Plan Overview

A Data Management Plan created using DMPonline

Title: Enhancing confidence in end-of-life care and cardiopulmonary resuscitation status discussions through simulation-based learning, for final year medical students.

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Template: The University of Sheffield Research DMP

Project abstract:

Many final-year medical students, and newly qualified doctors report a lack of confidences when holding difficult conversations with patients and their relatives, particularly when discussing the end of life and cardiopulmonary resuscitation (CPR). These are an essential part of working as a doctor and will be particularly relevant when working as a resident doctor across many clinical areas.

Literature has demonstrated the effectiveness of using simulated scenarios to provide medical students and doctors with the opportunity to practice the structure and delivery of conversations surrounding the end of life; patient wishes for this time and the appropriateness of CPR. The simulated environment has been shown to enhance confidence in knowing how to approach these conversations and convey empathy and compassion whilst doing so. Simulation creates a safe and controlled learning environment where these difficult conversations can be practiced to develop the learner's communication skills. It provides an opportunity for learners to apply their theoretical knowledge before moving into the clinical environment where these conversations are of significant importance and should be approached sensitively. Additionally, simulation allows the facilitator to tailor scenarios to the specific learners needs, and provide immediate feedback and time to act on that feedback and improve.

This project aims to evaluate the impact of simulated difficult patient and relative conversations on the perceived confidence of communication skills of Phase 4 medical students at the University of Sheffield.

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Copyright information:

Enhancing confidence in end-of-life care and cardiopulmonary resuscitation status discussions through simulation-based learning, for final year medical students.

Defining your data

- What digital data (and physical data if applicable) will you collect or create during the project?
- How will the data be collected or created, and how will you assure the quality of your data collection and processing?
- Approximately how much digital data will be generated (in GB, MB, etc), and what formats will they be in (e.g. .docx, .txt, .jpeg)?
- Are you using pre-existing datasets? Give details if possible, including conditions of use.

I will be collecting anonymised data on the perceived confidence of final year medical students on undertaking conversations around end-of-life; advanced care planning and cardiopulmonary resuscitation (CPR) status, before and after undergoing simulated discussions of the above.

This will be collected from pre- and post-questionnaires before and after the simulation session. These will consist of multiple choice questions, that majority of which will be using the Likert scale.

Question 1 & 2 are Yes/No

Questions 3-6 are a scale of 1-5 (1 being not confident at all, 5 is completely confident)

Questions 7-8 are a scale of 1-5 (1 being full understanding, 5 being no understanding)

Questions 9-10 are a scale of 1-5 (1 being not confident at all, 5 is completely confident)

Question 11 is Yes/No

1. 1. Do you consent to the following answers being collected and analysed for the assessment of this communication skills project? Y/N

   If No is selected then the questionnaire will end here

   2. Have you had any prior experience of conversations regarding the end-of-life, advanced care planning or CPR status? Y/N

   3. How confident do you feel in recognising a patient may be nearing the end of their life?

   4. How confident do you feel in identifying patients that we may need to discuss advanced care planning or CPR status with?

   5. How confident do you feel in preparing for discussions about the end-of-life?

   6. How confident do you feel in preparing for discussions about advanced care planning and CPR status?

   7. How would you rate your understanding of what end-of-life discussions should include?

   8. How would you rate your understanding of what advanced care planning and CPR status discussions should include?

   9. How confident do you feel in structuring and delivering discussions about the end-of-life?

   10. How confident do you feel in structuring and delivering discussions about advanced care planning and CPR status?

   11. Do you know where you can find more information/guidance on end-of-life and advanced care planning discussions? Y/N

The post-session questionnaire will also include additional questions centred around feedback for the session, what went well and what could be improved. This would help to assess if the session was suitable, and useful for students as well as help to refine and improve it for the future.

Digital data will be collected via a pre-event and post-event questionnaire. The questionnaire will be on Google forms, with a secure University of Sheffield staff account held by myself, the principle investigator. The data will be collected between the 27th October 2025 and 3rd December 2025.
No pre-existing data sets will be used.

Looking after data during your research

- Where will you store digital data during the project to ensure it is secure and backed up regularly? (University research storage)
- How will you name and organise your data files?
- If you collect or create physical data, where will you store these securely?
- Will you use extra security precautions for any of your digital or physical data? (E.g. for sensitive and/or personal data)
- What metadata/documentation will you create for your data? (E.g. a README file including methodology and file structure; descriptive metadata to enable discovery in a data repository)

I will store digital data on Google Forms (via University of Sheffield account) to ensure that it is secure. It will be stored on an encrypted and password protected laptop to ensure additional security.

All pre-session and post-session questionnaires will be downloaded after all the sessions have been completed. They will be saved under the names ‘pre-session questionnaire answers' and ‘post-session questionnaire answers’. They will be stored in a combined file name ‘Questionnaires responses’. They will be saved on an encrypted and password protected laptop to ensure additional security.

There will be no physical data. There will also be no personal or sensitive data collected. All data will be anonymous. They will be saved on an encrypted and password protected laptop to ensure additional security.

A google form will be created for data collection, which will also provide brief analysis of collected quantitative data. A word and pdf document for the questionnaire responses will also be generated.

Storing data after your research

- Which data supporting your research conclusions will be stored on a long-term basis after the end of the project?
- Where will the data be stored after the project (e.g. University of Sheffield repositoryORDA, or a subject-specific repository) and for how long (e.g. standard TUoS retention period of minimum 10 years after the project)?
- Will your chosen long-term data storage incur any financial costs?

Once data is collected, analysed and interpreted, it will not be stored by myself on a long term basis. The google form will be deleted on the 3rd December 2025 (project end date).

There will be PDF versions of the individual responses and summary of responses from both the pre- and post-session questionnaires to aid in reproducibility for anyone wanting to replicate this project. These will be stored with the University of Sheffield repository ORDA for 10 years. There is no foreseen financial costs for long term data storage.

Sharing data after your research

- How will you make data available outside of the research group after the project? (E.g. openly available through a repository, or on request through your department)
- Will you make all of your data available, or are there reasons you can’t do this? (E.g. personal data, commercial or legal restrictions, very large datasets)
- If you can’t share all of your data, how might you make as much of it available as possible? (E.g. anonymisation, participant consent, sharing analysed data only)
- How will you make your data as widely accessible as possible? (E.g. include a data availability statement in publications; ensure published data has a DOI)
- Will there be any delay before making data available? If so, give the reasons for this.

Data analysis will be available outside of this research group after the project- it will be openly available via the repository. All data will be anonymised so that all data can be made available. The first question of the form will be to consent to this data being used- if consent is not given, the form will end and no further data will be collected from that individual.

I will include a data availability statement in any publications that may result from this project, and if it is published I will ensure data has a DOI.

There will be no delay in making the data available on repository once collected and analysed. This will be done by 3rd December 2025.

Putting your plan into practice

- Who will be responsible for data management in the project? (There may be more than one person)
- Do you require any extra resources to put your data management plan into practice? Will this incur any financial costs?

Myself, as the principle investigator, will be responsible for data management in this project. I do not require any additional resources to put my data management plan into practice and there will be no additional financial costs.