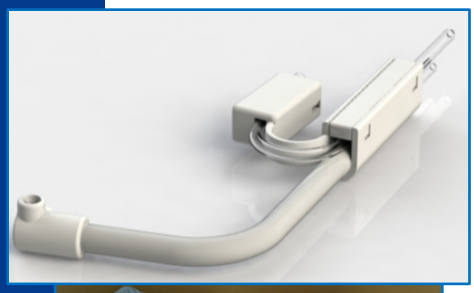
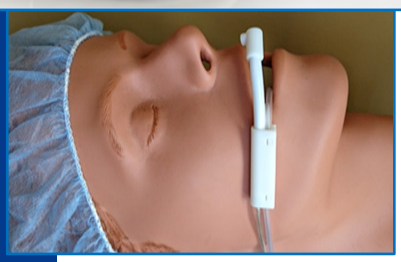
Anesthesia Intra-oral Monitoring System (AIMS) (A Replacement for the Nasal Cannula)





The American Society of Anesthesiologists requires continuous monitoring of breathing through exhaled CO_2 in all sedated patients needing supplemental oxygen. A nasal cannula monitors nasal breathing but the patient might randomly convert to mouth breathing, making it hard for the anesthesiologist to determine whether the patient has stopped breathing due to excess sedation. Nasal cannulas cause oxygen pooling around the patient's face and could ignite a flash-fire resulting in facial disfigurement and multimillion dollar lawsuits. These are preventable complications and out-of-pocket expenses for the hospital. The AIMS device is securely held between the upper and lower jaw teeth where intra-oral delivery of oxygen lowers the risk of fire. The AIMS device has a single prong with two ports that pick up both nasal and oral breathing so that respiratory distress can be properly diagnosed, and the anesthesiologist can intervene to resuscitate the patient. The AIMS device also prevents sedated patients from clenching their teeth, which would impede the use of airway resuscitation devices.

COMMERCIAL OPPORTUNITY

- Over 200 million sedation procedures are performed each year in the US, and this number may increase as procedures once performed only under general anesthesia, such as cardiac valve replacements, are now being done under sedation.

- Surgical drapes around a patient's face can cause delay in recognizing oral breathing versus respiratory arrest - a leading cause of patient injury and brain damage during sedation procedures. The AIMS device is securely held between the jaw teeth and picks up nasal or oral breathing. Intra-oral O_2 delivery away from the surgical field minimizes surgical fires while targeted oxygen delivery uses less oxygen, reducing costs.

- AIMS offers a critical advantage by preventing involuntary jaw-clenching seen in overly sedated patients. In case of an emergency, the oral cavity remains accessible to place respiratory resuscitation devices. Additionally, this feature provides a safe and easy option to place an endoscope during the 18 million endoscopies performed annually in the US.

- The AIMS device is expected to be approved through a 510(k) regulatory route. The device's minimal profile and placement on either side of the face while allowing a clear surgical field on the opposite side alone, should make it highly attractive for the facial plastic and reconstructive surgeons.

TECHNOLOGY

A prototype is available. The device is rectangular and held between the jaw teeth on either side of the patient's mouth. An oxygen line delivers oxygen to the back of the throat while a floating prong under the nose picks up exhaled CO_2 from the mouth or the nose.

PATENT

- Provisional patent application filed March 10, 2014 for Dr. Tariq Chaudhry

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