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BMJ Open Evaluation of the 'Talking Together' simulation communication training for 'goals of patient care' conversations: a mixed-methods study in five metropolitan public hospitals in Western Australia

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ABSTRACT

Introduction In partnership with Cancer Council Western Australia (WA), the East Metropolitan Health Service in Perth, WA has developed a clinical simulation training programme 'Talking Together' using role play scenarios with trained actors as patients/carers. The aim of the training is to improve clinicians' communication skills when having challenging conversations with patients, or their carers, in relation to goals of care in the event of clinical deterioration.

Methods and analysis A multisite, longitudinal mixedmethods study will be conducted to evaluate the impact of the communication skills training programme on patient, family/carer and clinician outcomes. Methods include online surveys and interviews. The study will assess outcomes in three areas; evaluation of the 'Talking Together' workshops and their effect on satisfaction, confidence and integration of best practice communication skills; quality of goals of patient care conversations from the point of view of clinicians, carers and family/carers; and investigation of the nursing/allied role in goals of patient care.

Ethics and dissemination This study has received ethical approval from the Royal Perth Hospital, St John of God and Curtin University Human Research Ethics Committees. The outputs from this project will be a series of research papers and conference presentations.

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INTRODUCTION

The primary focus of medical treatment is to provide curative or restorative care to prolong life. However, for many patients with incurable illness, prolonged survival is not possible. For these patients, a different treatment goal is required so that unnecessary or 'futile' treatments which produce no benefit and reduce the patients' quality of life are not implemented. Goals of care conversations are a key part of patient management,

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ The study comprises a multisite, multimethod, longitudinal, qualitative and quantitative research design ensuring a comprehensive evaluation of the 'Talking Together' communication skills training.
- ⇒ The study uses multiple perspectives (doctors, nurses, allied health, patients, families/carers) to evaluate the effectiveness of the communication skills training.
- ⇒ The evaluation of the communication skills training is conducted by an independent agency.
- ⇒ The study is limited to one hospital system (incorporating five hospitals) in one city.
- ⇒ The researchers were unable to use a randomised controlled trial due to the nature of the delivery of the communication skills training within the clinical settings.

which aim to identify a patient's values, needs and preferences; and to determine the most medically appropriate and patient-centred plan for treatment in the event of clinical deterioration.²³

The 'Goals of Patient Care' (GOPC) initiative was introduced in Western Australia (WA) in 2017 to replace 'do not resuscitate' orders. The process is a conversation between the patient, their family/carer (if relevant) and their treating doctor to develop goals about treatment choices in the event of clinical deterioration. The conversation includes discussion of the patient's medical condition, what treatments might be helpful or unhelpful, patient values, preferences and religious or spiritual considerations. The conversation is documented and kept in the medical record.²

The main aim of goals of care conversations is to improve outcomes for patients and



carers. There is evidence that quality of life, less aggressive medical care, goal concordant care, hospital readmissions and dying in a preferred location are all improved when goals of care conversations are implemented. For example, Apostol et al4 used a cohort study design to examine differences in outcomes between patients who had a goals of care conversation with those who did not. They found that patients with a goals of care conversation were less likely to receive critical care (ventilator and/ or continuous veno-venous haemofiltration dialysis (0% vs 22%, p=0.003), and more likely to be discharged to hospice (48% vs 30%, p=0.04) than patients who had not. Wright et al,⁵ in a sample of 332 patients with advanced cancer, found that more aggressive medical care was associated with worse patient quality of life (6.4 vs 4.6; F=3.61, p=0.01). They also found that end-of-life conversations were associated with lower rates of ventilation (1.6% vs 11.0%; adjusted OR, 0.26; 95% CI 0.08 to 0.83), resuscitation (0.8% vs 6.7%; adjusted OR, 0.16; 95% CI, 0.03 to 0.80), intensive care unit (ICU) admission (4.1% vs 12.4%; adjusted OR, 0.35; 95% CI 0.14 to 0.90), as well as earlier hospice enrolment (65.6% vs 44.5%; adjusted OR, 1.65; 95% CI 1.04 to 2.63).

