

## Recommended Summary Plan for Emergency Care and Treatment [ReSPECT] Report

## Subtitle: A Rapid Literature Review

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**Introduction:** In January 2024, a multi-professional Critically Appraised Topic (CAT) group was established to support a rapid review of literature related to Recommended Summary Plan for Emergency Care and Treatment (ReSPECT). A CAT group is a community of practice with a common interest to assess what is known/not known on a given topic in clinical practice by assessing the evidence. A rapid review uses all the traditional tools and process expected for any high-quality systematic review (Appendix 1). It is made **rapid** by limiting the breadth of databases searched, using a very focused literature review question with clearly defined parameters. Rapidity in this case was also achieved through the group approach contributing to each stage of the review process. In our case this review was completed in 6 months with contributions of 6 members of clinical staff. A CAT group is a pragmatic process which aims to establish key evidence to inform practice rather than publish new evidence. Dissemination of further information will be achieved through production of an abstract, poster and this report.

**Review question:** To search the literature a question was framed using the PICO framework (Population, Intervention, Comparison and Outcomes) as below:

What are the educational needs of healthcare professionals regarding the optimal communication and understanding of RESPECT needs with patients and other healthcare colleagues?

**Summary of findings:** Of the evidence reviewed (n= 10 papers) the following key points from papers selected (n=5) are noted as applicable to practice:

- Supporting education regarding communication for doctors in training, improves their skills, which supports conversations/negotiations surrounding Do Not Resuscitate orders and other related issues.
- Education of nurses regarding active resuscitation decisions in a resuscitation team, aids confidence and knowledge leading to improved decision-making.
- Improved documentation of discussions improves team communication and with patients about their care and the rationale for decisions made.
- Understanding patient concerns; using active listening skills, with adequate consideration of the type of environment where the discussions take place <u>and</u> sharing of any concerns (not limited to clinical issues) are integral to the informed patient and relative decision making about resuscitation and other related issues.
- The format adopted for written communication is shown to improve shared decision-making related to resuscitation in a team and assists early escalation of and resolution of issues throughout an admission to hospital.
- An acknowledgement that 'older age and multiple conditions' of patients influences clinician decision making related to the inclusion of patients for Resuscitation – not necessarily adversely – but these factors are present in decision making.

This ends the summary of key points from the rapid evidence review.

**Literature limitations:** Papers were global from Taiwan (x3); USA (x4); Australia (x1); Iran (x1) Wales (x1). Nine papers were single centre studies. All were cross sectional studies: which makes it impossible to extrapolate exact data for individual staff groups (aggregate only). Bias potential was also possible through preference in sampling in highest scoring studies – but partly mitigated through two reviewers (blinded) for all papers and adjudication for three papers, using third reviewer.

#### Key words of the search strategy:

Resuscitation Emergency care and treatment plan End of life ? palliative? Do not resuscitate? [timing of conversations]

Education [modes of delivery: online/blended/in person and theory practice gap] Training [specific related skills]

Discussion [difficult conversations and Communication+ improving process of this] Planning [context of discussion – emergency or elective care] Decision making [and documentation – what makes a good plan?]

Barriers/gaps [aversion, attribution to death – from patient/carers] Healthcare professionals Patients and Carers and Relatives. Healthcare settings [ambulance service, GPs, primary care]

#### May not need to explicitly have in search

ReSPECT Healthcare professionals Allied health professionals Care home staff Acute and care home and community settings Skills Shared decision making Patient inclusion

#### Search results

An initial scoping search using PubMed and Embase was conducted by Bridget O'Connell (CEBIS) on 31/1/2024, which yielded 21 results. On discussion with the group members, search terms were adjusted using the same databases the search was re-run yielding 52 pieces of evidence.

#### Table 1: PubMed

	Search date: 07/02/2024		
Search	Term	Results	
1	(education[MeSH Terms]) OR (training[MeSH Terms])	959,394	
3	("do-not-resuscitate") OR ("do not resuscitate")	2,599	
4	((#1) AND (#2))	153	
5	Filter last 10 years	35	

#### Table 2: Embase

#### Search date: 07/02/2024

Search	Term	Results
1	"do not resuscitate order"/	1785
2	education/	494552
3	training/	118736
4	2 or 3	603167
5	1 and 4	77
6	Limit to publications from 2014 to current	77
7	Limit to Articles (exclude letters/conference papers etc)	18

#### Paper Screening and Selection

The papers (n=52) were located and uploaded to RAYYAN software to enable data display of titles and abstracts and data screening tools. Each reviewer was assigned papers by the Librarian (CEBIS), the blind facility was applied until first screening was completed. Any non-concordance of review (include/exclude) was adjudicated by the group facilitator (LLD). The final full paper to review (n=10) ready for appraisal using CASP tools by group members.

