Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Background: Almost a year has passed since the start for Covid 19 pandemic, however with no human immunity and no vaccine for prevention early diagnosis remains the mainstay to contain the infection and prevent the spread of the virus. RT-PCR is said to be the most sensitive test currently. However, Truenat is also widely used being approved by ICMR, hence a comparative study of RT-PCR & Truenat was taken up in this study.
Methods: A total of 200 samples were taken from patients having signs and symptoms (clinically suspected) of COVID 19. Samples obtained via oropharyngeal and nasopharyngeal swabs were analyzed on both RT-PCR and Truenat. Viral load in samples were evaluated using Ct value of targeted genes by both the techniques.
Results: Out of 200 samples, 184 showed similar results via RT-PCR and Truenat i.e., 61 positive and 123 negatives. 16 samples showed discordant results. Out of 16 samples, 5 were positive and 11 were negative by RT -PCR. However, by Truenat 11 were positive and 5 were negative. The Ct values of targeted genes range between 13-30 for E-gene and 16-32 for RdRp gene.
Conclusions: The detection of SARS COV-2 patients with mild form of disease (which were persistently negative by RT- PCR) was higher by Truenat. P value being 0.077 which is significant at 90% level of significance. Hence though identifi- cation of viral RNA by RT-PCR is the gold standard, its sensitivity is lower compared to Truenat. Hence, we can suggest that Truenat is a diagnostic method with higher sensitivity, closed system hence lower chances of contamination and at the same time providing faster results at low cost, easy to perform as a point of care test, portable and requiring lower expertise to operate compared to RT-PCR

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COMPARABILITY OF THE SENSITIVITY OF DIFFERENT REAL TIME PCR KITS USED IN THE DETECTION OF SARS COV -2

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Background:COVID-19 pandemic is posing a major burden on society. Measures taken to reduce its spread critically de- pend on timely and accurate identification of virus-infected individuals by the most sensitive and specific method availa- ble, i.e. real-time reverse transcriptase PCR (RT-PCR). RT PCR can detect SARS-CoV-2 as early as day one of symptom onset. There are various RT PCR kits approved by FDA & ICMR, performance of which vary widely. Here, we assessed the performance of four PCR kits with the ICMR NIV Screening & Confirmatory assay used for diagnosis of COVID -19 in Od- isha.
Methods:A total of 20 samples, which included five positives, one inconclusive & 14 negative samples by NIV assay were evaluated in the four commercially available RT-PCR kits ie; Q-line Molecular (Q-line), Allplex™ 2019-nCoV Assay (Allplex), Liferiver Novel Coronavirus (COVID-19) Multiplex RT PCR (Liferiver), LabGun™ COVID-19 kit (LabGun).
Results: The sensitivity of the four PCR kits varied with the high cycle threshold (Ct) value (30-35 by NIV) & the lower Ct value (<30 by NIV). Among the negative results of NIV (n=14), LabGun, Allplex kits showed 100% concordance, while Q - line & Life river were shown to have 92.8% & 50% concordance respectively. In the inconclusive results (n=1), only All- plex Assay documented a concordance of 100% with the NIV assay, while the Q -line (n=6) & Life river (n=7) showed higher number of inconclusive results. The different kits showed lesser variations with positive results (n=5), with Life river, Allplex & LabGun showing 100% concordance for positive results with NIV assay. However, Q -line was able to de- tect only 1 positive out of all positives.
Conclusions:PCR kits vary in sensitivity & it is imperial to evaluate the various kits in order to deliver accurate results at optimum time in order to detect the cases to initiate adequate treatment & control measures

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INVENTION IS THE NEED OF THE HOUR: A UNIQUE DATA ACCUMULATION AND ANALYSIS PLATFORM FOR COVID REPORTING

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Background:A calamity in Wuhan, China would reach our doorstep was never thought and we were never prepared for it. Healthcare sector in India was stretched to its limits and manual processes in place were prone to errors and time consuming. ICMR has taken initiative for data management and develop portal for tracking testing and positive cases. However, mechanisms are required to reduce double data entries from already resource constrain laboratories. There was need for a software for automated report dispatch and real time analysis based on artificial intelligence for timely dissemination of reports to patients and health authorities for prompt containment measures.
Methods: Once the result for a specimen was concluded, lab facilities would enter test details into the ICMR's portal. DAAP - Data Accumulation and Analysis Platform was designed to timely disseminate institution specific reports in encrypted manner. Once the data is entered into the ICMR Portal, an excel is exported from the same which is uploaded to the DAAP. Every patient's ingested data is verified by laboratory. Validated reports are published which can only be viewed by the respective collection centres from where a particular specimen was collected. The analytic dashboard provides cumulative real time data.
Results: Prior to DAAP, data entry engaged 20 manhours per day to disseminate reports, which was reduced to less than two manhours due to DAAP. DAAP has not only reduced the challenges posed by the double data entry, confidentiality and security but also assisted in providing real time insights into the trends and laboratory quality systems.
Conclusions:DAAP empowers the clinicians and the authorities to view data statistics real time. Data insights such as hospitalization rate, positivity rate, symptoms distribution and distribution based on various parameters like age group, gender, ward, district etc can be sought real time by DAAP.

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INFLUENCE OF TEMPERATURE, HUMIDITY ON COVID POSITIVITY IN ODISHA

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Background: The spread of COVID 19 has not been uniform across various states of India, which encounters significant spatio-temporal variations in the climatic conditions. As, seasonal cycle plays a dynamic role in spread of respiratory Infections, we aimed to ascertain the Influence of temperature, humidity and seasonal variability on COVID positivity in a tertiary care testing hospital of Odisha
Methods: Samples collected from patients attending AIIMS, Bhubaneswar and from other districts for detection of Covid-19 were tested at our lab by RTPCR. A retrospective month wise comparative analysis of the Covid -19 positivity rate of samples tested during the months of March to November 2020 was done with temperature and humidity
Results: Out of 56,874 samples tested, 9,484(16.6%) were positive by real time reverse transcriptase PCR. As Odisha is a costal state it has high humidity and temperature as compared to rest of India. The mean humidity along with the mean temperature were com- pared to COVID positivity