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COVID-19 Pandemic Management in Oil and Gas Company, a Corporate Office Experience Based

Boy Hidayat[1*], Nuri Purwito Adi[2], Cinthya Yuanita[3]

[1] Occupational Medicine Specialist Program, Department of Community Medicine, Faculty of Medicine, Universitas Indonesia
[2] Department of Community Medicine, Faculty of Medicine, Universitas Indonesia
[3] Medika Prakarsa Indonesia, Jakarta, Indonesia

*Corresponding address: Boy Hidayat
Email: bhidayatohs@gmail.com

Abstract

Background: The COVID-19 pandemic is first and foremost a human tragedy that has played out across the globe. People are experiencing unprecedented levels of disruption in their homes and communities, as well as in their jobs. Office worker of an international oil and gas company located in Jakarta was also had the impact of COVID-19 pandemic. The company must establish system to protect their worker to perform their work safely and avoid COVID-19 exposure.
Objective: To describe COVID-19 statistic period 2020 – November 2021 and how company address the system to prevent outbreak and the re-occurrence.
Methods: A case study based on company record and performance on tackling COVID-19 problem during 2020 – 2021.
Result: Two cases started in March 2020 and total were up to 111 of 800's workers until Nov 2021. 56% were asymptomatic, 39% were 50 yo or above. 74% did not have co morbid. 46% were domestic cluster. Cases trend were like local and national cases statistic trend.
Conclusion: COVID-19 had also impact to corporate office workers which potentially lead to business disruption. The company set dedicated health system to prevent and control COVID-19 system. Principally, it must be set higher than local government standard other than 3M as follows: WFH policy, lowered body temperature identification to min 37^0C for COVID-19 testing, applied mobile application for health monitoring and tracing, biweekly COVID-19 screening test prior to work at office and included COVID-19 prevention behavior into individual key performance indicator.
Key words: COVID-19, office worker, pandemic management, oil and gas

Abstrak

Latar Belakang: *Pandemi COVID-19 merupakan tragedi kemanusiaan yang pertama dan utama yang telah terjadi di seluruh dunia. Orang-orang mengalami tingkat gangguan yang belum pernah terjadi sebelumnya di rumah dan komunitas, serta di pekerjaan mereka. Pekerja kantoran perusahaan minyak dan gas internasional yang berlokasi di Jakarta juga terkena dampak pandemi COVID-19. Perusahaan harus membangun sistem untuk melindungi pekerja mereka agar dapat melakukan pekerjaan dengan aman dan terhindar dari paparan COVID-19. Untuk menggambarkan statistik COVID-19 periode 2020 – November 2021 dan bagaimana perusahaan membuat sistem agar wabah dapat dicegah dan tidak terulang kembali.*
Metode: *Studi kasus berdasarkan catatan dan kinerja perusahaan dalam menangani masalah COVID-19 selama tahun 2020 – 2021.*
Hasil: *Dua kasus dimulai pada Maret 2020 dan totalnya mencapai 111 dari 800 pekerja hingga November 2021. 56% tidak menunjukkan gejala, 39% berusia 50 tahun atau lebih. 74% tidak memiliki penyakit penyerta. 46% adalah klaster domestik. Tren kasus seperti tren statistik kasus lokal dan nasional.*
Kesimpulan: *COVID-19 juga berdampak pada pekerja kantor perusahaan yang berpotensi menyebabkan gangguan bisnis. Perusahaan menetapkan sistem kesehatan khusus untuk mencegah dan mengendalikan sistem COVID-19. Pada prinsipnya harus ditetapkan lebih tinggi dari standar pemerintah daerah selain 3M sebagai berikut: kebijakan WFH, penurunan standar identifikasi suhu tubuh ke min 37° C untuk pengujian COVID-19, penerapan aplikasi seluler untuk penelusuran dan pemantauan kesehatan, tes skrining COVID-19 dua mingguan sebelum bekerja di kantor dan memasukkan perilaku pencegahan COVID-19 ke dalam indikator kinerja utama individu.*
Kata kunci: *COVID-19, pekerja kantor, manajemen pandemi, migas*