#### Flow of screening and literature selection



Figure 1.

*From:* Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). *Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med* 6(7): e1000097. doi:10.1371/journal.pmed1000097

#### **Critical Appraisal of Papers:**

Each of the twelve papers were independently critically appraised using Critical Appraisal Skills Programme (CASP) tools and Joanna Briggs Institute (JBi) tools, by group members noting usefulness to practice/topic. Two full text papers were excluded. All other papers (n=10) were assigned a quality score (out of 36) by two reviewers (=72), using Hawker et al (2002) quality tool (Appendix 2). The data was summarised and displayed (Table 3).

### Table 3: Data Display of Evidence [Alphabetical Order]

Author and Year	Location and Setting	Aims	Population	Design	Intervention (s)	Quality Score
Cheng et al 2019	Taiwan Emergency Department Single centre	Impact of SHARE communication model of DNA orders	Doctors and Patients	Cross Sectional Study	SHARE training course and Survey	31 33 <mark>64</mark>
Fan, Wang and Lin 2018	Taiwan Family Medicine Clinics Multi-site	Explore how to allow a natural death v DNAR. Needs and considerations underpinning discussions	524 healthy adults	Cross Sectional Study	Comprehensive scenarios to include DNAR ratings and Survey	16 14 <mark>30</mark>
Goodarzi et al 2022	Iran 2 acute hospitals Dual centre	To evaluate knowledge attitude and decision making of nurses regarding DNAR	128 Nurses	Descriptional Cross Sectional Study	Survey Instrument design – specialist group of nurses Conduct survey	32 34 <mark>66</mark>
Haire eta al 2023	Wales Cancer Centre setting	Improvement of DNA CPR discussions and documentation	2 x 50 sets of patient notes retrospective	Cross Sectional Audit and QI	2 cycles of audit Retrospective notes review New Documentation	33 24 (=29) <mark>62</mark>
Haynes et al 2019	USA California	To improve the continuity of care for physical orders for life sustaining treatment on transfer of patients to nursing home care.	50 sets of charts	Ql Retrospective audit using purposive sampling	1 cycle of 50 notes Education Ward Huddles Adjusted workflow	<sup>30</sup> 21 (=28) <mark>59</mark>
Johnson et al 2017	Australia Perth Rehabilitation setting	To assess the utility and safety of two interventions to improve CPR decision making for hospitalised older persons	Ward medical staff 1 -99 2a -94 2b - 84	Before and After Interventional Study Retrospective audit tools used (SPICT)	Three interventions in two phases: (1) Ward based education (3 x1 hours). (2) a - Goals of patient care form (GoPC) B – process changes	<sup>33</sup> 14 (=32) <mark>65</mark>
Kushelev et al 2021	USA – Ohio Surgery setting Single centre	Improve knowledge of anaesthetic trainee specialists in DNR orders and evaluate efficacy and retention of knowledge of didactic training	44 Doctors	Before and after study using a survey [purposively sampled]	Didactic training Survey before and after (12 months)	22 20 <mark>42</mark>
Parikh 2017	USA Florida	Improve skills retention in palliative care	105 Medical students In 3 <sup>rd</sup> year	Purposive sample Survey only	Education intervention Long term (one year) follow-up survey	30 29 <mark>59</mark>
Stevenson et al 2017	USA Boston	Management of patients based on the code assigned DNI – do not intubate DNR	A = 304 Participants B= 249 participants	2 x Cross sectional randomised surveys (A & B)	4 comprehensive scenarios with multiple choices of treatment options, divided into two surveys	34 33 <mark>67</mark>
Wu and Chang et al 2020	Taiwan Medical centre 1700 beds	To explore the predictors of knowledge, attitude and practice for DNR	194 nurses	Cross sectional design	Development of a KAP-DNR inventory. Incentivised (gift vouchers)	23 20 <mark>43</mark>

#### Quality scoring of selected papers

In the case of three papers (n=10) namely, Haire et al; Haynes et al and Johnson et al, the quality scores were contrasting, hence a third person from the group independently adjudicated; during the process they were blinded from the original scores given. This process significantly narrowed the disparity. The final scores indicated the range from best quality (score 67/72), to poorest quality (score 30/72), however the usefulness to practice and quality were considered as aggregate, in relation to the review topic (Figure 2).



