Claims

1. A needle assembly comprising:

A needle having a sharpened distal tip and an inner lumen, the needle being configured to be used within an intravenous device;

a proximal compartment coupled to a proximal end of the needle, a body of the proximal compartment forming a reservoir that is in fluid communication with the inner lumen of the needle thereby allowing blood to be withdrawn through the inner lumen and into the reservoir, wherein the body of the proximal compartment is compressible towards a longitudinal axis of the proximal compartment, wherein in response to compression of the body of the proximal compartment towards the longitudinal axis, at least a portion of the blood contained within the reservoir is expelled through the needle and a needle tip shield, wherein the proximal compartment includes a plunger, wherein in response to advancement of the plunger into the reservoir, at least a portion of the blood contained within the reservoir is expelled through the needle tip shield; and

the needle tip shield secured to the needle and configured to capture the sharpened distal tip when the sharpened distal tip is withdrawn from the intravenous device, wherein, with the sharpened distal tip captured within the needle tip shield, the needle tip shield blocks distal motion of the sharpened distal tip within the needle tip shield and the needle tip shield comprises a fluid pathway through which the blood contained within the reservoir is dispensable from the needle tip shield wherein the needle tip shield comprises a pocket, a tip guard, and a spring, wherein the tip guard and the spring are disposed within the pocket, wherein in response to the distal tip of the needle being withdraw proximally past the pocket, the spring forces the tip guard into the fluid pathway.

2. The needle assembly of claim 1, wherein the plunger forms a second reservoir.

3. The needle assembly of claim 2, wherein the plunger is removable from the proximal compartment to enable blood contained within the second reservoir to be expelled through an opening of the plunger.

4. The needle assembly of claim 3, wherein the proximal compartment includes a seal through which the plunger is inserted, the seal sealing the proximal compartment once the plunger is removed from the proximal compartment.

5. The needle assembly of claim 2, wherein the plunger includes a second plunger for reducing the volume of the second reservoir.

6. A catheter assembly, comprising :

a catheter adapter from which a catheter extends; and

a needle assembly, comprising:

a needle having a sharpened distal tip and an inner lumen, the needle extending through the catheter adapter and the catheter such that the sharpened distal tip extends distally from the catheter;

a proximal compartment secured to a proximal end of the needle, the proximal compartment extending proximally from the catheter adapter, a body of the proximal compartment forming a reservoir for collection of blood via the inner lumen of the needle, wherein the proximal compartment comprises a plunger, wherein the plunger comprises a vent to facilitate flow of the blood into the proximal compartment, wherein the plunger is moveable from a proximal position to a distal position, wherein a proximal end of an exterior of the body of the proximal compartment contacts the plunger to prevent movement of the plunger beyond the distal position; and

a needle tip shield secured to the needle and configured to capture the sharpened distal tip when the sharpened distal tip is withdrawn from the catheter adapter, wherein, with the sharpened distal tip captured within the needle tip shield, the needle tip shield blocks distal motion of the sharpened distal tip within the needle tip shield and the needle tip shield forms a fluid pathway aligned with a longitudinal axis of the needle and through which the blood contained within the reservoir is dispensable from the needle tip shield, wherein the body of the proximal compartment is compressible towards a longitudinal axis of the proximal compartment, wherein in response to compression of the body of the proximal compartment towards the longitudinal axis of the proximal compartment, at least a portion of the blood contained within the reservoir is expelled through the needle tip shield, wherein in response to advancement of the plunger into the reservoir, at least a portion of the blood contained within the reservoir is expelled through the needle tip shield.

7. The intravenous catheter of claim 6, wherein a portion of the plunger is compressible towards a longitudinal axis of the plunger.

8. The intravenous catheter of claim 6, wherein the fluid pathway is one of :

the same pathway through which the sharpened distal tip is withdrawn into the needle tip shield; or

a different pathway than a pathway through which the sharpened distal tip is withdrawn into the needle tip shield.

9. A method of dispensing blood for point-of-care testing, comprising:

collecting blood from the patient in a proximal compartment of a needle assembly of a catheter assembly, wherein the catheter assembly comprises:

a catheter adapter; and

the needle assembly, comprising:

a needle having a sharpened distal tip and an inner lumen;

the proximal compartment secured to a proximal end of the needle, a body of the proximal compartment forming a reservoir that is in fluid communication with the inner lumen of the needle thereby allowing blood to be withdrawn through the inner lumen and into the reservoir, wherein the body of the proximal compartment is compressible towards a longitudinal axis of the proximal compartment, wherein the proximal compartment includes a plunger, wherein the reservoir inserts partially into the proximal end of the catheter adapter; and

a needle tip shield secured to the needle and configured to capture the sharpened distal tip when the sharpened distal tip is withdrawn from the catheter

adapter, wherein, with the sharpened distal tip captured within the needle tip shield, the needle tip shield blocks distal motion of the sharpened distal tip within the needle tip shield and the needle tip shield comprises a fluid pathway through which the blood contained within the reservoir is dispensable from the needle tip shield; and

advancing the plunger into the reservoir, wherein in response to advancement of the plunger into the reservoir, at least a portion of the blood contained within the reservoir is expelled through the needle tip shield and onto a point-of-care cartridge.

10. The method of claim 9, further comprising compressing the body of the proximal compartment towards the longitudinal axis such that at least a portion of the blood contained within the reservoir is expelled through the needle tip shield.

11. The needle assembly of claim 1, wherein the tip guard comprises an opening.

12. The needle assembly of claim 11, wherein the distal tip of the needle extends through the opening.

13. The needle assembly of claim 11, wherein the opening is sized and configured to prevent blood from flowing out of the fluid pathway absent a reduction in volume of the reservoir.