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Cpt flu test

The American Medical Association (AMA) has announced important updates to the Current Procedural Terminology (CPT®) code set. These updates introduce new codes for multi-virus testing that detects COVID-19 and influenza. This change reflects the need for precise coding in the evolving landscape of respiratory infections.The AMA has introduced two new Category I CPT codes. These codes provide clarity for reporting critical diagnostic tests:87636: Infectious agent detection by nucleic acid (DNA or RNA); severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (Coronavirus disease [COVID-19]) and influenza virus types A and B, multiplex amplified probe technique. 87637: Infectious agent detection by nucleic acid (DNA or RNA); severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (Coronavirus disease [COVID-19]), influenza virus types A and B, and respiratory syncytial virus, multiplex amplified probe technique.These codes enhance reporting efficiency for respiratory virus testing.The AMA also revised existing CPT codes ranging from 87301 to 87430. The undefined term “multi-step method” has been removed from the code descriptors. This revision clarifies how antigen tests should be reported. 87426: Infectious agent antigen detection by immunoassay technique (e.g., enzyme immunoassay [EIA], enzyme-linked immunosorbent assay [ELISA], fluorescence immunoassay [FIA], immunochemiluminometric assay [IMCA]) qualitative or semiquantitative; severe acute respiratory syndrome coronavirus (e.g., SARS-CoV, SARS-CoV-2 [COVID-19]).Additionally, the CPT Editorial Panel approved a new Category I code:87811: Infectious agent antigen detection by immunoassay with direct optical (i.e., visual) observation; severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (Coronavirus disease [COVID-19]).These updates are crucial for healthcare providers and laboratories. They ensure accurate reporting and coding for the complex landscape of respiratory virus testing. As new strains emerge, having precise codes is essential for effective patient management and public health reporting.For more detailed information about the new CPT codes and other modifications, healthcare professionals can access the AMA’s official press release on their website. Staying informed about these changes is essential for maintaining compliance and optimizing coding practices. CHICAGO — The American Medical Association (AMA) today published an update to the Current Procedural Terminology (CPT®) code set that includes new code additions and editorial revisions for reporting medical services sparked by the public health response to the COVID-19 pandemic.The update to the CPT code set was approved by the CPT Editorial Panel, the independent body convened by the AMA with authority to review and approve proposed additions and revisions to the CPT code set. The new additions and revisions to the CPT code set have been approved for immediate use.“Two of the newly approved codes report nucleic acid assays that allow a single test to simultaneously detect the novel coronavirus and a combination of common viral infectious agents, including influenza A/B and respiratory syncytial virus,” said AMA President Susan R. Bailey, M.D. “Concurrent detection promises to conserve important testing resources, allowing for ongoing surveillance of influenza while testing for the novel coronavirus.”For quick reference, the new category I CPT codes and long descriptors are:87636 Infectious agent detection by nucleic acid (DNA or RNA); severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (Coronavirus disease [COVID-19]) and influenza virus types A and B, multiplex amplified probe technique87637 Infectious agent detection by nucleic acid (DNA or RNA); severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (Coronavirus disease [COVID-19]), influenza virus types A and B, and respiratory syncytial virus, multiplex amplified probe techniqueThe CPT Editorial Panel also revised CPT codes ranging from 87301 to 87430 by removing the undefined term “multi step method” from code descriptors. The revision clarifies the proper reporting for antigen tests that are read by a machine, as compared to those which can be visually interpreted without a machine. This revision affects the newly developed descriptor for CPT code 87426.87426 Infectious agent antigen detection by immunoassay technique, (eg, enzyme immunoassay [EIA], enzyme-linked immunosorbent assay [ELISA], fluorescence immunoassay [FIA], immunochemiluminometric assay [IMCA]) qualitative or semiquantitative; severe acute respiratory syndrome coronavirus (eg, SARS-CoV, SARS-CoV-2 [COVID-19])In accordance with the above revision, the