## Individual article scores – showing range

#### Figure 2.

#### Papers selected

Five papers were selected at this stage for potential inclusion, through group discussion as being of good quality (> 60) and relevant/useful to the clinical topic. Each of the summaries of usefulness to practice were made by members of the group; on  $20^{\text{th}}$  June 2024 this work was presented.

#### Table 4: Final Papers Selected

Authors	Year	Score
Stevenson et al,	2017	67
Goodarzi et al	2022	66
Johnson et al,	2017	65
Cheng et al	2019	64
Haire et al,	2023	62

The abstract from each paper is included within this report for reference only.

#### Abstracts of Selected Papers

[in order of scoring highest to lowest]

#### 1. Stevenson et al, 2017 – SCORE 67

Association between DNR and DNI/ resident decision making and national survey

Rationale: Compared with their Full Code counterparts, patients with do not resuscitate/do not intubate (DNR/DNI) status receive fewer interventions and have higher mortality than predicted by clinical characteristics.

Objectives: To assess whether internal medicine residents, the front-line providers for many hospitalized patients, would manage hypothetical patients differently based on code status. We hypothesized respondents would be less likely to provide a variety of interventions to DNR/DNI patients than to Full Code patients.

Methods: Cross-sectional, randomized survey of U.S. internal medicine residents. We created two versions of an internet survey, each containing four clinical vignettes followed by questions regarding possible interventions; the versions were identical except for varying code status of the vignettes. Residency programs were randomly allocated between the two versions.

Results: Five hundred thirty-three residents responded to the survey. As determined by Chi-squared and Fisher's exact test, decisions to intubate or perform cardiopulmonary resuscitation were largely dictated by patient code status (.94% if Full Code, ,5% if DNR/DNI; P , 0.0001 for all scenarios). Resident proclivity to deliver noninvasive interventions (e.g., blood cultures, medications, imaging) was uniformly high (.90%) and unaffected by code status. However, decisions to pursue other aggressive or invasive options (e.g., dialysis, bronchoscopy, surgical consultation, transfer to intensive care unit) differed significantly based on code status in most vignettes.

Conclusions: Residents appear to assume that patients who would refuse cardiopulmonary resuscitation would prefer not to receive other interventions. Without explicit clarification of the patient's goals of care, potentially beneficial care may be withheld against the patient's wishes.

Keywords: DNR/DNI; clinician decision-making; effect of code status

#### 2. Goodarzi et al (2022) – SCORE 66

Knowledge, Attitude and Decision Making of Nurses in the resuscitation room regarding DNR decisions

BACKGROUND: Making appropriate decisions for cardiopulmonary resuscitation (CPR) is very challenging for healthcare providers. This study aimed to evaluate knowledge, attitude, and decision making about do-not-resuscitate (DNR) and termination of resuscitation (ToR) among nurses in the resuscitation team.

METHODS: This descriptive cross-sectional study was conducted in April–September 2020. Participants were 128 nurses from the CPR teams of two hospitals in

Kermanshah and Hamedan, Iran. A valid and reliable researcher-made instrument was used for data collection. Data were analyzed using the Chi-square, Fisher's exact, and Mann-Whitney U tests, the Spearman's correlation analysis, and the logistic and rank regression analyses.

RESULTS: Only 22.7% and 37.5% of participants had adequate knowledge about ToR and DNR. The significant predictor of DNR and ToR knowledge was educational level and the significant predictors of decision making for CPR were educational level, gender, and history of receiving CPR-related education (P<0.05). When facing a cardiac arrest and indication of DNR or ToR, 12.5% of participants reported that they would not start CPR, 21.5% of them reported that they would terminate CPR, and 14.8% of them reported that they would perform slow code. The DNR decision had significant relationship with educational level, DNR knowledge, and ToR knowledge (P< 0.05), while the ToR decision had significant relationship with educational level and ToR knowledge (P<0.05).

CONCLUSION: Nurses' limited DNR and ToR knowledge and physicians' conflicting orders and documentation can cause ethical challenges for nurses. Clear guidelines for DNR orders or TOR is necessary for nurses, in order to prevent any potential confusion, legal or psychosocial issues and concerns surrounding CPR and improve their involvement in CPR decision making process.

