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# BMJ Open

## Evaluation of the 'Talking Together' simulation communication training in a shared decision-making approach to the 'goals of patient care' – a mixed methods study

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## Abstract

**Introduction:** In partnership with Cancer Council WA, the East Metropolitan Health Service in Perth, Western Australia has developed a clinical simulation training program '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, particularly in relation to shared decision-making for goals of care in the event of clinical deterioration.

**Methods and analysis:** A multi-site, longitudinal mixed methods study will be conducted to evaluate the impact of the communication skills training program 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.

### Strengths and limitations of this study

- The study comprises a multi-site, multi-method, longitudinal, qualitative and quantitative research design ensuring a comprehensive evaluation of the "Talking Together" communication skills training.
- The study utilises multiple perspectives (doctors, nurses, allied health staff, 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 utilise a randomised controlled trial due to the nature of the delivery of the communication skills training within the clinical settings.

## 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.<sup>1</sup> Goals of care conversations are a key part of patient management 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.<sup>2 3</sup>

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 is based on shared decision-making principles and 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.<sup>2</sup>

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 al.<sup>4</sup> utilised 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 hemofiltration 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.<sup>5</sup>, 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;  $F=3.61$ ,  $P=.01$ ). 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, 0.08-0.83), resuscitation (0.8% vs 6.7%; adjusted OR, 0.16; 95% CI, 0.03-0.80), Intensive Care Unit (ICU) admission (4.1% vs 12.4%; adjusted OR, 0.35; 95% CI, 0.14-0.90), as well as earlier hospice enrolment (65.6% vs 44.5%; adjusted OR, 1.65; 95% CI, 1.04-2.63).

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.<sup>6</sup> While it is recognised that communication skills can and should be taught, clinicians often lack access to formal training opportunities in this area.<sup>7-12</sup> In the absence of training, evidence shows communication skills do not reliably improve with experience.<sup>13</sup> 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.<sup>14-16</sup> 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.<sup>17</sup>

Conversely, early goals of care conversations are associated with better patient outcomes. For example, Emiloju, et al.<sup>18</sup> 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 ( $p < .0001$ ). Temel, et al.<sup>19</sup> 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 programs have been shown to improve clinician's ability to have goals of care conversations. For example, Childers and Arnold<sup>20</sup> 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%). Programs that have shown success in improving clinician confidence and communication skills and patient/carer satisfaction with GOPC conversations commonly include simulation-based learning experiences where clinicians role play communication with a simulated patient.<sup>20-24</sup>

Recognising the importance of providing training in communication skills, particularly around GOPC conversations, a bespoke communication training program ("Talking Together") based on best practice identified in the literature, was developed for implementation in Western Australia. 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.<sup>25</sup> 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 staff. Separate funding was received by Curtin University to conduct an independent evaluation of the communication skills workshops.

**Study Aim**

The aim of this study is to determine if the implementation of the "Talking Together" clinical simulation training program results in improved communication about goals of patient care. 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 staff 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*

9. Evaluate the extent to which all elements of communication best practice are incorporated into GOPC conversations
10. Assess clinician satisfaction with GOPC conversations
11. Assess patient satisfaction with GOPC conversations
12. 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 multi-site, multi-method, 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 Western Australia. 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 shared decision-making, particularly at end-of-life. The workshops achieve this by:

- Introducing an evidence-based, time efficient communication skills framework which 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), and
- 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 consumers will be appointed to the project Steering Committee to guide decision making on the workshops and research process. Due to administrative delays consumers were unable to be appointed in time to contribute to the research proposal.

### *Sample*

The expectation is that 52 workshops will be delivered across the EMHS over the three-year study period, with a maximum of eight staff at each workshop. If all workshops are fully subscribed 416 staff 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 staff 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.

### Aim 9

Senior medical staff (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 staff type 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 enrolls 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 enrolls in the course invited to participate in the ward evaluations.

### Aim 13

All nursing and allied health staff who attend the GOPC workshops will be invited to participate in semi-structured interviews.

### *Sample size calculation*

#### Aims 5-8

In the pilot study of the communication skills training, 59 clinicians attended the training. Of these, 34 completed a pre-survey of their learning needs, a response rate of 58%, and 56 completed the post surveys which assessed changes in confidence, a response rate of 95%.<sup>25</sup> 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 al.<sup>23</sup> 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.

### 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 in skills scores over time.

### Aims 4 and 10-13

Interviews will be analysed within one week after they take place and themes identified. Once data 'saturation' or informational redundancy is reached<sup>26</sup>, no more interviews will be conducted. It is anticipated that the sample size will be 10-15 participants for Aim 4, 10 – 15 participants in each category (Doctors/Nurse Practitioners, patients, family/carers), in each time period (pre and post workshop) for Aims 10-12, and 10-15 of each category (nurses and allied health professionals) for Aim 13.

### *Data collection*

#### Aims 1-3

The number of workshops, and numbers and types of staff 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 post-registration experience.

#### Aims 5-6

All clinicians who book to attend the 'Talking Together' workshops will receive an invitation to participate in the workshop evaluation. 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 one, three, 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.

