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**Implementation manual for Virtual Reality communication Tool for Application and
evALuation with Key Stakeholders (VR-TALKS): A feasibility, usability, and
acceptability study**

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This manual outlines the steps for implementing the virtual reality (VR) scenarios across partner countries. Delivery must be consistent across all sites. This manual is based on a process that worked for UCC in a [similar study](#). You can adapt the manual to suit your own cultural/educational contexts. The processes described herein also apply to educators who are participating in the testing, but recruitment would be less formal. Ethical guidelines and data protection regulations need to be followed in each country.

Recruitment and Data Collection Process

Recruitment of students:

- In-class (5 min) session in the identified courses/modules to introduce the study. Have a poster/PowerPoint slide in the background that has a large QR code that students could scan to register their interest and book their testing slot **(see example in Appendix 1)**.
- Each university will create their own slots so the QR code will be unique for each site.
- Same poster with same QR code to be sent to same students (e.g., via e-mail).
- The QR code would take the student to a page where they can book a slot to do the testing (e.g., Google Forms or similar). They will need to provide their name and e-mail address and indicate which date and time suits them to do the testing. Ensure 45 min slot per student participant (i.e., 9:00-9:45, 9:45-10:30, etc.).
- Data collector will e-mail the student and confirm the slot and venue for testing.

Data collection on the day:

- Booked venue on campus. If testing with more than 1 participant at a time (which is more efficient), then you will need to use headphones and participants to sit at least 1.5 meter apart. See [headphone recommendation](#) from Jiri.
- Introduce yourself and thank students for engaging in the process.
- Students are given information sheet and sign informed consent (hard copy). Informed consent forms to be stored and destroyed locally based on country-specific ethical requirements.
- A pre-briefing is given to student participant(s) including the two scenarios **(see next section)**.
- Data collectors put on headset, click on the chosen scenario, and give headset to participants.
- Participants put on the headset (and if applicable headphones) and engage with the guided then the non-guided scenario (only one scenario must be chosen i.e., Mr. Steward or Nora).
- After finishing the scenario, using their phones (or tablets such as iPads), each participant to scan a QR code which takes them to the survey. The same QR code will be used in all sites. Make sure that the participant completes the survey **(see QR code for students and educators in Appendix 2 generated by UCC)**.
- A debriefing is then given **(see next section)**.
- Participants receive their gift voucher at this point and then leave the venue.

Important notes:

- **Ensure that participants complete the survey immediately after completing the scenario.**
- Ensure VR headsets are charged at all times (have chargers on the day + access to socket).
- All survey items will be made mandatory to avoid missing data.
- Allow 30min-45min per participant for the whole process (i.e., consent, pre-brief, testing, survey, debrief). Testing in groups is more efficient for several reasons.
- If testing in groups, more support or facilitation will be needed especially if there is any troubleshooting or upset by participants before, during, or after VR engagement.
- Keep pre-brief and debrief, brief! Remember we are not assessing performance, we are only trying to explore how they found the experience and what worked/did not work for them.
- Stay with the participant while they are doing the testing. In the event of any psychological distress or any sign of discomfort, remove the headset and follow procedures as per your ethics application. **Keep a record of the number of participants who end their VR experience early. We will need to report these numbers while writing the results.**

Pre-briefing and Debriefing

The prebrief-debrief is a cognitive aid to support training. It is important to start the debrief with acknowledging the sensitive nature of the communication within the scenario. Focus on emotional intelligence and empathy, both in self-assessment and peer feedback. The use of a framework (**Figure 1 below**) creates a structured but open environment that promotes self-reflection, learning, and emotional support. Ensure participants have access to follow-up resources and psychological support if needed, as these conversations can be emotionally draining. This structured approach will help ensure a comprehensive debriefing session that addresses both the emotional and learning needs of participants in a palliative care context.

Pre-briefing: Provide orientation and preparatory instructions before each simulation session to set objectives and establish psychological safety for learners. This safe space facilitates participants being able to ask questions, offer ideas, and share concerns without fear of negative consequences. Ensure the participants have read the information sheet and signed the consent form (hard copy). And orientate the participants to the room.