Two critical factors in the success of goals of care processes are the ability of clinicians to successfully identify when a patient is transitioning to a palliative or terminal stage, and clinician communication skills.⁶ While it is recognised that communication skills can and should be taught, clinicians often lack access to formal training opportunities in this area.⁷⁻¹² In the absence of training, evidence shows communication skills do not reliably improve with experience. 13 A lack of knowledge, experience and confidence can in turn lead to reluctance to initiate timely GOPC conversations. Avoiding or delaying GOPC conversations until a life-threatening crisis occurs has been associated with poorer patient reported quality of life, more frequent hospitalisation, higher likelihood of ICU admission and aggressive interventions, underutilisation of palliative care and greater likelihood of a person dying in hospital. 14-16 Referral to hospice, which usually results in improved outcomes for patients, will have limited benefit when patients are transferred very late in the illness trajectory due to delayed GOPC conversations. 17

Conversely, early goals of care conversations are associated with better patient outcomes. For example, Emiloju $et\ al^{18}$ found that early goals of care conversations (within 2 days of admission) were associated with decreased admissions to critical care units (p=0.0005), and with having a palliative care consultation (p<0.0001). Temel, $et\ al^{19}$ assigned patients with metastatic non-small cell lung cancer to early palliative care or standard care, reporting better quality of life and lower rates of depressive symptoms in the early palliative care group. They also reported that despite receiving less aggressive end-of-life care, those in the early palliative care group had a significantly higher mean survival rate (11.6 months vs 8.9 months).

Communication skills training programmes have been shown to improve clinician's ability to have goals of care conversations. For example, Childers and Arnold²⁰ implemented an educational intervention with 512 clinicians to improve their ability to have goals of care conversations. Participants reported that they were more likely to hold a goals of care conversation after completing the training. This intention translated into practice with the authors finding that clinicians who attended the training were significantly more likely to have documented a goals of care discussion with patients than those who had not attended the training (30.8% vs 27.2%). Programmes that have shown success in improving clinician confidence and communication skills and patient/carer satisfaction with GOPC conversations commonly include simulationbased learning experiences where clinicians role play communication with a simulated patient.^{20–24}

Recognising the importance of providing training in communication skills, particularly around GOPC conversations, a bespoke communication training programme ('Talking Together') based on best practice identified in the literature, ²⁵ ²⁶ was developed for implementation in WA. Initially, eight half-day workshops were delivered between May and July 2020. A total of 59 doctors attended the training, 82% were registrars, primarily working in the emergency department, acute medical unit and ICU. The pilot project demonstrated participant satisfaction with the training and improved confidence in engaging in GOPC conversations.²⁷ Grant funding has been received to roll out the communication skills training across the East Metropolitan Health Service in WA so more medical personnel can participate. The funding will also enable the workshops to be expanded to include nursing and allied health clinicians. Separate funding was received by Curtin University to conduct an independent evaluation of the communication skills workshops. Although previous studies have assessed the effectiveness of communication skills training based on clinician selfreport or documentation assessment, this study will add to the literature by assessing changes in clinician communication skills in a simulation environment.

Study aim

The aim of this study is to determine if the implementation of the 'Talking Together' clinical simulation training programme results in improved communication about GOPC. The study will assess outcomes in three areas with specific aims/objectives for each component.

Part A: evaluation of the 'Talking Together' clinician workshops

- 1. Quantify the number of workshops delivered.
- 2. Quantify the number and type of clinician who attend the workshops.
- 3. Quantify the number of new facilitators trained and the number of workshops they deliver.
- 4. Evaluate facilitator satisfaction with the facilitator training.



- 5. Evaluate clinician satisfaction with the communication training.
- 6. Evaluate the effect of the training on clinician self-perceived confidence in having GOPC conversations.
- 7. Evaluate the effect of the training on clinician integration of best practice communication skills.
- 8. Assess if clinician confidence to engage in GOPC conversations changes over time.

Part B: quality of GOPC conversations

- 1. Evaluate the extent to which all elements of communication best practice are incorporated into GOPC conversations.
- 2. Assess clinician satisfaction with GOPC conversations.
- 3. Assess patient satisfaction with GOPC conversations.
- 4. Assess family/carer satisfaction with GOPC conversations.

