

Implementation of New Cryptococcal Meningitis Screening, Prevention, and Treatment Guidelines in Tanzania

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Background

- Cryptococcal meningitis (CM) causes approximately 15% of HIV-related deaths globally, the majority in sub-Saharan Africa
- 10,000-15,000 CM cases occur per year in Tanzania
- Tanzania began implementing a new advanced HIV disease package of care in 2019
- We describe findings from a technical assistance program that supported implementation of new CM screening and treatment guidelines in Tanzania

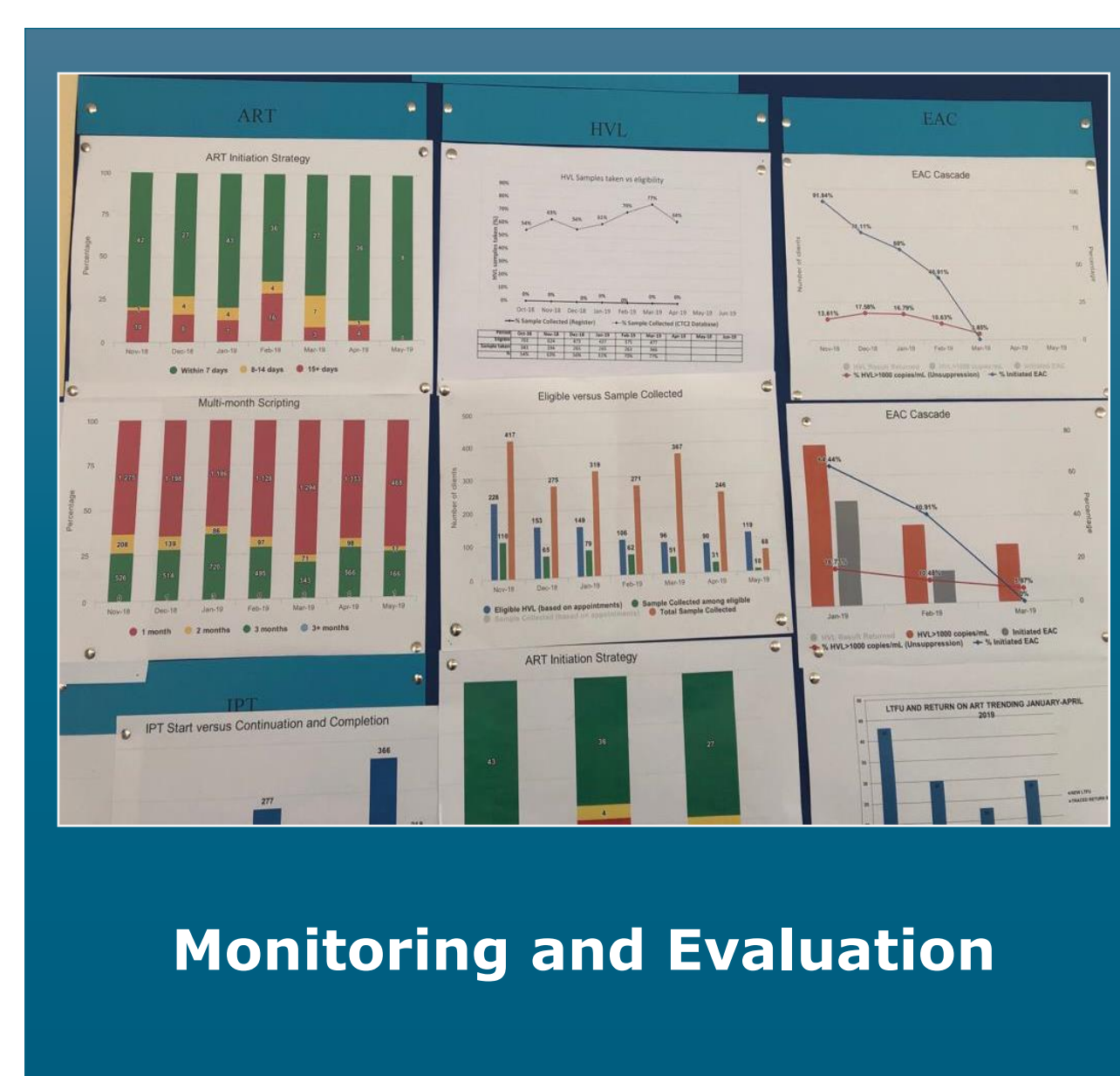
Description

Program activities: development and dissemination of new CM guidelines, supply chain support, health care provider training, on-site mentoring, and monitoring and evaluation

Setting and timeline: 15 health facilities in November 2019, February 2020, and March 2021

Data sources

- *Clinical records* – the previous three-months of records were abstracted at each visit. Lab records documented the numbers screened. Outpatient records assessed screening of HIV clients and inpatient records were reviewed for CM diagnosis, treatment, and clinical disposition.
- *Staff surveys* - assessed facility procedures, supplies, and implementation challenges



Lessons Learned

2,181 inpatient and outpatient clients with advanced HIV disease received cryptococcal antigen (CrAg) serum screening; 270 (12.3%) were CrAg positive.

