

CLAIMS:

1. An intravenous therapy system to facilitate the insertion of a catheter into a patient, comprising:

band made of flexible material, wherein the band is configured to be secured around a limb of a patient;

a window formed through the band to provide access to the limb of the patient;

a tourniquet formed within the band to selectively apply a pressure against the limb of the patient; and

a blood vessel indicator to indicate where the catheter is to be inserted.

2. The intravenous therapy system of claim 1, further comprising a processor to control the pressure applied to the patient's body via the tourniquet.

3. The intravenous therapy system of claim 1, wherein the tourniquet includes a bladder formed within the band of flexible material and wherein the bladder is inflated and deflated to create a pulsating pattern of pressure against the patient's body.

4. The intravenous therapy system of claim 1, further comprising a magnetic device to couple the catheter to the band to stabilize the catheter.

5. The intravenous therapy system of claim 1, further comprising a sealing lip to interface with a protective medical dressing to prevent contamination at an injection site created upon insertion of the catheter into the patient's body.

6. The intravenous therapy system of claim 1, further comprising a mechanical channel formed in the blood vessel indicator to direct the catheter to the location of a blood vessel within the patient's body.
7. The intravenous therapy system of claim 1, wherein the blood vessel indicator comprises a near-infrared (near-IR) camera to detect the location of the blood vessel within the patient's body.
8. The intravenous therapy system of claim 1, further comprising an IV device insertion indicator to indicate the insertion of the catheter into the patient's blood vessel.
9. The intravenous therapy system of claim 1, further comprising an infusion status indicator indicating the status of an infusion of fluid through the catheter and into the patient's blood vessel.
10. A method of manufacturing an intravenous therapy system, comprising:
 - forming a band of flexible material to be secured to the limb of a patient;
 - forming a window through the band to provide access to the patient's body;
 - forming a tourniquet within the band to selectively apply a pressure against the patient's body;
 - forming a blood vessel indicator to indicate where an intravenous device is to be inserted;
 - and

communicatively coupling the tourniquet to a processor to direct the application of pressure against the patient's body.

11. The method of claim 10, wherein the tourniquet is a bladder formed within the band of flexible material and wherein the bladder is inflated and deflated, via direction of the processor, to create a pulsating pattern of pressure against the patient's body.

12. The method of claim 10, wherein the intravenous device comprises a catheter, further comprising forming a magnetic device by the window to couple the catheter to the band to stabilize the catheter.

13. The method of claim 10, further comprising forming a sealing lip to interface with a protective dressing to prevent contamination at an injection site created upon insertion of the IV device into the patient's body.

14. The method of claim 10, wherein the intravenous device comprises a catheter, further comprising forming a mechanical channel formed in the indicator to direct the catheter to the location of a blood vessel within the patient's body.

15. The method of claim 14, forming a near-infrared (near-IR) camera within the indicator to detect the location of the blood vessel within the patient's body.

16. The method of claim 10, further comprising forming a light-emitting diode (LED) into the band to provide a visual indication of the insertion of the IV device into the patient's blood vessel.

17. The method of claim 10, further comprising forming an LED into the band to provide a visual indication as to a status of an infusion of fluid through the IV device and into the patient's blood vessel.

18. An intravenous placement device, comprising:

- a band of elastic material to be secured around a limb of a patient;
- a processor formed within the band;
- a window formed through the band to provide access to the patient's body near a blood vessel of the patient;
- a tourniquet formed within the band to selectively apply a pressure against the patient's body;
- a blood vessel location indicator to indicate where a catheter is to be inserted, the blood vessel location indicator comprising a near-infrared (near-IR) camera communicatively coupled to the processor; and
- a visual indicator formed in the band to indicate when the blood vessel location indicator has detected a location of a blood vessel.

19. The intravenous placement device of claim 18, wherein the processor controls the pressure applied to the patient's body via the tourniquet by creating a pulsating pattern of pressure against the patient's body.

20. The intravenous placement device of claim 18, further comprising a magnetic device to couple the catheter to the band to stabilize the catheter.