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Foundation Trust

Award Amount: **£114,802**

Award Duration: **12 months**

The Queen Elizabeth Hospital 
King's Lynn
NHS Foundation Trust

ARTERIAL GLUCOSAVE

Background

In intensive care and operating theatres, blood samples are frequently taken from arterial lines to measure a patient's blood chemistry. Arterial lines are maintained with a saline flush solution, however if a glucose-containing flush solution is accidentally attached to the arterial line it can artificially raise the patient's blood glucose. Without realising the error nursing staff may inappropriately administer insulin, resulting in the patient developing hypoglycemia that can lead to fatal brain injury. This error is reported 3 times per month to NHS England. The National Patient Safety Agency have issued an alert highlighting the error and recommended the development of safety solutions to prevent this fatal mistake.

Technology

Arterial GlucoSave is a patient safety solution designed to prevent this error and is at an early prototype stage. It is designed to work with the normal blood sampling system to immediately alert clinicians if a glucose bag is erroneously attached, preventing patient harm. Arterial GlucoSave comprises of a syringe with a non-return valve and colorimetric indicator, which immediately highlights the presence of glucose within the arterial sampling system.

MTA support

With support from the MTA award, the team are working with a development partner to produce functional prototypes of Arterial GlucoSave for clinical usability trials. The award will take the team towards regulatory approval for the device as they actively seek a route to market. The MTA award is expected to complete in mid-2019.

Future work

Following the end of the MTA award, the team will seek investment and commercial support to bring Arterial GlucoSave to market. Next steps will include market launch and developing further patient safety products that the team have in early development.

A Joint Venture Partnership