Background

The novel coronavirus SARS-CoV-2 (coronavirus disease 2019; previously 2019-nCoV) pandemic is first and foremost a human tragedy that has played out across the globe. People are experiencing unprecedented levels of disruption in their homes and communities, as well as in their jobs. Globally, as of 10 December 2021, there have been 267,865,289 confirmed cases of COVID-19, including 5,285,888 deaths, reported to WHO since the report first cases in Wuhan China in December 2019[1]. After first case in Indonesia on March 2, 2020, total confirmed cases in Indonesia and Jakarta reached up to 4,258,980 and 864,358 cases respectively[2]. Active cases in Indonesia on December 8, 2021, was 68 % male and 59% were 18-59 years old[2]. It took concern for productive age as a risk to develop COVID-19. Office worker of an international oil and gas company located in Jakarta was also had the impact of COVID-19 pandemic. The company must establish system to protect their worker to perform their work safely and avoid COVID-19 exposure. Therefore this study aim to describe COVID-19 statistic period 2020 – November 2021 and how company address the system to prevent out break and the re-occurrence

Methods

A case study based on company record and performance on tackling COVID-19 problem during 2020 – 2021. The authors conducted the data collection. Data source came from Health personnel of HSSE (Health, Safety, Security, and Environment) Dept. of the Company. The analysis was presented in description. The Data issued permission came from HSSE department of the Company.

Result

Two cases started in March 2020 and total were up to 111 (13%) of 849 workers until Nov 2021. One of them had 2-time COVID-19 on March 2020 and July 2021. In the Table 1 and 2 showed the profile of the COVID-19 cases among employee. Most of the patient were asymptomatic or had minimal symptoms (56%). Majority of the cases were 50 years old or above (39%). The older the worker, the more likely they were to get COVID-19. Most of them found during tracing and screening.

Table 1. Symptoms Level

No	Level	Qty	Percentage
1	Asymptomatic or minimal	62	56%
2	Mild	23	21%
3	Moderate to severe	26	23%

Table 2. Age of Confirmed Cases of Office Workers

No	Group Age (years old)	Qty	Percentage
1	<40	32	29 %
2	40-49	36	32 %
3	≥50	43	39%

In Table 3 shown that most of the cases did not have comorbid (74%). The existing comorbid were such as hypertension, diabetes non-insulin dependent, history of coronary disease on treatment, autoimmune, renal failure etc. One of them had positive HIV but since the last viral load was undetectable, the condition is not defined as comorbid.

Table 3. Comorbidity Profile

No	Comorbid	Qty	Percentage
1	No	82	74%
2	Yes	29	26%

Meanwhile, we have also briefly observed the severity rate and comorbidity profile among the workers, as stated in Table 4. In general, COVID-19 cases were dominated by patients without comorbidities, both asymptomatic-mild symptoms and moderate-severe symptoms. However, when we observed further, the percentage of moderate-severe symptoms in patients

Table 4. Severity Rate and Comorbidity Profile

No	Symptoms	Comorbidities	
		No	Yes
1	Asymptomatic-mild	67 (60%)	18 (16%)
2	Moderate - severe	15 (14%)	11 (10%)

with comorbidities was higher (38%) than in those without comorbidities (18%).