#### Aim 9

Some senior medical staff 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 by the lead facilitators of the 'Talking Together' program and the patient actors used in the communication skills workshops. The simulated conversations will be recorded prior to workshop attendance and again at one month, three months and 12 months after completion of the workshop to assess changes over time. Communication skills assessments will be limited to 20 minutes, with 10 minutes 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 post-registration experience, and prior communication skills training.

#### Aims 10-12

Some senior medical staff 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 pre and post interviews 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.

### Aim 13

Nursing and allied health staff who attend the ‘Talking Together’ training will receive an invitation to participate in a short semi-structured interview. The interview will take place one 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 post-registration experience.

### Instruments

#### Aim 4

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

#### Aims 5-8

The pre-survey 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 post-survey will consist of five sections. A demographics questionnaire (which will be skipped for those who completed the pre-survey), a brief questionnaire about previous experience with GOPC conversations (which will be skipped for those who completed the pre-survey), a confidence questionnaire, a communication skills questionnaire (which will be skipped for those who completed the pre-survey), 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 staff in addition to medical staff 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 six-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 al.<sup>27</sup> and adapted for an Australian study by Clayton, et al.<sup>23</sup> Clayton, et al.<sup>23</sup> reported the scale had excellent reliability and internal consistency with a Cronbach’s alpha for the scale of 0.934. In the Clayton, et al.<sup>23</sup> 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;  $Z = -3.923$ ,  $P < .001$ ), Lenzi, et al.<sup>28</sup> 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.<sup>29</sup> 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.

#### 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.<sup>24</sup> 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.

#### Aims 10-12

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

#### Aim 13

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

#### Data analysis

##### Aim 1-3

The number and types of staff 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 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.

##### Aim 9

Two raters, trained in the use of the evaluation tool will view the simulation recordings and rate the incorporation of specific 'best practice' communication skills in the simulated GOPC conversation using the evaluation tool. Raters will be blinded to the time-period of the GOPC conversations. Inter-rater reliability will be reported. Repeated measures ANOVA will be used to assess changes in mean scores over time.

##### Aims 10-12

Interviews will be transcribed verbatim. Transcripts will be read line by line. Researchers who code the data will be blind to the time period (pre or post workshop) in which the interviews took place. 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 – clinician, patient, family/carer). Discrepancies in the coding will be discussed until consensus is reached. Of particular interest is any differences in themes that emerge from interviews conducted before and after workshop attendance.

##### 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, allied health). Discrepancies in coding will be discussed until consensus is reached.

1 **Ethical Considerations**

2  
3  
4 This study has received ethical approval from the Royal Perth Hospital, St John of God, and Curtin University Human  
5 Research Ethics Committees. The study also received governance approval from participating sites. A participant  
6 information sheet will be provided for each element of the research study and explicit consent will be sought from  
7 participants. The outputs from this project will be a series of research papers and conference presentations. Data  
8 from the study will not be reused for other projects. The workshop evaluations will be given as feedback to the  
9 workshop implementation team and will be used to improve workshop content and delivery.

11 **Figure 1: Study Procedures Flowchart**

13  
14 **Acknowledgments**

15 The authors would like to thank Emily Allen for her contribution to earlier stages of this work and for assistance with  
16 the development of the evaluation tools.

18  
19 **Authors' contributions**

20 All authors meet the four criteria for authorship.

- 21 • Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of  
22 data for the work; AND  
23 • Drafting the work or revising it critically for important intellectual content; AND  
24 • Final approval of the version to be published; AND  
25 • Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or  
26 integrity of any part of the work are appropriately investigated and resolved.

28  
29 **Competing interests statement**

30 None declared

32  
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37  
38 **Data sharing statement**

39 No data are available

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For peer review only



Figure 1: Study Procedures Flowchart  
271x173mm (300 x 300 DPI)



# BMJ Open

## Evaluation of the 'Talking Together' simulation communication training for 'goals of patient care' conversations – a mixed methods study

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## Abstract

**Introduction:** In partnership with Cancer Council WA, the East Metropolitan Health Service in Perth, Western Australia has developed a clinical simulation training program '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 multi-site, longitudinal mixed methods study will be conducted to evaluate the impact of the communication skills training program 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.

### Strengths and limitations of this study

- The study comprises a multi-site, multi-method, longitudinal, qualitative, and quantitative research design ensuring a comprehensive evaluation of the "Talking Together" communication skills training.
- The study utilises 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 utilise a randomised controlled trial due to the nature of the delivery of the communication skills training within the clinical settings.

## 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.<sup>1</sup> Goals of care conversations are a key part of patient management 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.<sup>2 3</sup>

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.<sup>2</sup>

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 al.<sup>4</sup> utilised 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 hemofiltration 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.<sup>5</sup>, 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;  $F=3.61$ ,  $P=.01$ ). 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, 0.08-0.83), resuscitation (0.8% vs 6.7%; adjusted OR, 0.16; 95% CI, 0.03-0.80), Intensive Care Unit (ICU) admission (4.1% vs 12.4%; adjusted OR, 0.35; 95% CI, 0.14-0.90), as well as earlier hospice enrolment (65.6% vs 44.5%; adjusted OR, 1.65; 95% CI, 1.04-2.63).

