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RESEARCH ARTICLE

A Cross-sectional Study on Challenges Faced and Strategies Adopted in Responding to Corona Virus Disease (COVID-19) by Hospital Administrators in Kaski District

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ABSTRACT

Background: Following the outbreak of Coronavirus disease in 2019, the year 2020/21 has been an incredibly challenging one for all global health-care systems.

Methods: A cross sectional descriptive research design was used to conduct the study. The study was carried out in all general private and public hospitals of Kaski district of Nepal. Data were collected from 25th October to 5th December, 2020 from the Hospital administrators using a semi structured interview schedule. Descriptive statistics were used for data analysis.

Results: Most (96.3%) of the hospitals reported that increased cost or expenses of the hospitals creating financial threat is the most challenging situation that hospitals are facing in this pandemic. In addition shortages of ventilators creating ethical dilemma for patient allocation and changing guidelines from authorities have been reported as a challenge by 88.9 percent of the hospitals respectively. All of the surveyed hospitals had developed the use of thermometers for screening at the hospital entrances to minimize the risk.

Conclusion: Hospitals in this pandemic are facing a lot of challenges with regard to staff management, PPE management and so on. Hence they need to adopt best strategies in responding to the corona virus.

INTRODUCTION

Corona Virus Disease (COVID-19) was declared as a "Public health emergency of international concern" on thirtieth January 2020 and "Pandemic" on eleventh March 2020. The primary case in Nepal was reported on twenty third January 2020 [1]. This pandemic explosion has emphasized the importance of hospitals and alternative health care facilities at the side of the timely health system preparation and readiness to reply to the pandemic [2].

Hospitals even in developed countries like USA face fatal challenges within the current scenario. As hospitals in the US rebel to fulfill the challenges of COVID-19, a historic monetary pressure is being created in America's hospital and health system. Hospitals and health system are facing increased cost and hospital revenues have declined sharply as a result of the COVID 19 pandemic. Reduction in the admission and outpatient visits, increased demand of the medical equipment and supplies,

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postponement of the non-emergency procedures have all led to significantly reduced revenue for hospitals and health system in America [3].

Nepal has 26,930 hospital beds in public and private hospitals. Likewise, 1595 ICU beds and 840 ventilators are available in 194 hospitals. The rapid upsurge in the COVID 19 cases and the limited health capacity of the country is imposing a great challenge in the hospitals of Nepal. Thus hospitals should develop and implement effective strategies to oppose the substantial increase in COVID 19 cases [4].

The corona virus disease is making uncommon stresses on hospital and significant care systems. Hospitals and health care systems desperately got to assess their resources and build methods for responding to the disease. Hospitals ought to conjointly develop methods to confirm the provision of PPE, ventilators, and alternative crucial care resources [5].

Many health facilities are dealing with an increasing number of patients with COVID-19 and have to foresee the consequences, including the need for more beds, trained HCWs, and ventilators. In order to cope with the outbreak, hospitals have to ensure the commitment of hospital management staff and health authorities and encourage effective leadership [6].

METHOD

The study was carried out among the general hospitals of Kaski district. Kaski district, a part of Gandaki Pradesh, is one of the seventy-seven districts of Nepal. Altogether 23 private hospitals and 4 public hospitals of Kaski district were included in the study. As 3 of the hospitals of Kaski district did not responded to the survey as they were either closed or not fully operating due to the disease, the non response rate was 10 percent.

The study population consisted of the Hospital administrators of all the selected hospitals of Kaski district. Data were collected from 25th October to 5th December, 2020.

A semi structured interview schedule was used to collect the necessary data. Part I of the questionnaire assessed the background information of the hospitals whereas part II assessed the challenges faced and strategies adopted by hospitals in responding to Corona Virus Disease (COVID 19). Both open and closed ended questions were used to assess the challenges and strategies. The tool was developed by consultation with the subject experts. The tool was translated in Nepali language through language experts and a Nepali version of the tool was used to collect the relevant data.

All collected data were reviewed and checked for completeness, consistency and accuracy. Collected data were transferred into Statistical Package for Social Sciences (SPSS) version 16 for further analysis. The entered data were analyzed and interpreted according to the objective of the study by using descriptive statistics.

The study was approved by Nepal Health Research Council (NHRC). Informed written consent was obtained from all the participants.

RESULTS

Figure 1 reveals the background information of the hospitals. Out of the surveyed hospitals, most (88.9%) of the hospitals were located in Pokhara. More than 90% of hospitals were private. Out of 27 hospitals, 74 percent were less than 100 bedded and 26 percent were 100 and more bedded. More than half (51.9%) of the hospitals had an emergency preparedness plan.

Table 1 shows the challenges that the hospital administrators are facing while responding to the pandemic. Most (96.3%) of the hospitals reported that increased cost or expenses of the hospitals creating financial threat is the most challenging situation. In addition shortages of ventilators creating ethical dilemma for patient allocation has been reported as a challenge by 88.9 percent of the hospitals. Majority (88.9%) of the hospitals also reported that changing guidelines from authorities are imposing great challenges for hospitals to deal with the situation.

