Mass Evacuation and Quarantine Stay during COVID-19 Pandemic: An Experience of Nepalese Students Evacuated from Wuhan, China

Naveen Phuyal,[1] Bibek Rajbhandari,[2] Bikal Shrestha,[1] Moon Thapa,[3] Lee Budhathoki,[1] Kripa Thapa Magar,[4] Poonam Singh[5]

[1]Department of Community Medicine, NAIHS, Kathmandu, Nepal
[2]Department of Emergency Medicine and General Practice, Nepal Police Hospital, Kathmandu, Nepal
[3]Department of Pediatrics, Shree Birendra Hospital, Kathmandu, Nepal
[4]Department of Hygiene and Sanitation, SBH, Chhauni, Kathmandu, Nepal
[5]Department of Anatomy, NAIHS, Kathmandu, Nepal

ABSTRACT

Introduction: Many Nepalese students were struck in China demanding to be evacuated to Nepal during COVID pandemic. Government of Nepal had evacuated and rescued 175 students from China and kept them in Quarantine for maximum incubation period. This study aimed to seek experience of the students who stayed in the quarantine center designated for Nepalese evacuees from Wuhan during the Covid-19 pandemic.

Methods: All of the students repatriated from Wuhan were included in the study. Total of 165 participated for the study. A structured questionnaire was made and used for the study. Data was collected within a period of one week. Data was analyzed using SPSS. Ver 20.0, appropriate descriptive statistics were calculated and appropriate graphical representation done.

Results: More than 77% of the respondents rated the evacuation procedure from Wuhan China to Nepal to be excellent. 60 % of the respondents rated the screening procedure at Tribhuwan International airport as excellent. Nearly 2/3rd of the respondents felt that their movement from airport to Quarantine area was excellent. All of the respondents said that the behavior of the staffs in quarantine to be courteous. 66.1% of the respondents rated their experience in quarantine as excellent. Regarding Hygiene and sanitation of the camp almost all of the respondents felt it was very good while nearly 2/3rd saying it excellent.

Conclusions: Majority of the respondents rated their overall experience in Kharipati quarantine as excellent. Lessons from the quarantine's residents can be used further in development of quarantine centers so that people follow normal prevention and control measures during pandemics and stay in quarantine happily for the period of maximum incubation period.

Keywords: *mass evacuation; quarantine; COVID-19.*

INTRODUCTION

World Health Organization declared Global Public Health Emergency as the outbreak of COVID-19 continued to spread outside China.[1] City of Wuhan went on a lockdown and containment measures were heightened in Hubei province. Many Nepalese students were struck in China demanding to be evacuated to Nepal. After the lockdown, most countries like India and Bangladesh airlifted their citizens who were studying in China.[2] In this regard, Government of Nepal had evacuated and rescued 175 students from China and kept them in Quarantine for maximum incubation period. This was the very first mass evacuation carried out

Correspondence:

Dr. Naveen Phuyal,
Department of Community Medicine, NAIHS, Kathmandu, Nepal. Email: naveen.phuyal@gmail.com

in Nepal from abroad and the first mass quarantine practiced in Nepal during an impending pandemic.

This study aims to seek experience of the students who stayed in the quarantine center designated for Nepalese evacuees from Wuhan during the COVID-19 pandemic.

METHODS

This observational, descriptive cross-sectional study was carried out in Kharipati Quarantine center, Nepal, the first quarantine center for evacuees from Wuhan during the COVID-19 outbreak in China. This study was conducted for a period of 1 month. The study population included all evacuees from Wuhan on the month of January 2020. This study was vetted and approved by the Institutional review committee. Informed consent was taken from each study participant.

Experience of quarantine stay was asked in various areas like evacuation procedure, screening at airport, transportation to quarantine center, room allocation, food and water provisions, medical provisions, hygiene and sanitation of camp, overall stay of camp and open-ended questions were also asked on things to improve inside the quarantine area.