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.<sup>6</sup> While it is recognised that communication skills can and should be taught, clinicians often lack access to formal training opportunities in this area.<sup>7-12</sup> In the absence of training, evidence shows communication skills do not reliably improve with experience.<sup>13</sup> 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.<sup>14-16</sup> 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.<sup>17</sup>

Conversely, early goals of care conversations are associated with better patient outcomes. For example, Emiloju, et al.<sup>18</sup> 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 ( $p < .0001$ ). Temel, et al.<sup>19</sup> 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 programs have been shown to improve clinician's ability to have goals of care conversations. For example, Childers and Arnold<sup>20</sup> 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%). Programs that have shown success in improving clinician confidence and communication skills and patient/carer satisfaction with GOPC conversations commonly include simulation-based learning experiences where clinicians role play communication with a simulated patient.<sup>20-24</sup>

Recognising the importance of providing training in communication skills, particularly around GOPC conversations, a bespoke communication training program ("Talking Together") based on best practice identified in the literature<sup>25-26</sup>, was developed for implementation in Western Australia. 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.<sup>27</sup> 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.

## Study Aim

The aim of this study is to determine if the implementation of the "Talking Together" clinical simulation training program results in improved communication about goals of patient care. 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*

9. Evaluate the extent to which all elements of communication best practice are incorporated into GOPC conversations
10. Assess clinician satisfaction with GOPC conversations
11. Assess patient satisfaction with GOPC conversations
12. 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 multi-site, multi-method, 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 Western Australia. 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 which 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), and
- 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 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.<sup>28</sup>

## *Part A: Evaluation of the ‘Talking Together’ Clinician Workshops*

### *Sample*

The expectation is that 52 workshops will be delivered across the EMHS over the three-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 one week after they take place and themes identified. Once data 'saturation' or informational redundancy is reached<sup>29</sup>, 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 pre-survey of their learning needs, a response rate of 58%, and 56 completed the post surveys which assessed changes in confidence, a response rate of 95%.<sup>27</sup> 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 al.<sup>23</sup> 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 post-registration experience.

##### Aims 5-6

All clinicians who book to attend the 'Talking Together' workshops will receive an invitation to participate in the workshop evaluation (Supplementary 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 one, three, 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 semi-structured interview schedule developed by the research team.

### Aims 5-8

The pre-survey 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 post-survey will consist of five sections. A demographics questionnaire (which will be skipped for those who completed the pre-survey), a brief questionnaire about previous experience with GOPC conversations (which will be skipped for those who completed the pre-survey), a confidence questionnaire, a communication skills questionnaire (which will be skipped for those who completed the pre-survey), 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 six-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 al.<sup>30</sup> and adapted for an Australian study by Clayton, et al.<sup>23</sup> Clayton, et al.<sup>23</sup> reported the scale had excellent reliability and internal consistency with a Cronbach's alpha for the scale of 0.934. In the Clayton, et al.<sup>23</sup> 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;  $Z = -3.923$ ,  $P < .001$ ), Lenzi, et al.<sup>31</sup> 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.<sup>32</sup> 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

### Aim 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 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 enrolls 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 enrolls in the course invited to participate in the ward evaluations.

#### *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, version 3.1.9.7 repeated measures ANOVA).

#### Aims 10-12

Interviews will be analysed within one week after they take place and themes identified. Once data 'saturation' or informational redundancy is reached<sup>29</sup>, 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 by the lead facilitators of the 'Talking Together' program and the patient actors used in the communication skills workshops. The simulated conversations will be recorded prior to

workshop attendance and again at one month, three months and 12 months after completion of the workshop to assess changes over time. Communication skills assessments will be limited to 20 minutes, with 10 minutes 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 post-registration 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 pre and post interviews 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.<sup>24</sup> 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 Supplementary File 2.

##### Aims 10-12

Satisfaction with communication will be examined using a semi-structured 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.

##### *Sample size calculation*

##### Aim 13

Interviews will be analysed within one week after they take place and themes identified. Once data 'saturation' or informational redundancy is reached<sup>29</sup>, 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).

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*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 one 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 post-registration experience.

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*Aim 13*

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

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*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, allied health). Discrepancies in coding will be discussed until consensus is reached.

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**Ethical Considerations**

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**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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**Figure 1: Study Procedures Flowchart**

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**Authors’ contributions**

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**Authors’ contributions**

All authors contributed to the design of the protocol. JB, DE, LK, GB, and JA initiated the project. The protocol was drafted by HM and refined by JB, DE, LK, GB, JA, and LE. HM drafted the manuscript. All authors contributed to the manuscript and read and approved the final manuscript.

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**Competing interests statement**

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**Data sharing statement**

No data are available

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Figure 1: Study Procedures Flowchart

271x174mm (330 x 330 DPI)



## Talking Together – Post-workshop survey

Thank you for agreeing to participate in this evaluation of the 'Talking Together' communication training. The evaluation includes a survey which will be given to you at five timepoints - before you attend the workshop, after you attend the workshop, and at one month, three months and twelve months after completing the workshop. You can choose to participate in all, some, or none of these surveys. This is the post-workshop survey, to complete immediately after attending the workshop. There are five sections. The first asks about you, the second asks about your experience of holding 'goals of patient care' conversations, the third asks you to rate your confidence in having 'goals of patient care' conversations, the fourth asks about your implementation of communication skills, and the fifth asks about your satisfaction with the workshop. If you completed the pre-survey the first, second and fourth sections will be skipped. Please tick the box to indicate your consent to participate in the project.

