

# Cardiac Surgery Publications in Africa Over the Last 20 years: A Literature Review

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## Introduction

- Surgically amenable congenital heart disease accounts for 63,302 disability-adjusted life years (DALYs) in sub-Saharan Africa and an additional 1,692,728 DALYs in North Africa.
- Rise in CVD typically associated with high-income countries.
- Quantity, quality, location, and scope of cardiac surgery research emerging from Africa is poorly defined.
  - 62% case reports/series
  - 43% lacked clinical outcomes
- Paucity of literature surrounding engagement between high-income countries' (HIC) cardiac surgery programs and African institutions.
- We aim to describe the demographics of those producing literature on cardiac surgery in Africa over the previous 20 years to:
  - Describe the degree of collaboration between HIC and low-middle income countries (LMIC).
  - Analyze whether the origin, types, and quality of research have evolved over the study period.

## Method

- PubMed, Embase, and African Index Medicus were queried.
- Articles were compiled on EndNote X7 and duplicates were screened.
- Data abstraction through Microsoft Excel.

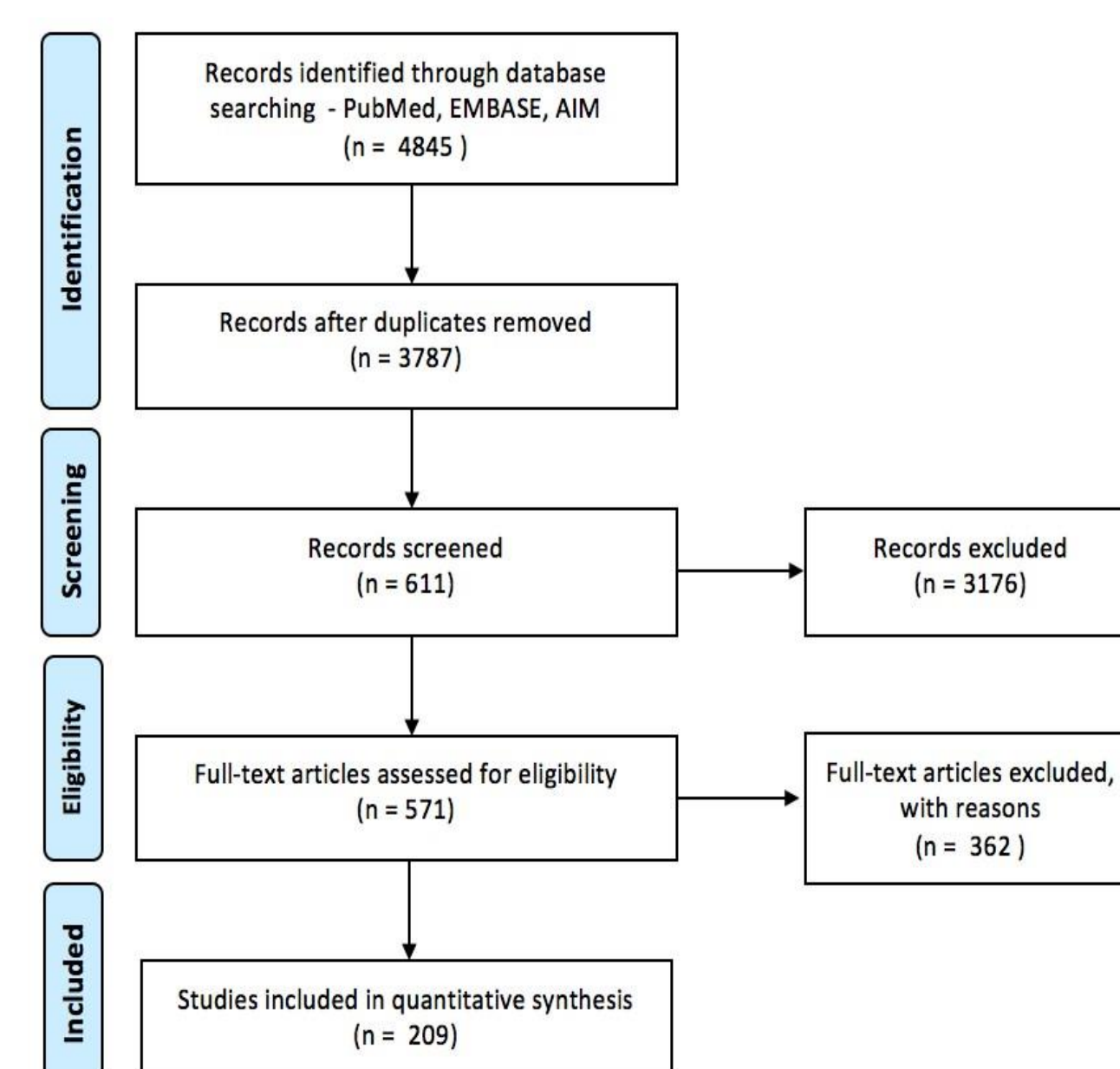


Figure 1. Prism Flow Diagram

## Publication Demographic

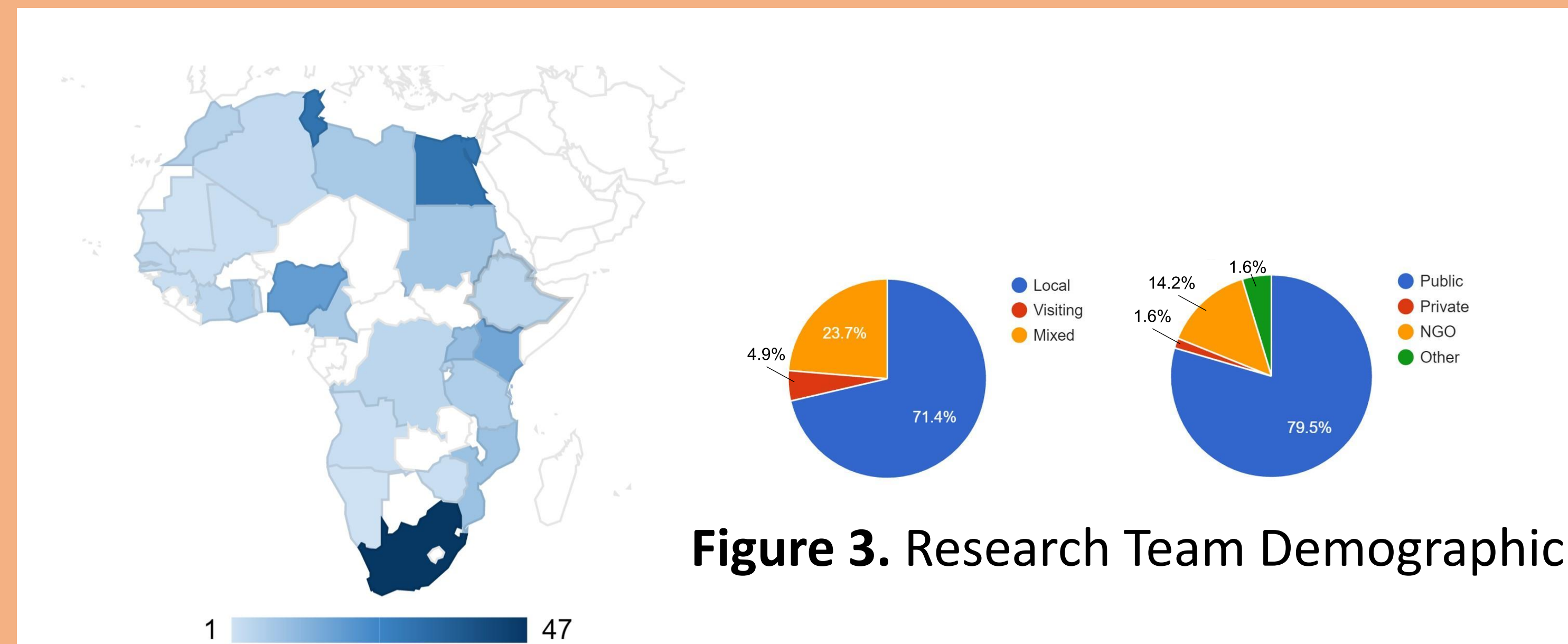


Figure 2. Contributing Countries

