

Respiratory multiplex NAAT
(8 or more targets)
English summary

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This is the English summary of the guidance entitled TAAN multiplex respiratoire = (8 cibles et plus) - Rapport en appui à l'outil d'aide à la décision published in April 2019.

The complete version of this guidance (in French) is available on the website of INESSS in the Publications section.

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SUMMARY

The use of multiplex PCR to detect respiratory viruses is raising certain concerns. It is usually ordered in a hospital setting, where it facilitates the management of patients with respiratory infections, since it helps limit their spread. However, the experts consulted indicated that, in many cases, the information provided by this test does not change patient management. It is against this backdrop that the present tool was developed.

Description of the technology under consideration

The nucleic acid amplification test (NAAT) is an *in vitro* molecular biology gene amplification technique that includes PCR-type amplifications. Multiplex PCR is used to detect the following viruses and their various subtypes: the influenza virus, respiratory syncytial virus (RSV), adenovirus, metapneumovirus, coronavirus human parainfluenza virus, rhinovirus, enterovirus and bocavirus.

Methods

A literature search was conducted in different databases for systematic reviews, meta-analyses, practice guidelines and primary studies. The grey literature was searched as well. In addition, experiential and contextual data were gathered from experts to ensure an understanding of the need to use this technology in clinical settings.

Results

For each clinical indication or target population identified, we present results concerning the test's diagnostic performance and clinical utility, the positions and leanings of the organizations of interest concerning the test, the pathogenic agents to be screened for and the preferred types of specimens, if applicable. Multiplex PCR is recommended in the following clinical situations, only if the results can modify the patient's treatment or management:

- In children admitted to intensive care or at risk for complications in the presence of community-acquired pneumonia;
- In hospitalized adults whose community-acquired pneumonia severity score is considered high;
- In immunocompromised patients, since multiplex PCR can identify a broad range of respiratory viruses;
- In hospitalized patients during a viral outbreak or in patients treated in intensive care.

Conclusions

This tool will serve to support clinicians in their decision to use or not use multiplex PCR to detect respiratory viruses.

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