CPT Editorial Panel approved a new category I code, 87811, to report infectious agent antigen detection by immunoassay with direct visual observation.87811 Infectious agent antigen detection by immunoassay with direct optical (ie, visual) observation; severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (Coronavirus disease [COVID-19])In addition to the long descriptors, short and medium descriptors for CPT codes 87636, 87637, 87426 and 87811 can be accessed on the AMA website, along with several other recent modifications to the CPT code set that have helped streamline the public health response to the SAR-CoV-2 virus and the COVID-19 disease.Changes to the CPT code set are considered through an open editorial process managed by the CPT Editorial Panel that collects broad input from the health care community and beyond to ensure CPT content reflects the coding demands of digital health, precision medicine, augmented intelligence, and other aspects of a modern health care system. This rigorous editorial process keeps the CPT code set current with contemporary medical science and technology, so it can fulfill its vital role as the trusted language of medicine today and the code to its future.# # #Answers to questions on CPT coding and content are available from the CPT Network. The CPT® (Current Procedural Terminology) code set is copyright by the American Medical Association (AMA). The common language descriptions within the code sets are copyrighted by CodingAhead LLC. Number: 0476 Table Of Contents Policy Applicable CPT / HCPCS / ICD-10 Codes Background References This Clinical Policy Bulletin addresses influenza rapid diagnostic tests. Aetna considers rapid diagnostic tests for viral influenza (e.g., Directigen Flu A, Directigen Flu A+B, Flu OIA, Quickvue Influenza Test, and Z Stat Flu) medically necessary. CPB 0035 - Influenza Vaccine Table: 87804 Infectious agent antigen detection by immunoassay with direct optical observation; influenza B34.9 Viral infection, unspecified J10.00 - J11.89 Influenza due to other influenza virus M79.10 - M79.18 Myalgia R05 Cough R50.9 Fever, unspecified R06.02 Shortness of breath R51 Headache R53.81 Other malaise Background In the context of an epidemic, the clinical diagnosis of influenza in a patient with fever, malaise, and respiratory symptoms can be made with some certainty. In the absence of an epidemic of influenza, however, the diagnosis may be uncertain. In these cases, rapid diagnostic tests (which take less than 1 hour to perform) may be helpful in distinguishing influenza from infection with a number of other viruses (and occasionally streptococcal pharyngitis) that produce headache, muscle aches, fever, and/or cough. The results of these rapid diagnostic tests for influenza may be useful in selecting appropriate antiviral therapy, avoiding inappropriate antibiotic therapy, and in promptly initiating measures to decrease the spread of disease. Most of the rapid diagnostic tests that can be done in a physician's office are approximately greater than 70 % sensitive for detecting influenza and approximately greater than 90 % specific (CDC, 2005). Thus, as many as 30 % of samples that would be positive for influenza by viral culture may give a negative rapid test result. In addition, some rapid test results may indicate influenza when a person is not infected with influenza. Guidelines from the Centers for Disease Control and Prevention (CDC) (Harper et al, 2005) explain that commercial rapid diagnostic tests can detect influenza viruses within 30 mins. Some tests are approved for use in any outpatient setting, whereas others must be used in a moderately complex clinical laboratory. These rapid tests differ in the types of influenza viruses they can detect and whether they can distinguish between influenza types. Different tests can detect: Centers for Disease Control and Prevention guidelines explain that none of the tests provide any information about influenza A subtypes. The types of specimens acceptable for use (i.e., throat, nasopharyngeal, or nasal aspirates, swabs, or washes) also vary by test. The specificity and, in particular, the sensitivity of rapid tests are lower than for viral culture and vary by test. The CDC recommends that, because of the lower sensitivity of the rapid tests, physicians should consider confirming negative tests with viral culture or other means because of the possibility of false-negative rapid test results, especially during periods of peak community influenza activity. In contrast, false-positive rapid test results are less likely, but can occur during periods of low influenza activity. Therefore, when interpreting results of a rapid influenza test, physicians should consider