



ICHA

INSTITUTE FOR CHILD
HEALTHCARE AFRICA

Modeling Pediatrics For Tomorrow



Arusha Pediatric and Maternity Centre

Executive Summary

Arusha Pediatric and Maternity Centre (APMC) will be northern Tanzania's first dedicated, free-standing pediatric & maternity specialty clinic delivering evidence-based, developmentally informed, family-centered care. It responds to a shifting disease burden—beyond acute infectious diseases to chronic, nutritional, developmental, and behavioral conditions—and to a shortage of trained pediatric providers. The Centre will offer comprehensive outpatient services, urgent care, diagnostics, and structured family education within a compassionate, equitable model. Operated as a nonprofit specialized clinic under the Institute for Child Healthcare Africa – Tanzania (ICHA), APMC aims for financial self-sustainability, reinvesting surpluses into subsidized care, workforce training, and service expansion. By raising standards, strengthening local capacity, and prioritizing prevention, APMC will improve child health outcomes across northern Tanzania.

Context and Need

- Tanzania's ~ 25 million children ($\approx 43\%$ of the population) face limited access to quality pediatric care, particularly services tailored to prevention, development, and complex chronic needs.
- Historic focus on acute infections has left gaps in non-communicable disease management, developmental/behavioral care, and family guidance.
- In northern Tanzania, demand is high for skilled, child-specific, preventive, and family-oriented care integrated with diagnostics and urgent services, delivered by trained pediatric professionals.

Proposed Solution and Model of Care

APMC proposes a specialized Arusha Pediatric and Maternity Centre that:

- Delivers both preventive and sick-child care in one coordinated setting.
- Embeds international standards for preventive, developmental, and family-centered practice.
- Integrates outpatient pediatrics, urgent care, diagnostics, pharmacy, radiology, and structured caregiver education within a seamless workflow.
- Operates as a self-sustaining nonprofit that expands access while maintaining high quality.

Core Services

- Preventive and routine care: newborn/child wellness visits, immunizations, growth and development monitoring, screening and early intervention.
- Family education and anticipatory guidance: nutrition, vaccination, developmental milestones, chronic disease action plans.
- Urgent Care Centre: minor trauma, common acute illnesses, short-stay observation (e.g., asthma exacerbations, dehydration requiring IV fluids).
- Diagnostics: full laboratory and microbiology, ultrasound, digital x-ray, and on-site pharmacy for rapid, safe dispensing.

Facility Design and Workflow

Purpose-built layout to maximize safety, flow, and child/family experience:

- Entry and Reception
- Welcoming foyer with reception/registration and adjacent waiting areas.
- Clear wayfinding signage (Reception; Lab; Pharmacy; Exam Rooms; Urgent Care; Radiology).
- Laboratory
- Child-friendly sample collection bay (phlebotomy chair).
- STAT bench for CBC, CRP, electrolytes, rapid ID panels.
- Microbiology workspace with Class II biosafety cabinet and incubators.
- Specimen pass-through window to reduce corridor traffic.
- Handwashing sinks; clean/dirty workflow separation.
- Pharmacy (free-standing with exterior access)
- Exterior door for community prescription pick-up without entering clinical areas.
- Interior service door for direct dispensing to clinic patients.
- Temperature/humidity control; cold-chain refrigeration.
- Secure narcotics cabinet; barcode-enabled inventory control.
- Clinical Zone
- Central nurse triage desk for visibility and rapid sorting.
- Six exam rooms with parent seating, child-focused décor, pediatric exam tables, infant scales.

- Three shared mobile vitals workstations; hand hygiene sinks; shared vaccine fridge access; sharps disposal.
- Urgent Care Treatment Zone
- One treatment room supporting up to four short-stay patients (e.g., nebulization, rehydration).
- Procedure room capable of light sedation for medical/orthopedic procedures.
- Point-of-care ultrasound dock; splinting cart; minor trauma supplies.
- Pediatric resuscitation cart with wall oxygen/suction; direct adjacency to radiology.
- Radiology
- Shielded digital x-ray suite with PACS linkage.
- Ultrasound room for pediatric applications (e.g., abdominal, soft tissue; cardiac screening as relevant).
- Dark/quiet environment with distraction tools to minimize motion artifacts.

Staffing and Clinical Coverage

1. Multiple pediatric-trained doctors staffing the clinic; they will also provide services in the NICU and Pediatric Ward at ALMC to ensure continuity of care and cross-facility collaboration.
2. Multidisciplinary team: obstetrics, pediatrics, pediatric nurses, laboratory scientists, radiographers, pharmacy staff, counselor/health educator, and social worker.
3. Scheduled clinics for preventive/developmental care; on-demand urgent care coverage

Infection Prevention and Control (IPC)

1. Separate well-child and sick-child waiting areas where feasible.
2. Isolation exam/treatment room with alternate entrance to minimize exposure.
3. Clean/dirty utility rooms per zone; routine environmental cleaning protocols and audits.

Accessibility

1. Wheelchair-accessible circulation and exam rooms.
2. Designated washroom for disabled patients

Power, Oxygen, and IT Infrastructure

1. Backup generator and UPS protection for critical systems (lab analyzers, PACS, vaccine cold chain, EMR, urgent care).

2. Medical gas manifold supplying oxygen to procedure room and urgent care bays; portable cylinders for exam rooms.
3. Networked EMR with triage dashboard; secure Wi-Fi for clinical devices; PACS integration for imaging.

Safety and Security

1. Access control for pharmacy, laboratory, radiology, and procedure rooms.
2. Fire safety systems: extinguishers, alarms, clear egress maps, and regular drills.
3. Data protection in line with Tanzanian regulations and best practices.

