We used a theory-informed conceptual model, the MEEGA+ (Fig 1) to guide the development and evaluation of a prototype.

We derived initial design principles for rapid prototyping–cycles of trial, testing, and refining the game and gameplay by involving pilot users to gain insights from all groups.

Initial feedback regarding prototype gameplay has indicated: the game is fun to play, has challenges for novice and advance players, can easily be expanded for other clinical scenarios, had elements of realism that made the game more exciting, players felt that they learned something, and that they would play it again/recommend others play the game.

We have finalized the design principles, a module prototype, and incorporated all content areas for formative evaluation and implementation.

We developed a prototype for serious game to emphasize specific knowledge and skills with regards to mechanical ventilation in critical care providers. Next steps include:

• Finalize the design and professional design of formal game beyond prototype
• Implement the game into the existing educational activities for new first year fellows
• Evaluate the game for usability and educational effectiveness
• Collect validity evidence for the modified MEEGA+ Tool