the positive- and negative-predictive values of the test in the context of the level of influenza activity in their community (Harper et al, 2005). Package inserts and the laboratory performing the test should be consulted for more details regarding use of rapid diagnostic tests. Centers for Disease Control and Prevention guidelines state that, despite the availability of rapid diagnostic tests, collecting clinical specimens for viral culture is critical, because only culture isolates can provide specific information regarding circulating strains and subtypes of influenza viruses. The guidelines explain that this information is needed to compare current circulating influenza strains with vaccine strains, to guide decisions regarding influenza treatment and chemoprophylaxis, and to formulate vaccine for the coming year. Virus isolates also are needed to monitor the emergence of antiviral resistance and the emergence of novel influenza A subtypes that might pose a pandemic threat. Although widely used in emergency departments and physicians' offices, antigen-based rapid assays have shown poor sensitivity for the H1N1 virus compared with culture or molecular diagnostic techniques. Drexler et al (2009) found only 11 % sensitivity of a rapid antigen test with reverse transcription polymerase chain reaction (RT-PCR). Investigators compared the sensitivity of a commercially available antigen-based rapid test (BinaxNOW Influenza A & B Rapid Test) with that of a real-time RT-PCR (rRT-PCR) assay specific for the hemagglutinin gene of the 2009 H1N1 virus. Of 1,838 clinical specimens tested, 221 were confirmed as H1N1 positive by RT-PCR. When 144 of these PCR-positive specimens were evaluated using the rapid-antigen test, results were positive for only 16 (11.1 %). The "gold standard" PCR also demonstrated poor sensitivity, detecting the 2009 H1N1 virus in just 12 % of 1,838 respiratory specimens submitted at a time when this virus was pandemic and probably responsible for most influenza-like illness. During May 2009, a few weeks after 2009 pandemic influenza A (H1N1) infection was first detected in the United States, outbreaks among students from 2 schools were detected in Greenwich, Connecticut (CT). Staff members from Greenwich Hospital and the CT Department of Public Health collected data on symptoms for 63 patients and submitted naso-pharyngeal washings for testing using a rapid influenza diagnostic test (RIDT) for influenza A and B and rRT-PCR assay, thus affording an opportunity to assess the field performance of the RIDT. A total of 49 patients had infections with pandemic H1N1 confirmed by rRT-PCR (CDC, 2009). The findings of this performance assessment indicated that, compared with rRT-PCR, the sensitivity of the RIDT for detecting infection in patients with 2009 pandemic H1N1 was 47 %, and the specificity was 86 %. Sensitivity and specificity did not vary markedly by the presence or absence of CDC-defined influenza-like illness (ILI) or by time from symptom onset to specimen acquisition. In this group of patients, although positive RIDT results performed well in predicting confirmed infection with pandemic H1N1 virus (positive predictive value: 92 %), negative tests did not accurately predict the absence of infection (negative predictive value: 32 %). These findings affirm recent CDC recommendations against using negative RIDT results for management of patients with possible 2009 pandemic H1N1 infection. Hawkes et al (2010) examined the diagnostic accuracy of a RIDT and direct fluorescent antibody (DFA) assay for swine-origin H1N1 virus (S-OIV) by using rRT-PCR as the reference standard. These investigators prospectively recruited children (aged 0 to 17 years) assessed in the emergency department of a pediatric referral hospital and a community pediatric clinic for ILI between May 22 and July 25, 2009. RIDT (performed on-site) and DFA were compared with rRT-PCR to determine their sensitivity and specificity for S-OIV. They also compared the sensitivity of RIDT for S-OIV to that for seasonal influenza over 2 preceding seasons. Of 820 children enrolled, 651 were from the emergency department and 169 were from the clinic. Sensitivity of RIDT was 62 % (95 % confidence interval [CI]: 52 % to 70 %) for S-OIV, with a specificity of 99 % (95 % CI: 92 % to 100 %). Sensitivity of DFA was 8 3% (95 % CI: 75 % to 89 %) and was superior to that of RIDT ($p < 0.001$). Sensitivity of RIDT for S-OIV was comparable to that for seasonal influenza when using DFA supplemented with culture as the reference standard. Sensitivity of RIDT for influenza viruses was markedly higher in children 5 years of age or younger ($p = 0.003$) and in patients presenting less than or equal to 2 days after