Claims

1. An intravenous (~~TV~~ IV) catheter system comprising:

a catheter component comprising:

a catheter hub having a proximal end;

a cannula that extends distally from the catheter hub; and

a wing that extends outwardly from a side of the catheter hub; and

a needle component comprising:

a needle hub having a distal end that couples to the proximal end of the catheter hub;

a needle that extends distally from the distal end of the needle hub;

a grip that extends outwardly and distally from a side of the needle hub; and

a rotation stop feature formed at the distal end of the needle hub, the rotation stop feature being adapted to contact the wing of the catheter component to limit rotation of the needle component with respect to the catheter component in a first rotational direction and not limit rotation of the needle component with respect to the catheter component in an opposite direction when the needle is fully inserted in the cannula.

2. The IV catheter system of claim 1, wherein:

the rotation stop feature extends distally from the distal end of the needle hub; and

when the rotation stop feature contacts the wing, a plane of the grip is substantially parallel to a plane of the wing.

3. An intravenous (IV) catheter system comprising an insertion configuration and a fluid delivery configuration, the IV catheter system comprising:

a catheter component comprising:

a catheter hub comprising a catheter hub distal end and a catheter hub proximal end, wherein the catheter hub defines a chamber extending between the catheter hub distal end and the catheter hub proximal end, and a needle port at the catheter hub proximal end that provides access to the chamber;

a cannula extending distally from the catheter hub distal end; and

a push feature connected to the catheter hub and defining a push surface of the catheter component;

a needle component comprising:

a needle hub comprising a needle hub distal end;

a needle extending distally from the needle hub distal end;

a pull feature connected to the needle hub and defining a pull surface of the needle component; and

a rotation stop feature formed proximate the needle hub distal end, the rotation stop feature being configured to engage a corresponding feature on the catheter component to limit rotation of the needle component relative to the catheter component in a first rotational direction and not limit rotation of the needle component relative to the catheter component in an opposite direction;

wherein, in the insertion configuration, the needle is positioned within the cannula, the needle hub distal end is seated in the needle port, and the pull surface is positioned distal to the catheter hub proximal end.

4. The IV catheter system of claim 3, wherein:

the catheter component comprises a wing extending outwardly from the catheter hub generally parallel to a central axis;

the needle component comprises a grip extending outwardly and distally from the needle hub generally parallel to a needle axis;

the rotation stop feature extends distally from the needle hub distal end;

in the insertion configuration, the needle component is rotated relative to the catheter component such that the rotation stop feature contacts the wing of the catheter component and the grip is substantially co-planar with the wing.

5. The IV catheter system of claim 3 or claim 4, further comprising:

a circumferential ring extending around the catheter hub;

a low-drag septum disposed within the catheter hub;

opposed side grips disposed on opposing sides of the needle hub; and

a low-volume, high-visualization flash chamber removably attached to a flash receptacle attached to a proximal end of the needle hub.