The epidemiology history as seen in Table 5 was dominated by domestic cluster (46%). It was in line with the increase of the domestic cluster that occurred in Indonesia. The Jakarta Health Agency, as stated in Tempo.co newspaper, reported that the family clusters were behind the spike in COVID-19 cases. The number reached 44 percent in mid-January 2021, from previously 40 percent.[3] We also reported the vaccination

Table 5. Epidemiology History

No	Epidemiology History	Qty	Percentage
1	Domestic Cluster	51	46%
2	WFO cluster	26	23%
3	Visit Relatives	7	6%
4	Traditional/modern market	7	6%
5	Gathering activities	7	6%
6	Mosque/public pray	4	4%
7	Hospital escort	3	3%
8	Go Out of Town	2	2%
9	Flood	2	2%
10	Meet Mobile seller + food delivery	2	2%

Table 6. Severity Rate and Vaccination Status

No	Symptoms	Vaccinated	Unvaccinated
1	Asymptomatic	44 (40%	18 (16%)
2	Mild	5 (5%)	18 (16%)
3	Moderate - severe	3 (3%)	23 (21%)

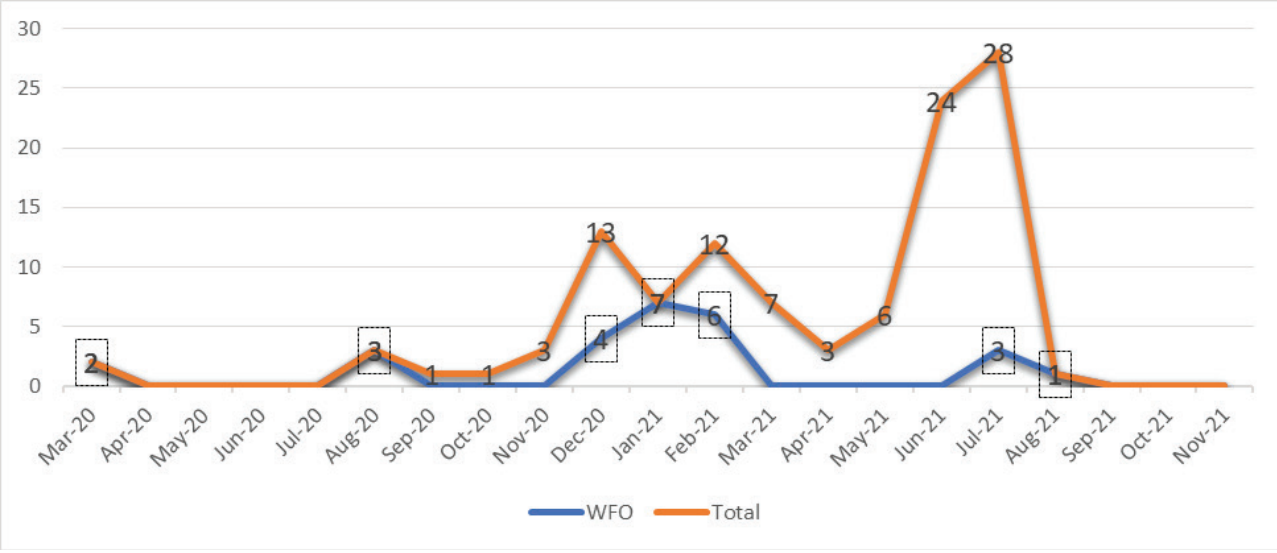

Figure 1. New Confirmed Cases Statistic

aspect as other aspect with strong relationship with case severity, as shown in Table 6.

In Figure 1 we also presented the cases trend were like national statistic trend. For example, there was a surge in long holiday and after Ied Day on June-July 2021. This is similar to the increasing trend of cases in the June-July 2021 period as reported in the Weekly Report on COVID-19 in Indonesia by the Ministry of Health.[4]

Discussion

In general, the level of symptoms experienced by employees was mild. It was similar to Wu and McGoogan report, that among 72,314 COVID-19 cases reported to the Chinese CDC (CCDC), that most of them (81%) were mild (absent or mild pneumonia), 14% were severe (hypoxia, dyspnea, >50% lung involvement within 24-48 hours), 5% were critical (shock, respiratory failure, multi organ dysfunction), and 2.3% were fatal. Multiple reports from around the globe have subsequently confirmed these patterns of presentation[5].

