

# Using an adapted Shadowbox technique to teach healthcare staff how to manage a patient with end-of-life care needs: A Blueprint for educators



David MacLennan<sup>1</sup>, Rebecca Evans<sup>1</sup>, Abigail Walton<sup>1</sup>, Charlie Hall<sup>1</sup>, Kelly Moffat<sup>1</sup>, Carolyn Taylor<sup>1</sup>, Suzanne Young<sup>1</sup>, Linda Fletcher<sup>1</sup>  
1: NHS Lothian, 51 Little France Crescent, Old Dalkeith Road, NHS Lothian

## Introduction

Shadowbox was initially used to train military and fire personnel (Hintze, 2008; Klein, 2016). This technique involves participants being immersed in a pre-recorded simulated scenario with a semi-scripted encounter. Semi-scripting refers to writing a script for actors but not for the expert who will enter the scenario. In this sense, the semi-scripting will relate to designing a scenario with intended learning outcomes that should come through organically when an expert encounters the scenario, using cognitive transformation theory.

This technique has since been adopted for healthcare education, with evidence of utility in the teaching of nursing students communicating with dying patients, and the taking of a sexual history in an infectious disease patient (Harder, 2020; Mutch, 2022) In these contexts, these videos were used to stimulate a synchronous debrief.

For our purposes, we adopted the Shadowbox technique. In our trust, healthcare professionals time is precious and ensuring that they are able to get away from the clinical environment in order to attend training sessions has been problematic. Therefore, we used the shadowbox principles to design video resources but formatted them so they could be used either for synchronous debriefing, personal reflective study, small group tutorials or large group teaching.

## Phase 1: Gathering a team

A working group was identified within the local palliative team. This team consisted of senior clinical staff from a nursing and medical background. All had been involved in the education of healthcare staff as part of the palliative team. Furthermore, one member was a medical education fellow with grounding in the literature and application of this in practice.

## Phase 2: What scenarios?

Following a review of existing educational resources, the team decided on three core concepts that were not sufficiently covered already and were an issue in practice. These were felt to be:

- 1: Identification of the dying patient
- 2: Gauging relatives understanding in a sensitive manner
- 3: The importance of anticipatory care prescribing medication at the end of life

## Phase 3: Intended Learning Outcomes

Each scenario proposed scenario was discussed in full. To ensure optimal learning occurred through the use of the Shadowbox technique, specific intended learning outcomes were mapped out to guide scenario development

### Intended learning outcomes

1-To empower various staff groups (wider healthcare team) in their ability to advocate for a patient approaching the end of their life

2: Recognise the signs and symptoms of dying.

Image 1: Intended learning outcomes of scenario 1

## Phase 4: Scripting

The working group then divided into three sub-groups, working on semi-scripted encounters. Once each sub-group had formulated a script, these were then read through in full with the entire team present. This allowed the wider group to sense check the scenarios and ensure that the content was constructively aligned (Biggs, 1996). Furthermore, to ensure optimal learning in self-directed study, the videos were concluded with salient learning points

staff nurse: "I am concerned about Mr Smith who seems to have been getting worse lately. His blood look bad and his blood pressure is low."

Junior doctor: "I think he might need some more fluids, could we speed them up? It could be worsening of his infection or superadded, we should arrange a chest x-ray and recheck his bloods. Could you take bloods?"

staff nurse: "He has been on antibiotics and fluids for the last week. He would need another cannula and the last one was difficult and distressing for him. I am worried that he is getting worse."

Junior doctor: "It could all be infection driven with delirium. I think we need to rule out infection and treat the underlying cause."

staff nurse: "Mr Smith has not been eating or drinking as much and has been sleeping more now. His family had noticed he had been going downhill since he was discharged home last month. He looks frail and I am just worried about him. Do you think he could die?"

Junior doctor: "Hmm, maybe. I am going to run this past my senior."

Senior Dr enters (unscripted role for member of palliative team/ cut to interaction between senior clinician and junior staff.

Image 2: excerpts from the script for scenario one

## Phase 5: Filming

Following scripting and review session, the next step is arranging a practical filming session. In our health board, this was supported by the medical photography department.

Prior to filming, a decision must be made on who will play each role. Scripted roles can be filled by any grade but the unscripted "expert" must be the appropriate member of the team who would undertake the observed skills at a high-level in the clinical environment. In our context these were palliative care consultants.



Image 3: excerpts from the final video for scenario 1: the scripted component

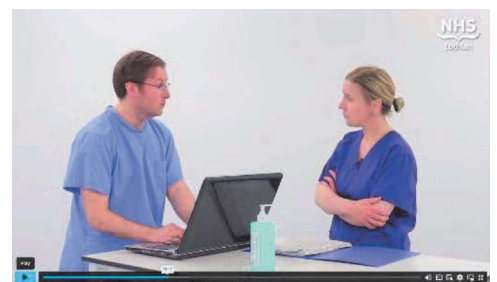


Image 4 : excerpts from the video for scenario one: the unscripted expert interacts naturally



Image 5: excerpts from the video for scenario one: Key learning points are reiterated.

## Phase 6: Embedding

The filmed videos were subsequently embedded into an existing, freely available web resource which can be accessed by all staff groups.

## Dissemination and Evaluation

These resources have now been incorporated into induction processes for new staff and have been used for ad-hoc interventions in the clinical environment.

Further work is needed to understand their impact on staff knowledge and practice.

## Contact

Dr David MacLennan | Medical Education Fellow  
NHS Lothian (MED)  
Email: [david.maclennan@nhslothian.scot.nhs.uk](mailto:david.maclennan@nhslothian.scot.nhs.uk)

## References

- 1: Hintze NR (2008) First Responder problem solving and decision making in Today's asymmetrical environment Dissertation available at:
- 2: Klein G Borders J (2016) The shadowbox approach to cognitive skills training: An empirical evaluation Journal of cognitive engineering and decision making 10 (3) pp268-280
- 3: Mutch CP Oliver N (2022) Virtual simulation of communication skills challenges using a shadowbox technique International Journal of Healthcare Simulation 1 pp 22-24
- 4: Harder N Turner S (2020) Applying simulation design criteria to non-manikin-based experiences: A Modified shadowbox technique Nursing Education Perspectives 4 (1) pp59-60
- 5: Biggs, J (1996) Enhancing teaching through Constructive alignment Higher Education 32 (3) pp 347-364