CLAIMS:

1. An intravenous (IV) device, comprising:

a needle;

a catheter coaxially formed around the needle and extending from the catheter hub;

a fluidic path fluidically coupled to a hollow formed through the needle and catheter;

a printed circuit board (PCB), comprising a communication device configured to communicate with a computing device; and

a plurality of sensors operatively coupled to the PCB, wherein the plurality of sensors is within the catheter distal to the catheter hub and proximate the fluidic path to measure a biological characteristic related to a plurality of patient vitals.

2. The IV device of claim 1, wherein the plurality of sensors comprises a pressure sensor fluidically coupled to a fluid path in the IV device to measure a pulse of the patient.

3. The IV device of claim 2, wherein, with a processor associated with the IV device, a fast Fourier transform is executed to detect a pressure trace detected by the pressure sensor.

4. The IV device of claim 1, wherein the plurality of sensors comprises a temperature sensor to measure a temperature of blood within the patient's body.

5. The IV device of claim 4, wherein the temperature sensor is operatively coupled to a fluidic path in the IV device used to house venous blood of the patient.

6. The IV device of claim 1, wherein the plurality of sensors comprises an optical sensor to measure an oxygen level within blood of the patient's body.

7. The IV device of claim 6, further comprising a pressure sensor to detect a pulse of the patient and wherein the optical sensor detects the pulse of the patient and compares the detected pulse rate with the detected pulse rate from the pressure sensor.

8. The IV device of claim 1, wherein the communication device comprises a network interface device, wherein the network interface device communicatively couples the printed circuit board to an IV device control module of a computing device.

9. The IV device of claim 1, further comprising a stabilization patch to be placed over the IV device and include a processor operatively coupled to the plurality of sensors on the IV device.

10. The IV device of claim 1, wherein the plurality of sensors is formed within a microfluidic die operatively coupled to the PCB.

11. A method of manufacturing an IV device, comprising:

forming a printed circuit board (PCB) at an intravenous (IV) device, wherein the IV device comprises:

a needle;

a catheter coaxially formed around the needle and extending from the catheter hub; and

a fluidic path;

forming a processor on the PCB;

operatively coupling a pressure sensor at the IV device to the processor;

operatively coupling a temperature sensor at the IV device to the processor;

operatively coupling an optical sensor at the IV device to the processor; and

operatively coupling a communication device to the processor, wherein the communication device is configured to communicate with a computing device, wherein at least one of the pressure sensor, the temperature sensor, and the optical sensor is disposed between within a fluidic path between the needle and the catheter, wherein the fluidic path is fluidically coupled to a hollow formed through the needle and the catheter.

12. The method of claim 11, further comprising forming a stabilization patch over the IV device to secure the IV device to the skin of a patient.

13. The method of claim 11, further comprising operatively coupling an accelerometer to the processor device to measure an acceleration of the IV device.

14. The method of claim 11, further comprising fluidically coupling the pressure sensor to a fluidic path formed in the IV device.

15. The method of claim 11, further comprising coupling the temperature sensor to a surface of a fluidic tube coupled to the IV device.

16. The method of claim 11, further comprising optically coupling the optical sensor to a fluidic path formed through the IV device.

17. An intravenous therapy system, comprising:

a needle;

a catheter coaxially formed around the needle;

a fluidic path fluidically coupled to a hollow formed through the needle and catheter;

a printed circuit board (PCB), comprising a communication device;

a plurality of sensors operatively coupled to the fluidic path to measure a biological characteristic related to a plurality of patient vitals, wherein at least one of the plurality of sensors is disposed within the fluidic path between the needle and the catheter; and

a stabilization patch to secure the needle and catheter to a patient's body, the stabilization patch housing a processor operatively coupled to the plurality of sensors.

18. The intravenous therapy system of claim 17, wherein the plurality of sensors comprises a pressure sensor fluidically coupled to a fluid path in the IV device to measure a pulse of the patient.

19. The intravenous therapy system of claim 17, wherein the plurality of sensors comprises a temperature sensor to measure a temperature of blood within the patient's body.

20. The intravenous therapy system of claim 17, wherein the plurality of sensors comprises an accelerometer to detect a rapid fall of the patient when the intravenous therapy system is inserted into the patient’s body.