☐

I have received information regarding this research and had an opportunity to ask questions. I believe I understand the purpose, extent, and possible risks of my involvement in this project, and I voluntarily consent to take part.

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**1. Respondent ID**

**Please use the same respondent ID for the pre-workshop, post-workshop and follow-up surveys. This will allow us to compare responses and you will only need to answer the demographic questions once.**

Please use the first 3 letters of your birth month, the last three letters of your first pet’s name, and your favourite number e.g. MARXER6

**Section 1: About you (skipped for those who completed the pre-survey)**

2. What workshop did you attend?

- Date xxx
- Date xxx
- Date xxx

3. How would you describe your gender?

- Male
- Female
- Other
- Prefer not to say

4. What is your age?

5. What is your health discipline?

- Medical
- Nursing
- Allied Health

6. If medical, what is your current role?

- Consultant
- Registrar
- RMO
- Intern

7. If nursing, what is your current role?

- Nurse Practitioner
- Clinical Nurse Specialist / Clinical Nurse Manager
- Clinical Nurse
- Registered Nurse
- Enrolled Nurse

8. If allied health, what is your current role?

- Social Worker
- Physiotherapist
- Occupational Therapist
- Dietitian
- Speech Pathologist
- Other - Please specify?

9. What is your highest educational qualification?

10. How many years of clinical experience do you have?

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11. What site do you currently work at?

- Royal Perth
- Bentley
- Armadale
- Kalamunda
- St John of God Midland

12. What area do you currently work in?

- Medical
- Surgical
- Emergency and Clinical Support Services
- Other, please specify?

13. If medical, please indicate which areas you work in (select all that apply)?

- Aged Care
- Clinical Pharmacology
- Gastroenterology/Hepatology
- Haematology
- Neurology
- Rheumatology
- Palliative Care
- Rehabilitation
- Respiratory
- Cardiology
- Endocrinology
- General Medicine
- Immunology
- Oncology
- Radiation Oncology
- Renal
- Other, please specify

14. If surgical, please indicate which areas you work in (select all that apply)?

- Cardiothoracic/Thoracic
- General Surgery
- Gynaecology
- Orthopaedics
- Neurosurgery
- Endocrine
- Neurology
- Vascular
- Trauma
- Other, please specify

15. If emergency and clinical support services, please indicate which areas you work in (select all that apply)?

- Anaesthetics
- Coronary Care Unit
- Emergency
- Intensive Care
- Pain Medicine
- Other, please specify

**Section 2: Experience with “Goals of Patient Care” discussions (skipped for those who completed the pre-survey)**

16. What support or training have you previously received regarding your communication skills?
- I have not received any previous communication skills training
  - During undergraduate study
  - Post-graduation (including CPD, targeted training etc.), please provide brief details of any training undertaken post-graduation
17. What do you consider to be a “Goals of Patient Care” conversation?
18. How often do you conduct “Goals of Patient Care” conversations in your current practice?
- Daily/every shift
  - 2-3 times per week
  - 2-3 times per month
  - 2-3 times per year
  - Never
19. How much time would you spend on average during a “Goals of Patient Care” discussion with a patient?
- Less than 5 minutes
  - 5-10 minutes
  - 10-20 minutes
  - More than 30 minutes
20. Have other disciplines been involved in these “Goals of Patient Care” conversations?
- Yes
  - No
21. Please indicate which other disciplines were involved:
- Nursing
  - Allied Health
  - Specialist Palliative Care
  - Other (please specify)
22. How often do you encounter differences in opinions between patient/carer/family and the team’s recommendation regarding “Goals of Patient Care”?
- Always
  - Often
  - Sometimes
  - Rarely
  - Never
23. What would you consider are the main challenges associated with having “Goals of Patient Care” conversations?
24. Please list two areas of communication that you believe are your strengths and two areas that you feel you could improve further:

### Section 3: Confidence with “Goals of Patient Care” discussions

Please rate each item according to how confident you feel about discussing these topics with patients and/or families/carers during “Goals of Patient Care” conversations.

	Not at all confident	Slightly confident	Somewhat confident	Moderately confident	Very confident
25. Give bad news to a patient about his or her illness?					
26. Obtain a patient's and/or carer's/family's perspective of a patient's illness?					
27. Express empathy?					
28. Elicit a patient's information needs regarding their illness and prognosis?					
29. Discuss life expectancy or prognosis?					
30. Discuss potential future symptoms?					
31. Elicit a patient's fears about their health and healthcare?					
32. Elicit a patient's hopes for their health and healthcare?					
33. Obtain a comprehensive map of values and goals from a patient and/or carer/family					
34. Discuss appropriate medical treatment options in the event of patient deterioration?					
35. Discuss treatments that do/do not align with a patient's values and goals					
36. Discuss and document treatment ceilings or limitations (eg. no-CPR, no ICU) with a patient?					
37. Discuss and document treatment ceilings or limitations (eg. no-CPR, no ICU) with a family member?					
38. Handle differing expectations between the treating team and the patient/carer/family					

39. Do you have any comments about your confidence to engage in goals of patient care discussions?

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Section 4: Communication skills (skipped for those who completed the pre-survey)

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Please rate each item according to how you currently communicate with patients.

