

## **SOP: Neurone Specific Enolase testing for prognostication of neurological outcome**

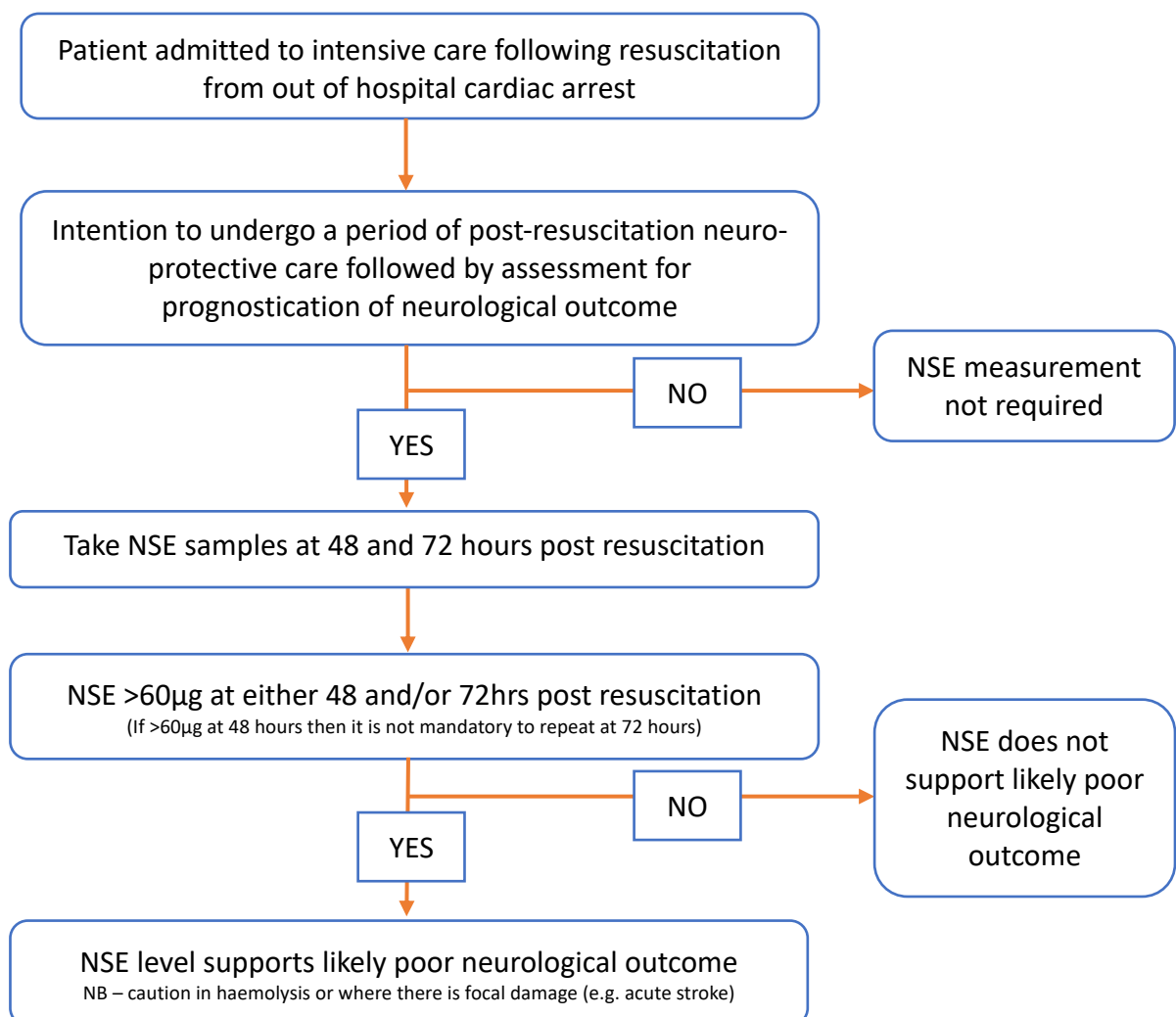
### **Context**

Neurone specific enolase (NSE) is a biomarker used as part of multi-modal prognostication of neurological outcome in patients who remain comatose following successful resuscitation from out of hospital cardiac arrest. International guidelines published in 2021<sup>(1)</sup> recommend measuring blood NSE levels at 48 and 72 hours post resuscitation as a marker of neuronal damage.