Read the fiction contract below and gain participants' commitment to suspend disbelief and actively participate in learning:

***Fiction Contract:** The purpose of VR simulation-based training is for you to develop skills, including judgment and reasoning, for the care of real patients. The realism of each simulation may vary depending upon the learning goals for the session. The simulated environment and patient have certain limitations in their ability to exactly mirror real life. When participating in the VR simulations, your role is to assume all aspects of a practicing healthcare provider's professional behaviour. Additionally, when a gap occurs between simulated reality and real life, it is expected that you try to understand the goals of the learning session and behave accordingly.*

At this stage, provide participants with the two scenarios (Mr. Steward and Nora Ibrahim) and ask them to choose only one. You can choose to print those:

Scenario A: Mr. Steward	Scenario B: Mrs. Nora Ibrahim
<p>You will meet the husband of Mrs. Rachel Steward, whom you already know from his previous visits. His wife (Mrs. Rachel Steward) was due to be discharged from the hospital today, but unfortunately the latest tests have shown that Mrs. Steward must remain in hospital for a few more days. Mr. Steward got the news directly from his wife in the hospital room, and now he enters to talk to you about the situation.</p>	<p>You will meet Nora, a 45-year-old woman diagnosed with advanced breast cancer. She has lived with the disease for three years and undergone multiple lines of therapy. Recent investigations have confirmed an extensive and progressive disease. Currently, Nora is undergoing radiotherapy for brain metastasis, leading to alopecia and severe headaches. She is experiencing profound fatigue. Her treatment is no longer working. Her life expectancy is limited to weeks or months. You are about to deliver the news about the progression of her illness and cessation of treatment.</p>
<p>While communicating with Mr. Steward, consider using NURSE:</p> <ul style="list-style-type: none"> • Name the emotion • Understand the emotion • Respect the person's experience • Support the person • Explore the emotion 	<p>While communicating with Nora, consider using SPIKES:</p> <ul style="list-style-type: none"> • Setting up the interview • Perception-assess the patient's perception • Invitation-Obtaining the patient's invitation • Knowledge-give knowledge and information • Emotions-addressing emotions with empathic responses • Strategy and Summary

Debrief: This is to be conducted as soon as participants complete the scenario and survey. Debrief covers key aspects of emotional and professional reflection, providing a structured approach that is both comprehensive and compassionate. Follow the 3D debriefing model (defusing, discovering, deepening) below to ensure that learners reflect on their experience, receive feedback, and explore areas for improvement.

Participants might indicate they are feeling a high level of stress or emotional distress. Observe for exhibit behaviours that are suggestive of distress or emotional distress. Offer participant to debrief on a one to one or allow more time to provide emotional support.

Thank the participants for engaging in the process and offering their time.

Example questions as part of the 3D model include		Defusing	Discovering	Deeping
<ul style="list-style-type: none"> • Begin by acknowledging the experience and emotions of the participants. • Ask participants how they felt during the scenario and what their immediate reactions were. • Validate emotions like frustration, sadness, or helplessness that are common in palliative care scenarios. <p>“How did it feel to be part of that scenario?” “Thank you for bringing that up” “Let’s recap WHAT happened during that scenario so that we can then discuss WHY during the second part of the debriefing.” What went well? what could be improved?)</p> <p>Discuss how the framework supported your communication?</p>		<ul style="list-style-type: none"> • Discuss what happened during the scenario in a descriptive and non-judgmental manner. <p>“Discuss the response you clicked in the situation. Can you tell me why you did x?” <i>“Can you share what specific strategies you found helpful when the patient started to cry? Is there anything you would do differently next time?”</i> “Thanks for sharing the rationale. Has anyone else every experienced this? What did you do to deal with that situation and why?” “How might this situation have been different if you had used that strategy”. “If you were to encounter a similar situation in the future, how would you handle it?”</p>	<ul style="list-style-type: none"> • Encourage self-assessment and peer feedback to provide different perspectives. <p>“How can you use the information we just discussed in your clinical practice?” “Can you think of other situations where this information could be applied?” “Offer psychological support or follow-up resources if needed.” “Emphasize self-care and coping strategies for managing the emotional toll of palliative care scenarios.”</p>	
<p>SPIKES</p> <p>Setting up the interview Perception-assess the patient’s perception Invitation-Obtaining the patient’s invitation Knowledge-give knowledge and information Emotions-addressing emotions with empathic responses Strategy and Summary</p>	<p>NURSE</p> <p>Name the emotion Understand the emotion Respect the person’s experience Support the person Explore the emotion</p>			