KEYWORDS: Cardiopulmonary resuscitation, DNR order, Ethics, Resuscitation Orders

#### 3. Johnson et al, 2017 – SCORE 65

Goals of patient care system change with video-based education increases rates of advance cardiopulmonary resuscitation decision-making and discussions in hospitalised rehabilitation patients

Background: Advance cardiopulmonary resuscitation (CPR) discussions and decisionmaking are not routine clinical practice in the hospital setting. Frail older patients may be at risk of non-beneficial CPR.

Aim: To assess the utility and safety of two interventions to increase CPR decisionmaking, documentation and communication for hospitalised older patients.

Methods: A pre-post study tested two interventions: (i) standard ward-based education forums with CPR content; and (ii) a combined, two-pronged strategy with 'Goals of Patient Care' (GoPC) system change and a structured video-based workshop; against usual practice (i.e. no formal training). Participants were a random sample of patients in a hospital rehabilitation unit.

The outcomes were the proportion of patients documented as: (i) not for resuscitation (NFR); and (ii) eligible for rapid response team (RRT) calls, and rates of documented discussions with the patient, family and carer.

Results: When compared with usual practice, patients were more likely to be documented as NFR following the two-pronged intervention (adjusted odds ratio (aOR): 6.4, 95% confidence interval (CI): 3.0; 13.6). Documentation of discussions with patients was also more likely (aOR: 3.3, 95% CI:1.8; 6.2). Characteristics of patients

documented NFR were similar between the phases, but were more likely for RRT calls following Phase 3 (P 0.03).

Conclusion: An increase in advance CPR decisions occurred following GoPC system change with education. This appears safe as NFR patients had the same level of frailty between phases but were more likely to be eligible for RRT review. Increased documentation of discussions suggests routine use of the GoPC form may improve communication with patients about their care.

#### 4. Cheng et al, 2019 – SCORE 64

The training in SHARE communication course by physicians increases the signing of do-not-resuscitate orders for critical patients in the emergency room (cross-sectional study)

Background: Communication skills may be an important skill for the front-line emergency physicians.

Aim: This study aimed to investigate the effect of training in a SHARE communication course by emergency physicians on patient notification and signing of do-not-resuscitate (DNR) orders for critical patients in the emergency room. Design: From a total of 29 attending physicians in the emergency department, 19 physicians had been trained in the SHARE communication course. An observation form designed based on the SHARE training was completed by two observers who noted the communication process between physicians and patients and family members during patient notification and signing a DNR order. To assess the influence of physicians trained in a SHARE communication course on the signing of DNR orders, a propensity score-matched population was created to reduce the potential selection bias of patients and family members.

Setting: Level 1 trauma medical center in southern Taiwan. Results: There were 145 individuals enrolled in the study, of which 93 signed the DNR order, and 52 did not sign it. Analysis from 23 matched pairs from this population revealed that significantly more family members would sign a DNR order if the physician had been trained in the SHARE communication course than when they did not receive this training (78.3% vs. 39.1%, respectively, p = 0.017). The overall score of the observation form for physicians was higher in those individuals who had signed a DNR order than in those who did not sign it (29.48 ± 3.72 vs. 26.13 ± 3.52, respectively, p = 0.003), especially when the physician had chosen a quiet environment (1.35  $\pm$  0.65 vs. 0.87  $\pm$  0.69, respectively, p = 0.020), understood the patient's wishes and confirmed them  $(1.78 \pm 0.42 \text{ vs. } 1.30 \pm 0.70, \text{ respectively, p} =$ 0.008), and expressed concern ( $1.48 \pm 0.79$  vs.  $0.96 \pm 0.77$ , respectively, p = 0.028). In addition, a feedback survey about the feelings experienced by these physicians during the process of patient notification did not reveal a significant difference during the communication with those who had or had not signed DNR orders. Conclusion: The training in a SHARE communication course can improve the communication skills of emergency physicians in patient notification and signing of DNR orders for critical patients.

#### 5. Haire et al, 2023 – SCORE 62

# Do not attempt cardiopulmonary resuscitation documentation: a quality improvement project

**Objectives** This quality improvement project to enhance do not attempt cardiopulmonary resuscitation (DNACPR) documentation in a Welsh National Health Service trust.