Part C: investigation of the nursing/allied role in GOPC

13. Understand the role that nurses and allied health personnel play in GOPC conversations or implementation.

METHODS AND ANALYSIS

Study design

This study uses a multisite, multimethod, longitudinal design incorporating both quantitative and qualitative methodologies to evaluate the effect of the 'Talking Together' communication skills training on patient, family/carer and clinician outcomes. Figure 1 outlines the study procedures for each component.

Quantitative

Aims 1–3 and 5 will be addressed through post-test only data collection following the delivery of the workshops. Aim 6 will be addressed through a pre/post design. Aims 7 and 8 will be addressed using follow-up surveys at 1 month, 3 months and 12 months following completion of the workshop. Aim 9 will be addressed using a pre–post

design with three repeated simulated communication assessments over a 12-month follow-up period.

Qualitative

Aims 4 and 10–13 will be addressed through a qualitative research design.

Setting

This study will be conducted at five metropolitan public hospitals within the East Metropolitan Health Service of WA. One is a tertiary hospital, two are general hospitals and two are specialist hospitals. The study will be conducted between February 2022 and June 2024.

Intervention

The clinical simulation training workshops ('Talking Together') are aimed at improving clinicians' communication skills enabling them to have challenging values-based conversations with patients and carers in relation to goals of care, particularly at end of life. The workshops achieve this by:

- ▶ Introducing an evidence-based, time efficient communication skills framework that focuses on patient values to inform appropriate GOPC and treatment decisions.
- ▶ Using realistic scenarios and simulated patients/ carers (professional actors trained to represent authentic patients/carers with clinical problems).
- Providing participants with the opportunity to practice their communication skills and receive real-time feedback from experienced clinician facilitators using an evidence-based, learner-centred facilitation methodology.

Each workshop is facilitated by a senior hospital medical consultant and a junior facilitator.

Patient and public involvement

Two consumer representatives have been appointed to the project Steering Committee to guide decision making

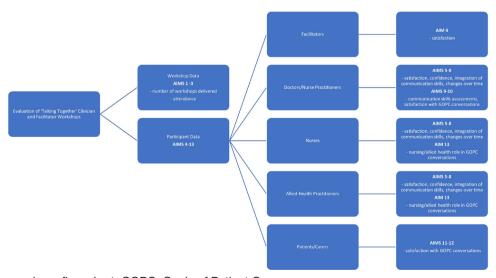


Figure 1 Study procedures flow chart. GOPC, Goals of Patient Care.



on the workshops and research process. Due to administrative delays consumers were unable to be appointed in time to contribute to the research proposal. The consumer representatives will have an ongoing role in contributing to project administration, data analysis and dissemination plans. Involvement will be guided by the Australian National Health and Medical Council Consumer Involvement Statement.²⁸

Part A: evaluation of the 'Talking Together' clinician workshops

Sample

The expectation is that 52 workshops will be delivered across the East Metropolitan Health Service over the 3-year study period, with a maximum of eight clinicians at each workshop. If all workshops are fully subscribed 416 clinicians will receive the communication skills training. Additionally, two facilitator workshops will be delivered, resulting in 16 new lead facilitators being trained by the end of the project. The study sample will be drawn from clinicians who attend the workshops.

Aims 1–3

All clinicians who attend the workshops will be included in the workshop summary statistics.

Aims 4-8

All clinicians who attend the communication skills workshops or the facilitator training workshops will be invited to participate in the workshop evaluation component of this project.

Sample size calculation

Aim 4

Interviews will be analysed within 1 week after they take place and themes identified. Once data 'saturation' or informational redundancy is reached,²⁹ no more interviews will be conducted. It is anticipated that the sample size will be 10–15 participants.

