

Project title: Amateur Paramedics: Trauma Team '99

ACCA6020

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Ethics Form: [SoAC Ethics Form \(2\) \(1\).docx](#)



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## Introduction, aims and objectives

### The problem and my aim

I wish to investigate how a game could enable four people to collaborate through a series of challenges. My question is: how does movement in ambulance games affect collaborative fun in a four-player online game? I will explore whether the movement creates amusing possibilities that the players can manage, or frustrating ones, making their actions feel futile.

I intend to develop and test a small game in Unreal Engine 5.8. Players are four unqualified emergency responders in a fictional city, set in 1999. One controls the ambulance, the other three medics treat the patient. Medics share equipment, and perform simple CPR, bandaging and stitching tasks. Sharp corners, braking and crashes can throw players and equipment around, making treatment challenging. Players must also move the patient using a stretcher with unreliable wheels.

The driver will have to listen when the medics ask them to slow. The medics will have to explain what is happening and help each other; this makes each player's choices matter to the team. The project is valuable to me because it will teach me to make shared challenges enjoyable, and give me experience with online games.

## Objectives and plan

To make the project achievable, I will build one compact area, one ambulance, one patient and one complete rescue mission. Physics will be shared where possible. My main objectives are:

- By the end of November 2026, connect four players and test shared objects, vehicle movement and player movement inside the ambulance.
- By the end of January 2027, complete the stretcher and three treatment tasks, including the effects of driving.
- By the end of February, complete a playable rescue, around 10-15 minutes with instructions, patient feedback and a clear ending.
- By the end of March, aim to test both versions with 16 adults, ethics approved.
- During April, review the results and make one recorded round of improvements.
- By the May 2027 deadline, complete the game, written report and supporting work.

## Resources, success and deliverables

I will need Unreal Engine 5.8, Blueprints, suitable development hardware, internet connection and four PCs with headsets for testing. I will check access to this equipment early. I will use licensed assets where needed and credit them.

The game should support four connected players to complete the mission in three test sessions without crashes, unexpected disconnections or shared objects becoming unusable. At least 75% of testers should give the controls and their sense of helping the team a score of four out of five, or better.

My final work will include a playable Windows build, the Unreal project, design notes, a development log, test results, a short video and the dissertation. Extra missions and proximity chat will only be added if the main game works reliably. The research will still be useful if players prefer less movement, because I can explain what did and did not work.

## Background to the project

### Research and chosen ideas

My ideas are shared goals, differing jobs, communication and a challenge that players can recover from. Six journal papers will guide this work.

Peng and Hsieh [1] found that players reported more effort in cooperative play than competitive play in their experiment. This supports giving my players one shared rescue goal. Velez and colleagues [2] found that talking during Overcooked! 2 did not improve later teamwork tasks outside the game. This means I should test what happens in my game, rather than assuming that more talking always means better teamwork.

Ryan and colleagues [3] associate enjoyment with feeling capable, having choices and feeling connected to others. I will use these ideas to check whether every player feels useful. Sweetser and Wyeth's GameFlow model [4] highlights clear goals, helpful feedback and a challenge suited to the player's skill. This will guide my instructions and the patient display.

Klimmt and colleagues [5] found that feeling able to affect the game matters for enjoyment. I will therefore check whether players still feel their actions matter when driving disrupts treatment. Denisova and colleagues [6] show that challenge includes feelings and decisions as well as physical performance. This supports asking players about their experience alongside recording mistakes and completion times.

These studies give me starting points, but do not prove my game's movement will be enjoyable. My testing will explore that question.

## Existing games and topic familiarity

Overcooked! 2 [7] uses shared tasks and changing hazards. Emergency Buddies [8] has a closely related ambulance and treatment idea. My contribution will be to test how different amounts of movement affect teamwork. My interest is in co-op games and physics comedy. Early experiments will help me identify what I need to learn about Unreal networking and vehicle interiors.

## How I will test the game

I will aim to recruit four teams of four adults. After a practice session, each team will play low and high movement versions. Two teams will start with each version. The movement settings will be held constant for each version. The route, tasks and each player's job will be the same.

I will record completion times, treatment mistakes and examples of players helping or getting in each other's way. Players will answer short questions about teamwork, enjoyment, frustration and control, followed by a short discussion. I will compare each team's results and look for repeated points in their answers. With four teams, the findings will be a small study.

## Ethics

I will submit the required ethics form with the proposal and get approval before testing. Participants will be adults who give informed consent. They will be told about cartoon injuries, stressful tasks and possible motion discomfort, and can stop whenever they want. I will explain withdrawal arrangements, remove identifying details from results and store data securely. The medical tasks will be clearly fictional. I will explain how long information is kept. Any recordings will need separate consent, and the humour will focus on the unqualified responders' mistakes.

## References

- [1] W. Peng and G. Hsieh, 'The influence of competition, cooperation, and player relationship in a motor performance centered computer game', *Computers in Human Behavior*, 28(6), pp. 2100–2106, 2012.

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- [3] R.M. Ryan, C.S. Rigby and A. Przybylski, 'The motivational pull of video games: A self-determination theory approach', *Motivation and Emotion*, 30(4), pp. 344–360, 2006.
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- [7] Team17, 'Overcooked! 2: Crossplay', n.d. Accessed 12 October 2026.
- [8] Gestalt Studio, 'Emergency Buddies', Steam, n.d. Accessed 13 October 2026.