

Article (7)

Evaluation of Pooling Strategy of SARS-CoV-2 RT-PCR in Limited Resources setting in Egypt at Low Prevalence.

Abstract:

Background: Sample pooling testing for SARS-COV-2 can be an effective tool in Covid-19 screening when resources are limited, yet it is important to assess the performance before implementation as pooling has its limitations. Our objective was to assess the efficacy of pooling samples for coronavirus 2019 (COVID-19) compared to individual analysis by using commercial platforms for nucleic acid testing. **Methods:** 2200 nasopharyngeal swabs for SARS-COV-2 were tested individually and in pools of 4, 8, and 10. The cycle threshold (Ct) values of the positive pooled samples were compared to their corresponding individual positive samples. **Results:** In pool size 10 samples, an estimated increase of 3-Ct was obtained, which led to false negative results in low viral load positive samples. **Conclusion:** Pooling SARS COV-2 samples is an effective strategy of screening to increase laboratories capacity and reduce costs without affecting diagnostic performance. A pool size of 8 is recommended.