"GEL PROTECTED INSERT FOR PRACTISING INVASIVE FLUID REMOVAL PROCEDURES"

VCU #13-060

Applications

- Medical training for invasive fluid removal procedures

Advantages

- Can be used in Low and High Fidelity manikins
- Reusable
- Multipurpose use (neonatal and all other critical care specialties)
- Can be sold as an add-on for existing manikins
- Can be used to develop thoracentesis, paracentesis and pericardiocentesis task trainers

Inventors

David Walton, BBA, MS
Archana Jayaram, MD

Contact

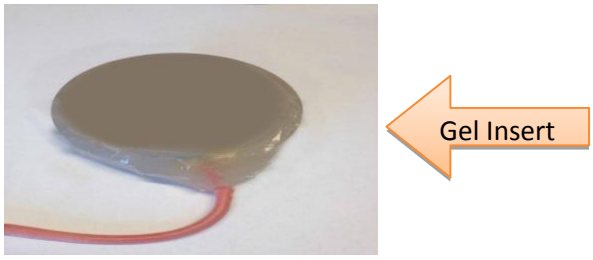
Wendy M. Reid, Ph.D.
Licensing Associate
wmreid@vcu.edu
Direct 804-827-2213

Market Need

Removal of pleural, pericardial and peritoneal fluid for diagnostic and therapeutic purposes (Thoracentesis, Pericardiocentesis and Paracentesis, respectively) are essential procedures performed across all critical care specialties. Opportunities to perform critical, lifesaving procedures and partake in complex resuscitations that require emergent removal of fluid are diminishing during medical training. Task trainers and simulations offer an avenue for exposure and development of expertise, but current neonatal and pediatric High Fidelity (HF) simulators and task trainers are not designed to allow practice of the above mentioned invasive "fluid removal" procedures.

Technology Summary

Dr.Jayaram and Mr. Walton from Virginia Commonwealth University have developed reusable gel based inserts that can be adapted in a Low Fidelity manikins with the purpose of being used as task trainers. They also be used in High Fidelity manikins for the purposes of bringing realism to "fluid removal" during simulated scenarios (for example-Hydrops Fetalis). The advantage of this insert in comparison to fluid filled latex balloons is that it can be repeatedly used, has a conduit for refilling fluid, can be molded to different shapes, offers realistic 'feeling' of penetrating tissues and eliminates fluid leakage, thus protecting the electronics of High Fidelity manikins.



Technology Status

Patent pending: U.S. and foreign rights available.
Prototype available.

This technology is available for licensing to industry for further development and commercialization.