WHAT IS CLAIMED IS:

1. A system for closed transfer of fluids comprising:

a vial adapter comprising:

a body having a first end and a second end;

a vial connection extending from the second end of the body, the vial connection configured to secure the body to a vial;

a vial spike extending from the second end of the body, the vial spike defining a passageway; and

a collet connection extending from the first end of the body; and

a syringe adapter comprising:

a housing having a first end and a second end;

a membrane housing positioned within the housing, the membrane housing moveable between a first position and a second position, the membrane housing including at least one membrane;

a cannula positioned within the housing, the cannula having a first end and a second end, the second end of the cannula positioned within the membrane housing when the membrane housing is in the first position and positioned outside of the membrane housing when the membrane housing is in the second position; and

a syringe connection extending from the first end of the housing, the syringe connection configured to be secured to a syringe barrel,

~~wherein the collet connection is configured to be secured to the membrane housing~~

wherein the collet connection is moveable between a first position where the collet connection is configured to receive the membrane housing and a second position where the collet connection is configured to be secured to the membrane housing, and

wherein collet connection comprises a collet body and first and second arms extending from the collet body away from the first end of the body of the vial adapter, the first and second arms defining a space configured to receive the membrane housing.

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~~2. The system of claim 1, wherein the collet connection is moveable between a first position where the collet connection is configured to receive the membrane housing and a second position where the collet connection is configured to be secured to the membrane housing.~~

~~3~~2. The system of claim 1~~2~~, wherein the housing of the syringe adapter comprises a first portion positioned adjacent to the first end of the housing and a second portion position adjacent to the second end of the housing, the first portion of the housing having a smaller internal diameter relative to the internal diameter of the second portion of the housing, and wherein the collet connection is in the first position when the collet connection is positioned within the first portion of the housing and in the second position when the collet connection is positioned within the second portion of the housing.

~~4~~3. The system of claim ~~3~~2, wherein the collet connection is moveable radially inward when transitioning from the first position to the second position.

~~5~~4. The system of claim ~~4~~3, wherein the housing comprises a transition portion positioned between the first and second portions of the housing, the transition portion configured to engage the collet connection to move the collet connection from the first position to the second position when the collet connection is positioned within the housing of the syringe adapter.

~~6~~5. The system of claim ~~5~~4, wherein the transition portion is frusto-conical.

~~7. The system of claim 2, wherein collet connection comprises a collet body and first and second arms extending from the collet body away from the first end of the body of the vial adapter, the first and second arms defining a space configured to receive the membrane housing.~~

~~8~~6. The system of claim ~~7~~1, wherein the first and second arms each include a projection extending radially inward, the projection configured to engage the membrane housing when the collet connection is in the second position with the membrane housing received within the space.

~~9~~7. The system of claim ~~7~~1, wherein the collet body defines a passageway in fluid communication with the vial spike, the collet body further comprising a collet membrane configured to engage the membrane of the of the syringe adapter.

~~10~~8. The system of claim ~~2~~1, wherein the vial adapter further comprises a collet housing extending from the first end of the body, the collet connection positioned within the collet housing, the collet housing configured to receive a portion of the housing of the syringe adapter.

~~11~~9. The system of claim ~~10~~8, wherein the collet housing defines an indicator opening and the housing of the syringe adapter includes an indicator, the indicator configured to be visible via the indicator opening when the collet connection is in the second position.

~~12~~10. The system of claim 1, wherein the vial adapter further comprises a projection configured to engage a corresponding projection within the housing of the syringe adapter to secure the vial adapter to the syringe adapter.

~~13~~11. The system of claim 1, further comprising a patient connector, the patient connector comprising:

a body having a first end and a second end;

a patient connection configured to secure the body to a patient line; and

a collet connection configured to be secured to the membrane housing of the syringe adapter.

~~14~~12. A vial adapter comprising:

a body having a first end and a second end;

a vial connection extending from the second end of the body, the vial connection configured to secure the body to a vial;

a vial spike extending from the second end of the body, the vial spike defining a passageway; and

a collet connection extending from the first end of the body, the collet connection configured to be secured to a syringe adapter,

wherein the collet connection is moveable between a first position where the collet connection has a first radial position and a second position where the collet connection has a second radial position, and

wherein the collet connection comprises a collet body and first and second arms extending from the collet body away, the first and second arms defining a space configured to receive a portion of a syringe adapter.

~~15. The vial adapter of claim 14, wherein the collet connection is moveable between a first position where the collet connection has a first radial position and a second position where the collet connection has a second radial position.~~

~~16~~13. The vial adapter of claim ~~15~~12, wherein the collet connection is moveable radially inward when transitioning from the first position to the second position.

~~17. The vial adapter of claim 15, wherein the collet connection comprises a collet body and first and second arms extending from the collet body away, the first and second arms defining a space configured to receive a portion of a syringe adapter.~~

~~18~~14. The vial adapter of claim ~~17~~12, wherein the first and second arms each include a projection extending radially inward.

~~19~~15. The vial adapter of claim ~~17~~12, wherein the collet body defines a passageway in fluid communication with the vial spike, the collet body further comprising a collet membrane.

~~20~~16. The vial adapter of claim ~~15~~12, wherein the vial adapter further comprises a collet housing extending from the first end of the body, the collet connection positioned within the collet housing, the collet housing configured to receive a portion of a syringe adapter.