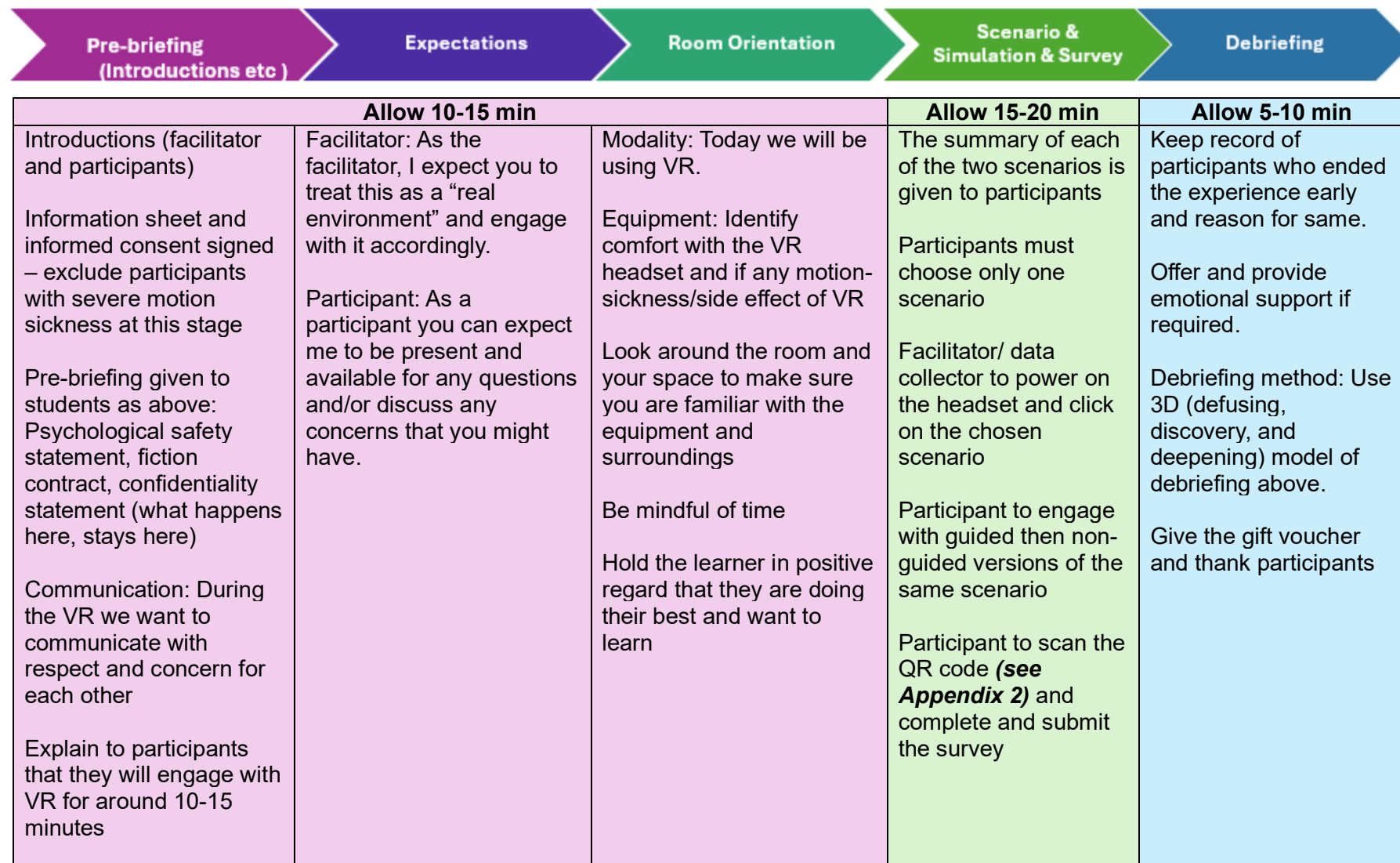


Figure 1. Framework governing pre-briefing, data collection, and debriefing

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Appendix 1. Sample Invitation Poster for Students

Study title: Virtual Reality communication Tool for Application and evALuation with Key Stakeholders (VR-TALKS): A feasibility, usability, and acceptability study

University logo and VR TALKS logo here

ARE YOU:

- ✓ An Undergraduate or Postgraduate Nursing or Medical Student?
- ✓ Aged 18 years and above?

WOULD YOU LIKE TO:

- ✓ Experience Virtual Reality (VR) while learning about difficult communication and breaking bad news?
- ✓ Complete a short survey and receive a €20 voucher?

INTERESTED IN PARTICIPATING?

Book your place by scanning this code **[QR code here]** or use the link in this post. Places are limited!

For queries, contact **XXX** on **XXX**

Appendix 2. QR Codes to the Survey

Survey for **STUDENTS:**

https://ucc.qualtrics.com/jfe/form/SV_4GTfkWyiKgm6s9E



Survey for **EDUCATORS**

https://ucc.qualtrics.com/jfe/form/SV_0oMhkHoltdgaZ0O

