extension tube causes fluid to flow into our out of the catheter tube. A clinician may use the force required to expand or contract the extension tube to determine the presence of an obstruction. In some embodiments, the extension tube may be configured to resist kinking. The corrugation of the extension tube 24 may be bendable without kinking, while still flexing to bent shapes and/or redirecting the extension tube. The locking mechanism 26 may be re-engaged after the extension tube 24 is compressed. In some embodiments, the compression of the extension tube 24 and/or the redirection of the extension tube may benefit the comfort of the patient by using less tape and/or securement material to secure the catheter adapter 12 or catheter system 10 for indwell.

[0051] Referring now to Figures 4A-4B, the needle hub 16 may include a paddle grip 22 that may include a raised feature 34 on the upper surface of the paddle grip. The raised feature 34 may include a bump and/or a nub to enhance grip. The raised feature may include a ridge or ridges and/or other grip feature that assists the user with gripping the paddle grip 22. In some embodiments, the raised feature 34 may extend upward beyond the other grip feature of the paddle grip 22.

[0052] In some embodiments, the catheter adapter 12 includes at least one wing 36 that extends outwardly from the catheter adapter. The wings may stabilized the catheter adapter and simplify insertion of the catheter. In some embodiments, the catheter adapter 12 includes two wings extending from the catheter adapter. The wings may be constructed of flexible material. When the catheter adapter 12 is coupled to and/or nested within the needle hub 16, the at least one wing 36 of the catheter adapter may be situated on top of and/or contact the paddle grip 22. In some embodiments, the paddle grip 22 may extend distally beyond the wing 36 of the catheter adapter 12.

CLAIMS

1. A catheter system, comprising:

a catheter adapter having a distal end, a proximal end, and a lumen extending therebetween, the catheter adapter further comprising a flange;

a catheter tube extending distally from the catheter adapter;

an extension tube, comprising a distal end and a proximal end, wherein the distal end of the extension tube is coupled to the proximal end of the catheter adapter, wherein the extension tube is extendable;

a septum holder coupled to the proximal end of the extension tube;

a septum disposed within the septum holder;

a lever extending from the septum holder, wherein a distal end of the lever comprises a lip configured to engage with the flange;

a needle hub removably coupled to the septum holder, wherein when the extension tube is in a compressed state, the extension tube is immediately surrounded by the needle hub and the lever; and

an introducer needle extending through the catheter tube, wherein a proximal end of the introducer needle is secured within the needle hub.

2. The catheter system of claim 1, wherein the extension tube is corrugated, such that the extension tube is flexible when extended.

3. The catheter system of claim 1, wherein the extension tube is resilient and retains shape when curved.

4. The catheter system of claim 1, in response to a depression of a proximal end of the lever, the lip disengages from the flange of the catheter adapter.

5. The catheter system of claim 4, wherein the extension tube is compressed when the lip and the flange are engaged and is extendable when the lip and the flange are disengaged.

6. The catheter system of claim 1, wherein the introducer needle is withdrawable through the extension tube when the extension tube is compressed, extended, or while the extension tube is being extended.

7. The catheter system of claim 1, further comprising a luer connector coupled to the proximal end of the extension tube.

8. The catheter system of claim 1, wherein a flash chamber is disposed within the needle hub and extends in a proximal direction from a proximal end of the needle hub.

9. The catheter system of claim 1, wherein the needle hub further comprises a paddle grip.

10. The catheter system of claim 1, further comprising a flash chamber disposed within a proximal end of the needle hub, and configured such that in in response to insertion of the catheter tube into the vein of the patient, blood flows into the flash chamber.

11. The catheter system of claim 10, wherein the catheter adapter further comprises at least one wing that extends outwardly from the catheter adapter.

12. The catheter system of claim 11, wherein the needle hub further comprises a paddle grip, wherein the at least one wing comprises an upper surface and a lower surface, wherein the upper surface comprise a grip and the lower surface comprises a recess, wherein the recess couples with a grip on an upper surface of the paddle grip when a tip of the introducer needle is withdrawn within the catheter tube.

13. The catheter system of claim 10, wherein the flash chamber comprises an air vent.

14. The catheter system of claim 10, wherein the flash chamber has a capacity between 2ml to 3ml.

15. The catheter system of claim 10, wherein the flash chamber is transparent.

16. A catheter system, comprising:

a catheter adapter having a distal end, a proximal end, and a lumen extending therebetween, the catheter adapter further comprising a flange;

a catheter tube extending distally from the catheter adapter;

an extension tube, comprising a distal end and a proximal end, wherein the distal end of the extension tube is coupled to the proximal end of the catheter adapter, wherein the extension tube is extendable;

a septum holder coupled to the proximal end of the extension tube;

a septum disposed within the septum holder;

a lever extending from the septum holder, wherein a distal end of the lever comprises a lip configured to engage with the flange;

a needle hub removably coupled to the septum holder, wherein the needle hub comprises a cutout extending from a distal end of the needle hub, wherein the lever is disposed within the cutout, wherein when the extension tube is in a compressed state, the extension tube is immediately surrounded by the needle hub and the lever; and

an introducer needle extending through the catheter tube, wherein a proximal end of the introducer needle is secured within the needle hub.