



A cluster of COVID-19 at a formal workplace, Kampala Central, August 2020: description of cases and response measures

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Summary

In response to COVID-19, the Ugandan government instituted a lockdown, with multiple strategies including curfews and banning of both private and public transport. On May 5, with minimal community transmission (6%) phased lifting of some of the earlier restrictions commenced. Due to its high rate of infectivity, multiple clusters were seen in Kampala's workplaces. We described confirmed COVID-19 cases among employees of a motor vehicle dealing facility in Kampala city and assessed the implemented control measures.

We described case-persons by demographic characteristics, symptoms, role at the facility, distribution of overtime, and documented the response strategies. We also conducted Key Informant interviews with the cases and workplace management, made observations, and generated information on the response strategies. We conducted content analysis to summarise findings from the key informant interviews.

All the 85 employees were tested. The overall attack rate (AR) was 12.9/100. Only the males (AR: 14.9/100) were affected, females were not affected. All case-patients were from the mechanics department (AR: 24.4/100), working as motor vehicle mechanics. Eight out of the 11 case-patients (73%) reported symptoms of cough and/or fever.

The outbreak ended on August 22, when all the employees had been successfully tested and only those who were asymptomatic with a negative PCR test result for COVID-19 could resume work.

A low proportion of the employees at the motor vehicle dealership tested positive for COVID-19 and were predominantly symptomatic. Inspection of the workplace showed that close or



prolonged interactions among the employees in the meeting areas including the dining could have resulted in the continued spread of the infection. Widespread transmission of COVID-19 did not seem likely to occur as the management instituted control measures and ensured they were strictly adhered to.

Background

COVID-19 was confirmed as a global pandemic on March 11, 2020, and reached Uganda on March 21, 2020(1). In response to this, the Ugandan government instituted a lockdown on March 30, with multiple strategies including curfews and banning of both private and public transport. Six weeks later, on May 5, with minimal community transmission (6%) the government begun phased lifting of some of the earlier restrictions to spur economic growth. Due to its high rate of infectivity, multiple clusters were seen in Kampala's workplaces following the easing of some of the earlier government restrictions. In response to this, we described confirmed COVID-19 cases among employees of a motor vehicle dealing facility in Kampala city and assessed the implemented control measures.

Methods

We conducted a descriptive study using both quantitative and qualitative data collection approaches among a group of 85 employees engaged in motor vehicle mechanics, sales, and administrative duties at the motor vehicle dealing facility, 07th-22nd August 2020. The study was conducted from 07 – 22 August 2020. All employees were tested for COVID-19 following the confirmation of three (3) employees as COVID-19 positive while at the workplace in August 2020. We defined a confirmed case as any staff that had a confirmed PCR positive test for COVID-19 at the motor vehicle dealing facility in August 2020.

Using an interviewer-administered questionnaire we collected data from the confirmed cases on COVID-19 symptom status, sex, age, date, and site of sample collection, date of COVID-19 test confirmation, and the occupation or role at the workplace.

We conducted key informant interviews with the case-persons and workplace management, made observations, and generated information on the response strategies. We described case-persons by demographic characteristics, symptoms, role at the facility, distribution of



overtime, and documented the response strategies. We used content analysis to summarise findings from the key informant interviews.

This was a public health emergency and the investigation was part of the national efforts to control COVID19 in Uganda, we did not therefore seek for ethical approval. However, we received a project determination as non-research and clearance from the Centers for Disease Control and Prevention (CDC) to conduct this investigation. Personal identification information was not recorded during the interviews at the workplace.

Results

All 85 employees (74 males and 11 females) at the workplace had their samples taken and tested. The overall attack rate (AR) was 12.9/100. Only the males (AR: 14.9/100) were affected, females were not affected. Eight out of the 11 case-patients (73%) reported symptoms of cough and/or fever. All case-patients were from the mechanics department (AR: 24.4/100), working as motor vehicle mechanics. There were no cases from the sales, support, and administrative departments.

The outbreak started on August 07, 2020, almost three months after the government had initiated relaxation of some of the lockdown restrictions in May 2020. The initial cases were three (3) employees, working as motor vehicle mechanics, who presented at work with symptoms of COVID-19 on August 06, 2020. COVID-19 was suspected, while on duty at the motor vehicle dealing facility, the employees sought medical attention, and samples were collected immediately. Following this, samples were collected from all employees (82) at the workplace for fourteen days and 8 additional employees were confirmed positive. All the subsequent cases were close contacts of the initial three cases, working together in the mechanics department. Direct or prolonged close contact was reported among all the case-patients as they shared close contact areas at the workplace including the dining and meeting rooms where they held conversations near each other. The outbreak ended on August 22, when all the employees had been successfully tested and only those who were asymptomatic with a negative PCR test result for COVID-19 could resume work (Figure 1).