**Methods** A full clinical review cycle evaluating 50 DNACPR forms per data collection, total = 100 forms. The DNACPR audit template was used to ensure standardised audit criteria. After first data collection, several changes were introduced: (1) a new version national form was adopted; (2) a series of education events to

improve understanding of the DNACPR policy. (3) Electronic learning resources, such as the TalkCPR videos and electronic staff record modules.

**Results** The evaluation of data demonstrated consistency in completion of forms. The introduction of the new national audit form in phase 2 resulted in clearer documentation of discussions held with patients, their significant others and documented reasons why / when conversations had not taken place.

**Conclusion** Documentation of DNACPR discussions in the trust demonstrably improved in several domains. A central electronic record for advance and future care plans, accessible by all relevant healthcare providers, patients and carers, may be an effective way of improving further on the current paper-based model

#### References

Haire E, Bralesford C, Botting J, Beasant E, Taubert M. Do not attempt cardiopulmonary resuscitation documentation: a quality improvement project. BMJ Support Palliat Care. 2023 May 31:spcare-2022-004133. doi: 10.1136/spcare-2022-004133. Epub ahead of print. PMID: 37258086.

Goodarzi A, Sadeghian E, Babaei K, Khodaveisi M. Knowledge, Attitude and Decisionmaking of Nurses in the Resuscitation Team towards Terminating Resuscitation and Do-not-Resuscitate Order. Ethiop J Health Sci. 2022 Mar;32(2):413-422. doi: 10.4314/ejhs.v32i2.22. PMID: 35693564; PMCID: PMC9175214.

Kushelev M, Meyers LD, Palettas M, Lawrence A, Weaver TE, Coffman JC, Moran KR, Lipps JA. Perioperative do-not-resuscitate orders: Trainee experiential learning in preserving patient autonomy and knowledge of professional guidelines. Medicine (Baltimore). 2021 Mar 19;100(11):e24836. doi: 10.1097/MD.00000000024836. PMID: 33725954; PMCID: PMC7982162.

Wu LF, Chang LF, Hung YC, Lin C, Tzou SJ, Chou LJ, Pan HH. The Effect of Practice toward Do-Not-Resuscitate among Taiwanese Nursing Staff Using Path Modeling. Int J Environ Res Public Health. 2020 Aug 31;17(17):6350. doi: 10.3390/ijerph17176350. PMID: 32878243; PMCID: PMC7503820.

Cheng YH, Chen CH, Chen FJ, Huang EY, Liu PM, Kung CT, Huang HL, Yang LH, Chien PC, Hsieh CH. The training in SHARE communication course by physicians increases the signing of do-not-resuscitate orders for critical patients in the emergency room (cross-sectional study). Int J Surg. 2019 Aug;68:20-26. doi: 10.1016/j.ijsu.2019.06.005. Epub 2019 Jun 8. PMID: 31185311.

Haynes CA, Dashiell-Earp CN, Wenger NS, Simon WM, Skootsky SA, Clarke R, Watts FA, Walling AM. Improving Communication About Resuscitation Preference for Patients Discharged from Hospital to Nursing Home: A Quality Improvement Project. J Palliat Med. 2019 May;22(5):557-560. doi: 10.1089/jpm.2018.0419. Epub 2019 Feb 14. PMID: 30762475.

Fan SY, Wang YW, Lin IM. Allow natural death versus do-not-resuscitate: titles, information contents, outcomes, and the considerations related to do-not-resuscitate decision. BMC Palliat Care. 2018 Oct 10;17(1):114. doi: 10.1186/s12904-018-0367-4. PMID: 30305068; PMCID: PMC6180419.

Johnson CE, Chong JC, Wilkinson A, Hayes B, Tait S, Waldron N. Goals of patient care system change with video-based education increases rates of advance cardiopulmonary resuscitation decision-making and discussions in hospitalised rehabilitation patients. Intern Med J. 2017 Jul;47(7):798-806. doi: 10.1111/imj.13454. PMID: 28401688. Parikh PP, White MT, Buckingham L, Tchorz KM. Evaluation of palliative care training and skills retention by medical students. J Surg Res. 2017 May 1;211:172-177. doi: 10.1016/j.jss.2016.11.006. Epub 2016 Nov 11. PMID: 28501114.

Stevenson EK, Mehter HM, Walkey AJ, Wiener RS. Association between Do Not Resuscitate/Do Not Intubate Status and Resident Physician Decision-making. A National Survey. Ann Am Thorac Soc. 2017 Apr;14(4):536-542. doi: 10.1513/AnnalsATS.201610-798OC. PMID: 28099054; PMCID: PMC5427717.