## Publication Output Over Last 20 Years

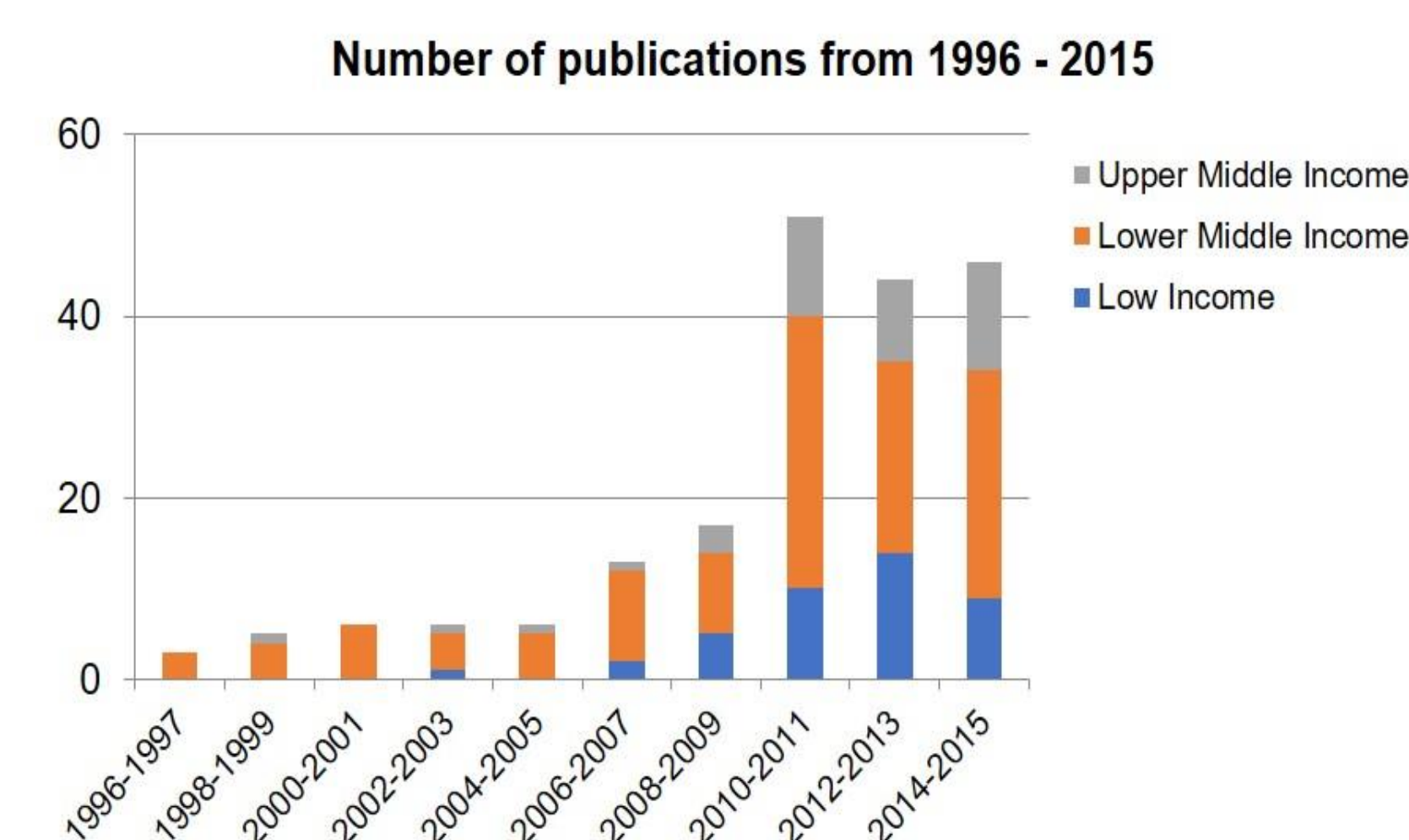


Figure 4. Number of Publications from 1996 - 2015

## Types of Studies

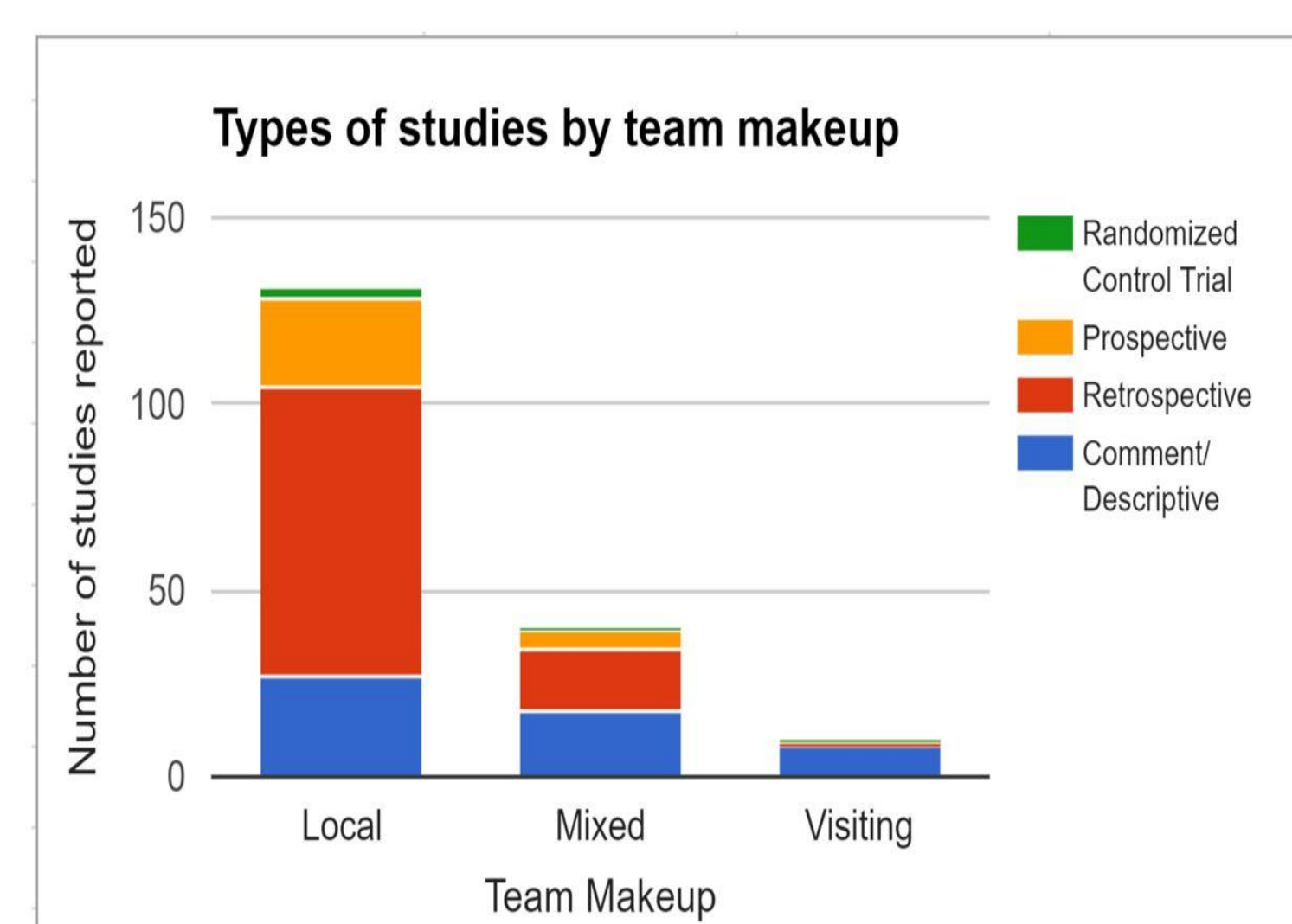


Figure 5. Types of Studies by Team Makeup

## Conclusion

- Majority of the publications came from local research teams affiliated with public hospitals which suggests strong local engagement in research and cardiovascular care.
- Research output significantly increased and the share of literature from major research contributors has relatively shrunk over the study period, which suggests emerging research capacities from previously underrepresented regions.
- Studies were set in countries from all income brackets, with most of the studies originating from LMIC.
- Need to standardize reporting of surgical outcomes which is dependent on perioperative care and maintenance of high-quality health records.

## Future Directions

- Identify factors that limit research collaboration between HIC and LMIC.
- Assess the effectiveness and sustainability of current research investment and training programs from HIC in Africa.
- Identifying more encompassing measurements of cardiac care in Africa.

## Implications of Research

- Informed policy changes to restructure partnerships around prospective and randomized trials between HIC and LMIC.
- Efficient and informed investment in building research capacity.