March 31, 2020

To: Code Life Ventilator Challenge Committee

Re: Endorsement of UBC gVent by a medical professional

Dear Code Life Ventilator Challenge Committee:

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

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

1. The addition of a flow and pressure sensor to enable volume and flow monitoring. This can allow the ventilator to sense patient efforts and adds an additional layer of safety with the inclusion of important volume and pressure alarms.
2. A one-way check valve to allow the patient to draw room air during the inspiratory phase in the unexpected event of a loss of pressure. This safety feature will prevent a draw of fluid from the gravity chamber into the breathing circuit.
3. Adding a flush flow can reduce rebreathing and also provide flow to draw upon when triggering the ventilator.

The project is not at the stage where I can attest to the safety of the design or device, however, I foresee that with appropriate professional consultation, it is certainly possible to achieve required safety standards.

Regards,

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