symptom onset ($p < 0.001$). The authors concluded that the sensitivity of RIDT for detection of S-OIV is higher than recently reported in mixed adult-pediatric populations but remains suboptimal. Cruz and associates (2010) evaluated the performance of a RIDT in detecting H1N1 2009 influenza A virus in respiratory samples from pediatric patients in comparison to that of rRT-PCR and viral culture. Patients for whom the RIDT, viral culture, and rRT-PCR results were known were included. Sensitivity, specificity, and likelihood ratios (LRs) were calculated. A total of 3,030 specimens had RIDT results paired with both rRT-PCR and viral culture results. With rRT-PCR as the reference, overall test sensitivity was 45 % (95 % CI: 43.3 % to 46.3 %) and specificity was 98.6 % (95 % CI: 98.1 % to 99 %). Positive and negative LRs were 32.9 (95 % CI: 22.9 to 45.4) and 0.56 (95 % CI: 0.54 to 0.58), respectively. Sensitivity of RIDT was significantly higher in young infants and children younger than 2 years than in older children. Using viral culture as the reference standard, RIDT sensitivity was 55.5 % (95 % CI: 51.9 % to 95.6 %) and specificity was 95.6 % (95 % CI: 95 % to 96.1 %). The positive and negative LRs were 12.6 and 0.47, respectively. The authors concluded that the RIDT had relatively poor sensitivity but excellent specificity in this consecutive series of respiratory specimens obtained from pediatric patients. Although a positive RIDT result was highly accurate in predicting infection with influenza type A H1N1 2009 in children, a negative RIDT result did not preclude a child having H1N1. Thus, for children at high-risk with ILI during high prevalence periods of influenza, empiric initiation of antiviral therapy should be considered for patients with a negative RIDT result. Parida et al (2011) stated that the recent emergence of the S-OIV poses a serious global health threat. Rapid detection and differentiation of S-OIV from seasonal influenza is crucial for patient management and control of the epidemics. These researchers reported a 1-step, single-tube accelerated and quantitative S-OIV-specific H1 reverse transcription loop-mediated isothermal amplification (RTLAMP) assay for clinical diagnosis of S-OIV by targeting the H1 gene. A comparative evaluation of the H1-specific RTLAMP assay vis-a-vis the World Health Organization (WHO)-approved rRT-PCR, involving 239 acute-phase throat swab samples, demonstrated exceptionally higher sensitivity by picking up all of the 116 H1N1-positive cases and 36 additional positive cases among the negatives that were sequence-confirmed as S-OIV H1N1. None of the rRT-PCR-positive samples were missed by the RTLAMP system. The comparative analysis revealed that S-OIV RTLAMP was up to 10-fold more sensitive than the WHO rRT-PCR; it had a detection limit of 0.1 tissue culture infectious dosage of (50)/ml. One of the most attractive features of this isothermal gene amplification assay is that it seems to have an advantage in monitoring gene amplification by means of SYBR Green I dye-mediated naked-eye visualization within 30 mins compared to 2 to 3 hours for a eRt-PCR. This suggested that the RTLAMP assay is a valuable tool for rapid, real-time detection and quantification of S-OIV in acute-phase throat swab samples without requiring sophisticated equipment. Su and colleagues (2012) applied the developed paired surface plasma waves biosensor (PSPWB) in a dual-channel biosensor for rapid and sensitive detection of S-OIV. In conjunction with the amplitude ratio of the signal and the reference channel, the stability of the PSPWB system is significantly improved experimentally. The theoretical limit of detection (LOD) of the dual-channel PSPWB for S-OIV is 30 PFU/mL (PFU, plaque-forming unit), which was calculated from the fitting curve of the surface plasmon resonance signal with a S-OIV clinical isolate concentration in phosphate-buffered saline (PBS) over a range of 18 to 1.8 × 10(6) PFU/ml. The LOD is 2 orders of magnitude more sensitive than the commercial rapid influenza diagnostic test at worst and an order of magnitude less sensitive than rRT-PCR whose LOD for S-OIV in PBS was determined to be 3.5 PFU/ml in this experiment. Furthermore, under in-vivo conditions, this experiment demonstrates that the assay successfully measured S-OIV at a concentration of 1.8 × 10(2) PFU/ml in mimic solution, which contained PBS-diluted normal human nasal mucosa. Most importantly, the assay time took less than 20 mins. The authors concluded that from thees findings, the dual-channel PSPWB potentially offers great opportunity in developing an alternative PCR-free diagnostic method for rapid, sensitive, and accurate detection of viral pathogens with