All of the students repatriated from Wuhan were included in the study. Total of 165 participated for the study. Participants who were more than 18 years and those willing to be a part of the study were included in the study. Two children were excluded from the study. A structured questionnaire was made and used for the study, which was vetted for content validity after conducting a pilot study. The questionnaire was given online using goggle survey platform for the safety of investigators as well as the participants. The overall response rate was 94.28 %. Data was collected within a period of one week. The respondents were assured of complete anonymity and confidentiality. Data was analyzed using SPSS. Ver 20.0, appropriate descriptive statistics were calculated and appropriate graphical representation done.

RESULTS

All of the respondents had completed a quarantine period of 14 days plus 1 day for the receipt of RT-PCR reports.

Majority of the respondents were in the age group of 20-25 years and 23 % of respondents were female (Figure 1). The median age of the respondent's was 23.3 years.

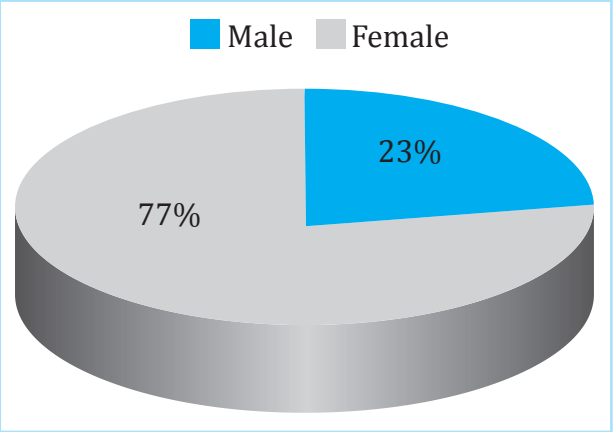

Figure 1. Gender Distribution of Respondents

More than 2/3rd of the respondents rated the evacuation procedure from Wuhan China to Nepal to be excellent. 60 percentage of the respondents rated the screening procedure at Tribhuwan International airport as excellent. Nearly 2/3rd of the respondents felt that their movement from airport to Quarantine area was excellent as shown in table 1.

Table 1. Experience in various areas N (%)

	Excellent	Very Good	Good	Fair	Poor
Evacuation procedure	127 (77%)	28 (17%)	10 (6.1%)	0	0
Airport Screening	100 (60.6%)	32 (19.4%)	24 (14.5%)	9 (5.5%)	0

Transport to Quarantine Center	122 (73.9%)	31 (18.8%)	12 (7.3%)	0	0

Majority of the respondents were satisfied with the room allocation at Quarantine center and equal respondents felt that their accommodation and provision of personal items during the period of quarantine was excellent as shown in fig 2.

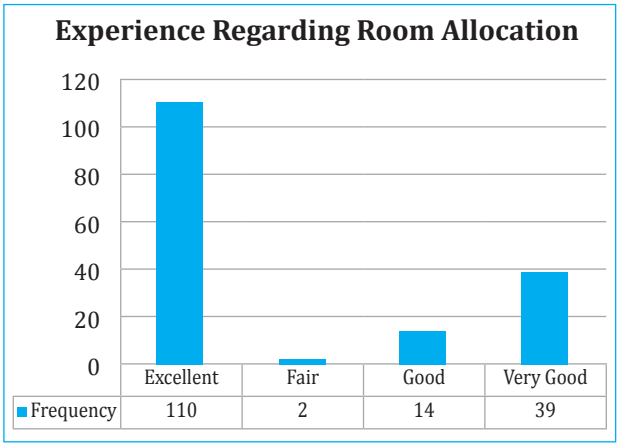

Figure 2. Experience regarding Room allocation

Nearly 2/3rd i.e. 72.1% of the respondents felt that the medical provisions inside the quarantine area was excellent. 66 percentage rated the food and water provisions during quarantine to be excellent. Nearly all of the respondents had a very good experience while allowing laboratory samples to be collected from nasal and throat swab, 67 percentage rating it as excellent as shown in table 2

