



African Population and  
Health Research Center

## BRIEFING PAPER



## TRANSFORMING EARLY CHILDHOOD DEVELOPMENT: A CENTRALIZED, DATA-DRIVEN SOLUTION FOR KENYA

### Introduction

In Kenya, many young children face developmental challenges that impact their future, with those in informal settlements and underserved counties like Homa Bay and Isiolo particularly affected by poverty, malnutrition, and low access to healthcare and education services.

According to available evidence, up to **40%** of children under **five years** in **Kenya** are at risk of developmental delays, a situation compounded by a lack of data on early childhood development (ECD) or barriers to its management. Currently, ECD data are managed disparately across various sectors, including health, education, and social protection, and they never get aggregated. This limits policymakers' ability to make well-informed decisions about programming and resource allocation for ECD as a unified function.

Recognizing this gap and working with the various sectors that support ECD, the African Population and Health Research Center (APHRC) spearheads an initiative to develop a centralized ECD data visualization platform to enable holistic visualization of ECD. The goal is to create a comprehensive, multisectoral system that combines key indicators from different sectors to give policymakers a holistic view of children's developmental progress, empowering them to make data-driven decisions that prioritize children's needs across counties.

The ECD indicators on the platform will be drawn from the health, education, social services, and other sectors and organized into one accessible system. The project will focus on three counties, **Nairobi, Homa Bay, and Isiolo**, to obtain learning that will inform future scaling up of the platform nationwide and possibly regionally across the African continent. The counties are selected based on regional representation, the need for this initiative, and readiness in terms of data systems.



## Project Execution

The platform's development will take place over several phases. It will begin with a situation analysis of the current state of ECD data systems and identify stakeholders involved in managing and using these systems. This will be done through a desk review and a wider scoping review within Kenya and beyond. This phase will include mapping technical staff, statisticians, planners, development officers, community partners, and consultants who play roles in data collection and use. Building on this information, the project team will conduct focus group discussions, in-depth interviews with key informants and surveys across various sectors—health, nutrition, education, and social protection—to gain insights into how each sector collects, manages, and reports ECD data. This step will be instrumental in addressing gaps from desk review and situation analysis and identifying gaps in existing data systems and informing the design of a centralized, cross-sectoral data visualization platform.

Based on data from the above exercise, the project will enter a co-creation phase, where APHRC will facilitate workshops involving local experts, policymakers, caregivers, and community stakeholders. These sessions will provide a collaborative environment for participants to develop a data visualization dashboard that synthesizes data across sectors. The aim is to design a dashboard that provides real-time insights into key ECD indicators, creating a centralized system for visualizing ECD data at the county level. This data visualization platform will connect existing data sources and incorporate powerful visual tools to present information on children's development and wellbeing. The process will also involve building the capacity of data management personnel and data systems to effectively support the use of the platform, as well as ethical considerations and safeguards to ensure that the data are managed under the national data protection laws. The co-creation workshops will also consider how the new platform aligns with national data management structures, including frameworks led by Kenya's health information systems, Kenya National Bureau of Statistics (KNBS), and the National Council for Children's Services (NCCS).

Once the platform's design is completed, it will be tested in Nairobi, Homa Bay, and Isiolo. This feasibility phase will assess the platform's ease of use, data quality, and integration with existing county systems. Policymakers and service providers across sectors will use the platform to gather feedback on usability, functionality, and data relevance. This stage will include observing how effectively the platform enables data-driven decision-making and understanding barriers to its widespread use. Testing will also identify any technical and logistical challenges that may need to be addressed for future scalability, ensuring the platform meets the needs of counties throughout Kenya.

## Opportunities Presented by the Centralized ECD Data Platform

The new platform will help better support children's development by providing a holistic view of their progress. It will also clarify which aspects of children's wellbeing, and which regions and groups require more attention. With timely and aggregated data, policymakers can effectively allocate resources, measure progress, and address gaps accordingly.

The platform will provide an opportunity to enhance a multisectoral approach that will foster collaboration. Health, education, social services, and other sectors will work together seamlessly to deliver comprehensive support for ECD programs. Such collaborative data management will solve the current challenge of data scarcity and improve monitoring and resource allocation by prioritizing children who are most vulnerable.

Beyond government functions, the centralized ECD visualization platform provides a reliable and up-to-date source for ECD data for local and international development partners (e.g., funders, researchers, etc.) supporting ECD programs in the country to prioritize their efforts based on evidence.

A well established and documented data ecosystem and visualization platform scaled up to other counties will provide countrywide statistics on ECD indicators that can be disaggregated by age, sex, wealth status, location and other characteristics to track risk and plan interventions accordingly. This will be one of the in kind in Africa that can be cascaded to other countries to accelerate progress in ECD in the region.

## Special Considerations in Developing the ECD Platform

**Data fragmentation** remains a major hurdle, as ECD indicators are often scattered across multiple sectors and systems. Pooling the fragmented data onto a centralized platform requires a detailed understanding of existing data systems within each sector and ensuring the platform is aligned. We aim to work with the existing structures and support smooth linkages between the platform and the source and reporting systems. Resource limitations in many counties underlie the lack of infrastructure.





The three counties selected have established ICT infrastructure, electronic data systems (ECHIS and EMIS) and reliable servers for data storage. The project funds will support any gaps, and maintenance costs beyond the project life are expected to be affordable by the counties.

Furthermore, **technical expertise and training** will be essential because the platform's success depends on having competent personnel managing, maintaining, updating, and using the platform, including running analyses and generating outputs and reports from the data for decision-makers regularly and on request. Training and ongoing mentorship of key personnel involved in the input platform and output aspects of the data ecosystem is critical to the initiative.

**Data privacy and security** will also be key concerns, especially given the sensitive nature of children's information. The platform will need robust safeguards to protect data and ensure compliance with privacy regulations. The personnel involved in the platform and the data ecosystem will be trained and sensitized on ethical considerations and safeguards to ensure that the data are managed and protected per national data protection laws. Access to the platform will be restricted to authorized users who will access it using usernames and passwords.

**Community buy-in and stakeholder engagement** will be critical. Throughout the project, we will foster a collaborative (not competitive) spirit among the different sectors, especially with the benefit of visualizing ECD indicators in one place. We will emphasize that the platform will enable the identification of aspects of ECD that need more support and specific populations that need to be prioritized rather than exposed sectors that are not performing well. The general sense of joint ownership of ECD is critical for platform adoption, willingness, and transparency in data sharing for holistic visualization. Continuous stakeholder engagement sensitization is believed to achieve multisectoral collaboration.



## Conclusion

Ultimately, the APHRC's ECD data visualization platform is a pioneer innovation that aspires to reshape early childhood development by enhancing data utilization to bridge gaps in service provision, enabling all Kenyan children to achieve their developmental potential. By addressing these challenges through careful planning, robust training programs, and community engagement, Kenya can create a platform that effectively supports the wellbeing and development of its youngest and most vulnerable citizens. The initiative is projected to benefit over 460,000 children across Nairobi, Homa Bay, and Isiolo, potentially impacting millions nationwide if the platform is scaled up. If successful, this data-driven approach can serve as a regional model, showing how data integration can unlock new opportunities for supporting children across Africa. With collaboration from multiple stakeholders and dedicated resources, this project marks a pioneering step toward data-informed ECD systems that will help shape a brighter future for children across Kenya.



## Authors

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