5

	Almost never	Once in a while	Sometimes	Normally	Very Often	Many times
40. I respect the right of patients to express themselves freely						
41. I explore the emotions of my patients						
42. I respect the autonomy and freedom of patients						
43. When the patient speaks, I show interest through body gestures (nodding, eye contact, smiles, ...)						
44. I provide information to patients (whenever my professional competency permits me) about what concerns them						
45. I listen to patients without prejudice, regardless of their physical appearance, mannerisms, form of expression, ...						
46. I express my opinions and desires clearly to patients						
47. When I give information, I use silence to allow the patient to assimilate what I am saying						
48. When I give information to patients, I do so in understandable terms						
49. When a patient does something that does not seem right, I express my disagreement or discomfort						
50. I dedicate time to listen and try to understand the needs of patients						
51. I try to understand the feelings of my patient						
52. When I interact with patients, I express my opinions clearly and firmly						
53. I believe that the patient is entitled to receive health information						
54. I feel that I respect the needs of patients						
55. I find it difficult to make requests of patients						
56. I make sure that patients have comprehended the information provided						
57. I find it difficult to ask for information from patients						

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## Section 5: Satisfaction with the 'Talking Together' communication skills workshop

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree	Not applicable
58. The pre-workshop video was helpful in preparing me for this workshop						
59. The workshop briefing provided me with a clear understanding of communication theory and frameworks						
60. Using trained actors to rehearse GPC conversations was an effective simulation experience for me						
61. Receiving feedback from the simulated patient during the simulation added value						
62. Receiving feedback from the facilitators during the simulation added value						
63. The workshop provided a protected and supportive learning environment						

64. What changes to your "Goals of Patient Care" conversations will you make based on what you have learnt during this workshop?

65. Do you see broader applications of the communication framework beyond "Goals of Patient Care"?

- Yes
- No
- If yes, please provide a brief outline

66. Do you have any suggestions or comments to improve the workshop?

67. Are there any supports you would like post-training (for example cheat sheets, simulated scenario videos, virtual community of practice, further workshops)? Please describe any supports and your preferred format for these supports.

68. Would you recommend this workshop to your colleagues?

- Yes
- No

69. We would appreciate a comment about this workshop that you would be happy for us to use for promotional purposes.



Communication Skills Evaluation

Mini CEX for “Goals of Patient Care” conversation			
Please assess the skills below using the following marks: “Yes” = Done (stands for score of 2), “PD” = Partially done (stands for score of 1), “No” = did not do (stands for score of 0)			
Content of the Encounter:	Yes	PD	No
1. Greets patient and family and introduces self and team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Explains the purpose of the meeting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Asks patient and family to describe their understanding of the patient’s illness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Describes the current medical condition succinctly without jargon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Offers an opportunity for both the patient and family to ask questions; responds appropriately	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Explores patient’s values and priorities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Clearly discusses clinical concerns and imperatives and describes care options	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Develops a plan of care based on shared priorities, and makes recommendation (if appropriate)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Interpersonal skills of the Encounter:	Yes	PD	No
1. Maintains an open posture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Assures respect and concern eg: comfort, listening and acknowledgement, and privacy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Assumes comfortable inter-personal distance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Uses silence at appropriate times and allows the patient/family to express concerns or reflect	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Recognizes and responds to emotion using more than one NURSES skill	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ending the Encounter:	Yes	PD	No
1. Summarizes the discussion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Reviews next steps of care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Screens for questions or concerns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:			

# 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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Keywords:	MEDICAL EDUCATION & TRAINING, QUALITATIVE RESEARCH, PALLIATIVE CARE

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Manuscripts

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## Abstract

**Introduction:** In partnership with Cancer Council WA, the East Metropolitan Health Service in Perth, Western Australia has developed a clinical simulation training program '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 multi-site, longitudinal mixed methods study will be conducted to evaluate the impact of the communication skills training program 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.

## Strengths and limitations of this study

- The study comprises a multi-site, multi-method, longitudinal, qualitative, and quantitative research design ensuring a comprehensive evaluation of the "Talking Together" communication skills training.
- The study utilises 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 utilise a randomised controlled trial due to the nature of the delivery of the communication skills training within the clinical settings.

## 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.<sup>1</sup> Goals of care conversations are a key part of patient management 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.<sup>2 3</sup>

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.<sup>2</sup>

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 al.<sup>4</sup> utilised 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 hemofiltration 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.<sup>5</sup>, 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;  $F=3.61$ ,  $P=.01$ ). 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, 0.08-0.83), resuscitation (0.8% vs 6.7%; adjusted OR, 0.16; 95% CI, 0.03-0.80), Intensive Care Unit (ICU) admission (4.1% vs 12.4%; adjusted OR, 0.35; 95% CI, 0.14-0.90), as well as earlier hospice enrolment (65.6% vs 44.5%; adjusted OR, 1.65; 95% CI, 1.04-2.63).