Table 2. Experience in medical provision and laboratory sample N (%)

	Excellent	Very Good	Good	Fair	Poor
Medical Provision	119 (72.1%))	29 (17.6 %)	13 (7.9%)	4 (2.4%)	0
Laboratory Sample collection	111 (67.3%)	47 (28.5%)	5 (3%)	1 (0.6%)	1 (0.6%)

All of the respondents said that the behavior of the staffs in quarantine to be courteous while 70 % rating it as highly courteous as shown in figure 3

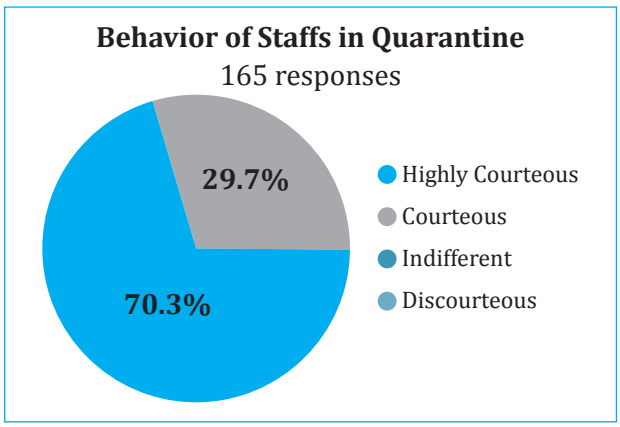

Figure 3. Behavior of staff in quarantine

Regarding Hygiene and sanitation of the camp almost all of the respondents felt it was very good while nearly 2/3rd saying it excellent as shown in figure 4

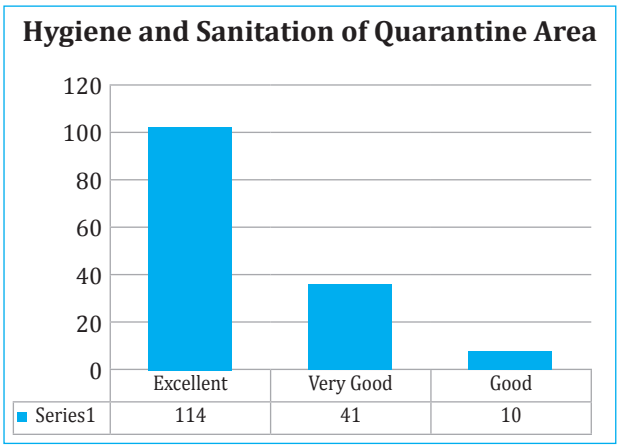

Figure 4. Experience regarding Hygiene and sanitation of Quarantine Area

Overall, 66.1% of the respondents rated their experience in quarantine as excellent, 30% rated it as very good. None of the respondents rated it as poor(Figure 5). The respondents felt that the internet quality in the quarantine area had to be improved otherwise their overall experience was excellent.

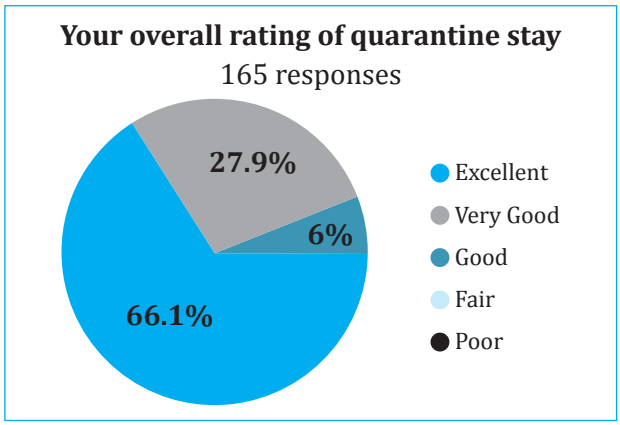

Figure 5. Overall experience of quarantine stay

DISCUSSION

77 percentage of the respondents rated the evacuation experience from Wuhan China to Kathmandu as excellent. This may be due to training of the evacuation team by experienced trainers and security forces, scientific study of all the procedures of evacuation, detail study of the aircraft, robust planning, table top exercise and a simulation exercise carried out just before the evacuation.[2]

Many countries have imposed traveller screening in an effort to prevent importation of Covid-19 cases to unaffected areas and in many countries screening remains the primary barrier to case importation.[3] Many travellers experience the screening procedure to be long and frustrating: in this context when majority of the respondents have rated it as excellent, it seems that the returnees were very happy about the screening at the airport.

