Mother during the FASSTT trial. In a sub sample of participants, magnetoencephalographic (MEG) brain imaging was performed to assess brain functioning through estimating neuronal activity in relation to semantic processing of language. Related covariates including general health and lifestyle measures, socioeconomic status, anthropometry including BMI status, B-vitamin biomarkers and nutritional dietary analysis were evaluated. Statistical analysis was performed using the Statistical package for the Social Services software.

Results Of the 119 mother-child pairs in the FASSTT trial, 68 children were assessed for neurocognitive performance at 11-year follow up (Dec 2017 to Nov 2018). Children of mothers randomized to FA compared with placebo scored significantly higher in two Processing Speed tests i.e. symbol search (mean difference 2.9 points, 95% CI 0.3 to 5.5, $p=0.03$) and cancellation (11.3 points, 2.5 to 20.1, $p=0.04$), whereas the positive effect on Verbal Comprehension was significant in girls only (6.5 points, 1.2 to 11.8, $p=0.03$).

MEG assessment of neuronal responses to a language task showed increased power at the Beta (13–30 Hz, $p=0.01$) and High Gamma (49–70 Hz, $P=0.04$) bands in children from FA-supplemented mothers, suggesting more efficient semantic processing of language.

Conclusions Continued FA supplementation in pregnancy beyond the early period currently recommended to prevent NTD, can benefit neurocognitive development of the child. MEG provides a non-invasive tool in paediatric research to objectively assess functional brain activity in response to nutrition and other interventions. Our findings add considerably to the existing evidence that have linked maternal folate status in pregnancy with neurocognitive outcomes in the older child. This evidence reinforces our previous findings in these children and suggest that continued FA intervention in pregnancy beyond the early period is beneficial to future neurocognitive development.

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715 APPROACH TO EVALUATING A NOVEL EDUCATIONAL E-MODULE ON PAEDIATRIC ADVANCED LIFE SUPPORT

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Background Storytelling is a powerful tool in education where emotional investment rewards enhanced learning. We designed a 'choose your own adventure' story written in the second person where the participant assumes the role of a junior doctor taking decisions in the resuscitation of an infant. The decisions taken influence both the narrative and learner's role making it truly interactive. This breaks from traditional e-learning techniques with linear progression. Instead the learner is supported in a safe environment to make realistic clinical decisions. The purpose of such engagement is to stimulate interest, simulate real clinical practice and enables higher level

learning whilst also testing knowledge in a way that allows detailed personal feedback.

In the current climate of the COVID-19 pandemic, the aim was to produce an innovative e-module that engaged and entertained learners who most likely will have a degree of online burnout. Learning objectives are taken from the advanced paediatric life support course. Retention of knowledge is paramount and through simulating auditory, visual and cognitive cues it is hoped translation into practice is improved.

Objectives In this study, we had the following two aims. Firstly to gather user feedback to determine areas for improvement with subsequent versions. Secondly, to determine the utility of digital simulation in healthcare education as a tool to impact clinical practice.

Methods Many approaches to evaluation exist. Using a framework described by Roland et al. we crafted a pre and post-questionnaire to assess more than simply user experience. Users including all clinical staff in our tertiary hospital emergency department via email. Hence sampling was not random and instead was opportunistic. Beforehand, an anonymous online survey firstly gathered demographic data about users (for example; age, sex, ethnicity, profession group and training experience).

Afterwards, a series of questions were asked, again via an anonymous online survey, to determine the utility of the digital simulation with regards to the following; interactivity, interface, instruction, ideation (what you think you have learned), integration (what you have shown you have learned), implementation and improvement. This 7Is framework allows potential patient benefit to be encapsulated in its outcome measures as has an existing precedent for use as demonstrated in a previous study examining outcomes of a separate e-learning package.

Results Results include the following; 90% had high motivation, 60% were able to easily access the module (desktop computer, smartphone etc), 100% wished to utilise the same style of learning again, 80% report gaining new knowledge or skills, mean time to complete module was 22 minutes, blank space feedback included; 'novel and engaging format, unclear at first how to select choices,' 'needs to include feedback at each decision point, not at end,' 'learnt airway skills and steps to expect in the resuscitation of a baby.' The first one hundred staff to respond were included in this data set with good representation across the different demographic groups.

Conclusions This work represents preliminary stages of development for a novel elearning module. Results suggest with further improvement this is a format that has the potential to engage, educate and impact upon clinical practice.

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THE MANAGEMENT OF EPISODES OF A SIGNIFICANT DROP IN LUNG FUNCTION IN PATIENTS WITH CYSTIC FIBROSIS (CF) IN AN OUTPATIENT SETTING

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