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.<sup>6</sup> While it is recognised that communication skills can and should be taught, clinicians often lack access to formal training opportunities in this area.<sup>7-12</sup> In the absence of training, evidence shows communication skills do not reliably improve with experience.<sup>13</sup> 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.<sup>14-16</sup> 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.<sup>17</sup>

Conversely, early goals of care conversations are associated with better patient outcomes. For example, Emiloju, et al.<sup>18</sup> 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 ( $p < .0001$ ). Temel, et al.<sup>19</sup> 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 programs have been shown to improve clinician's ability to have goals of care conversations. For example, Childers and Arnold<sup>20</sup> 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%). Programs that have shown success in improving clinician confidence and communication skills and patient/carer satisfaction with GOPC conversations commonly include simulation-based learning experiences where clinicians role play communication with a simulated patient.<sup>20-24</sup>

Recognising the importance of providing training in communication skills, particularly around GOPC conversations, a bespoke communication training program ("Talking Together") based on best practice identified in the literature<sup>25-26</sup>, was developed for implementation in Western Australia. 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.<sup>27</sup> 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 self-report 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 program results in improved communication about goals of patient care. 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

9. Evaluate the extent to which all elements of communication best practice are incorporated into GOPC conversations
10. Assess clinician satisfaction with GOPC conversations
11. Assess patient satisfaction with GOPC conversations
12. 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 multi-site, multi-method, 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 Western Australia. 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 which 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), and
- 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 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.<sup>28</sup>

## Part A: Evaluation of the ‘Talking Together’ Clinician Workshops

### Sample



The expectation is that 52 workshops will be delivered across the EMHS over the three-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 one week after they take place and themes identified. Once data 'saturation' or informational redundancy is reached<sup>29</sup>, 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 pre-survey of their learning needs, a response rate of 58%, and 56 completed the post surveys which assessed changes in confidence, a response rate of 95%.<sup>27</sup> 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 al.<sup>23</sup> 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 post-registration experience.

##### Aims 5-6

All clinicians who book to attend the 'Talking Together' workshops will receive an invitation to participate in the workshop evaluation (Supplementary 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 one, three, 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 semi-structured interview schedule developed by the research team.

### Aims 5-8

The pre-survey 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 post-survey will consist of five sections. A demographics questionnaire (which will be skipped for those who completed the pre-survey), a brief questionnaire about previous experience with GOPC conversations (which will be skipped for those who completed the pre-survey), a confidence questionnaire, a communication skills questionnaire (which will be skipped for those who completed the pre-survey), 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 six-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 al.<sup>30</sup> and adapted for an Australian study by Clayton, et al.<sup>23</sup> Clayton, et al.<sup>23</sup> reported the scale had excellent reliability and internal consistency with a Cronbach's alpha for the scale of 0.934. In the Clayton, et al.<sup>23</sup> 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;  $Z = -3.923$ ,  $P < .001$ ), Lenzi, et al.<sup>31</sup> 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.<sup>32</sup> 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

### Aim 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 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 enrolls 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 enrolls 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, version 3.1.9.7 repeated measures ANOVA).

#### Aims 10-12

Interviews will be analysed within one week after they take place and themes identified. Once data 'saturation' or informational redundancy is reached<sup>29</sup>, 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 by the lead facilitators of the 'Talking Together' program and the patient actors used in the communication skills workshops. The simulated conversations will be recorded prior to workshop attendance and again at one month, three months and 12 months after completion of the workshop to assess changes over time. Communication skills assessments will be limited to 20 minutes, with 10 minutes 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 post-registration 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 pre and post interviews 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.<sup>24</sup> 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 Supplementary File 2.

##### Aims 10-12

Satisfaction with communication will be examined using a semi-structured 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*

1     Aim 13  
2     Interviews will be analysed within one week after they take place and themes identified. Once data ‘saturation’ or  
3     informational redundancy is reached<sup>29</sup>, no more interviews will be conducted. It is anticipated that the sample size  
4     will be 10-15 of each category (nurses and allied health professionals).  
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7     *Data collection*  
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10    Aim 13  
11    Nursing and allied health clinicians who attend the ‘Talking Together’ training will receive an invitation to participate  
12    in a short semi-structured interview. The interview will take place one month after attendance at the workshop to  
13    allow the clinician time to integrate the workshop training into their clinical practice. Themes that will be explored  
14    include the role that nurses/allied health take in GOPC conversations, and how nurses/allied health professionals  
15    incorporate the GOPC plan into their interventions. Limited demographic and other data will be collected to describe  
16    the sample and will include date and time of interview, clinician type (nurse, allied health), age, sex, and length of  
17    post-registration experience.  
18

19  
20    *Instruments*  
21

22    Aim 13  
23    The nursing/allied health role in GOPC conversations will be assessed using a semi-structured interview schedule  
24    developed by the research team.  
25

26  
27    *Data analysis*  
28

29    Aim 13  
30    Interviews will be transcribed verbatim. Transcripts will be read line by line. Data will be analysed using open coding  
31    to summarise the main themes and ideas into categories. A second coder will review a sample of interviews (two  
32    from each sample type – nursing, allied health). Discrepancies in coding will be discussed until consensus is reached.  
33