Aims 5-8

In the pilot study of the communication skills training, 59 clinicians attended the training. Of these, 34 completed a presurvey of their learning needs, a response rate of 58%, and 56 completed the postsurveys which assessed changes in confidence, a response rate of 95%.²⁷ Conservatively, if workshops are subscribed at 80% capacity (332 participants), and 60% of workshop attendees complete a pre and post survey (199 participants), this will give 80% power to detect a small effect size (<0.2) between the two means on the confidence scale—the primary outcome measure for the workshop evaluation. In a study by Clayton et al²³ self-assessed confidence following communication skills training for end-of-life conversations increased from a mean of 42.1 (SD=6.41) before the workshop to a mean of 56.1 (SD=8.95) after the workshop. This is a large effect size (1.7). This study is therefore adequately powered to detect a small difference in confidence following the workshop.

Data collection

Aims 1–3

The number of workshops, and numbers and types of clinicians who attend will be obtained from the booking and attendance records.

Aim 4

All facilitators who attend the facilitator training will be invited to participate in a short semi-structured interview to assess their satisfaction with the training they received. Limited demographic and other data will be collected to describe the sample and will include date and time of interview, clinician type (consultant, RMO, registrar, nurse practitioner), age, sex and length of postregistration experience.

Aims 5-6

All clinicians who book to attend the 'Talking Together' workshops will receive an invitation to participate in the workshop evaluation (online supplemental file 1). Participants will be asked to complete the survey before they attend the workshop. Following each workshop, clinicians will be invited to participate in the post workshop evaluation. Both surveys will be administered via the Qualtrics platform. Participants in both the pre and post surveys will be asked to assign an ID number to their survey. This will enable the pre and post surveys to be linked where a participant has completed both components.

Aims 7-8

Participants will also be asked to complete a follow-up survey at 1, 3 and 12 months following completion of the workshop. This survey will be used to assess changes in integration of best practice communication skills and confidence to engage in GOPC conversations over time. These surveys will be administered via the Qualtrics platform. Participants will be requested to add the same ID number as they did in previous surveys.

Instruments

Aim 4

Facilitator satisfaction with the training will be examined using a semistructured interview schedule developed by the research team.

Aims 5-8

The presurvey will consist of four sections. A demographics section, a brief questionnaire about previous experience with GOPC conversations, a confidence questionnaire and a communication skills questionnaire.

The postsurvey will consist of five sections. A demographics questionnaire (which will be skipped for those who completed the presurvey), a brief questionnaire about previous experience with GOPC conversations (which will be skipped for those who completed the presurvey), a confidence questionnaire, a communication skills questionnaire (which will be skipped for those who completed the presurvey), and a workshop satisfaction questionnaire.



The follow-up survey will consist of three sections. A brief survey about experience with GOPC conversations, the confidence questionnaire, and the communication skills questionnaire. Details of the instruments used to measure satisfaction, confidence and communication skills within the surveys are detailed below.

Participant satisfaction with the workshop content and delivery will be evaluated using a survey designed by the research team based on the workshop content. The results from the participant satisfaction survey will be given as feedback to the workshop delivery team on an ongoing basis so that adjustments can be made to the workshop format to improve the presentation and workshop content. This is particularly important as the workshop will now be delivered to nursing and allied health clinicians in addition to medical clinicians and so refinement will be required to ensure the workshop simulations and other content are of relevance to all clinicians. Changes to the workshops will be made at the end of each 6-month period so that the changes can be tracked and any impact on the outcome measures can be assessed.

Confidence will be measured using the 'Self Assessed Confidence in Communication Skills Questionnaire' developed by Lenzi et al⁸⁰ and adapted for an Australian study by Clayton et al.²³ Clayton et al.²³ reported the scale had excellent reliability and internal consistency with a Cronbach's alpha for the scale of 0.934. In the Clayton et al²³ study, self-assessed confidence in communication skills significantly increased after the communication training (pre: mean=42.1, SD=6.41; post: mean=56.1, SD=8.95; Z=-3.923, p<0.001), Lenzi et $at^{0.001}$ used the questionnaire to assess confidence before and after a communication skills training workshop for oncologists and found a significant increase following the workshop (pre: mean=59.5 SD=14.6; post: mean=72.2, SD=14.8; t=6.75; p<0.001). The tool has been adapted to suit the local context.

