WHAT IS CLAIMED IS:

1. An incentive spirometer system, comprising:

a housing including an electronic visual indicator, one or more processors, and one or more storage devices;

an airflow assembly, the airflow assembly including:

a first end configured to connect to the housing;

a second end opposite the first end;

an air inlet at the first end;

an air outlet at the second end;

an air flow chamber including an inlet portion, a constriction portion, and an outlet portion, the constriction portion having a constriction diameter smaller than a diameter of the inlet portion and the outlet portion, the constriction portion having a lateral opening;

a sensor connected to the lateral opening of the constriction portion;

a mouthpiece configured to connect to the second end of the airflow assembly, the mouthpiece including a one-way valve that permits air flow from a mouthpiece inlet connected to the second end of the airflow assembly to a mouthpiece outlet opposite the mouthpiece inlet;

wherein the one or more storage devices store instructions that are operable, when executed by the one or more processors, to cause the one or more processors to perform operations comprising:

obtaining sensor data, the sensor data including data obtained from a plurality of inspiration repetitions;

generating one or more inspiration signatures using the sensor data, the one or more inspiration signatures including an air flow rate and air volume for each of a plurality of inspiration repetitions;

providing a result of the one or more inspiration signatures to one or more of (i) the electronic visual indicator; (ii) a user device; and (iii) a provider device.

2. The incentive spirometer system of claim 1, wherein the operations comprise receiving a treatment protocol from the provider device or set on the incentive spirometer.

3. The incentive spirometer system of claim 2, wherein the operations comprise sending alerts to one or more of the electronic visual indicator of the incentive spirometry device, the user device, and the provider device according to the treatment protocol.

4. The incentive spirometer system of claim 3, wherein a plurality of inspiration signatures are obtained according to the treatment protocol, and the operations include comprise sending the plurality of inspiration signatures to one or more of the electronic visual indicator of the incentive spirometry device, the user device, and the provider device.

5. The incentive spirometer system of claim 1, wherein the housing comprises an electrical port that interfaces with the first end of the airflow assembly.

6. The incentive spirometer system of claim 1, wherein the airflow assembly and the mouthpiece are disposable.

7. The incentive spirometer system of claim 6, wherein the housing is re-useable.

8. The incentive spirometer system of claim 1, wherein the air inlet comprises a discrete ornamental design.

9. An incentive spirometry method, comprising:

connecting an airflow assembly to a housing of an incentive spirometry device, the airflow assembly including:

a first end configured to connect to the housing;

a second end opposite the first end;

an air inlet at the first end;

an air outlet at the second end;

an air flow chamber including an inlet portion, a constriction portion, and an outlet portion, the constriction portion having a constriction diameter smaller than a diameter of the inlet portion and the outlet portion, the constriction portion having a lateral opening;

a sensor connected to the lateral opening of the constriction portion;

obtaining sensor data from the sensor, the sensor data including data obtained from a plurality of inspiration repetitions;

generating one or more inspiration signatures using the sensor data, the one or more inspiration signatures including an air flow rate and air volume for each of a plurality of inspiration repetitions;

providing a result of the one or more inspiration signatures to one or more of (i) a electronic visual indicator of the incentive spirometry device; (ii) a user device; and (iii) a provider device.

10. The incentive spirometry method of claim 9, further comprising simultaneously displaying the one or more inspiration signatures in real time at the electronic visual indicator of the incentive spirometry device, at the user device, and at the provider device.

11. The incentive spirometry method of claim 9, wherein further comprising receiving a treatment protocol from the provider device or set on the incentive spirometer device.

12. The incentive spirometry method of claim 11, further comprising sending alerts to one or more of the user device and the electronic visual indicator of the incentive spirometry device according to the treatment protocol.

13. The incentive spirometry method of claim 9, further comprising sending the one or more inspiration signatures from a plurality of inspiration spirometry devices obtained by one or a plurality of patients to the provider device.

14. An incentive spirometer device, comprising:

a housing including an electronic visual indicator, , one or more processors, and one or more storage devices;

an airflow assembly, the airflow assembly including:

a first end configured to connect to the housing;

a second end opposite the first end;

an air inlet at the first end;

an air outlet at the second end;

an air flow chamber including an inlet portion, a constriction portion, and an outlet portion, the constriction portion having a constriction diameter smaller than a diameter of the inlet portion and the outlet portion, the constriction portion having a lateral opening;

a sensor connected to the lateral opening of the constriction portion; and

a mouthpiece configured to connect to the second end of the airflow assembly, the mouthpiece including a one-way valve that permits air flow from a mouthpiece inlet connected to the second end of the airflow assembly to a mouthpiece outlet opposite the mouthpiece inlet;

wherein the one or more storage devices store instructions that are operable, when executed by the one or more processors, to cause the one or more processors to perform operations comprising:

obtaining sensor data from the sensor, the sensor data including data obtained from a plurality of inspiration repetitions;

generating one or more inspiration signatures using the sensor data, the one or more inspiration signatures including an air flow rate and air volume for each of a plurality of inspiration repetitions.

15. The incentive spirometer device of claim 14, wherein the airflow assembly and the mouthpiece are disposable and the housing is reusable.