Is Personal Protective Equipment (PPE) Spotter Effective in Reducing Non-compliance in COVID-19 Community Care Facility (CCF)?

Woodlands Health
National Healthcare Group

Better Health. With You.

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BACKGROUND

In 2020, a 6000-bedded CCF was set up by Woodlands Health (WH) in collaboration with other healthcare and non-healthcare agencies to provide isolation and care for recovering COVID-19 patients in Singapore. One of the key objectives for the Infection Prevention and Control (IPC) team in CCF was to reinforce PPE compliance among staff, especially for those without formal training in healthcare. Despite the ongoing PPE training, audit, and feedback efforts put in by the IPC team, PPE non-compliance was still observed during the doffing process among staff in CCF. Since past studies showed promising effects of PPE spotter in a long-term care facility[1], a PPE spotter intervention was implemented to address the PPE non-compliance issue in CCF.

METHODOLOGY

Between 22 July and 15 August 2020, a group of nursing and operation support staff was trained as PPE doffing spotters to monitor staff compliance and provide real-time feedback/guidance to staff during the doffing process, which included the removal of gown, gloves, and hairnet. PPE spotter sessions were scheduled 6 times per day, 20 minutes per session, to cover the common break slots among 3 main staff categories: clinical staff from WH, non-clinical staff from the managing agent's team (MA), and security. PPE spotters were allocated to the doffing zones of the CCF. The non-compliances observed by PPE spotters were categorized into 10 common groups of errors. Staff non-compliance to PPE doffing with more than 5 errors observed were called back for retraining. The weekly PPE non-compliance summary was shared with the respective team leaders during CCF IPC Safety meeting for awareness and continuous improvement.

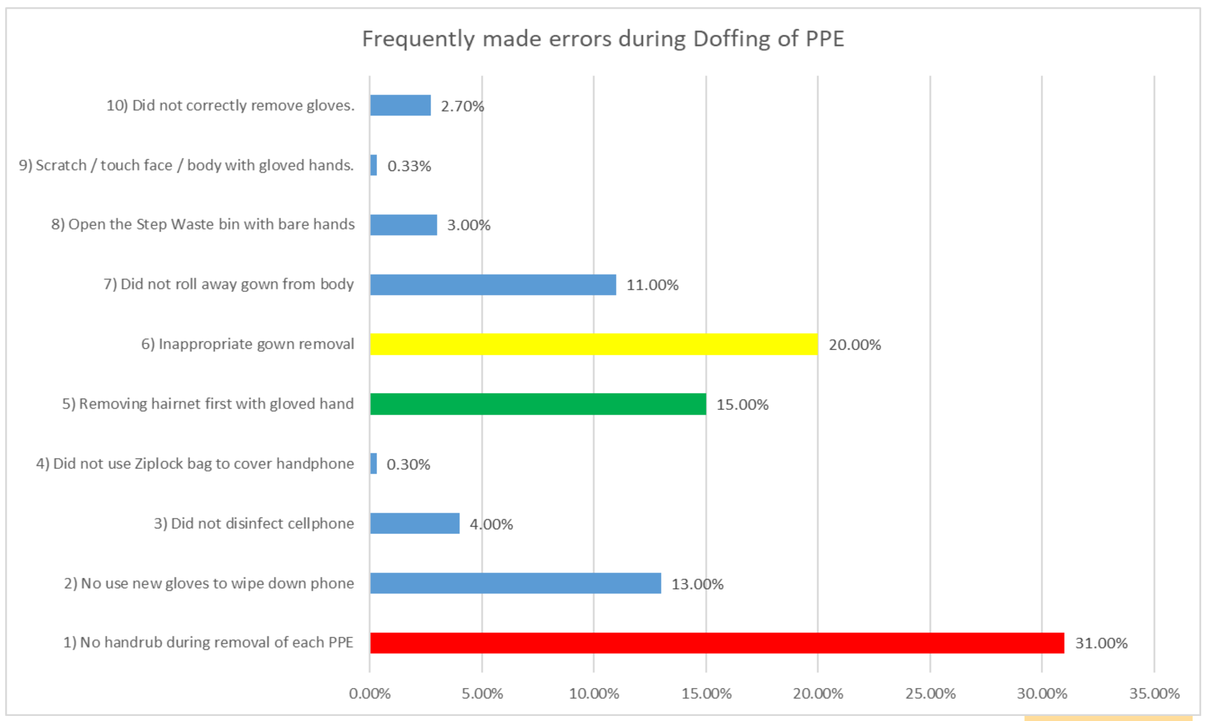

Figure 1

RESULTS

A total of 2402 observations were assessed over a 3-week period. Among the 10 categories of errors, the 3 most frequent errors made were "No hand rub during removal of each PPE" (31%), "Inappropriate gown removal" (20%), and "Removing hairnet first with gloved hand" (15%) as shown in Figure 1. The PPE spotter intervention reduced the weekly doffing errors rate from 41% to 21% ($p < .001$) at the end of the 3-week intervention period as shown in Figure 2. The weekly error rate among the 3 staff categories was also reduced from 11% to 4% for MA staff, 10% to 6% for WH staff, and 20% to 9% for Security staff as shown in Figure 3.