Table 2 reveals the strategies that the hospitals are adopting to respond to the pandemic. All of the surveyed hospitals had developed the use of thermometers for screening at the hospital entrances to minimize the risk. Majority (85.2%) of the hospitals had implemented droplets and isolation precautions. However most (92.6%) of the hospitals had not scheduled medical visits via online.

Challenges in responding to the disease

To identify the other challenges that the hospitals are facing while responding to the pandemic, open-ended questions were used. Hospitals reported that there has been massive black marketing of the essential Personal Protective Equipments (PPEs). Despite proper counseling and strict regulations to visitors on the use of PPEs, visitors aren't following the regulations imposing more danger. Hospitals are facing a financial crisis while supplying all sorts of facilities like quarantine, fooding to staff exposed to corona cases. Difficulty in managing the dead cases and aggressive behavior of visitors on the death of their beloved ones is creating tensions among the hospital workers. Visitors are also making false allegations and accusations on health workers after death, claiming money for dead patients.

The use of media and other social power for spreading unnecessary information is creating havoc in the hospital. Lack of properly trained health workers and lack of

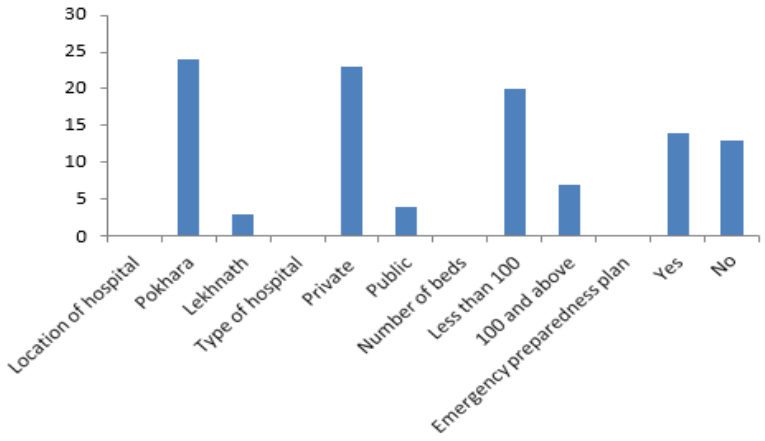

Figure 1 Background information of the hospitals.

Table 1: Challenges Faced by Hospitals in Responding to Corona virus Disease.

S.N	Challenges	Yes n(%)	No n(%)
1.	Shortages of testing supplies and extended waits for results		
a.	Lack of complete kits and and supplies needed to complete tests	23 (85.2)	4 (14.8)
b.	Reliance on external laboratories contributing to delays in test results	23 (85.2)	4 (14.8)
2.	Widespread shortages of PPE placing staff and patients at risk for virus		
a.	Heavier than normal use of PPE contributed to shortages	21 (77.8)	6 (22.2)
b.	Lack of a robust supply chain as delaying or preventing them from restocking the PPE needed to protect staff	18 (66.7)	9 (33.3)
3.	Uncertainty about availability of PPE	16 (59.3)	11 (40.7)
4.	Inability to maintain adequate staffing levels or to offer adequate support to staff		
a.	Shortage of specialized providers needed to meet the anticipated patient surge	16 (59.3)	11 (40.7)
b.	Staff exposure to the virus is exacerbating staffing shortages and overwork.	19 (70.4)	8 (29.6)
c.	Fear and uncertainty are taking an emotional toll on staff, both professionally and personally.	21 (77.8)	6 (22.2)
5.	Substantial challenges maintaining and expanding capacity to care for patients		
a.	Decreased capacity to treat a surge of patients who may require special beds and rooms to treat and contain infection	23 (85.2)	4 (14.8)
6.	Difficulties in securing other critical supplies, materials, and logistic support		
a.	Shortages of no-touch, infrared thermometers needed for temperature screening	13 (48.1)	14 (51.9)
b.	Shortages of disinfectants and cleaning supplies.	16 (59.3)	11 (40.7)
7.	Shortages of ventilators as a potential challenge		
a.	Potential ventilator shortages would pose difficult decisions about ethical allocation and liability	24 (88.9)	3 (11.1)
8.	Increasing costs has become a threat to the financial viability	26 (96.3)	1 (3.7)
9.	Changing and sometimes inconsistent guidance from state, and local authorities has posed challenges and confused the hospital	24 (88.9)	3 (11.1)

Table 2: Strategies in responding to Corona virus disease.

