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**Conclusions:** We concluded that majority of the laboratories approved by ICMR are performing with high concordance of results despite varied usage of kits and platforms

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#### MORTALITY REVIEW OF COVID-19 PATIENTS: AN EXPERIENCE FROM THE LARGEST DEDICATED COVID HOSPITAL IN DELHI

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**Background:** The clinical presentation of COVID-19 varies from range of clinical symptoms to being completely asymptomatic. The country's case fatality rate in July was at 2.41% though the mortality has remained at a lower level in the Indian subcontinent. The present study aims at reviewing detailed demographic, systemic symptoms, comorbidities and its association with cycle threshold (Ct) values

**Methods:** It is a retrospective study. The patients who died with the disease in the dedicated covid care hospital between March 2020 through October 2020 were included in the study. Records from Medical Records Department were retrieved with data entered in Microsoft excel sheet. The analysis was done in percentage and average values as required.

**Results:** A total of 10383 patients of confirmed COVID-19 were admitted to the hospital. Among these patients, 1321 patients died (12.72 deaths per 100 admissions). Among these death cases 83 patients had undergone RT PCR testing at MAMC at the time of admission. Out these 38 (45%) were females and 45 (54%) males. Crude death rate is calculated 127 per 1000 admissions. Deaths were highest in the month of June (21.5 per 100 admissions) followed by May (14.3) and August (10.2). Maximum comorbidities observed in death cases was hypertension (39%), Diabetes (33%), Coronary Artery disease (16%) and Chronic kidney disease (16%). Among these deaths 34% occurred within 24 hours of admission and additional 11% occurred in next 24 hrs. The lowest average Ct value (20) was observed in older patients (>60 years) indicating higher viral RNA burden.

**Conclusions:** Mortality was highest in >60 year old males, correlating with average lower Ct values suggesting higher viral load. Mortality was highest in the month of June. As close to 50% deaths occurred within 48hrs of admission indicating that patients arrived to the hospital in late stages of illness minimizing their chance of survival.

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#### ANALYSIS OF COVID-19 BY RT-PCR DURING LOCKDOWN AND AFTER LOCKDOWN AT A TERTIARY CARE CENTRE

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**Background:** An outbreak of unusual viral pneumonia in Wuhan China, identified as novel Corona virus as evolved into global health crisis and it has been declared as pandemic by WHO on 11th March 2020. Indian government took stringent measures to control the outbreak by implementing lockdown on 22nd March and improvising the diagnostic and isolation facility. Reverse transcriptase polymerase chain reaction (RT-PCR) testing for presence of infection occupies a critical role in diagnosis, managing the patient and also in implementing the preventive control measures both at individual level and at a community and global level.

**Methods:** Nasopharyngeal/Oropharyngeal swab samples from symptomatic patients and the contacts of positive patients were tested by RT-PCR from March to November 2020. Individual sample details including age, gender, address, comorbidities, symptomatic/asymptomatic, history of contact, history of travel, were registered in standard sample referral form (SRF) prescribed by ICMR. Results of RT-PCR test and the above data were analysed with reference to the phases of lockdown and its role in the control of virus transmission. 5 phases of

lockdown were described, phase 1: 24th March to 5th April, phase 2: 6th April to 30th April. Phase 3: 1st May to 15th June, phase 4: 16th June to 15th July, phase 5: 16th July to 15th August.

**Results:** A total of 30351 samples were tested using RT-PCR and 8604 (28.3%) were positive. Among the positives 61.3% were male and 38.7% were female. Positivity during phase 1 was 4.4%, in phase 2 was 6.7%, in phase 3 was 22.6%, in phase 4 was 12.8% and in phase 5 was 41%. After phase 5 positivity was 33.4%.

**Conclusions:** Results of the present study has shown that lockdown and intervention undertaken in a timely manner helped in curbing the spread of the virus thus controlling the morbidity and mortality. Importance of interventions such as use of mask, hand hygiene and social distancing is reinforced for the containment of the disease.

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#### CLINICO-VIROLOGICAL-EPIDEMIOLOGICAL CHARACTERISTICS IN COVID POSITIVE CLUSTERS AMONG FRONTLINE HEALTH CARE WORKERS AND NON-HEALTH CARE WORKERS – A HOSPITAL BASED STUDY

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**Background:** Ample of studies have been carried out on the causative agent, pattern of illness, treatment options which mainly concern regarding the patients and general population affected from COVID -19, however few studies have focused on its adverse effects on front line health care workers (HCW) and other employees of health care facilities. The present retrospective study was planned to analyse the clinico-viro-epidemiological profile of different covid clusters in HCWs and non-health care employees of AIIMS, Bhubaneswar.

**Methods:** A hospital based retrospective study was carried out on the HCWs and other employees of AIIMS, Bhubaneswar, who tested positive SARS-CoV-2 infection by RT-PCR test. The clinical and demographic information were analysed with corresponding virological data of the patient.

**Results:** Of the 671 employees of AIIMS, Bhubaneswar who tested positive for SARS-CoV-2, 92 were from eight clusters that could be traced. The eight clusters involved 4 clusters each from both the HCWs group containing 66 individuals and non-HCWs group with 32. Male to female ratio was 2.5:1. Maximum 55(59.7%) individuals belonged to 20 -30yrs age group followed by 30-40yrs 28(30.4%) and least 3(3.2%) in 50-60yrs. Asymptomatic COVID positive individuals were more as compared to symptomatic in all the age groups. All the individuals with cycle threshold value (CT)  $\leq$  20 were symptomatic; of the 21 persons with CT value 21-30, seven were symptomatic and 14 were asymptomatic. Majority with >30 CT value (35/44) were asymptomatic.

**Conclusions:** Frontline HCWs are constantly at increased risk of getting infection, but the disease burden and post-covid stigma can be substantially decreased among non-HCWs if COVID appropriate behaviour are strictly implemented and followed

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#### COMPARISON OF COVID-19 RT-PCR RESULTS IN DIFFERENT AGE GROUPS DURING 6 MONTHS PERIOD AT A TERTIARY CARE CENTRE

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**Background:** The new pandemic caused by COVID-19 (SARS CoV-2) originated at Wuhan, China became the public health crisis throughout the globe. Susceptibility to this airborne infection is low in children when compared to adults due to nonspecific protection resulting from recent infection by other respiratory viruses, which children experiences more frequently than adults. Age is the most important factor in diminishing one's chance to survive COVID -19 especially