

2020-03-31

Dear Code Life Ventilator Challenge Committee,

I have reviewed the conceptual design of the gVent system and it holds significant promise.

There are three planned essential additions that will improve the functionality and safety this device. I believe that these additions can be implemented quickly and effectively. They are as follows.

1. The addition of a flow and pressure sensor will allow for volume and flow monitoring, but also allow for sensing patient efforts. This will also allow for the inclusion of important volume and pressure alarms.
2. A one-way check valve will allow the patient to draw room air during the inspiratory phase in the event of a loss of pressure. This will prevent a draw of fluid from the gravity chamber into the breathing circuit.
3. Given the single limb nature of the circuit, deadspace will be an issue, and providing a flush flow will reduce rebreathing and also provide a flow to draw upon when triggering the ventilator.

The project is not at the stage where I can truly attest to the safety of the design or device. However, I foresee that, with appropriate Healthcare Professional consultation, it will would be possible to achieve required safety standards.

Regards,

A handwritten signature in black ink, appearing to read 'J Waechter', with a stylized, cursive script.

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