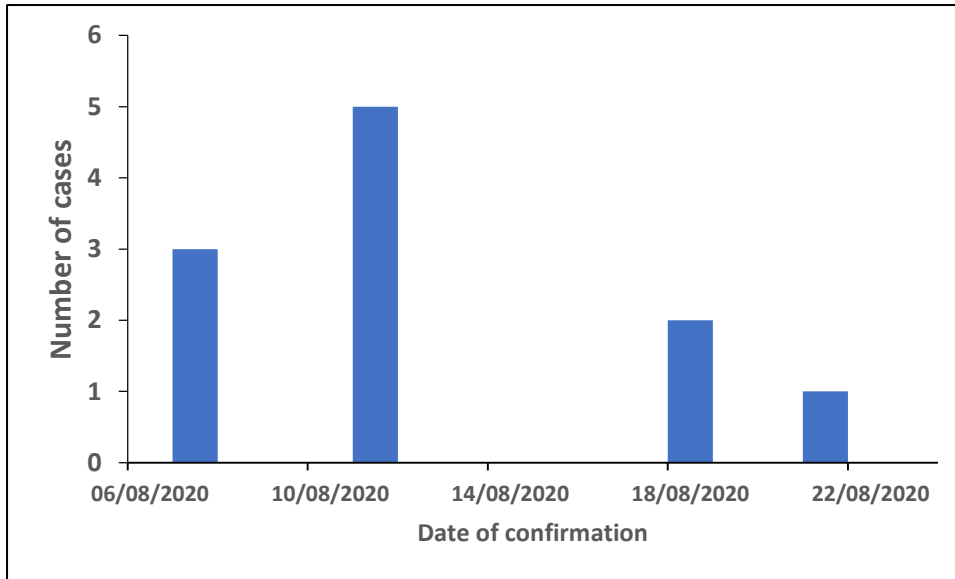


Figure 1: Epidemic curve showing the number of confirmed COVID-19 cases at a motor vehicle dealing facility, by date of confirmation, Kampala, August 2020

COVID-19 control strategies at a motor vehicle dealing facility, Kampala Central, August 2020

During the inspection of the workplace and interviews with management, we identified the following control strategies

Closure of workplace

The workplace was closed for two weeks, to allow for fumigation and deep cleaning including the vehicles. Only employees with negative PCR COVID-19 test results could resume working after the two weeks of closure. The workplace initiated a policy of fumigation of all vehicles accessing the dealership before offering mechanical services with the cost to be split between the customer and the workplace.

Safe physical distancing in the dining room

Before testing and identification of the initial cases, the 85 employees were sharing one small dining room, they were subsequently advised to improve the dining spacing and design shifts for taking meals to enable practicing of safe physical distancing.

Enforcement of standard operating procedures

A team was set up in the workplace to train the employees on the key basic practices they were required of. This team comprised of the human resources manager, occupational



safety manager and the heads of each department including mechanics, sales, administration and support staff. It was also tasked with ensuring compliance to the use of face masks by the employees, hand hygiene, and physical distancing practices. The workplace provided masks for the employees, improved coverage of handwashing stations and provision of hand sanitizers, and put physical markings in workplace areas including the reception and dining room to minimize possibilities of crowding.

Discussion

Our investigation demonstrates that workplaces are key sources of COVID-19 infections as all the confirmed cases were close contacts, working together in the same department.

Our findings are in agreement with COVID-19 outbreak events elsewhere, in Ireland, of the 344 outbreaks/clusters reported in 2020, most of them 293 (85%) were from workplaces including commercial premises, construction sites, office-based workplaces, meat/poultry plants, manufacturing plants, other food/beverage plants, defense forces, justice and emergency services and other workplaces(2).

We found a low positivity rate of COVID-19 as the initial cases did not cause a high volume of secondary cases at the workplace which can be explained by the rapid response strategies undertaken by the management upon identification of the initial cases to cut further transmission amongst the employees. This also implies that workplaces can be made COVID-19 safe if adherence to Standard Operating Procedures is strictly enforced.

All employees who tested positive for COVID-19 were working in the same department and most of them developed symptoms. This could have resulted from multiple unavoidable interactions amongst the employees which increased the risk for propagated transmission within the department. The outbreak of COVID-19 at this workplace was probably due to close or prolonged interactions among employees working in the same department. Close contact was reported in the dining area during mealtime with low compliance with handwashing and use of face masks.



Limitations

Given the nature of the study design (a descriptive study), without analytical approaches, we were not able to quantify and relate exposure factors among the employees. However, this study documents control strategies that can be utilised by formal workplaces during future similar outbreaks.

Conclusion

A low proportion of the employees at the motor vehicle dealership tested positive for COVID-19 and were predominantly symptomatic. Inspection of the workplace showed that close or prolonged interactions among the employees in the meeting areas including the dining could have resulted in the continued spread of the infection. Widespread transmission of COVID-19 did not seem likely to occur as the management instituted control measures and ensured they were strictly adhered to.

Acknowledgements

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