Outpatient screening cascade (112 clients)

- Of the 112 outpatient clients who tested positive for CrAg, 65% were screened for symptoms of meningitis (Figure 1)
- 55% of the 27 outpatient clients who were symptomatic were hospitalized for cerebrospinal fluid (CSF) testing
- Among the 46 asymptomatic clients, 43 (93%) started pre-emptive therapy with Fluconazole

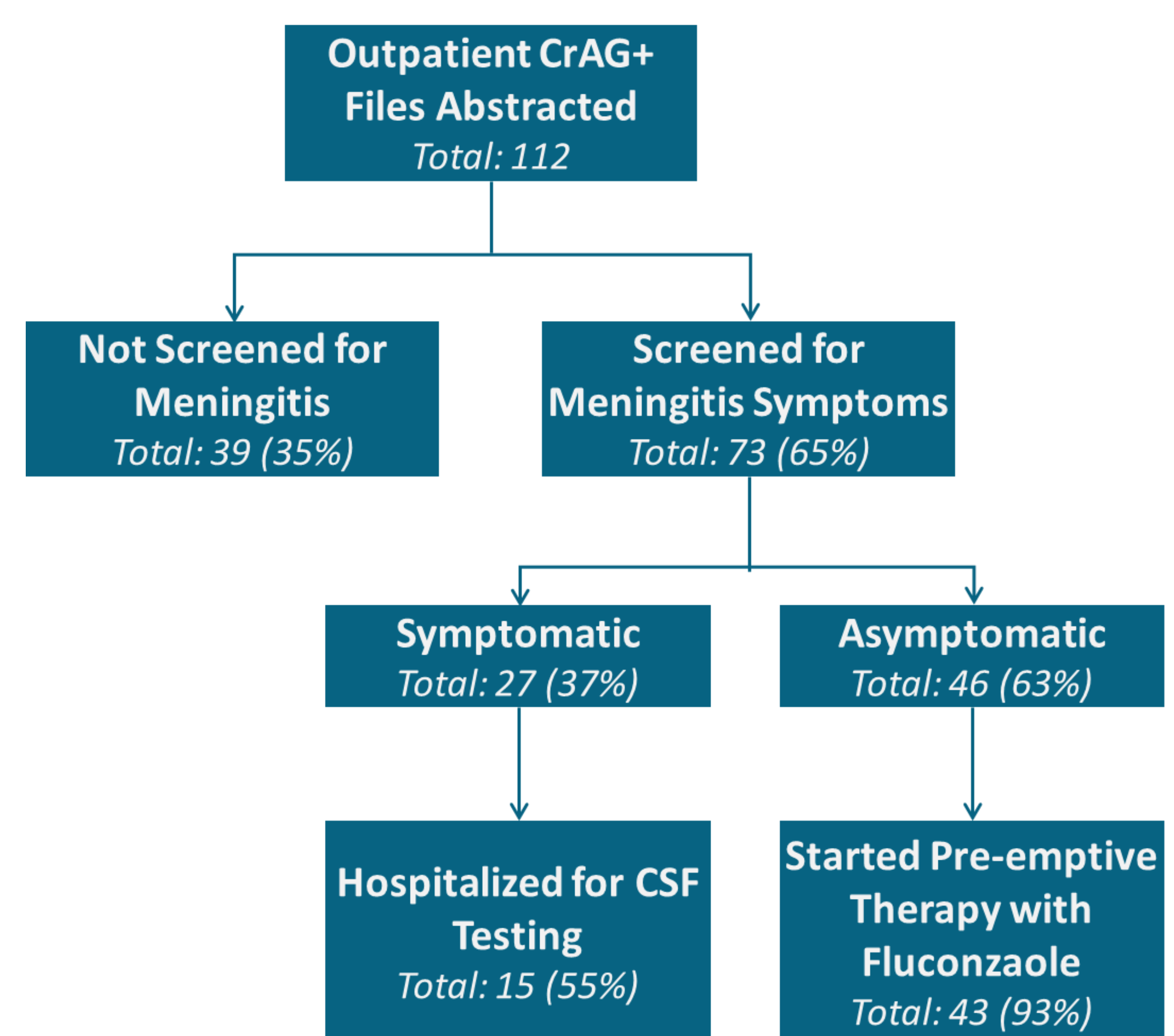


Figure 1. Cryptococcal Antigen Serum Screening Outpatient Cascade

Inpatient care (268 clients)

- 58 (22%) inpatient clients received a lumbar puncture (LP) for CFS analysis and cryptococcus testing; 26 (45%) of LPs were positive
- Patient files did not include a reason for not performing LP diagnostic confirmation in 78% of clients
- Inpatient treatment: Fluconazole monotherapy (77%), Fluconazole and Amphotericin B (7%), and Amphotericin B alone (<1%)

Staff surveys

- Staff reported patient condition, lack of equipment and failure of patients to pay as reasons for not conducting LPs
- 53% of facilities reported frequent Fluconazole shortages in 2019, but only 1 continued to report shortages in 2021
- All facilities: shortages of Amphotericin B and 5-FC in 2021

Conclusion and Recommendations

Implementation challenges following adoption of new CM guidelines in Tanzania include supply shortages, data linkage limitations, few LP procedures and inadequate management of cryptococcal meningitis. Ongoing support is needed to address barriers and increase successful screening and treatment of clients with advanced HIV disease.

Recommendations: Strengthening forecasting and ordering CrAg test kit supplies, incorporating CrAg test kits into the routine ordering of commodities through the medical store department, training health care providers on conducting LPs, integration of inpatient and outpatient databases to monitor implementation, and procurement and distribution of 5-FC and Amphotericin B.

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