

CLAIMS

1. An IV access device comprising:
a catheter adapter from which a catheter extends distally;
an extension tube coupled to the catheter adapter; and
a needle hub from which a needle extends distally, the needle hub being coupled to the catheter adapter such that the needle extends through the catheter;
wherein the needle hub further includes a flash chamber that is in fluid communication with a lumen of the needle thereby allowing blood to flow into the flash chamber when a distal tip of the needle is contained within a patient's vein, wherein a proximal end of flash chamber includes a vent plug, wherein the flash chamber includes:
a path-defining structure forming a path for blood to flow within the chamber, wherein the path includes a spiral path formed around an outer surface of the path-defining structure and having a distal end and a proximal end, wherein the distal end of the spiral path is proximal to the needle, wherein the proximal end of the spiral path is proximate the vent plug; or
a path that commences from an opening in a distal end of the path-defining structure and passes through a leaking channel to a visualization channel formed along an outer surface of the path-defining structure.
2. The IV access device of claim 1, wherein a proximal end of the needle includes an opening that is positioned within a chamber of the flash chamber.
3. The IV access device of claim 2, wherein the flash chamber includes a plug positioned proximal to the chamber, the plug venting air but blocking the flow of blood to an external environment.
4. The IV access device of claim 2, wherein the needle hub includes a needle retaining portion through which the needle extends, the opening of the needle being positioned proximal to the needle retaining portion.
5. The IV access device of claim 1, wherein the opening of the needle extends into the path formed by the path-defining structure.
6. The IV access device of claim 1, wherein the needle includes a notch positioned towards the distal tip of the needle, wherein blood flowing through the notch and into the catheter provides a first confirmation of proper catheter placement and blood flowing into the flash chamber provides second confirmation of proper catheter placement.
7. The IV access device of claim 1, wherein the flash chamber is removable from the needle hub.
8. The IV access device of claim 7, wherein the flash chamber is compressible to allow blood contained within the chamber to be ejected from the chamber.
9. The IV access device of claim 7, wherein the needle hub includes a female luer port, the flash chamber being configured to be coupled to the female luer port.
10. The IV access device of claim 1, wherein the catheter adapter includes a wing and the needle hub includes a paddle grip.
11. An IV access device comprising:
a catheter adapter from which a catheter extends distally;
an extension tube coupled to the catheter adapter;

a needle hub from which a needle extends distally, the needle hub being coupled to the catheter adapter such that the needle extends through the catheter, the needle hub including a flash chamber, a proximal end of the needle forming a fluid pathway for blood to flow into the flash chamber, the flash chamber including a plug that vents air but blocks the flow of blood thereby allowing blood to flow into the flash chamber when a distal tip of the needle is contained within a patient's vein, wherein the flash chamber includes a path-defining structure forming a path for blood to flow within the chamber, wherein a proximal end of the flash chamber includes a vent plug, wherein the path-defining structure includes a spiral path formed around an outer surface of the path-defining structure and having a distal end and a proximal end, wherein the distal end of the spiral path is proximal the needle, wherein the proximal end of the spiral path is the vent plug.

12. The IV access device of claim 11, wherein the flash chamber is removable from the needle hub.

13. The IV access device of claim 11, wherein the plug is formed by a portion of the path-defining structure.

14. The IV access device of claim 11, wherein the flash chamber couples to the needle hub via a female luer port.

15. The IV access device of claim 11, wherein the catheter adapter includes a wing and the needle hub includes a paddle grip.