

Convesaid Press Release:

Team develops innovative haemostat spray device which can't cause embolisms

Team Consulting has created Convesaid, a ground-breaking haemostat spray device that eliminates the risk of air embolism when delivering powder haemostats during surgery.

Stopping bleeds quickly and efficiently during surgery saves lives and money¹. A recent study from the British Medical Council found that 30% of speciality inpatient surgeries involved a bleed during the procedure which increased the length of hospital stay (BMC).

Haemostat powders are a convenient way to stop bleeding, they can be quickly sprayed onto the location of the bleed using an air spray device. However air sprays carry a risk of squirting air into a vein and causing a lethal embolism.

Team set about developing a powder sprayer which could never cause embolism. Convesaid's ingenious airflow design uses the Coanda principle – the tendency of an airflow to follow an adjacent curved surface - to ensure that only the haemostat powder exits the device. No air leaves the device and hence the sprayer is intrinsically safe.

How does it work?

The battery powered pump inside Convesaid creates a stream of air, which picks up the haemostat powder particles and blows them out of the end of the device. The air however is funnelled round a smooth curve in the tip of the device and back to the pump. No air ever leaves the device.

Convesaid is intrinsically safe. It's also simple to operate, reliable and cheap enough to be disposable - Team estimates the device would cost around \$15 to manufacture.

Bringing Convesaid to life

We've taken Convesaid from an initial concept, all the way through to a fully functional proof-of-principle device.

Following initial design concepts and math modelling of the airflow, we created the first prototype. It functioned really well, but initial feedback suggested it was too large, so we set about creating a smaller handheld device which was cheap enough to be disposable.

The new design is compact, featuring a redesigned layout, as well as a lock-out which prevents the trigger from moving until the device is switched on.

User feedback was invaluable throughout the process, and this is typical of the way we develop products for our clients: we develop devices from understanding user needs, through design, lab testing and user studies – all the way to scale up and manufacture.

¹ Impact of bleeding-related complications and/or blood product transfusions on hospital costs in inpatient surgical patients

Michael E Stokes, Xin Ye, Manan Shah, Katie Mercaldi, Matthew W Reynolds, Marcia FT Rupnow and Jeffrey Hammond

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Dr Ben Wicks – Head of MedTech at Team commented “Convesaid gives surgeons the ability to stop a variety of bleeds in a rapid, accurate and safe way. It takes no time to set-up and is unencumbered by any air lines. Convesaid will give haemostat manufacturers the ability to deliver haemostats more effectively, more conveniently and, above all, more safely than ever before.”

Get in touch with Ben if you'd like to know more about Convesaid or explore how Team could help you develop your new products.

Team Consulting

Team Consulting is medical device design and development agency, based in Cambridge UK. Our work includes OrganOx metra, a world-first system that keeps transplant livers alive, which was recently featured on a BBC documentary series, with Convesaid being the latest in a long line of exciting and potentially life-saving developments.

Dr Ben Wicks

Ben heads up the medtech business at Team. He has 20 years of experience in the science, engineering and commercialisation of medical devices and diagnostics. He was trained in microbiology, immunology and virology before completing a PhD in Clinical Biochemistry.