CLAIMS

1. A flush syringe assembly comprising:

a barrel including a side wall having an inside surface defining a chamber for retaining fluid, an open proximal end, a distal end including a distal wall with a tip extending distally therefrom having a passageway therethrough in fluid communication with said chamber;

a plunger rod disposed within the barrel, the plunger rod comprising a distal portion and a proximal portion, the plunger rod further comprising a distal end including a stopper slidably positioned in fluid-tight engagement with the inside surface of the barrel for drawing fluid into and driving fluid out of the chamber by movement of the stopper relative to the barrel, the plunger rod extending outwardly from the open proximal end of the barrel, the stopper having a distal surface; and

~~the~~ a reservoir collar integrally formed on the distal wall of the barrel and surrounding the tip, the reservoir collar including at least one side wall having an inside surface defining a compartment containing a disinfectant or antimicrobial agent, a sealed distal end, the tip is located proximal of the distal edge of the reservoir collar such that a fully flat removable seal can be attached to the reservoir collar, thereby completely enclosing the tip and the disinfectant or antimicrobial agent, whereby the distal end of the reservoir collar is sealed by a removable seal, completely enclosing the tip, a proximal end adjacent the distal wall of the barrel, with disinfection of the hub of the vascular access device by the disinfectant or antimicrobial agent.

2. The flush syringe assembly of claim 1, wherein the reservoir collar has a plurality of threads on the inside surface for connection to the hub of the vascular access device.

3. The flush syringe assembly of any of claims 1-2, wherein the reservoir collar further comprises an absorbent material for soaking up the disinfectant or antimicrobial agent.

4. The flush syringe assembly of any of the preceding claims, wherein the disinfectant or antimicrobial agent is a fluid, foam or gel.

5. The flush syringe assembly of any of the preceding claims, wherein the disinfectant or antimicrobial agent is selected from the group consisting of ethanol, 2-propanol, butanol,

methylparaben, ethylparaben, propylparaben, propyl gallate, butylated hydroxyanisole (BHA), butylated hydroxytoluene, t-butyl-hydroquinone, chloroxylenol, chlorohexidine, dichlorobenzyl alcohol, dehydroacetic acid, hexetidine, triclosan, hydrogen peroxide, colloidal silver, and mixtures thereof.

~~6. The flush syringe assembly of any of the preceding claims, further comprising a removable seal adhered to the distal end of the reservoir collar.~~

6~~7~~. The flush syringe assembly of claim 1~~6~~, wherein the removable seal comprises an aluminum or multi-layer polymer film peel back top.

7~~8~~. The flush syringe assembly of any of the preceding claims, further comprising an aluminum lining adhered to the inside surface of the at least one side wall of the reservoir collar.

8~~9~~. The flush syringe assembly of claim 3, wherein the absorbent material compresses toward the proximal end of the reservoir collar upon connection to a hub of the vascular access device.

~~10~~9. The flush syringe assembly of claim 8~~9~~, wherein the compression of the absorbent material disinfects the vascular access device.

~~11~~10. The flush syringe assembly of any of the preceding claims, wherein connection to a hub of the vascular access device disinfects the vascular access device.

~~12~~11. A method of disinfecting a vascular access device, the method comprising:
connecting a flush syringe assembly of any of the preceding claims to a hub of the vascular access device, wherein connecting includes frictionally engaging a reservoir collar with the hub of the vascular access device such that the hub of the vascular access device contacts an antimicrobial agent or disinfectant contained within the reservoir collar.

~~13~~12. The method of claim ~~12~~11, wherein the reservoir collar further contains an absorbent material.

~~14~~13. The method of any of the preceding claims, wherein the reservoir collar further comprises threads that engage threads on the hub, and connecting occurs by engaging the threads on the hub and the reservoir collar by twisting the vascular access device with respect to the flush syringe.

~~15~~14. The method of any of the preceding claims, wherein upon connection, the hub contacts the antimicrobial agent or disinfectant and the absorbent material.