CLAIMS

1. A device for monitoring air pressure in the body of a patient, the device comprising:

a tube comprising a feeding lumen;

a sensor lumen positioned at least partially parallel to the feeding lumen;

at least one sensor in communication with the sensor lumen; and

at least one perforation positioned to expose the at least one sensor to an air pressure within the body of a patient when the device is positioned at least partially within an airway of the patient;

wherein the at least one sensor is configured to generate data related to the pressure within the airway to which the sensor has been exposed.

2. The device of claim 1, wherein the tube comprises the sensor lumen and the at least one sensor does not protrude from an exterior of tube.

3. The device of claim 1, further comprising a sensor conduit coupled along the length of the tube, wherein the sensor conduit comprises the sensor lumen.

4. The device of any one of claims 1 to 3, wherein the air pressure is at least one of laryngopharyngeal pressure, lower oesophageal sphincter pressure, lower oesophageal pressure and lung pressure.

5. The device of any one of claims 1 to 4, further comprising a connector portion to allow the tube to be fluidly coupled to a feeding line and to allow the at least one sensor to be electrically coupled to a processing unit.

6. The device of any one of claims 1 to 5, wherein the tube is at least one of a nasogastric or orogastric tube.

7. The device of any one of claims 1 to 6, wherein the tube acts as an enteral feeding tube.

8. The device of any one of claims 1 to 7, further comprising at least one positioning marker to assist in placing the device into at least one of the

laryngopharyngeal, lower oesophageal sphincter and lower oesophageal region of the patient.

9. The device of any one of claims 1 to 8, wherein the sensor is an optic fibre pressure sensor.

10. The device of claim 9, wherein the sensor is Fibre Bragg Grating sensor.

11. The device of any one of claims 1 to 10, wherein the at least one sensor comprises at least two sensors positioned along a length of the tube.

12. The device of claim 11, wherein at least two of the at least two sensors are positioned at least 3cm apart.

13. The device of any one of claims 1 to 12, wherein the at least one sensor comprises at least two sensors positioned around a circumference of the tube.

14. The device of any one of claims 1 to 13, further comprising a light source to shine light through an anterior section of the patient's throat to assist in positioning of the device at least partially in the airway of the patient.

15. The device of any one of claims 1 to 14, wherein monitoring air pressure in the body of a patient comprises monitoring air pressure within an upper digestive tract of the patient.

16. The device of any one of claims 1 to 15, wherein the sensor is positioned in the sensor lumen.

17. A system for monitoring air pressure in the body of a patient, the system comprising:

the device of any one of claims 1 to 16; and

a processor unit configured to receive sensor data generated by the at least one sensor.

18. The system of claim 17, further comprising a display device.

19. The system of claim 17or claim 18, wherein the processing device is configured to determine at least one of a pressure administered by the device, a pressure being delivered to the airway, an indication of whether the pressure being delivered is outside a predetermined limit, an indication of whether an error exists in the device, and at least one parameter relating to airflow dynamics in the airway.

20. The system of any one of claims 17 to 19, wherein the system is configured to detect airflow variations and to analyse airflow dynamics.

21. The system of any one of claims 17 to 20, wherein the system is configured to detect gastroesophageal reflux.

22. The system of any one of claims 17 to 21, wherein the system allows for real-time monitoring.

23. The system of any one of claims 17 to 22, wherein the system is configured to determine an invalid sensor reading.

24. The system of any one of claims 17 to 23, wherein the processor unit is configured to determine at least one of a respiratory rate and a heart rate based on the sensor data.