

A mixed methods study for the evaluation of a digital health solution for cancer multidisciplinary team meetings using simulation-based research methods.

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## Abstract Disclosures

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## Background:

Simulation-based research (SBR) methods involve setting up structured scenarios to replicate real-world situations, with the aim of eliciting real-world reactions and behaviours. SBR is useful for the evaluation of new healthcare solutions without compromising patient safety or navigating complex ethical review processes. However, there are few trials using SBR methods for the evaluation of digital health interventions (DHIs), the adoption of which has been hindered in the NHS due to a lack of evidence-base for their efficacy. SBR methods could be an appropriate tool for testing digital solutions.

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## Methods:

The Institute of Global Health Innovation (IGHI) developed a series of simulated lung cancer multidisciplinary team (MDT) meetings to test the NAVIFY Tumor Board solution by Roche Diagnostic Information Solutions, a digital solution for the preparation and conduct of cancer MDTs. To provide an environment for participants to evaluate the capabilities of the NAVIFY Tumor Board solution, 10 simulation sessions were organised in which groups of five to six clinicians were recruited to discuss up to 10 mock patient cases across two simulated MDTs, first using standard tools commonly used to conduct MDTs and then using the NAVIFY Tumor Board solution. The cases were developed by the study team at IGHI and consultants in respiratory medicine and oncology. 56 healthcare professionals (respiratory physicians, oncologists, radiologists, histopathologists, clinical nurse specialists and thoracic surgeons) were recruited. The sessions were video recorded and observations were noted by the study team, followed by a focus group in which participants provided feedback about their experience of the simulated MDTs.

## Results:

Through this study we were able to generate evidence and multi-professional recommendations for Roche regarding the functionality, usability and applicability of the solution in the NHS, as well as beneficial features and those which could be improved. Participants reported that the simulations were realistic and a meaningful way of conducting evaluations of digital health solution without impacting clinical practice or patient safety.

## Conclusions:

This study demonstrated the utility and validity of testing commercial tools in simulated settings to generate meaningful insights from endusers. SBR methods were shown to be an acceptable way for frontline practicing clinicians to participate in the testing and development of digital health tools in a standardised setting.