Infection Control and Prevention with Non-Invasive Ventilation Equipment

ACTRN12623000932662

Status	RECRUITING
Sponsor	Royal Prince Alfred Hospital
Enrollment	20 participants

Plain Language Summary

Many people with serious lung conditions — such as COPD, cystic fibrosis, or neuromuscular disease — use ventilation machines at home or in hospital to help them breathe. These devices, called NIV (non-invasive ventilation) or CPAP machines, are cleaned and disinfected between patients when loaned out. However, very little research has looked at how well current cleaning methods actually remove bacteria, fungi, and other microbes that can build up on these machines.

This study will take swabs and air samples from NIV and CPAP devices before and after the standard cleaning process used at Royal Prince Alfred Hospital. The goal is to compare how many microbes are present before and after cleaning, and to check whether any potentially harmful microbes remain. Importantly, the study is not trying to suggest that any individual patient's machine is unsafe — it simply wants to validate that the cleaning process works.

You may be eligible if you are 18 or older, have a physician diagnosis of a relevant lung condition (such as CF, COPD, or a neuromuscular disorder), have been prescribed NIV or CPAP, and use a device with an integrated humidifier. Home-based users must use the device at least 4 hours per night. People with major psychiatric disorders or who are unable to read and understand English are not eligible. The study is based at Royal Prince Alfred Hospital.

Key Eligibility Criteria

Inclusion (1)

- Subjects will be recruited from either the existing home NIV database or hospital-based ventilation undertaken by the Respiratory Support Service at Royal Prince Alfred Hospital. Patients aged 18 years or older will be eligible for inclusion if they have: a physician diagnosis of CF, non-CF bronchiectasis, COPD, obesity associated chronic respiratory failure or NMD; a history of sleep hypoventilation and/or daytime hypercapnia (arterial carbon dioxide partial pressure [PaCO2]>45 mmHg); been prescribed NIV or CPAP and are using a device with an integrated humidifier (whether humidification is used or not). Usage requirements for inclusion of home based ventilation participants will be a minimum of 4 hours per might over the past four weeks, and for acute patients, at least 12 blower hours with the last use of therapy within the previous 24 hrs on the device to be tested. Participants within the Sydney metropolitan area will be offered a home visit appointment for data collection.

Exclusion (1)

- major psychiatric disorders non-compliance with therapy, unable to read and understand English, inability to understand or comply with the study requirements, or inability to give informed consent.

Locations (1 total)

Royal Prince Alfred Hospital - Camperdown, NSW, Australia