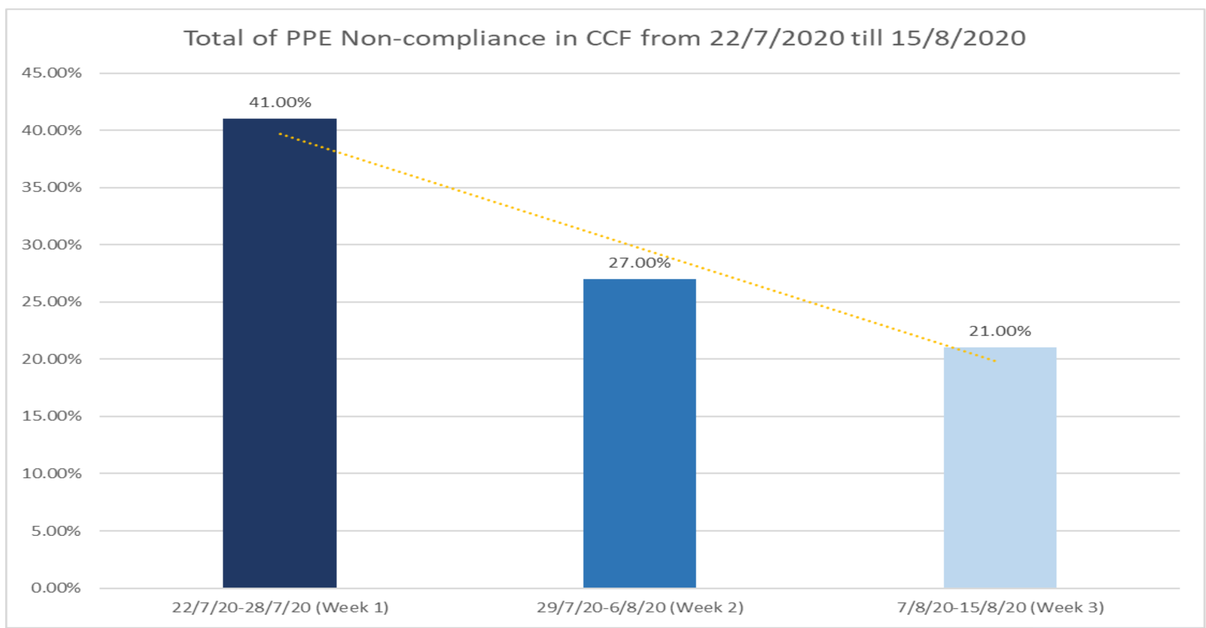

Figure 2

CONCLUSION

In the COVID-19 CCF setting with multi-agency staff, PPE spotter intervention with real-time feedback and education for staff demonstrated effectiveness in reducing PPE non-compliance. Though this intervention required a lot of manpower support and was challenging to implement during the early stage of a pandemic, its implementation in CCF significantly reduced non-compliance to the doffing steps and improved staff safety.

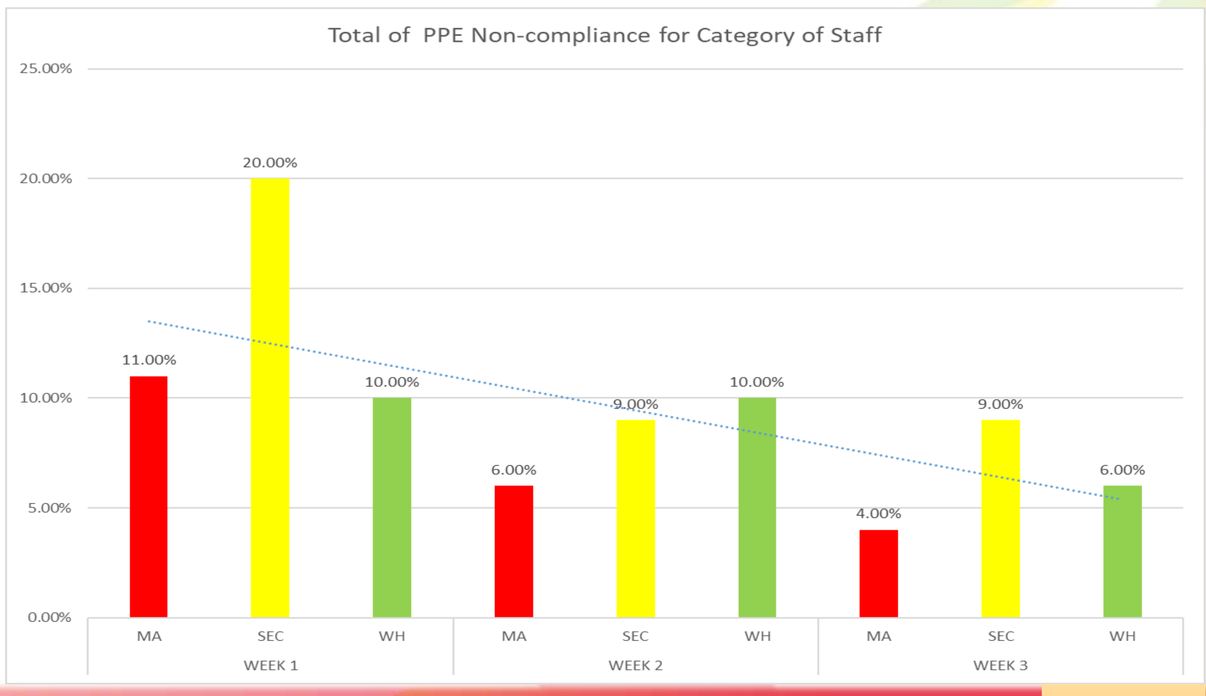

Figure 3

REFERENCES

1. Black, A. T., Guan, W., MacLeod, M., Richards, D., & MA, R. (2021). The PPE spotter role: Supporting best practice in acute and long-term care. Canadian Journal of Infection Control, 36(3), 138-140.