Most of the confirmed cases had no comorbidities. It was similar to report from the National Health Commission diagnosed 1590 confirmed COVID-19 as of 31 January 2020 from 575 hospitals in China that 1191 of 1590 COVID-19 patient (75%) had no comorbid[6]. Several literatures have published the relationship between the severity of COVID-19 symptoms and comorbid factors. Ejaz H et al stated that the patients with comorbidities are utmost at the risk of infection so they have to undertake vigilant preventive measures to protect themselves during the pandemic.[7] Pre-existing conditions predispose patients to an unfavorable clinical course and increased risk of intubation and death.[8] Obesity, hypertension, and diabetes are the most common comorbidities among the patients and became a high-risk factors for severe COVID-19.[8,9]

The Company started to establish COVID-19 prevention and control system and dedicated task force in the early 2020 after first case of Corona disease in Wuhan, China in December 2019. Continuous training was consistently carried out not only for workers but also their families. Workers and their family were obliged to report their body temperature and clinical sign of flu like symptoms to medical team in dedicated file share in daily basis. Medical team collected and analyzed the data and follow up for any abnormality and body temperature >37.0° C. Medical mask and sanitizer were purchased after the system was set and cost center budget had been identified.

First 2 cases were arisen before Large-Scale Social Restrictions (Pembatasan Sosial Berskala Besar) regulation in Jakarta and then Work from home (WFH) Policy was issued including business trip & hands on meeting restriction. The worker was limited to work from office (WFO) based on assessment whether their position was essential or not to work at office. Grid management is composed that dedicated group worker to WFO alternately. Office spaces were labeled in such a way to show physical distancing. Company also rented a landed house near corporate office building as a backup office.

In Aug 2020, the worker was obliged to conduct self-assessment of COVID-19 risk and epidemiology check manually one day prior to WFO. After COVID-19 WFO cluster in August 2020, the company set the application in mobile phone for health monitoring and permits to WFO and started applied in the end of 2020. As an improvement after outbreak in the early 2021, biweekly COVID-19 screening rapid antigen test was conducted for WFO worker.

The worker and their dependent participated COVID-19 vaccination which held by either government started in April 2021 massively or company self-funded called Vaccine of Gotong Royong (mutual cooperation). After the surge incident in June-July 2021, the company plan to conduct behavior change survey and set up key performance indicator of individual related to health protocol compliances.

Severity rate increased in the unvaccinated population. Meanwhile, the vaccinated population was mostly asymptomatic. Centers for Disease Control and Prevention (CDC) stated that the risk of COVID-19 infection remains much higher for unvaccinated than vaccinated people.[10]

The discussion of immunity in post-infectious cases is still being studied. Several studies stated conflicting conclusions. Some of them suggested that reinfection poses a lower risk of severity.[11] On the other hand; there was case study that reported worse symptoms in the second episode of infection[12].One of the workers had reinfection in 16 months. In the first infection (March 2020), he experienced moderate to severe symptoms, but in the second infection (July 2021) he had no

symptoms at all. He just had two doses of vaccination 2 months before he got the second infection. Further literature review is needed to observe this case report. However, both of the naturally acquired protection and complete vaccination seems to play an important role in reducing the severity of symptoms. It is also important for the management to share the COVID-19 pandemic management experience through scientific publication as it will provide a reliable access to answer medical questions and disseminate knowledge among OH professionals.[13]

Conclusion

COVID-19 had also impact to corporate office workers which potentially lead to business disruption. The company set dedicated health system to prevent and control COVID-19 system. Principally, it must be set higher than local government standard beyond 3M (Masker, Mencuci tangan, Menjaga jarak /Mask, Hand washing, & Physical distancing) which have been done as follows: WFH policy; lowered body temperature identification to min 37.0 C to consider for COVID-19 testing, applied mobile application for health monitoring, tracing, and work from office approval; biweekly covid19 screening test prior to work at office. Path forward is to conduct survey COVID-19 prevention behavior and set COVID-19 prevention behavior compliance into individual key performance indicator.

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