Integration of best practice communication will be measured using the 'Health Professionals Communication Skills Scale' (HP-CSS) developed by Leal-Costa et al. The HP-CSS is an 18-item instrument used to evaluate the communication skills of clinicians. It consists of four dimensions: the empathy dimension focuses on how clinicians obtain and provide information; the informative communication dimension which focuses on active listening and empathy; the respect dimension which focuses on the respect shown by clinicians and the social skill/assertiveness dimension focusing on clinician social skills and capacity for assertiveness. Exploratory and confirmatory factor analysis was used in two samples of health professionals (n=410 and 517) to explore the psychometric properties of the instrument. Internal consistency was reported as 0.77 for the empathy dimension, 0.78 for the informative communication dimension, 0.74 for the respect dimension, and 0.65 for the social skill/assertiveness dimension. The tool has been adapted to suit the local context.

Data analysis

Aims 1-3

The number and types of clinicians who attend the workshop and facilitator training will be reported using simple statistics as frequencies and percentages.

Aim 4

Facilitator interviews will be transcribed verbatim. Transcripts will be read line by line. Data will be analysed using open coding to summarise the main themes and ideas into categories. A second coder will review a sample of interviews (two). Discrepancies in coding will be discussed until consensus is reached.

Aims 5-6

Satisfaction will be reported using simple statistics such as frequencies and percentages. Open ended questions will be summarised narratively. The mean confidence score will be calculated for the pre and post test periods. The difference in confidence scores pre/post the workshops will be assessed using a paired t-test. Additionally, differences in confidence scores between types of clinicians will be assessed using analysis of variance (ANOVA).

Aims 7-8

The difference in mean confidence scores and communication skills scores over time will be assessed using a repeated measures ANOVA design.

Part B: quality of GOPC conversations Sample

Aim 9

Senior medical clinicians (registrar and above), and nurse practitioners who register to attend the workshops will be invited to participate in an assessment of their GOPC communication skills in a simulation environment. These are currently the only clinicians permitted by hospital policies to hold GOPC conversations with patients. A systematic sampling method will be used with every fourth senior doctor/nurse practitioner who enrols in the course invited to participate in the communication skills evaluation.

Aims 10-12

Satisfaction with GOPC conversations will be assessed in the ward setting. Senior doctors and nurse practitioners who attend the communication skills training, nominated patients with whom they have a GOPC conversation, and the patients' nominated family member/carer will be included in the sample. A systematic sampling method will be used with every fifth senior doctor/nurse practitioner who enrols in the course invited to participate in the ward evaluations. There are no inclusion or exclusion criteria for patients, besides having a recent goals of care conversation with the consenting clinician. Clinical deterioration and transition points, such as entry to palliative or terminal care phases, are common reasons for these conversations.



Sample size calculation

Aim 9

We aim to recruit 20 participants who participate in the four assessments of their communication skills over the study period. This gives 80% power to detect a moderate difference (effect size of 0.5)in skills scores over time and allows for a 50% non-completion rate (G*Power, V.3.1.9.7 repeated measures ANOVA).

Aims 10-12

Interviews will be analysed within 1 week after they take place and themes identified. Once data 'saturation' or informational redundancy is reached, ²⁹ no more interviews will be conducted. It is anticipated that the sample size will be 10–15 participants in each category (doctors/nurse practitioners, patients, family/carers), in each time period (pre and post workshop).

Data collection

Aim 9

Some senior medical clinicians and nurse practitioners who book to attend the 'Talking Together' workshops will receive an invitation to participate in the workshop evaluation, and an invitation to participate in the communication skills evaluation. If they agree to participate in the study, they will be recorded during simulated GOPC conversations using simulated patients.

The simulated GOPC conversations will be conducted the lead facilitators of the 'Talking Together' programme and the patient actors used in the communication skills workshops. The simulated conversations will be recorded prior to workshop attendance and again at 1 month, 3 months and 12 months after completion of the workshop to assess changes over time. Communication skills assessments will be limited to 20 min, with 10 min provided at the end of each assessment for the clinician to receive feedback from the facilitator and the simulated patient (if they request this). Limited demographic and other data will be collected to describe the sample and will include date and time of assessment, timing of assessment (pre/post), clinician type (consultant, RMO, registrar, nurse practitioner), age, sex, length of postregistration experience and prior communication skills training.

