Respiratory depression and airway obstruction are the primary causes of morbidity associated with sedation and analgesia. The typical approach in these cases is to temporarily ventilate the affected patient by hand, using a face mask and a bag that is periodically squeezed to deliver breaths. The proposed technology is a non-invasive, portable ventilator designed to replace these Bag Valve Masks. This new device delivers support ventilation (up to 25 cm H₂O) without the need for compressed oxygen. By monitoring patient air intake, oxygen pressure, and tidal volumes, the device helps maintain ventilation, while reducing adverse effects such as stomach inflation. The device is easy to use, requiring use of one hand, and adjusts for changing conditions.

- Provides continues airflow via built-in air leak mask.
- Notifies user when they need to increase pressure.
- Delivers a more consistent tidal volume, flow rate, and average peak inspiratory pressure.
- Reduces the risk of barotrauma, hypoventilation, and hyperventilation.

Fogarty, M., Orr, J., Kuck, K., Brewer, L., Sakata, D. (2015). Simple ventilation device for procedural sedation, difficult intubation in the OR, and transport. Digital Commons @ USU. Link

LEARN MORE
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