S.N	Strategies	Yes n(%)	No n(%)
1.	Setting infrared thermometer at the hospital entrances	27	0
2.	Tracing travel and contact history	21 (77.8)	6 (22.2)
3.	Scheduling medical visits via online	2 (7.4)	25 (92.6)
4.	Ward management (setting isolation rooms)	16 (59.3)	11 (40.7)
5.	Implementation of droplets and contact precaution like maintaining hand hygiene	23 (85.2)	4 (14.8)
6.	Provision of enough PPEs.	14 (51.9)	13 (48.1)
7.	Proper implementation of social distancing.	16 (59.3)	11 (40.7)

awareness regarding COVID 19 among people are also some massive challenges which the hospital administrators are facing currently. Hospitals also mentioned that they are being unable to properly allocate areas for management of COVID and non-COVID cases such as a separate entrance and exit for COVID cases. Private hospitals are facing challenges like difficulty in referring patients of COVID 19 due to lack of ICU and staff are also unwilling to treat COVID cases leading to high dropout rates of staff.

Strategies to secure necessary equipments and supplies for staff

Hospitals of the Kaski district reported that proper protocols are being developed on the proper use and supply of PPES and other equipment. Hospitals are minimizing the unnecessary use of PPES. Hospitals are keeping regular contact with the suppliers and some hospitals are coordinating with the municipality office for PPES.

Strategies adopted to ensure adequate staffing to treat patients with Covid-19

To ensure adequate staffing hospitals are providing free PCR tests for the hospital staff. Hospitals are ensuring rotation of all staffs in COVID wards. Some hospitals have also recruited new staff and some have merged wards to minimally expose staff to COVID cases. Many hospitals are recruiting new staff. However, some of the surveyed hospitals have increased the duty hours of staff exposed to isolation and COVID ward as a strategy to ensure adequate staffing. Separate areas have been allocated for staffs on duty and 100 percent incentives/hazard allowance have been provided to staff along with adequate treatment facilities. Some hospitals are also following principles like more duty hours and more day-offs with adequate sick leave facilities for staff.

Strategies to manage patient flow and hospital capacity

As a strategy to manage patient flow and hospital capacity, hospitals are following the protocol of social distancing. Pre isolation wards have been developed. Certain non-critical wards have been merged to ensure adequate spaces for isolation wards. Hospitals have developed health desks in the entrance of hospitals so that patient flow can be minimized inside the hospitals. Hospitals are implementing a one patient one visitor policy. Guards have been allocated at the entrance to minimize the crowd. Hospitals are fumigating wards immediately after a positive case treatment. Follow-up of patients has been kept on hold unless extremely necessary.

Strategies to Secure Ventilators and Alternative Equipment to Support Patients

Most of the surveyed hospitals are trying to increase the number of ventilators. However, due to high costs, hospitals are not being able to develop proper strategies to ensure adequate ventilators. As alternative equipment to support patients, hospitals are increasing O_2 cylinders in place of ventilators which cannot be readily imported.

DISCUSSION

The findings of the study are consistent with the findings of the study conducted in France which revealed that the major challenges that health care systems were facing in the pandemic were the increased need for beds in the hospital. The logistic services of the hospital were hindered. The hospital had to work hard to meet the increased demand of the hospital to provide necessary equipment for health workers. As strategies to counter the pandemic, screening centers were established and an early discharge or referral system of non-COVID cases was implemented. The surveyed hospital in France had managed the media and journalists properly which is in contrast to our study findings where controlling media was a challenge for the hospitals surveyed in Kaski district [6].

The findings of the study are in contrast to the findings of a multicountry survey which revealed that to deal with the upsurge of corona cases, hospitals are utilizing retired health professionals. Some countries were also found mobilizing medical and nursing students who were in their final year to provide services along with responding to the telephone inquire of the clients. However, none of the hospitals surveyed in the Kaski district were found to be utilizing the students or the retired health professional to meet the demand of the health workers [7].

The findings of the study are also consistent with a study conducted in Columbia, the USA which revealed that the most reported challenges were to keep the health workers safe from corona virus disease, to keep health care staff safe, and to provide needed services to patients requiring hospital care. Difficulties related to testing, lack of Personal Protective Equipment (PPE), lack of well-trained staff were some of the major challenges that the hospitals. To respond to such challenges our study findings revealed that hospitals in Kaski district were recruiting new staff, proving incentives to ensure adequate staffing. The screening was used as a method to reduce patient flow. These findings are in line with the findings of the pulse survey which revealed that hospitals were implementing screening procedures, creating their own stock of PPEs, partnering and collaborating with the local government to respond to the challenges imposed by the pandemic [8].

CONCLUSION

Hospitals are facing a lot of challenges with regard to staff management, PPE management and so on. The study shows that hospitals are also struggling to develop best

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strategies to deal with the increasing cases of corona virus disease. Kaski district where the number of corona affected cases is in surge, hospitals are likely to face a lot of significant challenges and need to adopt best strategies in responding to the corona virus.

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ETHICAL CONSIDERATIONS

The study has been approved by Nepal Health Research Council (NHRC). Written informed consent has also been obtained from the research participants.

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