

DYNAMIC SEAL VALVE TO PREVENT AEROSOL INFECTION

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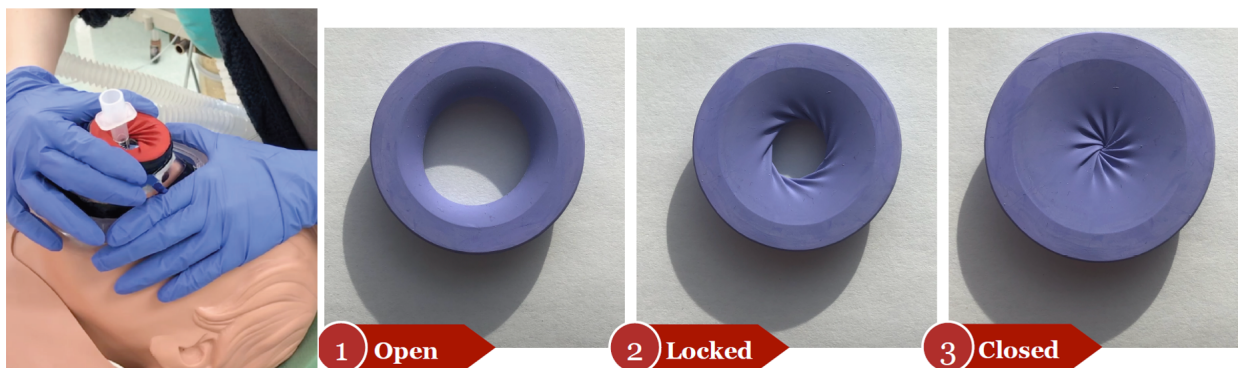
[Weilbaecher, Craig](#)

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Technology Description

Researchers in Mohamed Zayed's lab at Washington University have developed a dynamic seal valve that creates a seal around devices with varying cross sections. This valve could be deployed in masks to protect health care workers from aerosol infection while using airway management tools.

The valve can be fully closed or collapsed to various diameters using the serrated interface mechanism. An outer jaw is twisted by the user while an inner jaw is held in place, with a flexible material between them creating the seal.



Stage of Research

The researchers have developed and tested a 3D-printed prototype in a laboratory setting. Further testing will be moved into a clinical setting.

Applications

- Protection of health care workers from infection when using airway management tools

Key Advantages

- Closes fully or seals around devices with varying cross sections
- Easily manufactured with 3D printing

Patents: [WO2022150679](#)

Related Web Links: Zayed [Profile](#) & [Lab](#)