Quarantine in public health practice refers to the separation of persons (or communities) who have been exposed to an infectious disease. It is often the first response against new infectious diseases. However if imposed with too heavy a hand, or in too haphazard a manner, they can be counterproductive.[4] Our respondents in majority have rated the quarantine facilities like room allocation, provision of personnel items, medical provisions, food and water provisions to be excellent. Room allocations were done before the travel enquiring about the people they wished to stay together and personnel items required for 15 days were provided to the evacuees on entry inside the quarantine area. Quarantine center medical requirements were provided through administrative rules, engineering controls, environmental hygiene, correct work practices and appropriate PPEs.[5]

Patient responses to healthcare services are one of the best ways to obtain the information regarding the quality of healthcare.[6] The most powerful predictor of satisfaction in health services is provider's behavior towards the patient; particularly showing respect and politeness.[7] All of our respondents felt that the behavior of the staff was highly courteous. The staffs were previously trained in infection control as well as on behavior. This may be the reason for high satisfaction level among the respondents.

Being the first quarantine center built up during Covid-19 in Nepal, most of the focus was put on Infection Prevention and Control and a team of hygiene officer and cleaners were stationed inside the camp. This may be the reason why most of the respondents have rated the hygiene and sanitation of the camp as excellent. Water, sanitation, hygiene and waste management for the Covid-19 virus guideline as given by World Health Organization was strongly adhered.[8]

CONCLUSIONS

Majority of the respondents rated their overall experience in Kharipati quarantine as excellent. Lessons from the quarantine's residents can be used further in development of quarantine centers so that people follow normal prevention and control measures during pandemics and stay in quarantine happily for the period of maximum incubation

period. This will in-turn contribute to reduction in transmission of infection. Overall the students evacuated from Wuhan during Covid-19 pandemic were more than happy to stay in the quarantine area and their overall experience was excellent.

CONFLICT OF INTEREST: None

REFERENCES

1. World Health Organization. COVID 19 Public Health Emergency of International Concern (PHEIC). Global research and innovation forum: towards a research roadmap. 2020 May.

2. Rajbhandari B, Phuyal N, Shrestha B, Thapa M. Air Medical Evacuation of Nepalese Citizen During Epidemic of COVID-19 from Wuhan to Nepal. J Nepal Med Assoc. 2020;58(222):125-33.

3. Gostic K, Gomez AC, Mummah RO, Kucharski AJ, Lloyd-Smith JO. Estimated effectiveness of symptom and risk screening to prevent the spread of COVID-19. Elife. 2020 Feb 24;9:e55570.

4. Parmet WE, Sinha MS. Covid-19—the law and limits of quarantine. N Engl J Med. 2020 Apr 9;382(15):e28.

5. Tarrac SE. Application of the updated CDC isolation guidelines for health care facilities. AORN J. 2008 Mar;87(3):534-46.

6. Poudel L, Baskota S, Mali P, et al. Patient Satisfaction in Out-patient Services at a Tertiary Care Center: A Descriptive Cross-sectional Study. J Nepal Med Assoc. 2020;58(225):301-5.

7. Mendoza Aldana J, Piechulek H, al-Sabir A. Client satisfaction and quality of health care in rural Bangladesh. Bull World Health Organ. 2001;79(6):512-7.

8. World Health Organization. Water, sanitation, hygiene and waste management for COVID-19: technical brief, 03 March 2020. World Health Organization. 2020.