CLAIMS

1. A nasal cannula interface for supplying a gases flow to a patient comprising:

a nasal cannula defining at least a portion of a gases flow path and comprising

a body having a base portion and at least one prong extending from the base portion, the at least one prong being configured to direct the gases flow to an orifice of the patient, and

one or more sensors configured to measure a parameter,

wherein the body further comprises a top surface and a rear surface, the rear surface being adjacent the patient in use of the nasal cannula interface; wherein

an outer surface of the one or more sensors is flush with the top surface or the rear surface.

2. The nasal cannula interface of claim 1, wherein at least one of the one or more sensors is a patient sensor, and the parameter is a physiological parameter of the patient.

3. The nasal cannula interface of any of the preceding claims, wherein the parameter is a measure of blood oxygenation of the patient.

4. The nasal cannula interface of any of the preceding claims, wherein the at least one prong is configured to be received in one or more nares of the patient.

5. The nasal cannula interface of any of the preceding claims, wherein one or more of the at least one prong is configured to form a seal with one of the nares of the patient.

6. The nasal cannula interface of any of claims 1 to 4, wherein one or more of the at least one prong is configured be received in one of the nares of the patient in an unsealed manner.

7. The nasal cannula interface of any of the preceding claims, further comprising a head securement assembly.

8. The nasal cannula interface of claim 7, wherein the head securement assembly comprises one or more straps.

9. The nasal cannula interface of claim 7, wherein the head securement assembly comprises one or more facial pads.

10. The nasal cannula interface of claim 9, wherein the or each facial pad comprises an adhesive surface to adhere to the patient's skin.

11. The nasal cannula interface of claim 9 or 10, wherein the or each facial pad comprises two distinct patches.

12. The nasal cannula interface of claim 11, wherein the two distinct patches are removably coupled.

13. The nasal cannula interface of any of the preceding claims, further comprising a pair of side arms.

14. The nasal cannula interface of claim 13, wherein the pair of side arms is integral with the body of the nasal cannula.

15. The nasal cannula interface of claim 13 or 14, when dependent on any of claims 7 to 9, wherein the head securement assembly is connected to the side arms.

16. The nasal cannula interface of claim 13 or 14, when dependent on any of claims 9 to 12, wherein the facial pads are located on the side arms.

17. The nasal cannula interface of any of the preceding claims, wherein the outer surface of the patient sensor is flush with the top surface, and the top surface is a patient contacting surface, or the outer surface of the patient sensor is flush with the rear surface and the rear surface is a patient contacting surface.

18. The nasal cannula interface of any of the preceding claims, wherein at least one of the one or more sensors is a pulse oximeter.

19. The nasal cannula interface of claim 18, wherein the pulse oximeter is a reflectance type pulse oximeter.

20. The nasal cannula interface of any of the preceding claims, further comprising a second prong extending from the base portion.

21. The nasal cannula interface of claim 20, wherein the one or more sensors are located between the two prongs.

22. The nasal cannula interface of any of the preceding claims, wherein the at least one prong extends from the top surface of the body of the nasal cannula, and the one or more sensors are located on said top surface.

23. The nasal cannula interface of any of the preceding claims, wherein the one or more sensors are arranged to contact the patient's columella whilst the nasal cannula interface is in use.

24. The nasal cannula interface of any of claims 1 to 20, wherein the at least one prong extends from a top surface of the body of the nasal cannula, and the one or more sensors are located on a surface of the body that is adjacent to said top surface.

25. The nasal cannula interface of any of claims 1 to 20, or 24, wherein the one or more sensors are positioned on the body of the nasal cannula so as to contact the patient's upper lip whilst the nasal cannula interface is in use.

26. The nasal cannula interface of any of the preceding claims, further comprising:

a gases inlet conduit for receiving the gases flow from a flow source, the gases inlet conduit defining at least a portion of a gases flow path; and

an interface connector for receiving the gases flow from the gases inlet conduit and directing the gases flow towards the at least one prong.

27. The nasal cannula interface of claim 26, further comprising a set of wires, and wherein the gases inlet conduit further comprises a patient end, and a distal end,

wherein the patient end is connected to the interface connector,

the distal end comprises an interface inlet, the interface inlet comprising a set of electrical contacts, and

the set of wires of the nasal cannula interface provides electrical communication between the one or more sensors and the set of electrical contacts of the interface inlet.

28. The nasal cannula interface of claim 27, wherein the set of electrical contacts of the interface inlet comprises a planar surface, and

wherein the planar surface is substantially perpendicular to a longitudinal axis of a lumen of the interface inlet.

29. The nasal cannula interface of claim 27, wherein the set of electrical contacts of the interface inlet comprises a pin and/or a socket of a pin and socket electrical connector, and

wherein a longitudinal axis of the pin and/or socket is substantially parallel to a longitudinal axis of a lumen of the interface inlet.

30. The nasal cannula interface of any of claims 27 to 29, wherein the set of electrical contacts of the interface inlet are in a fixed position relative to the remainder of the interface inlet.

31. The nasal cannula interface of any of claims 27 to 30, further comprising a mesh layer surrounding the outer surface of at least a portion of the nasal cannula or the gases inlet conduit,

wherein the mesh comprises a plurality of interwoven filaments, and

at least a portion of the set of wires of the nasal cannula interface are interwoven with the filaments of the mesh layer.

32. The nasal cannula interface of any of claims 27 to 31, wherein at least a portion of the set of wires of the nasal cannula interface are embedded into at least a portion of the body of the nasal cannula, the interface connector of the nasal cannula, or the gases inlet conduit.

33. The nasal cannula interface of any of claims 27 to 32, wherein at least a portion of the set of wires of the nasal cannula interface are located on an outer surface of at least a portion of the body of the nasal cannula, the interface connector of the nasal cannula, or the gases inlet conduit.

34. The nasal cannula interface of any of claims 27 to 33, wherein at least a portion of the set of wires of the nasal cannula interface are located on an inner surface of at least a portion of

the body of the nasal cannula, the interface connector of the nasal cannula, or the gases inlet conduit.