

Publication

Impact of a multi-disease integrated screening and diagnostic model for COVID-19, TB, and HIV in Lesotho

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The surge of the COVID-19 pandemic challenged health services globally, and in Lesotho, the HIV and tuberculosis (TB) services were similarly affected. Integrated, multi-disease diagnostic services were proposed solutions to mitigate these disruptions. We describe and evaluate the effect of an integrated, hospital-based COVID-19, TB and HIV screening and diagnostic model in two rural districts in Lesotho, during the period between December 2020 and August 2022. Adults, hospital staff, and children above 5 years attending two hospitals were pre-screened for COVID-19 and TB symptoms. After a positive pre-screening, participants were offered to enroll in a service model that included clinical evaluation, chest radiography, SARS-CoV-2, TB, and HIV testing. Participants diagnosed with COVID-19, TB, or HIV were contacted after 28 days to evaluate their health status and linkage to HIV and/or TB care services. Of the 179160 participants pre-screened, 6623(3.7%) pre-screened positive, and 4371(66%) were enrolled in this service model. Of the total 458 diagnoses, only 17 happened in children. One positive rapid antigen test for SARS-CoV-2 was found per 11 participants enrolled, one Xpert-positive TB case was diagnosed per 85 people enrolled, and 1 new HIV diagnosis was done per 182 people enrolled. Of the 321(82.9%) participants contacted after 28 days of diagnosis, 304(94.7%) reported to be healthy. Of the individuals that were newly diagnosed with HIV or TB, 18/24(75.0%) and 46/51(90.1%) started treatment within 28 days of the diagnosis. This screening and diagnostic model successfully maintained same-day, integrated COVID-19, TB, and HIV testing services, despite frequent disruptions caused by the surge of COVID-19 waves, healthcare seeking patterns, and the volatile context (social measures, travel restrictions, population lockdowns). There were positive effects in avoiding diagnostic delays and ensuring linkage to services, however, diagnostic yields for adults and children were low. To inform future preparedness plans, research will need to identify essential health interventions and how to optimize them along each phase of the emergency response.

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