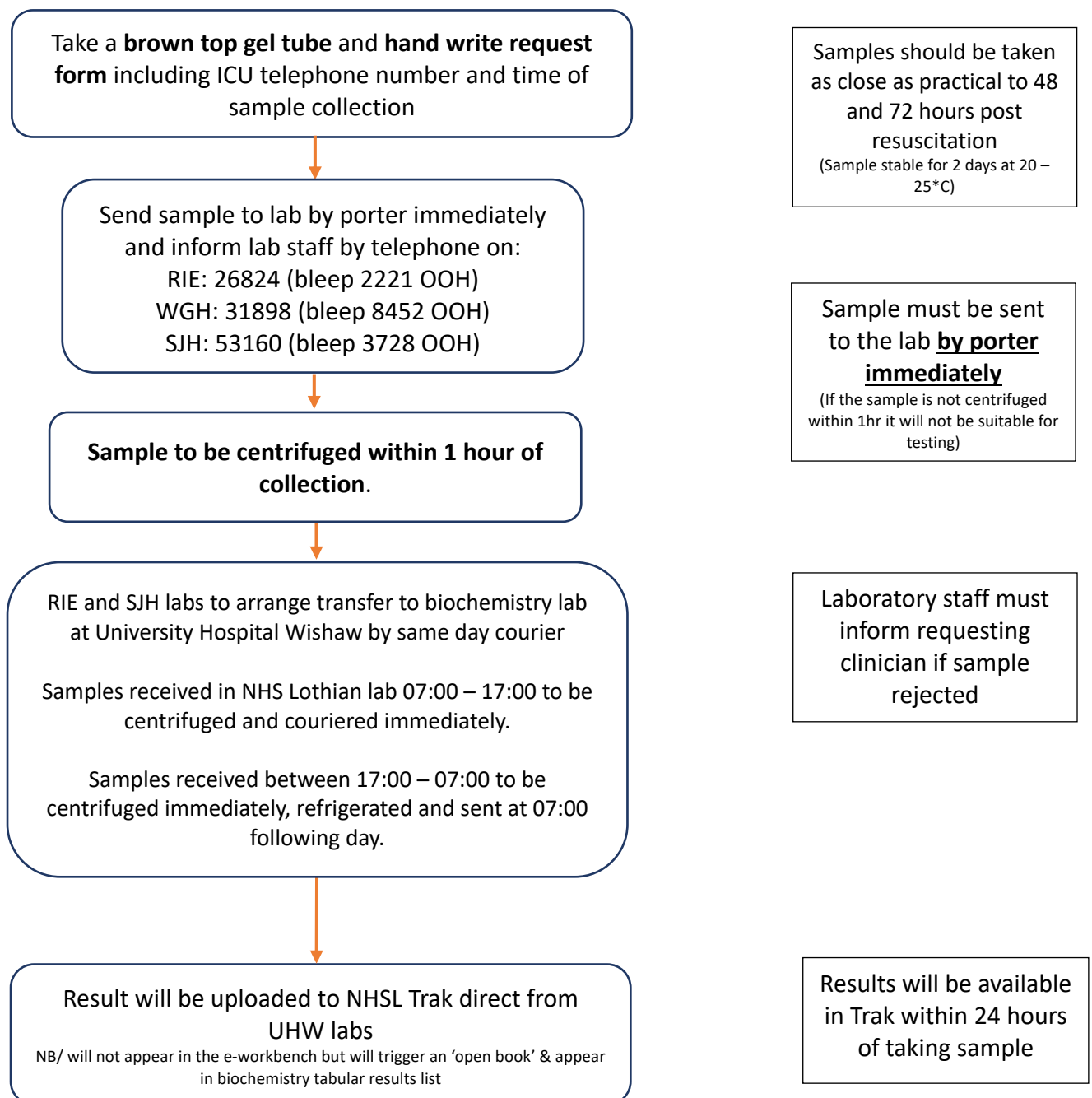
NSE levels will not be used in isolation. Multi-modal prognostication includes two or more of: clinical assessment, brain imaging, multi-channel electro-encephalogram (EEG) recording and NSE measurement. NSE levels of  $>60\mu\text{g/L}$  at 48 and/or 72 hours following resuscitation are considered to be supportive of a poor neurological outcome<sup>(1,2)</sup> as part of this process.

The laboratory at University Hospital Wishaw provides NSE testing nationally for Scotland and samples must be sent away.

### **Patient selection and interpretation of results**



## Transferring samples for testing



## References

1. Nolan et al. European Resuscitation Council and European Society of Intensive Care Medicine guidelines 2021: Post-resuscitation care. Intensive Care Med (2021) 47: 369 - 421
2. Sandroni C et al. Prediction of poor neurological outcome in comatose survivors of cardiac arrest: a systematic review. Intensive Care Med (2020) 46: 1803 – 1851