers in the peer-reviewed journal.
4. Impact: Number of "Policy Briefs" submitted to the Ministry of Health, along with clinical guideline contribution as a result of the research output.
5. Funding: Number of research grants obtained during the years of this strategy implementation

Monitoring and evaluation findings will be reviewed annually by the Thesis and Research Publication Committee and shared with the Institutional Review Board to ensure that research growth remains aligned with ethical oversight capacity, prioritizing quality, integrity, and participant protection over volume. We will adopt and implement a “plan-do-check-act” cycle to further refine the process based on feedback, audits and performance data as outlined above.

7. Quality Assurance (QA) Processes

To ensure ethical and scientific rigor, we will implement:

- Plagiarism & ethics checks: Mandatory use of relevant plagiarism and integrity-checking software, and IRB clearance for all data-driven projects.
- The "Pre-Submission Peer Review": Internal departmental reviews before a manuscript is sent to a journal.
- Data Management Policy: Centralized, de-identified storage of hospital data to ensure reproducibility.
- Continuous training and improvement of researchers' competencies
- Research Audit-compliance: Annual audits will be performed to measure compliance with current standard operating procedures of the IRB, proper study documentation, and correct use of research funding.

8. Institutional Governance (Committees)

The following two committees will ensure the research done in the institution is sound, ethical, and will drive a large scholarly output:

1. Thesis and Research Publication Committee (TRPC): Strategic oversight and budget allocation.
2. Institutional Review Board (IRB): Ethical clearance and patient protection.

9. Strategic Re-evaluation (2029-2033)

In Year 5, the Directorate will conduct a "Research Impact Audit."

- Gap Analysis: The following will be the focus of our analysis:
 - ❖ Effective transition from descriptive to interventional research
 - ❖ Increase in the number of publications
 - ❖ Established policies based on evidence drawn from institutional research
- Infrastructure Check:
 - ❖ Laboratory capacity to move into molecular and genomic research
- Strategic Pivot:
 - ❖ Re-align pillars based on the 2030 National Health Burden data.

10. Approval and signatures

Names	Role	Signature	Date
Dr. Kara Neil	Ag. Deputy Vice Chancellor for Academic and Research Affairs		3 November 2024
Dr. Zerihun Abebe	Ag. Vice Chancellor		3 November 2024