epidemiological relevance in clinical samples by using an appropriate pathogen-specific antibody. Multiplex Real-Time Reverse-Transcription Polymerase Chain Reaction Assays for Diagnosis of Seasonal Influenza Viruses Mancini and colleagues (2021) noted that pandemic coronavirus disease 2019 (COVID-19) disease represents a challenge for healthcare structures. The molecular confirmation of samples from infected individuals is crucial and therefore guides public health decision-making. Clusters and possibly increased diffuse transmission could occur in the context of the next influenza season. For this reason, a diagnostic test able to discriminate severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) from influenza viruses is urgently needed. These researchers examined a multiplex real-time reverse-transcription polymerase chain reaction (PCR) assay using 1 laboratory protocol with different real-time PCR instruments. Overall, 1,000 clinical samples (600 from samples SARS-CoV-2-infected patients, 200 samples from influenza-infected patients, and 200 negative samples) were analyzed. The assay developed was able to detect and discriminate each virus target and to intercept co-infections. The limit of quantification of each assay ranged between 5 and 10 genomic copy numbers, with a cut-off value of 37.7 and 37.8 for influenza and SARS-CoV-2 viruses, respectively. Only 2 influenza co-infections were detected in COVID-19 samples. The authors concluded that the findings of this study suggested that multiplex assay is a rapid, valid, and accurate method for the detection of SARS-CoV-2 and influenza viruses in clinical samples. The test may be an important diagnostic tool for both diagnostic and surveillance purposes during the seasonal influenza activity period. Moreover, these researchers stated that it will be necessary to examine if the method might be affected by the co-presence of other respiratory pathogens in the clinical samples. The authors stated that the major drawback of this study was the relatively small sample size. Although these investigators tested approximately 1,000 clinical specimens, the number of samples positive for influenza specimens was very low. In this regard, it should be considered that the influenza active surveillance activities globally decreased because of the COVID-19 pandemic and a low number of samples was collected during the influenza season (2019 to 2020) in Italy. Moreover, it should be noted that also during the SARS pandemic in 2003, only 5 % of mixed infection with influenza viruses was reported, though it tended to increase over time. Additional information concerning diagnostic testing for influenza is available at Clinical Description and Lab Diagnosis of Influenza. The Quidel Sofia Rapid Influenza Fluorescent Immunoassay In a prospective study, Yang and co-workers (2018) examined the diagnostic performance of the Sofia influenza A+B fluorescent immunoassay (Sofia FIA). This trial was carried out at the Chang Gung Memorial Hospital in Taiwan from January 2012 to December 2013. Patients who presented at outpatient clinics or the emergency department with influenza-like illness (ILI) were included. Upper respiratory tract specimens were collected from oropharynx or nasopharynx. Performance of the Sofia FIA was compared to that of the Formosa One Sure Flu A/B Rapid Test. A real-time reverse transcriptase-polymerase chain reaction assay (RT-PCR) and/or virus culture were used as reference standards. Of the 109 enrolled patients, the sensitivity, specificity, positive, and negative predictive values (PPV and NPV) of the Sofia FIA to detect influenza A virus were 82 %, 89 %, 77 %, and 89 %, respectively. These parameters were 100 % when the samples were from nasopharynx. The PPV for influenza B virus detection was 29 %. The sensitivity of the Sofia FIA for detection of influenza A virus was 93 % between days 2 and 4 after onset of symptoms. For specimens with low viral loads (RT-PCR cycle threshold between 30 and 34.9), the sensitivity of the Sofia FIA was 83 % (10/12). The Sofia FIA performed effectively in detecting influenza A virus infection. With nasopharyngeal samples, the performance was comparable to RT-PCR. Although influenza viral load typically decreases with time, the Sofia FIA was sensitive enough to identify influenza infecting patients presenting after several days of illness. However, a high false positive rate limited the assay's usefulness to identify influenza B virus infection suggesting that the Sofia FIA should not be the sole basis of any clinical decisions or as guidance for anti-viral agent administration. The authors stated that this study had several drawbacks. First, these researchers preformed this