The Laboratory Services Reform Programme

ADVICE NOTE

Testing for Acute Respiratory Virus Infection Guidance

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Clinical Practice Guidance Document Cover Sheet

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The Laboratory Services Reform Programme offers the following advice:

1.1 Advice for Laboratory Users

1. Testing for acute viral respiratory tract infection is not required in people with no clinical features of acute viral respiratory tract infection.
2. Testing for acute respiratory virus infection is not required in most people with clinical features of acute viral respiratory tract infection as the condition is generally self-limiting. Identification of the specific viral agent causing the infection is generally not required to provide advice on self-care and reducing the risk of spread of infection to other people.
3. Detection of viral nucleic acid in an upper respiratory tract sample should not be accepted uncritically as establishing a diagnosis, or as excluding other diagnoses. Viral nucleic acid may persist for some time (in some cases for weeks) after acute infection. A positive test may be an incidental finding. Clinical correlation is essential.
4. A person with clinical features of acute viral respiratory tract infection should continue to be managed as such for infection prevention and control purposes even if no specific virus is identified on testing of a respiratory tract sample.
5. When there is a clinical indication for testing for acute viral respiratory tract infection, an appropriate sample should be tested by a quality assured method either in a laboratory or near-patient setting. If there is a requirement for testing of multiple people, for example in initial evaluation of a suspected outbreak in a residential care setting, the laboratory should be informed by telephone.
6. You should expect the laboratory to require relevant clinical details on the request form. The clinical details required maybe concise such as one of more of the following

    - Fever
    - Nasal discharge
    - New cough
    - Worsening cough
    - New shortness of breath
    - Worsening shortness of breath

7. Other valid indications, such as otherwise unexplained general deterioration in a residential care setting should be clearly stated
8. It should be expected that laboratories will not process samples that do not include appropriate patient identifiers, requestor information, and relevant clinical details. Note that vague or non-specific terms, e.g. “?viral infection”, are not considered adequate clinical details.
9. The sample submitted should be taken and submitted promptly, and as specified by the laboratory providing the testing service. Laboratory users should establish the sample type required and the hours during which the laboratory provides access to deposit samples.
10. In a healthcare or other setting where an outbreak of acute viral respiratory tract infection is suspected on clinical grounds, notification and other necessary measures should be taken promptly. Samples should be taken and submitted to the laboratory as soon as is practical but action should not be delayed pending laboratory results.

11. In an outbreak of acute viral respiratory tract infection in a congregated setting, it is not necessary to test all patients with typical clinical features. If the same viral agent (for example Influenza A virus) is identified in 2 to 3 patients, it is generally appropriate to assume that other people in the same setting with similar symptoms in a short period of time, have infection with the same virus. In some cases, Public Health or Infection Prevention and Control teams may advise additional testing.
12. Repeat testing of previously positive people to assess for clearance or to guide the discontinuation of specific infection control precautions should not be performed because viral nucleic acid may persist for some time after acute infection has resolved.

1.2 Advice for Laboratories

1. HSE laboratory services should provide clear information to the relevant Regional Public Health Department and to healthcare providers they support (hospital, GP, residential care) regarding the service they provide for testing for acute respiratory infection, the hours during which service is provided and the expected turnaround time.
2. Laboratories should test samples for a panel of viruses that includes Influenza A, Influenza B, Respiratory Syncytial Virus (RSV). and SARS-CoV-2 by a method that detects viral nucleic acid.
3. Testing should be performed when relevant and legible clinical details and requestor identification are provided on the request (electronic or paper) accompanying the sample and the sample received is suitable for analysis.
4. To the greatest extent practical, requests for testing for respiratory viruses that do not conform to the laboratory requirements for testing should not be processed.
5. Laboratories supporting inpatient services should be resourced to report results promptly on those samples that fulfil the requirements for testing. A minimum target should be to report samples that meet the requirements for testing within 24 hours of the receipt of samples in the laboratory, including at weekends.
6. There are significant practical challenges in implementing a process to manage requests in the absence of electronic ordering. The provision of a specific list to users of terms (such as that indicated above) that must be legible on a request form for acceptance of the sample for testing, is a strategy that has been implemented effectively in some laboratories.
7. If samples are not processed, a report should be issued to the effect that testing for respiratory viruses was not performed because the criteria for testing were not met. Samples that are not processed should be stored for a period of 5 to 7 days to allow for retrospective testing if relevant details are subsequently provided during the period in which the samples are still suitable for testing.

2. Background

A large number of respiratory viruses circulate in the human population. The clinical spectrum of disease associated with these agents overlaps in terms of severity and patterns of symptoms. It is generally not possible to differentiate between viral respiratory agents with any confidence based on clinical features alone.

Acute viral respiratory tract infection is a self-limiting condition that does not require healthcare attention in most people. Otherwise healthy people without specific risk factors should be encouraged to self-care and to limit contact with other people. There is no clinical requirement for testing, either self-testing or

quality assured testing, in most people. Most people (adults and children) who seek healthcare do not require testing. Collecting a good quality sample can be uncomfortable.

Testing is appropriate where required to guide specific public health or clinical decision making as indicated in the ARI testing guidance published and updated annually by Health Protection Surveillance Centre (HPSC). (https://www.hpsc.ie/a-z/respiratory/acuterespiratoryinfection/) When testing is required it should include at least four key viral agents as follows: Influenza A, Influenza B, RSV, and SARS-CoV-2. These are relatively common causes of acute viral respiratory tract infection, however, they can be associated with severe infection and may require specific treatment in some people. Testing by a quality assured multiplexed nucleic acid-based method is generally the most appropriate method for testing. In some cases, samples that test positive may require additional testing in a reference laboratory to further characterise the type of virus causing infection. Where there is a clear clinical indication to support decision making, testing for a wider panel of respiratory viruses and other agents (for example *Bordetella pertussis*) may be appropriate in some circumstances in people with compatible clinical features of infection, if the initial test does not identify a relevant pathogen.

Note that testing of people with acute viral respiratory tract infection who would not ordinarily require testing on purely clinical grounds is sometimes required for national surveillance purposes.

3. Relevant Materials

None

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