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## **The clinical statuses of exposed healthcare works with covid-19 patients while the provision of care in a pandemic situation at one of the specialized healthcare setup in karachi pakistan**

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All staffs who are working in deferent departments of any healthcare facility have a significant value to carry out the effective implementation of healthcare management in a hospital. At the situation of COVID-19 pandemic outbreak, all healthcare workers are at on high risk to acquire the infection of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and may increase the result of harm while caring of patients in a hospital however they can get severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) from their family and community as well. The first case of COVID-19 was reported in Wuhan, China in December 2019 and in Pakistan, the first case of COVID-19 has been confirmed by the Ministry of Health, Government of Pakistan on February 26, 2020, in Karachi, Sindh province. From 8th March 2020, we had started to work on the management of COVID-19

pandemic in our healthcare setup where we had started our triage room, crowd control mechanisms, designated route, and all other strategies implementation. Besides all upcoming

patients, we had started to monitor all healthcare works for their practices and clinical status for preventing further spread of COVID-19 and had taken immediate actions as were needed.

### **Purpose**

1. To establish a system of Contact Tracing of all healthcare workers in the hospital.
2. To early identification of a person with signs and symptoms of COVID-19 among Healthcare Workers.
3. To establish a system for the diagnose of exposed and symptomatic healthcare workers, based on their clinical status and test reports.
4. To create a system for the home isolation, and rerun to work for the contacted and symptomatic healthcare works.
5. To build a system for the monitoring of their clinical status in the duration of home isolation. The overall purpose is to create effective strategies that should be easily implemented and accepted by all in overcoming the COVID-19 pandemic situation.

### **Methodology:**

Setting: Observation was conducted in all units including Inpatient Units, Emergency Room, Triage

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Room, OPD, Day Care, Housekeeping, Laboratory, X-Ray, Ultra Sound, Passive Immunization, Reception, Security, Food Service Department, Pharmacy, Purchase, IT (Information and Technology) Marketing, Account, Transport and Admin units at a specialized hospital.

**Population:** All Staffs including clinical and non-clinical who are working in the hospital. Inclusion Criteria: All staff who a history of contact with any has suspected or confirm COVID-19 patient in hospital, family & friend circle, and community.

**Selection criteria:** high risk, high cost, high volume, problem-prone and requirement of IPC

**Design:** That was the Prospective Observational Study

**Data Collection:** Collected by making a daily round in all units, Risk Assessment tool of COVID-19

which was used in triage clinic for scoring based on their clinical status and history of contact, tracing list of contacted healthcare works (HCWs), reviewed HCWs' clinical condition and discussed with the triage doctor about their clinical status, and daily follow-up their status via phone and SMS and investigation reports such as x-ray and RT-PCR.

**Data Analysis:** Patients' data was compiled on an excel sheet.

**Results:** In the COVID-19 pandemic situation, we started our management with the establishment of triage room on 8th March 2020 including dedicated staff for all 3 shifts, and initially, we started to monitor their health status but later it was extended to other units including clinical and non-clinical. Before Eid-ul-Fiter only one staff was identified with COVID -19 symptoms but after Eid Holidays we got 3 staff with symptoms and on the 2nd day we got more staff with COVID symptoms. We modified our strategies immediately, distributed the formal tracing list of contacted HCWs and official memo to all units with requests to extend their cooperation with IPC team. As per the tracing list, 180 staffs out of 300, were identified with the history of contact with suspected or confirmed case in the hospital, family, friend circle or in community and it was impossible to quarantine 60% staffs, therefore, we implemented the policy that after contact with suspected or confirmed case + symptomatic staffs will be remained in home isolation and those staff also with positive PCR due to any reason. From 27th May till the end of July 2020, 33.3% of staff had developed the symptoms and 75 staffs were in home isolation with the percentage with 24.0% because they met the criteria of the COVID-19 Risk Assessment tool. Out of 75, 26.3% staffs are belonged to the laboratory, on 2nd number is from nursing services which is 22.3%, doctors are on 3rd number with 11.8% and the rest of other departmental staff have less than 10%. All staffs were developed symptoms of fever (F), cough (C), difficulty of breath (SOB), diarrhea (D), sore throat (ST) body ache (BA), weakness, and flu (FL) during their isolation period. 13.3% of staffs were remained asymptomatic till 14 days as their PCR test was positive and 86.7% of

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staff developed symptoms. On follow-up by Infection Prevention and Control (IPC) team during 14 days isolation period, it was noticed that 20% staffs were developed minor or moderate to severe symptoms, 3.3% staff had a situation from server to minor or moderate symptomatic conditions on initial 5 -10 days, 28.3% of staff always informed about their symptomatic condition on follow-up and but on the day of reassessment by the triage doctors they were clinically fit. The 6.7% staff remained a challenge because they did not inform their clinical status via any mode of communication. Healthcare workers (HCWs) develop different type of symptoms 63.1% with fever, 60% with body ache, 53.8% with cough, 33.8% with shortness of breath, 26.2% with weakness, 15.4% with sore throat, 3.1% diarrhea and 1.5% with flu as alone or with combination of COVID-19 symptoms in home isolation period.

**Conclusion:** Proper handling of the COVID-19 pandemic situation was very challenging for anyone as an institution, as an IPC team and as an individual too. There were no established guidelines on a national and international level and after every few days, we were receiving new guidelines and were confused that what should be the final strategy. However every day we learned something good for the future and to prevent our hospital team as they are assets of any healthcare facility especially in the situation of the outbreak of any infectious diseases. The best strategies are to teach them, establish the criteria for the tracing list of contacted healthcare workers, effective implementation of home isolation and strict monitoring system for their clinical status.

#### **Limitations:**

There were lots of challenges we had faced as mentioned below:

1. On initial stage staff and departmental HODs were not cooperative and they were reluctant to inform that they had contact with suspected or confirm COVID-19 patients in their family, friend circle, and community.
2. Departments were reluctant to fill the tracing list and send it to IPC department as they had fears and doubts in their minds.
3. There had been many changes in national and international guidelines.
4. Management was reluctant to quarantine of contacted healthcare workers.
5. RT-PCR test could not be formed all contacted healthcare workers due to cost issues and for symptomatic staffs due to the unavailability of kit in market and cost as well that who should paid.
6. Vigilant follow-up of contacted healthcare workers for their clinical status till 14 days was quite challenging for the IPC team besides other IPC activities which needed to be carryout as smoothly as demand.

#### **Biography**

Riffat Shaheen is from Karachi, Pakistan and working since more than in the field of IPC, QA, and Healthcare management. Currently Working as consultant QA and IPC with National Institute of Blood Diseases (NIBD) in Karachi.