

Information for health workers

Cleaning and disinfecting virtual reality equipment

Virtual care provides an effective platform to engage clinicians and provide safe and efficient care to patients. Virtual reality (VR) is used as a method of education and training delivery.

VR Head Mounted Displays (HMD) are non-critical devices used for VR-based education. The HMD comes into contact with the user's face and hair, and the controls come into contact with the user's hands. The headsets can be shared between different users and may be used in either a home or healthcare setting. Different types of VR equipment have different cleaning options. Each manufacturer of VR equipment offers options on how to clean their products. General tips are provided below that could be applied to most VR equipment.

Figure 1: Example of HMD (left) and handheld controllers (right)



Figure 2: Example of velcro fastening on HMD



When using HMDs, the following need to be addressed:

- Velcro elements of the HMD cannot be cleaned or disinfected and should be replaced with a fastening system, such as a buckle clip or ratchet system, that is cleanable.
- Ensure the facial interface is wipeable and replaceable. Otherwise, use a disposable, impervious barrier layer between the user and the facial interface.

Information for health workers

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- Distribute only the required equipment in a cleanable case or disposable bag with label “CLEAN – ready for use” or “DIRTY – to be cleaned”, depending on the situation.
- VR devices are not to be used if the user has any cold or flu symptoms or any open cuts/sores on their face or hands.

Figure 3: Wipeable (left) and disposable (right) facial interfaces



Figure 4: Example of safe coverings



How to clean and disinfect the VR headset

- Remove disposable face pads (interface) and discard.
- Clean reusable face pads with a detergent solution or wipe.
- Clean hands with alcohol-based hand rub or soap and water.
- Use a new wipe to clean the inner surface of the HMD.
- Using a new wipe, clean the outer surface.
- Clean the hand-held devices with a new detergent wipe.
- Disinfect the reusable components with a TGA- and manufacturer-approved disinfectant.
- Allow to dry in a clean area.
- Once the items are dry, store in a clean, sealable and disposable bag.
- Perform hand hygiene after completion.

Information for health workers

Cleaning and disinfecting virtual reality equipment

At home user instructions

- Only the designated user who borrowed the HMD should use the device.
- Perform hand hygiene prior to use of the HMD.
- The HMD should be thoroughly wiped down with neutral detergent (solution or wipe) prior to returning the unit to the hospital or educational facility.
- The controllers should be wiped down with neutral detergent (solution or wipe) prior to returning the unit.
- The whole device should be cleaned with a neutral detergent. Then, once the item is dry, place in a clean bag prior to returning the device to the hospital or educational facility.
- The disposable facial interface should be removed and replaced by the designated coordinating educator or user wearing appropriate PPE.
- The reusable facial interface should be cleaned with a neutral detergent and left to dry.

In hospital use

- Perform hand hygiene prior to use of the HMD.
- The facial interface should be disposed of and changed, or cleaned, by the designated coordinating educator or health worker between users.
- The HMD and controllers should be wiped down with neutral detergent (solution or wipe) and allowed to adequately dry by the designated coordinating educator or health worker between users.

Reference

The advice in this factsheet was informed by resources developed by Nathan Moore, Chief Nursing Information Officer, Digital Health Solutions – WSLHD.

Moore N, Dempsey K, Hockey P, Jain S, Poronnik P, Shaban RZ, Ahmadpour N. *Innovation During a Pandemic: Developing a Guideline for Infection Prevention and Control to Support Education Through Virtual Reality*. Front. Digit. Health, 09 July 2021. <https://doi.org/10.3389/fdgth.2021.628452>

The Healthcare Associated Infections (HAI) Program assists local health districts and specialty networks in NSW to manage and monitor the prevention and control of HAIs.