



**KWONG WAI SHIU HOSPITAL**  
**廣 惠 肇 留 醫 院**

**Since 1910**

## **MEDIA RELEASE**

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### **KWONG WAI SHIU HOSPITAL (KWSH) IS HAZE-READY**

Piloting a ventilation system is part of a series of measures that are rolled out to ensure the well-being of KWSH residents during a haze situation.

#### **Background**

Most nursing homes in Singapore are non-air-conditioned and hence the residents would usually suffer from the humidity and heat of the climate during the warm and dry spells in the year. The ward environment will become even more unbearable when Singapore is affected with haze.

To enhance the thermal comfort of our residents, a mechanical ventilation system, comprising axial fans, filters and ducting, has been installed in two wards in the main building to improve the air circulation in the two wards. The two wards (MWL2 and MWL3) currently houses two-thirds of KWSH's residents.

#### **About the ventilation system**

Good ventilation is key to keeping an enclosed place comfortable. The mechanical ventilation system helps to improve indoor air quality by extracting warmer air from the ward to the exterior while allowing fresher, cooler air to enter the interiors from outside.

Patient's thermal comfort is dependent on both the ambient temperature and air flow. From our study, the mechanical ventilation has been able to bring about at least 1 degree (Celsius) drop in temperature and increase the air flow/circulation within the ward. Our patients and staff have also given feedback that the installation of ventilation system has indeed provided more comfort, especially during a hot and stale afternoon.

During the haze situation, windows will be closed to prevent haze particulates from entering the ward. However, with the windows closed, the ventilation system is still able to mitigate the temperature rise by circulating the filtered and cooler external air through the ducting system to the ward. This is achieved by reversing the ventilation axial fans and adding a HEPA filter to the system. The filter is to remove airborne particulates from the haze resulting in clean air entering the wards through the ventilation ducts.

During the testing of the system, we have also identified some window gaps where air pollutants can still enter the ward after reversing the ventilation air filter. We will use plastic films/foils to close up these areas during the intense haze period.

## A snapshot of the haze measures at KWSH

Main Measures	Actions
Risk profiling and closer monitoring of residents	KWSH nursing staff will be on the lookout for residents who are unwell and ensure these residents receive medical attention immediately. For residents who have pre-existing heart or lung conditions, the staff will be monitoring their well-being closely.
Adequate logistics	Oxygen support will be made available to patients who have chronic respiratory conditions when the haze reaches a hazardous level. The hospital has also stocked adequate supply of N95 masks for use when the need arises.
Air ventilation and air purification	The installation of the mechanical ventilation system helps to improve the air circulation within closed wards that are non-air conditioned. Air filters are also added to the ventilation system to remove as much air pollutants as possible from the exterior so that the cleaner air can be circulated internally. Fans and air-coolers are also in place to mitigate the ward temperature while air purifiers further enhance the air quality.
Contingency	In a situation where the resident (who has pre-existing health conditions) becomes badly affected by very adverse haze condition, he/she will be transferred to a designated air-conditioned location in the KWSH premises. A few air-conditioned spaces like the Auditorium, Conference Room, TCM Centre and Day Rehabilitation Centre have been designated as contingency spaces to hold the more critically affected residents.

With all the measures (installation of the mechanical ventilation system, fans and coolers and other measures as mentioned above) in place, we strive to maintain a much more comfortable environment with better air quality during an intense haze situation.