prospective cohort study in adults from outpatient clinics and the emergency department. Some research has reported that the Sofia FIA performed well in young children due to higher viral loads and the relatively immature immune systems of these patients. The lack of data from young patients in this study may affect the overall performance of the Sofia FIA. Second, the patients included in this trial presented with mild influenza symptoms. There were few underlying conditions in the patients and the severity index was not evaluated. As much lower sensitivity and PPVs were observed in critically ill patients, these findings on the performance of the Sofia FIA may not be applied for the critically ill patients. Finally, this study was carried out at a single center with a limited number of patients. Case numbers were further reduced in the subgroup analyses. The study sample was small, and the low PPV especially influenza B may be due to further reduced number in the subgroup analyses. However, this trial considered several important clinical parameters that may impact the diagnostic performance of the Sofia FIA. With all of these clinical parameters defined and included, this report provided critical information to improve test interpretation in a clinical point-of-care setting. Moreover, these researchers also encouraged similar studies to include relevant clinical perspectives to examine the diagnostic performance of any rapid influenza antigen tests, including the Sofia FIA. Lee and colleagues (2021) noted that although the Quidel Sofia rapid influenza FIA is widely used to identify influenza A and B, the diagnostic accuracy of this test remains unclear. In a systematic review and meta-analysis, these researchers examined the diagnostic performance of this test compared to RT-PCR. They carried out a systematic literature search using Medline, Embase, and the Cochrane Central Register. Pooled sensitivity, specificity, diagnostic odds ratio (DOR), and a hierarchical summary receiver-operating characteristic curve (HSROC) of this test for identifying influenza A and B were determined using meta-analysis. A sensitivity subgroup analysis was carried out to identify potential sources of heterogeneity within selected studies. These investigators identified 17 studies involving 8,334 patients. Pooled sensitivity, specificity, and DOR of the Quidel Sofia rapid influenza FIA for identifying influenza A were 0.78 (95 % CI: 0.71 to 0.83), 0.99 (95 % CI: 0.98 to 0.99), and 251.26 (95 % CI: 139.39 to 452.89), respectively. Pooled sensitivity, specificity, and DOR of this test for identifying influenza B were 0.72 (95 % CI: 0.60 to 0.82), 0.98 (95 % CI: 0.96 to 0.99), and 140.20 (95 % CI: 55.92 to 351.54), respectively. The area under the HSROC for this test for identifying influenza A was similar to that for identifying influenza B. Age was considered a probable source of heterogeneity. The authors concluded found that pooled sensitivities of the Quidel Sofia rapid influenza FIA were slightly below the target level (greater than or equal to 80 %) set by the FDA for both influenza A and B; thus, physicians should consider the possibility of false-negative results by this test, especially for adults. Although pooled specificities of this test were very high for both influenza A and B, substantial between-study heterogeneity requires careful interpretation of the data. The authors stated that this was the 1st meta-analysis to examine the Quidel Sofia rapid influenza FIA for detecting influenza. However, potential limitations of this study should be considered when interpreting these findings. First, because this review/analysis was based on a relatively small number of trials, these findings should be carefully interpreted due to its limited statistical power. Second, these researchers could not make an assessment for publication bias since no reliable methods existed to examine this issue for diagnostic test accuracy studies. Finally, as a sample for viral diagnosis, nasopharyngeal aspirates could show higher quality than nasopharyngeal swabs. As mentioned previously, although these investigators tried to examine the diagnostic accuracy of the Quidel Sofia rapid influenza FIA according to the type of samples, they were unable to carry out such analysis because of data limitations. Phetcharakupt and associates (2021) stated that rapid influenza diagnostic test (RIDT) is a diagnostic tool that detects the influenza virus nucleoprotein antigen. The RIDT is widely used in clinical practice because it is simple and cost-effective; and provides results within 10 to 15 mins. In a retrospective study, these investigators examined the sensitivity and specificity of the Sofia RIDT compared with