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Letter to the Editor



The impact of COVID-19 on inpatient wards at psychiatric hospitals in Japan

1. Introduction

In January 2021, Japan saw a daily peak of nearly 8,000 positive tests for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), and the cumulative number of positive cases surpassed 500,000 in April (Ministry of Health, Labour and Welfare, 2021). A third declared state of emergency is ongoing as of this writing, and general hospitals are overwhelmed. Since January, successive new COVID-19 clusters have been reported in Japanese psychiatric hospitals and the urgency of the situation is expected to worsen nationwide.

One study revealed that COVID-19 has led to fewer operations and fewer hospitalizations due to physical illness (Lima et al., 2020; Sharma et al., 2020), but to our knowledge, its impact on inpatient wards at psychiatric hospitals in Japan has not been reported. Psychiatric facilities have characteristic that distinguish them from other medical care facilities; consequently, they face different challenges compared with general wards (Fukuta and Muder, 2013).

In this retrospective observational study, we retrieved data from hospital databases on bed occupancy rates and the use of private rooms in psychiatric hospitals in the first half of the pandemic in Japan in order to compare the situation in psychiatric hospitals from the beginning of the COVID-19 epidemic until October 2020 with the situation prior to the COVID-19 pandemic.

2. Methods

We extracted aggregated monthly data from the Japanese Psychiatric Electronic Clinical Observation (PECO) system (Fukasawa et al., 2018) for January-October in 2018, 2019, and 2020. Aggregated daily records for bed occupancy rate and seclusion rate by month were compared against the monthly averages for each year.

We used the chi-squared test to perform three-group comparison of proportions of bed occupancy rate and seclusion rate in the same months in 2018, 2019, and 2020.

3. Results

The psychiatric bed occupancy rate from March 2020 onward was lower than in the same months in 2018 and 2019 (Fig. 1). The biggest difference was in May 2020, during the first declared state of emergency, when the occupancy rate was 3.7 % and 2.7 % lower than in the same month in 2018 and 2019, respectively. For most of March-October 2020, the bed occupancy rate was significantly lower than in the previous years ($P = 0.000$). Residual analysis showed that, even after considering adjusted residual values, 2020 represents a change relative to 2018 and 2019.

Next, although we found that the overall seclusion rate did not

change significantly, under the declared state of emergency in May 2020, it was 0.7 % and 0.5 % higher than in 2018 and 2019, respectively. Even after considering adjusted residual values, 2020 represents a change relative to 2018 and 2019.

4. Discussion

The results of our analysis indicate that the bed occupancy rate was approximately 2% lower every month during March-October 2020 relative to the same period in the previous two years. This rate was relatively low compared with previous findings in other departments (Lima et al., 2020; Sharma et al., 2020). This finding has three potential explanations. First, it is possible that COVID-19 had little effect on psychiatric hospitals. Hospital stays are longer in Japan than in other countries, and bed turnover rates tend to be low in Japan because many psychiatric beds are utilized as long-term care beds (OECD, 2014). This tendency means low inpatient turnover, which might reduce the risk of viral infection.

Second, psychiatric wards tend to be located in suburban areas. Therefore, any impact might have been small because the hospitals studied were in areas where COVID-19 infection rates were low.

Finally, it is possible that psychiatric inpatients with suspected COVID-19 could not be transferred to other hospitals, so the occupancy rate of psychiatric beds was less affected. According to a nationwide survey by the Japanese Association of Psychiatric Hospitals, approximately 60 % of patients could not be transferred to other hospitals after contracting COVID-19, even when they needed specialized treatment (The Mainichi Shimbun; Tokyo, 2021).

In the present study, the seclusion rate increased by 0.4 %-0.7 % under the state of emergency compared with the previous two years. If it is difficult to transfer patients to another facility, psychiatric hospitals may have no choice but to isolate patients with suspected COVID-19 infection in private rooms. Given reports that isolation areas have been prepared for suspected COVID-19 cases since the outbreak began, preventing infection in psychiatric wards could be challenging (Xiang et al., 2020). Also, because of restrictions on behaviors such as going out and engaging in recreational activities, inpatients are likely to become frustrated, which could exacerbate symptoms and necessitate further restrictions.

