Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Maintaining Zero Coronavirus Disease 2019 Infection Among Long-Term Care Facility Residents in Hong Kong

To the Editor:

During the novel coronavirus disease 2019 (COVID-19) pandemic, older adults are a particularly vulnerable group with higher mortality.[1] In long-term care facilities (LTCFs), the risk of serious outbreaks is great given a higher prevalence of dementia and potential poor resident compliance with infection control measures such as hand hygiene and wearing of surgical masks.[2,3] Transmission from infected healthcare workers in LCTFs have led to disastrous outbreaks.[2] Hong Kong recorded its first confirmed case of COVID-19 on January 23, 2020. Up to the point of writing (May 16, 2020), there has been no LTCF resident (~74,000 in 940 LTCF) infected with COVID-19 in Hong Kong. We believe that the following measures have contributed to this favorable outcome.

Visitor Restrictions

Most LTCFs in Hong Kong have followed the practice of the public hospitals under the Hospital Authority (HA) to restrict visitors since January 23, 2020. Relatives are only allowed to bring necessities to residents via LTCF staff at the facilities' main entrance.

Early Government and HA Involvement

The Center for Health Protection (CHP) and link nurses of the Community Geriatric Assessment Team (CGAT)[4] of HA have offered guidance and education to LTCF staff to reinforce hygiene and infection control measures.[5] The CHP has established guidelines for residents and staff working in LTCFs.

Policies Regarding Staff Working in LTCFs

Staff are required to have daily measurement of body temperature and to wear surgical masks on duty. Hand hygiene and contact precautions are emphasized. Staff should avoid talking during meal-times. Staff with travel history meeting the government's quarantine criteria are not permitted to return to work and are quarantined according to the government's policy. Staff members are arranged to work on the same floor or district (ie, caring for the same group of patients) and no cross-over of duty is allowed.[5]

Policies Regarding Residents

Residents are also required to have daily measurement of body temperature and to wear surgical masks where feasible. If they develop respiratory symptoms or fever, physician assessment will be arranged. New residents and newly discharged residents from hospitals (COVID-19 testing is not compulsory) will be bathed immediately with monitoring of body temperature 2 times per day for 1 week. Other than for medical needs, residents are not allowed to leave LTCF premises. Residents' meal-times are arranged at different time slots and no face-to-face sitting is allowed.[5]

Other Infection Control or Hygiene Measures

The environment in each LTCF is regularly cleaned with household bleach solution. Soap, alcohol hand rub, tissue paper, and rubbish bin are provided in washrooms, kitchens, tea rooms, dining rooms and activity rooms with regular replenishment.[5]

On-site Physician Visits

The HA CGAT services have reduced the frequency of routine physician visits to every 16 weeks in an effort to minimize exposure risk to and from healthcare workers and conserve personal protective equipment. Drug refill are arranged for stable patients. Physicians are provided with face shields, surgical masks, and protective gowns when making on-site visits.

Response to a COVID-Positive Staff Member

A 23-year-old nurse who provided care in 2 LTCFs was confirmed with COVID-19 infection on March 27, 2020. Upon contact tracing, the nurse had provided routine nursing care to around 100 residents on March 24 and March 25, 2020. The nurse had followed strict contact precautions and was wearing a surgical mask while on duty. Recent studies have shown the highest viral load in saliva is during the first week of infection and viral load is similar in symptomatic and presymptomatic patients.[2,6] The residents were placed under on-site quarantine for 28 days. Daily body temperature and monitoring for respiratory symptoms were performed and reported to the CHP and CGAT link nurses. All staff

(n = 60) and most residents (n = 102) in the involved facilities were instructed to save deep throat secretions or throat swab for severe acute respiratory syndrome coronavirus 2 by real-time reverse transcriptase polymerase chain reaction and the tests were repeated 8 to 9 days apart during the quarantine period. They all turned out negative. Four residents under surveillance were admitted with fever and respiratory symptoms but respiratory specimens for severe acute respiratory syndrome coronavirus 2 real-time reverse transcriptase polymerase chain reaction were again negative. Workflows to alert the appropriate personnel including the hospital infection control team and staff in emergency department were set-up so as to ensure smooth transfer of residents to the acute hospital.

Conclusions and Implications

We achieved a zero COVID-19 infection rate among LTCF residents because of strict hand hygiene, near 100% compliance among staff in wearing of surgical masks, prohibition of visitors, and reducing the frequency of on-site physician visits. However, it remains our concern how the restriction of visitors may affect the general well-being of residents.

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