[Potential false-positive rate among the ′asymptomatic infected individuals′ in close contacts of COVID-19 patients]. - PubMed - NCBI

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目的： 随着新型冠状病毒肺炎疫情防控工作不断深入，很多地区开展了对病例的密切接触者的核酸检测主动筛查工作，但是该措施阳性结果中假阳性比例尚未见报道。搞清此问题对科学防控疫情具有一定参考价值。 **方法：** 基于目前能够获得的信息，估计相关指标的点值和合理变动范围，推演主动筛查措施阳性结果中假阳性比例，单因素和多因素概率敏感性分析探讨结果的稳健性。 **结果：** 当密切接触者的感染率和报告的灵敏度和特异度均取点估计值时，主动筛查措施阳性预测值仅为19.67%，相反，阳性结果中假阳性比例为80.33%。多因素概率敏感性分析结果支持本研究的基准结果，阳性结果中假阳性比例>47%的可能性为75%。 **结论：** 在新型冠状病毒肺炎病例的密切接触者中，核酸检测主动筛查发现的"无症状感染者"可能有近一半，甚至更多为假阳性者。.

Objective: As the prevention and control of COVID-19continues to advance, the active nucleic acid test screening in the close contacts of the patients has been carrying out in many parts of China. However, the false-positive rate of positive results in the screening has not been reported up to now. But to clearify the false-positive rate during screening is important in COVID-19 control and prevention. **Methods:** Point values and reasonable ranges of the indicators which impact the false-positive rate of positive results were estimated based on the information available to us at present. The false-positive rate of positive results in the active screening was deduced, and univariate and multivariate-probabilistic sensitivity analyses were performed to understand the robustness of the findings. **Results:** When the infection rate of the close contacts and the sensitivity and specificity of reported results were taken as the point estimates, the positive predictive value of the active screening was only 19.67%, in contrast, the false-positive rate of positive results was 80.33%. The multivariate-probabilistic sensitivity analysis results supported the base-case findings, with a 75% probability for the false-positive rate of positive results over 47%. **Conclusions:** In the close contacts of COVID-19 patients, nearly half or even more of the 'asymptomatic infected individuals' reported in the active nucleic acid test screening might be false positives.

COVID-19; Close contacts; False-positive; Nucleic acid test; Screening