CLAIMS

1. A blood draw system comprising:

at least one catheter adapter connector configured to engage a catheter adapter and place the at least one catheter adapter connector in fluid communication with the catheter adapter;

at least one blood draw device in selective fluid communication with the at least one catheter adapter connector, the at least one blood draw device configured to draw blood from a blood vessel of a patient;

a first valve configured to selectively permit fluid communication between the at least one blood draw device and the at least one catheter adapter connector;

a flush device in selective fluid communication with the at least one catheter adapter connector, the flush device configured to flush the catheter adapter with fluid ejected from the flush device; and

a second valve configured to selectively permit fluid communication between the flush device and the at least one catheter adapter connector.

2. The blood draw system of claim 1, wherein the at least one catheter adapter connector comprises at least one of:

a needle;

a wing needle set;

a needleless connector;

a luer lock connector;

a lure slip connector;

a luer taper connector;

an extension set; and

an extension tube.

3. The blood draw system of claim 1, wherein the at least one blood draw device comprises at least one of:

a syringe; and

a vacutainer.

4. The blood draw system of claim 1, wherein the first valve and the second valve comprise at least one of:

a stopcock valve;

a two-way stopcock valve;

a three-way stopcock valve;

a check valve;

a slide clamp; and

a pinch clamp.

5. The blood draw system of claim 1, wherein the flush device comprises a syringe filled with a saline solution.

6. The blood draw system of claim 1, further comprising at least one fluid conduit coupled to the at least one catheter adapter connector, wherein the at least one fluid conduit is configured to place at least one of the flush device and the at least one blood draw device in fluid communication with the at least one catheter adapter connector.

7. The blood draw system of claim 1, wherein the at least one catheter adapter connector comprises a needle that is at least partially housed within a protective needle housing.

8. A protective needle housing system comprising:

a needle; and

a protective needle housing comprising:

a needle passageway configured to receive at least a portion of the needle therein; and

a needle block configured to move between a closed position and an open position; wherein:

in the closed position, the needle block prevents the needle from advancing distally through the needle passageway; and

in the open position, an aperture formed in the needle block is placed in alignment with the needle passageway to allow the needle to advance distally through the needle passageway.

9. The protective needle housing system of claim 8, further comprising a resilient member configured to bias the needle block in the closed position.

10. The protective needle housing system of claim 9, wherein the resilient member comprises at least one of:

a spring clip; and

a helical spring.

11. The protective needle housing system of claim 8, wherein the needle block comprises a first engagement surface configured to engage with a second engagement surface of a catheter adapter, such that, as the second engagement surface of the catheter adapter engages the first engagement surface of the needle block, the needle block is moved from the closed position to the open position.

12. The protective needle housing system of claim 8, wherein the protective needle housing comprises an engagement feature configured to couple the protective needle housing to a catheter adapter.

13. The protective needle housing system of claim 8, wherein a distal end of the needle comprises:

a closed tip; and

an aspiration aperture formed in a sidewall of the needle proximate the closed tip.

14. The protective needle housing system of claim 8, wherein the needle comprises a bumper configured to prevent the needle from moving proximally out of the protective needle housing.

~~15. A method of drawing blood from a patient via a blood draw system, the method comprising:~~

coupling at least one catheter adapter connector to a catheter adapter in order to place the at least one catheter adapter connector in fluid communication with the catheter adapter;

adjusting a first valve to permit fluid communication between at least one blood draw device and the at least one catheter adapter connector, the at least one blood draw device configured to draw blood from a blood vessel of a patient;

aspirating blood into the at least one blood draw device through the at least one catheter adapter connector;

adjusting the first valve to prevent fluid communication between the at least one blood draw device and the at least one catheter adapter connector;

adjusting a second valve to permit fluid communication between a flush device and the at least one catheter adapter connector; and

flushing the catheter adapter with fluid ejected from the flush device.

16. The method of claim 15, further comprising:

adjusting the second valve to prevent fluid communication between the flush device and the at least one catheter adapter connector and to permit fluid communication between a second blood draw device and the at least one catheter adapter connector; and

aspirating blood into the second blood draw device through the at least one catheter adapter connector.

17. The method of claim 15, wherein the at least one catheter adapter connector comprises a first catheter adapter connector and a second catheter adapter connector.

18. The method of claim 15, wherein the at least one catheter adapter connector comprises at least one of:

a needle;

a wing needle set;

a needleless connector;

a luer lock connector;

a lure slip connector;

a luer taper connector;

an extension set; and

an extension tube.

19. The method of claim 18, wherein the at least one catheter adapter connector comprises a needle that is at least partially housed within a protective needle housing.

20. The method of claim 15, wherein the first valve and the second valve comprise at least one of:

a stopcock valve;

a two-way stopcock valve;

a three-way stopcock valve;

a check valve;

a slide clamp; and

a pinch clamp.