34    **Ethical Considerations**  
35

36  
37    This study has received ethical approval from the Royal Perth Hospital, St John of God, and Curtin University Human  
38    Research Ethics Committees. The study also received governance approval from participating sites. A participant  
39    information sheet will be provided for each element of the research study and explicit consent will be sought from  
40    participants. The outputs from this project will be a series of research papers and conference presentations. Data  
41    from the study will not be reused for other projects. The workshop evaluations will be given as feedback to the  
42    workshop implementation team and will be used to improve workshop content and delivery.  
43

44    **Figure 1: Study Procedures Flowchart**  
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47    **Acknowledgments**  
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50    the development of the evaluation tools.  
51

52    **Authors’ contributions**  
53

54    All authors contributed to the design of the protocol. JB, DE, LK, GB, MK, and JA initiated the project. The protocol  
55    was drafted by HM and refined by JB, DE, LK, GB, JA, MK, and LE. HM drafted the manuscript. All authors contributed  
56    to the manuscript and read and approved the final manuscript.  
57

58    **Competing interests statement**  
59

60    None declared

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#### **Data sharing statement**

No data are available

For peer review only



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Figure 1: Study Procedures Flowchart

271x174mm (330 x 330 DPI)

**Talking Together – Post-workshop survey**

Thank you for agreeing to participate in this evaluation of the ‘Talking Together’ communication training. The evaluation includes a survey which will be given to you at five timepoints - before you attend the workshop, after you attend the workshop, and at one month, three months and twelve months after completing the workshop. You can choose to participate in all, some, or none of these surveys. This is the post-workshop survey, to complete immediately after attending the workshop. There are five sections. The first asks about you, the second asks about your experience of holding ‘goals of patient care’ conversations, the third asks you to rate your confidence in having ‘goals of patient care’ conversations, the fourth asks about your implementation of communication skills, and the fifth asks about your satisfaction with the workshop. If you completed the pre-survey the first, second and fourth sections will be skipped. Please tick the box to indicate your consent to participate in the project.

☐ I have received information regarding this research and had an opportunity to ask questions. I believe I understand the purpose, extent, and possible risks of my involvement in this project, and I voluntarily consent to take part.

For peer review only

## 1. Respondent ID

Please use the same respondent ID for the pre-workshop, post-workshop and follow-up surveys. This will allow us to compare responses and you will only need to answer the demographic questions once.

Please use the first 3 letters of your birth month, the last three letters of your first pet's name, and your favourite number e.g. MARXER6

## Section 1: About you (skipped for those who completed the pre-survey)

### 2. What workshop did you attend?

- Date xxx
- Date xxx
- Date xxx

### 3. How would you describe your gender?

- Male
- Female
- Other
- Prefer not to say

### 4. What is your age?

### 5. What is your health discipline?

- Medical
- Nursing
- Allied Health

### 6. If medical, what is your current role?

- Consultant
- Registrar
- RMO
- Intern

### 7. If nursing, what is your current role?

- Nurse Practitioner
- Clinical Nurse Specialist / Clinical Nurse Manager
- Clinical Nurse
- Registered Nurse
- Enrolled Nurse

### 8. If allied health, what is your current role?

- Social Worker
- Physiotherapist
- Occupational Therapist
- Dietitian
- Speech Pathologist
- Other - Please specify?

### 9. What is your highest educational qualification?

### 10. How many years of clinical experience do you have?

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11. What site do you currently work at?

- Royal Perth
- Bentley
- Armadale
- Kalamunda
- St John of God Midland

12. What area do you currently work in?

- Medical
- Surgical
- Emergency and Clinical Support Services
- Other, please specify?

13. If medical, please indicate which areas you work in (select all that apply)?

- Aged Care
- Clinical Pharmacology
- Gastroenterology/Hepatology
- Haematology
- Neurology
- Rheumatology
- Palliative Care
- Rehabilitation
- Respiratory
- Cardiology
- Endocrinology
- General Medicine
- Immunology
- Oncology
- Radiation Oncology
- Renal
- Other, please specify

14. If surgical, please indicate which areas you work in (select all that apply)?

- Cardiothoracic/Thoracic
- General Surgery
- Gynaecology
- Orthopaedics
- Neurosurgery
- Endocrine
- Neurology
- Vascular
- Trauma
- Other, please specify

15. If emergency and clinical support services, please indicate which areas you work in (select all that apply)?

- Anaesthetics
- Coronary Care Unit
- Emergency
- Intensive Care
- Pain Medicine
- Other, please specify

**Section 2: Experience with “Goals of Patient Care” discussions (skipped for those who completed the pre-survey)**

16. What support or training have you previously received regarding your communication skills?

- I have not received any previous communication skills training
- During undergraduate study
- Post-graduation (including CPD, targeted training etc.), please provide brief details of any training undertaken post-graduation

17. What do you consider to be a “Goals of Patient Care” conversation?

18. How often do you conduct “Goals of Patient Care” conversations in your current practice?

- Daily/every shift
- 2-3 times per week
- 2-3 times per month
- 2-3 times per year
- Never

19. How much time would you spend on average during a “Goals of Patient Care” discussion with a patient?

- Less than 5 minutes
- 5-10 minutes
- 10-20 minutes
- More than 30 minutes

20. Have other disciplines been involved in these “Goals of Patient Care” conversations?

- Yes
- No

21. Please indicate which other disciplines were involved:

- Nursing
- Allied Health
- Specialist Palliative Care
- Other (please specify)

22. How often do you encounter differences in opinions between patient/carer/family and the team’s recommendation regarding “Goals of Patient Care”?

