CLAIMS

1. A respiratory system configured to deliver a respiratory therapy to a patient, the system also configured to provide information related to the patient, the system comprising:

a respiratory device configured to deliver nasal high flow therapy, the respiratory device comprising a controller, wherein the controller is configured to:

receive measurements of a first parameter of a flow of gases or representative of performance of a component of the respiratory device, wherein the first parameter is a flow rate;

receive measurements of a second parameter of a gases flow or representative of performance of a component of the respiratory device, wherein the second parameter has an assumed effect on the first parameter, wherein the first parameter is calculated independent of the second parameter;

determine whether the assumed effect is valid; and

discard the first parameter from a validated first parameter dataset in response to the assumed effect being invalid, the controller configured to use the validated first parameter dataset to estimate a respiratory rate of the patient.

2. The system of Claim 1, wherein the controller is further configured to estimate whether the patient is wearing a patient interface of the system.

3. The system of Claim 1, wherein the respiratory device further comprises a blower including a motor, wherein the second parameter is a motor speed.

4. The system of Claim 3, wherein the assumed effect is invalid if the motor speed is below a minimum threshold.

5. The system of Claim 3, wherein the assumed effect is invalid if recent changes in the motor speed are above a change in a motor speed threshold.

6. The system of Claim 1, wherein the second parameter is pressure.

7. The system of Claim 1, wherein the flow of gases comprises ambient air.

8. The system of Claim 7, wherein the flow of gases comprises a supplementary gas.

9. The system of Claim 8, wherein the supplementary gas comprises oxygen.

10. The system of Claim 8, wherein the controller is configured to measure a composition of the flow of gases after the ambient air and the supplementary gas have been mixed.

11. The system of Claim 10, wherein the assumed effect is invalid if recent changes in the composition of the flow of gases are above a change in the composition of the flow of gases threshold.

12. The system of Claim 8, wherein the controller is configured to measure a flow rate of the supplementary gas into the respiratory device.

13. The system of Claim 12, wherein the assumed effect is invalid if recent changes in the flow rate of the supplementary gas are above a change in the flow rate of a supplementary gas threshold.

14. The system of Claim 12, wherein the controller is configured to control the flow rate of the supplementary gas into the respiratory device.

15. The system of Claim 1, wherein if the assumed effect is valid, the controller is configured to estimate the respiratory rate of the patient using the assumed effect, wherein the controller is further configured to subtract the assumed effect from the first parameter to output

a modified first parameter and estimate the respiratory rate of the patient based on the modified first parameter.

16. The system of Claim 1, wherein the controller is configured to perform a frequency analysis of the validated first parameter dataset to estimate the respiratory rate of the patient.

17. The system of Claim 1, wherein the respiratory system further comprises a non-sealed interface.