Financial and Growth Approach

1. Nonprofit model with a path to financial self-sustainability (clinical services, diagnostics, pharmacy, training programs, and partnerships).
2. Surpluses reinvested into:
 - Subsidized care for financially disadvantaged families.
 - Training and continuous professional development for clinicians and nurses (locally and across Tanzania/Sub-Saharan Africa).
 - Service expansion into pediatric subspecialties, optometry, mental health, and future antenatal services.

Governance and Values (ICHA)

1. Operated by the Institute for Child Healthcare Africa – Tanzania.
2. Mission: provide evidence-based, compassionate pediatric care strengthened by education, research, and collaboration.
3. Governance: clinical quality committee, IPC committee, and ethics oversight; routine performance review and public accountability.

Intended Impact

1. Raise pediatric care standards in northern Tanzania through high-quality, family-centered services.
2. Build local capacity via structured training, mentorship, and collaboration with ALMC and regional partners.
3. Improve child health outcomes by emphasizing prevention, early detection, developmentally appropriate care, and timely urgent interventions.

4. Advance equity by offering subsidized access and reducing geographic and financial barriers.

Implementation Roadmap

1. Phase 1: Final design, regulatory approvals, and procurement (months 0–6).
2. Phase 2: Construction and fit-out; recruitment and training; EMR deployment; SOPs and IPC protocols (months 6–12).
3. Phase 3: Soft launch of preventive clinics, lab/pharmacy; staged opening of urgent care (months 12–18).
4. Phase 4: Full operations, quality improvement cycles, and service optimization (month 18+).
5. Phase 5: Radiology, Subspecialty and antenatal expansion based on utilization and outcomes (year 2–3).

Monitoring and Evaluation (M&E)

1. Access and utilization: visit volumes, immunization coverage, growth/developmental screening rates, urgent care throughput.
2. Quality and safety: IPC adherence, time-to-triage, time-to-antibiotic/bronchodilator, imaging turnaround, adverse event rates.
3. Outcomes: control of chronic conditions (e.g., asthma action adherence), reduced unnecessary hospital transfers, developmental referrals completed.
4. Experience and equity: family satisfaction, wait times, proportion of subsidized care, no-show rates, community outreach engagement.
5. Capacity building: number of trainees, Continuing Medical Education (CPD) sessions delivered, mentorship pairings with international specialists.

Risk Assessment and Mitigation

1. Workforce recruitment/retention: competitive professional development, mentorship, and academic partnerships.
2. Power/cold chain disruptions: generator/UPS redundancy, continuous temperature monitoring, maintenance contracts.
3. Supply chain variability: multi-vendor sourcing, safety stock, barcode inventory, local supplier development.
4. Financial pressure: diversified revenue, phased scaling, disciplined cost control, donor and partner engagement.
5. IPC threats: strict protocols, audits, and continuous staff training.

Sustainability and Partnerships

1. Collaboration with ALMC for NICU/Pediatric Ward continuity and shared protocols.
2. Partnerships with regional training institutions for pipeline development and CPD.
3. Research and training collaborations with academic training institutions in USA, Europe, Australia.
4. Community health networks to strengthen referrals, follow-up, and health literacy.

Conclusion

APMC will fill a critical gap in northern Tanzania by providing comprehensive, child- and family-centered care that prioritizes prevention, timely acute management, and education. With a robust facility design, integrated diagnostics, strong governance, and a sustainability plan that reinvests in equity and capacity building, the Centre is positioned to elevate pediatric health outcomes and standards across the region.

APMC Architectural Renderings



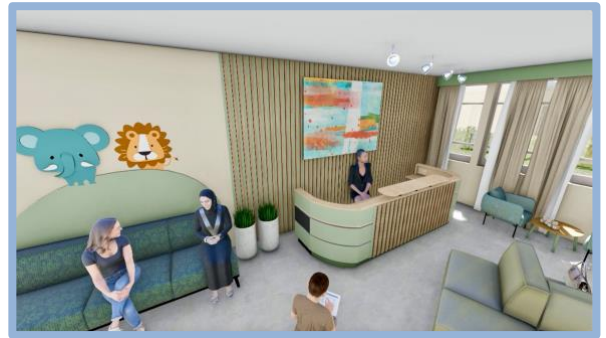
Entrance



Front Reception



Main Reception



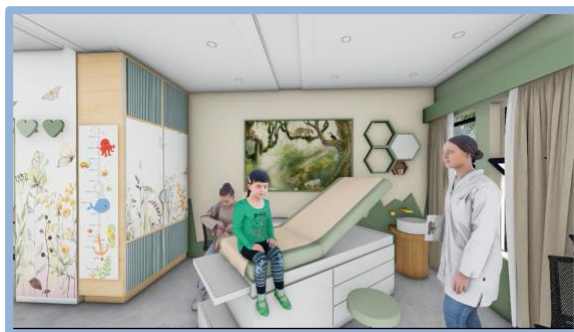
Main Reception



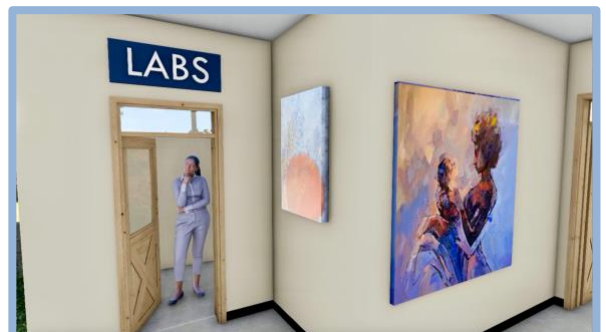
Yellow Exam Room



Clinic Setting



Green Room



Lab Entrance