Aims 10-12

Some senior medical clinicians and nurse practitioners who book to attend the 'Talking Together' workshop will receive an invitation to participate in the workshop evaluation, and an invitation to participate in short semi-structured interviews to discuss their satisfaction with GOPC conversations. The interviews will be scheduled as close as possible to the time when they complete a GOPC conversations (at each of the timepoints). One interview will be conducted prior to them attending the communication skills workshop and one interview will take place after they attend the workshop. This will allow the clinician to be able to reflect on any changes in the way they

conducted the GOPC conversation as a result of participating in the workshop.

During both the preinterviews and postinterviews, the clinician will be asked to nominate a patient with whom they had a recent GOPC conversation and who is still on the ward. The clinician will be asked to discuss the study with the patient and ask if they are willing to be approached by a researcher. If the patient agrees to participate in an interview, the interview will be conducted at a time that is convenient to the patient in a quiet room on the ward. The patient will be asked to nominate a family member/carer (if applicable) who attended the GOPC conversation. If the family/carer agrees to participate in an interview the interview will be conducted at a time that is convenient to the family/carer in a quiet room on the ward.

Limited demographic and other data will be collected at the time of the interviews to describe the sample and will include date and time of interview, timing of interview (pre/post workshop), participant type (clinician, patient, family/carer), clinician type (doctor, nurse), age, sex, and for patients—their primary diagnosis, length of time in hospital and time since the GOPC conversation.

Instruments

Aim 9

Communication skills will be assessed using the Mini Clinical Evaluation Exercise (Mini-CEX) assessment tool. The Mini-CEX was developed by Nagpal *et al*²⁴ to assess communication skills for GOPC conversations following communication skills training. The evaluation tool incorporates best practice communication skills and is adapted from the American Academy of Hospice and Palliative Medicine and the Mini-CEX format of the American Board of Internal Medicine. The tool has been adapted to suit the local context (see online supplemental file 2).

Aims 10-12

Satisfaction with communication will be examined using a semistructured interview schedule developed by the research team.

Part C: investigation of the nursing/allied health role in GOPC Sample

Aim 13

All nursing and allied health clinicians who attend the GOPC workshops will be invited to participate in semi-structured interviews. The aim of the interviews with nurses/allied health clinicians is to understand what role they play in GOPC conversations as well as how they implement the decisions made in GOPC conversations into their clinical practice. While they are not currently authorised to lead GOPC conversations they may still attend these conversations and play a role in them.

Sample size calculation

Aim 13

Interviews will be analysed within 1 week after they take place and themes identified. Once data 'saturation' or



informational redundancy is reached,²⁹ no more interviews will be conducted. It is anticipated that the sample size will be 10–15 of each category (nurses and allied health professionals).

Data collection

Aim 13

Nursing and allied health clinicians who attend the 'Talking Together' training will receive an invitation to participate in a short semi-structured interview. The interview will take place 1 month after attendance at the workshop to allow the clinician time to integrate the workshop training into their clinical practice. Themes that will be explored include the role that nurses/allied health take in GOPC conversations, and how nurses/allied health professionals incorporate the GOPC plan into their interventions. Limited demographic and other data will be collected to describe the sample and will include date and time of interview, clinician type (nurse, allied health), age, sex and length of postregistration experience.

Instruments

Aim 13

The nursing/allied health role in GOPC conversations will be assessed using a semistructured interview schedule developed by the research team.

Data analysis

Aim 13

Interviews will be transcribed verbatim. Transcripts will be read line by line. Data will be analysed using open coding to summarise the main themes and ideas into categories. A second coder will review a sample of interviews (two from each sample type—nursing and allied heath). Discrepancies in coding will be discussed until consensus is reached.

ETHICAL CONSIDERATIONS

This study has received ethical approval from the Royal Perth Hospital, St John of God, and Curtin University Human Research Ethics Committees. The study also received governance approval from participating sites. A participant information sheet will be provided for each element of the research study and explicit consent will be sought from participants. The outputs from this project will be a series of research papers and conference presentations. Data from the study will not be reused for other projects. The workshop evaluations will be given as feedback to the workshop implementation team and will be used to improve workshop content and delivery.

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