

Publication

Analysis of diagnostic findings from the european mobile laboratory in Gueckedou, Guinea, march 2014 through march 2015

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A unit of the European Mobile Laboratory (EMLab) consortium was deployed to the Ebola virus disease (EVD) treatment unit in Guéckédou, Guinea, from March 2014 through March 2015.; The unit diagnosed EVD and malaria, using the RealStar Filovirus Screen reverse transcription-polymerase chain reaction (RT-PCR) kit and a malaria rapid diagnostic test, respectively.; The cleaned EMLab database comprised 4719 samples from 2741 cases of suspected EVD from Guinea. EVD was diagnosed in 1231 of 2178 hospitalized patients (57%) and in 281 of 563 who died in the community (50%). Children aged <15 years had the highest proportion of Ebola virus-malaria parasite coinfections. The case-fatality ratio was high in patients aged <5 years (80%) and those aged >74 years (90%) and low in patients aged 10-19 years (40%). On admission, RT-PCR analysis of blood specimens from patients who died in the hospital yielded a lower median cycle threshold (Ct) than analysis of blood specimens from survivors (18.1 vs 23.2). Individuals who died in the community had a median Ct of 21.5 for throat swabs. Multivariate logistic regression on 1047 data sets revealed that low Ct values, ages of <5 and ≥45 years, and, among children aged 5-14 years, malaria parasite coinfection were independent determinants of a poor EVD

outcome.; Virus load, age, and malaria parasite coinfection play a role in the outcome of EVD.

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