Although Japan has provisions and guidelines for responding to COVID-19 (Ministry of Health, Labour and Welfare, 2020; Japan Psychiatric Nurses Association, 2020), they may not be easy to implement at psychiatric hospitals. To strengthen infection control at psychiatric institutions, even after the pandemic, continued review of infection control measures in psychiatric wards is warranted.

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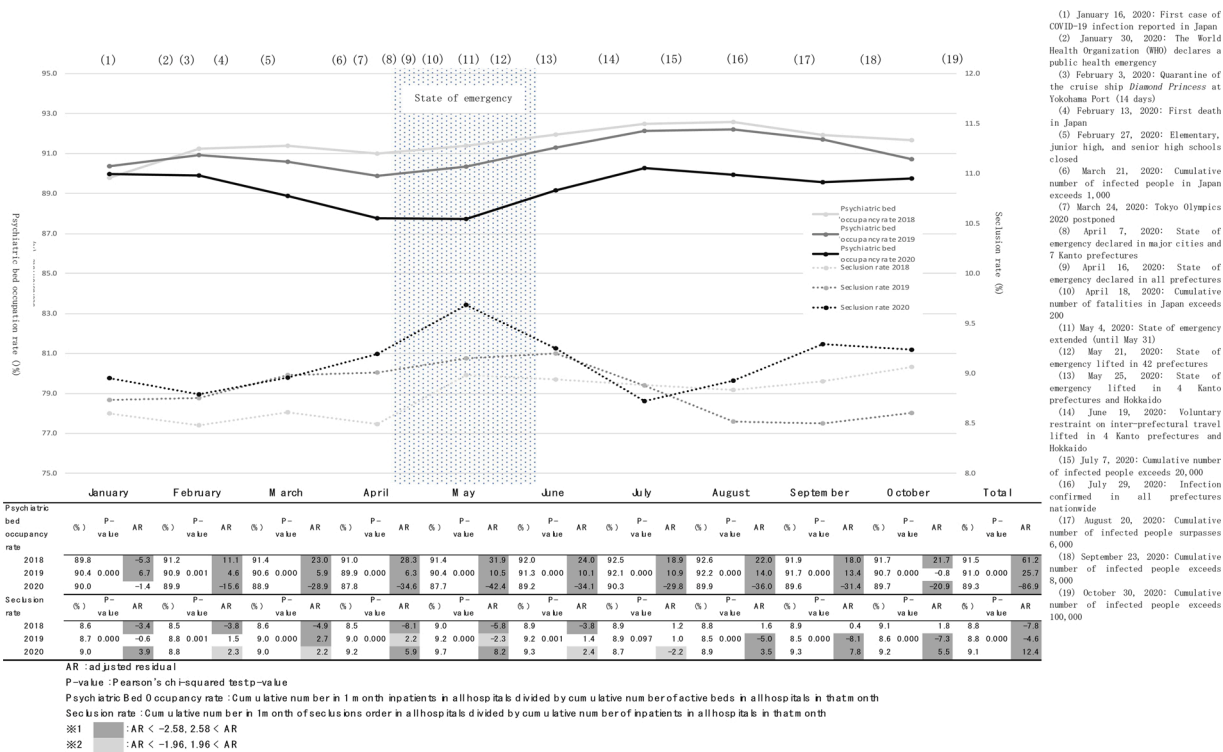


Fig. 1. Time-series data for bed occupancy and seclusion rates in psychiatric hospitals in Japan from January to October in 2018, 2019, and 2020.

Author contributions

All authors made substantial contributions to the conception and design of the study, data collection and analysis, drafting and revising the article, and approval of the final version for submission.

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Declaration of Competing Interest

The authors report no declarations of interest.

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