#### Appendix 1

#### Process and Tools used during this review

#### Group meetings with CAT members:

- Learning about methods and process
- Devising suitable review question
- Engaging and learning about the process
- Time for discussions about the evidence
- Presentation of the available evidence

#### Individual work in-between meetings:

- Screening of literature against eligibility criteria using RAYYAN software
- Critical appraisal of literature using CASP and JBi tools
- Summary of application of evidence to practice
- Quality scoring articles using HAWKER tool
- Double blind review process to finalize included literature

#### Appendix 2

This checklist is from Hawker, S., S. Payne, et al. (2002).

#### "Appraising the Evidence:

Reviewing Disparate Data Systematically." Qualitative Health Research 12(9): 1284-1299.

Please assess each paper on the following criteria. For scoring please refer to notes below.

Good=4 Fair=3 Poor=2 Very poor=1 Lower scores =poor quality Notes for appraising the quality of each paper:

#### 1. Abstract and title:

Did they provide a clear description of the study? Good Structured abstract with full information and clear title. Fair Abstract with most of the information.

Poor Inadequate abstract.

Very Poor No abstract.

#### 2. Introduction and aims:

Was there a good background and clear statement of the aims of the research? Good Full but concise background to discussion/study containing up-to date literature

review and highlighting gaps in knowledge. Clear statement of aim AND objectives including

research questions.

Fair Some background and literature review. Research questions outlined.

Poor Some background but no aim/objectives/questions, OR Aims/objectives but inadequate background.

Very Poor No mention of aims/objectives. No background or literature review.

#### 3. Method and data:

Is the method appropriate and clearly explained?

Good Method is appropriate and described clearly (e.g., questionnaires included). Clear

details of the data collection and recording.

Fair Method appropriate, description could be better. Data described.

Poor Questionable whether method is appropriate. Method described inadequately. Little

description of data.

Very Poor No mention of method, AND/OR Method inappropriate, AND/OR No details of data.

#### 4. Sampling:

Was the sampling strategy appropriate to address the aims?

Good Details (age/gender/race/context) of who was studied and how they were recruited.

Why this group was targeted. The sample size was justified for the study. Response rates

shown and explained.

Fair Sample size justified. Most information given, but some missing.

Poor Sampling mentioned but few descriptive details.

Very Poor No details of sample.

#### 5. Data analysis:

Was the description of the data analysis sufficiently rigorous?

Good Clear description of how analysis was done. Qualitative studies: Description of how

themes derived/ respondent validation or triangulation. Quantitative studies: Reasons for tests

selected hypothesis driven/ numbers add up/statistical significance discussed.

Fair Qualitative: Descriptive discussion of analysis. Quantitative.

Poor Minimal details about analysis.

Very Poor No discussion of analysis.

#### 6. Ethics and bias:

Have ethical issues been addressed, and what has necessary ethical approval gained? Has

the relationship between researchers and participants been adequately considered? Good Ethics: Where necessary issues of confidentiality, sensitivity, and consent were addressed. Bias: Researcher was reflexive and/or aware of own bias.

Fair Lip service was paid to above (i.e., these issues were acknowledged).

Poor Brief mention of issues.

Very Poor No mention of issues.

#### 7. Results:

Is there a clear statement of the findings?

Good Findings explicit, easy to understand, and in logical progression. Tables, if present,

are explained in text. Results relate directly to aims. Sufficient data are presented to support

findings.

Fair Findings mentioned but more explanation could be given. Data presented relate directly to results.

Poor Findings presented haphazardly, not explained, and do not progress logically from

results.

Very Poor Findings not mentioned or do not relate to aims.

#### 8. Transferability or generalizability:

Are the findings of this study transferable (generalizable) to a wider population? Good Context and setting of the study is described sufficiently to allow comparison with

other contexts and settings, plus high score in Question 4 (sampling).

Fair Some context and setting described, but more needed to replicate or compare the

study with others, PLUS fair score or higher in Question 4.Poor Minimal description of

context/setting.

Very Poor No description of context/setting.

# 9. Implications and usefulness: How important are these findings to policy and practice?

Good Contributes something new and/or different in terms of understanding/insight or

perspective. Suggests ideas for further research. Suggests implications for policy and/or

practice.

Fair Two of the above (state what is missing in comments).

Poor Only one of the above.

Very Poor None of the above.