Now is the time for interventions targeting congenital Human African Trypanosomiasis transmission: Lessons from Chagas Disease

Congenital transmission of trypanosomes from a pregnant mother to child is recognised by the World Health Organization (WHO) in both Human African Trypanosomiasis (HAT) and Chagas disease (CD) and is documented within the Neglected Tropical Disease (NTD) Roadmap 2021-30. Despite this, targeted strategies addressing congenital trypanosome transmission remain limited, particularly in HAT, and efforts towards elimination have largely focussed on vector control and adult case detection. The biological mechanisms are poorly understood, and existing diagnostics and treatments are not fit for purpose in pregnant women or infants. Although their regions of endemicity differ, both diseases face similar challenges in addressing an under-researched transmission route. Despite this limited investment, congenital CD has achieved measurable policy prioritisation and programmatic progress over the past two decades, offering transferable lessons for a strategic roadmap for HAT.

To examine this progress, I conducted a systematic narrative review, incorporating backward citation tracking of key intervention documents by the CUIDA Chagas Consortium, to trace the pathway from problem recognition to policy inclusion, and subsequent programme implementation in CD. A thematic analysis of CD pregnancy screening programs was conducted as an implementation case study, examining how initiatives progressed despite constrained funding and limited political prioritisation.

CD has made progress in addressing congenital transmission through sustained research and advocacy investment. This elevated congenital CD onto the global agenda, leading to its inclusion within the Elimination of Mother to Child Transmission Plus (EMTCT-Plus) initiative and shifting it from being known to being actionable. Progress occurred despite evidence gaps in transmission mechanisms and epidemiological data. Rather than waiting for perfect evidence, programmes were integrated within existing maternal health care, demonstrating that implementation itself can generate the data required to facilitate policy and practice. Screening initiatives embedded in trusted health systems doubled as surveillance platforms, producing epidemiological data while supporting a vulnerable and time-critical population. Integration within established services enabled context-specific delivery, leveraging regional expertise to reduce barriers due to access and stigma. In CD, infants born to infected mothers are followed up for up to 12 months, enabling diagnosis once maternal antibodies have waned, demonstrating how appropriate definitions are critical to facilitate better care. Sustained advocacy, strategic policy inclusion, integrated implementation, and definitional flexibility facilitated measurable progress.

In contrast, congenital HAT remains constrained by a narrow definition (diagnosis <5 days after birth), minimal epidemiological data, and limited policy prioritisation or investment. This has created a cycle where limited screening produces insufficient data, reinforcing continued neglect. Unlike congenital CD, HAT lacks any sustained engagement even in endemic regions (CD policies exist in Europe and North America). Sparse case reports are used to justify shifting priorities, yet reduced screening limits detection and

quantification of congenital transmission. Without active investigation, an unmonitored transmission route risks contributing to ongoing HAT transmission.

Drawing lessons from CD, this work argues that revising the definition of congenital HAT and integrating screening within existing maternal health services would provide a pragmatic and ethical mechanism to support affected women and infants while generating the epidemiological evidence currently lacking. As HAT approaches elimination targets, failure to address congenital transmission risks leaving a preventable transmission pathway unchallenged.