- Always
- Often
- Sometimes
- Rarely
- Never

23. What would you consider are the main challenges associated with having “Goals of Patient Care” conversations?

24. Please list two areas of communication that you believe are your strengths and two areas that you feel you could improve further:

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Section 3: Confidence with “Goals of Patient Care” discussions

Please rate each item according to how confident you feel about discussing these topics with patients and/or families/carers during “Goals of Patient Care” conversations.

	Not at all confident	Slightly confident	Somewhat confident	Moderately confident	Very confident
25. Give bad news to a patient about his or her illness?					
26. Obtain a patient’s and/or carer’s/family’s perspective of a patient’s illness?					
27. Express empathy?					
28. Elicit a patient’s information needs regarding their illness and prognosis?					
29. Discuss life expectancy or prognosis?					
30. Discuss potential future symptoms?					
31. Elicit a patient’s fears about their health and healthcare?					
32. Elicit a patient’s hopes for their health and healthcare?					
33. Obtain a comprehensive map of values and goals from a patient and/or carer/family					
34. Discuss appropriate medical treatment options in the event of patient deterioration?					
35. Discuss treatments that do/do not align with a patient’s values and goals					
36. Discuss and document treatment ceilings or limitations (eg. no-CPR, no ICU) with a patient?					
37. Discuss and document treatment ceilings or limitations (eg. no-CPR, no ICU) with a family member?					
38. Handle differing expectations between the treating team and the patient/carers/family					

39. Do you have any comments about your confidence to engage in goals of patient care discussions?

#### Section 4: Communication skills (skipped for those who completed the pre-survey)

Please rate each item according to how you currently communicate with patients.

	Almost never	Once in a while	Sometimes	Normally	Very Often	Many times
40. I respect the right of patients to express themselves freely						
41. I explore the emotions of my patients						
42. I respect the autonomy and freedom of patients						
43. When the patient speaks, I show interest through body gestures (nodding, eye contact, smiles, ...)						
44. I provide information to patients (whenever my professional competency permits me) about what concerns them						
45. I listen to patients without prejudice, regardless of their physical appearance, mannerisms, form of expression, ...						
46. I express my opinions and desires clearly to patients						
47. When I give information, I use silence to allow the patient to assimilate what I am saying						
48. When I give information to patients, I do so in understandable terms						
49. When a patient does something that does not seem right, I express my disagreement or discomfort						
50. I dedicate time to listen and try to understand the needs of patients						
51. I try to understand the feelings of my patient						
52. When I interact with patients, I express my opinions clearly and firmly						
53. I believe that the patient is entitled to receive health information						
54. I feel that I respect the needs of patients						
55. I find it difficult to make requests of patients						
56. I make sure that patients have comprehended the information provided						
57. I find it difficult to ask for information from patients						

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Section 5: Satisfaction with the ‘Talking Together’ communication skills workshop

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	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree	Not applicable
58. The pre-workshop video was helpful in preparing me for this workshop						
59. The workshop briefing provided me with a clear understanding of communication theory and frameworks						
60. Using trained actors to rehearse GOPC conversations was an effective simulation experience for me						
61. Receiving feedback from the simulated patient during the simulation added value						
62. Receiving feedback from the facilitators during the simulation added value						
63. The workshop provided a protected and supportive learning environment						

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64. What changes to your “Goals of Patient Care” conversations will you make based on what you have learnt during this workshop?

65. Do you see broader applications of the communication framework beyond “Goals of Patient Care”?

- Yes
- No
- If yes, please provide a brief outline

66. Do you have any suggestions or comments to improve the workshop?

67. Are there any supports you would like post-training (for example cheat sheets, simulated scenario videos, virtual community of practice, further workshops)? Please describe any supports and your preferred format for these supports.

68. Would you recommend this workshop to your colleagues?

- Yes
- No

69. We would appreciate a comment about this workshop that you would be happy for us to use for promotional purposes.

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Mini CEX for "Goals of Patient Care" conversation			
<p>Please assess the skills below using the following marks:</p> <p>"Yes" = Done (stands for score of 2), "PD" = Partially done (stands for score of 1), "No" = did not do (stands for score of 0)</p>			
Content of the Encounter:	Yes	PD	No
1. Greets patient and family and introduces self and team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Explains the purpose of the meeting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Asks patient and family to describe their understanding of the patient's illness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Describes the current medical condition succinctly without jargon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Offers an opportunity for both the patient and family to ask questions; responds appropriately	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Explores patient's values and priorities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Clearly discusses clinical concerns and imperatives and describes care options	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Develops a plan of care based on shared priorities, and makes recommendation (if appropriate)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Interpersonal skills of the Encounter:	Yes	PD	No
1. Maintains an open posture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Assures respect and concern eg: comfort, listening and acknowledgement, and privacy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Assumes comfortable inter-personal distance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Uses silence at appropriate times and allows the patient/family to express concerns or reflect	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Recognizes and responds to emotion using more than one NURSES skill	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ending the Encounter:	Yes	PD	No
1. Summarizes the discussion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Reviews next steps of care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Screens for questions or concerns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><b>Comments:</b></p>			