the Luminex multiplex PCR. The secondary objective was to determine the predicting factors for diagnosing influenza among individuals with ILI. These investigators examined patients with ILI who had the results of both tests; they determined the performances of the RIDT. A total of 473 patients were included with a median age of 58 (inter-quartile range [IQR] 41 to 74) years. Of these, 47.1 % were male, and 16.2 % were diagnosed with influenza by the RIDT or RT-PCR's positive test. For influenza A, the RIDT showed a sensitivity of 76.3 % (95 % CI: 59.8 to 88.6) and a specificity of 97.9 % (95 % CI: 96.1 to 99.0), whereas for influenza B, it showed a sensitivity of 47.1 % (95 % CI: 23.0 to 72.2) and a specificity of 97.1 % (95 % CI: 95.2 to 98.5). Patients with influenza were more likely to present with fever (81.8 % versus 63.1 %), cough (81.8 % versus 66.1 %), and rhinorrhea (41.6 % versus 26.5 %) compared to those without influenza ($p < 0.05$, all), and had a higher proportion of pneumonia (19.5 % versus 10.6 %, $p = 0.029$) and acute respiratory distress syndrome (5.2 % versus 1.5 %, $p = 0.063$). The predicting factors for influenza among patients presented with ILI were cough (odds ratio [OR] 2.77; 95 % CI: 0.21 to 0.81, $p = 0.010$), rhinorrhea (OR 1.87; 95 % CI: 1.03 to 3.36, $p = 0.037$), and higher body temperature (OR 1.64; 95 % CI: 1.23 to 2.19, $p = 0.001$). The authors concluded that the sensitivity of the RIDT for the diagnosis of influenza was fair in contrast to the specificity. Among patients with ILI, cough, rhinorrhea, and higher body temperature might be factors for predicting influenza. The authors stated that this study had several drawbacks. First, unavailable medical records and missing data such as a history of receiving influenza vaccine are common due to the retrospective study's nature. Second, this study was conducted in a single center; thus, the findings might not be generalized to other populations or other settings. The low prevalence of influenza B in this trial might have affected the performance of RIDT. However, this study's benefit was evaluating the parameter(s) associated with a diagnosis of influenza, which might aid a physician in decision-making regarding the diagnosis and treatment of influenza in a situation where any confirmation test could not be performed. Gentilotti et al (2022) stated that point-of-care (POC) tests could be essential in differentiating bacterial and viral acute community-acquired lower respiratory tract infections and driving antibiotic stewardship in the community. In a systematic review and meta-analysis, these investigators examined diagnostic test accuracy of POC tests in the community setting for acute community-acquired lower respiratory tract infections. Data sources included multiple databases (Medline, Embase, Web of Science, Cochrane Library, Open Gray) from inception to May 31, 2021, without language restrictions. Diagnostic test accuracy studies entailing patients at primary care, out-patient clinic, emergency department and long-term care facilities with a clinical suspicion of acute community-acquired lower respiratory tract infections were selected for analysis. The comparator was any test used as a comparison to the index test. In order not to limit the study inclusion, the comparator was not defined a priori. A total of 4 reviewers independently extracted data, rated risk of bias, and examined the quality using QUADAS-2. The measures of diagnostic test accuracy were calculated with 95 % CI. A total of 421 studies addressed at least 1 POC test. The diagnostic performance of molecular tests was higher compared with that of rapid diagnostic tests for all the pathogens studied. The accuracy of stand-alone signs and symptoms or biomarkers was poor. Lung ultrasound (US) showed high sensitivity and specificity (90 % for both) for the diagnosis of bacterial pneumonia. Rapid antigen-based diagnostic tests for influenza, respiratory syncytial virus (RSV), human metapneumovirus, and Streptococcus pneumoniae had sub-optimal sensitivity (range of 49 % to 84 %) but high specificity (greater than 80 %). The authors concluded that physical examination and host biomarkers were not sufficiently reliable as stand-alone tests to differentiate between bacterial and viral pneumonia. Lung US demonstrated higher accuracy than chest X-ray for bacterial pneumonia at emergency department. Rapid antigen-based diagnostic tests could not be considered fully reliable because of high false-negative rates. Overall, molecular tests for all the pathogens considered were found to be the most accurate. References The above policy is based on the following references:

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