Table 2 - GOC Communication Support Intervention Description, Adherence, Measurement, Results

Study No.	Authors, (Year)	GOC Intervention Modality	Intervention Description, Delivery & Frequency	Study Completion Adherence	Measurement Tools	Outcomes & Results
1	Bakitas et al. (2015)	Early Palliative Care	30 hours of training in RDC ENABLE intervention: 1 initial PC MD consultation, NP telehealth calls every 6 weeks until death or study completion (24 weeks).	147/ 207 (71%)	QOL: FACIT- Pal; Patient Symptoms: QUAL-E; Patient Depression: CES-D	Primary: Before death, no significant difference in patient QOL. Secondary: no significant difference for hospital inpatient days, ICU days, ED visits, chemotherapy ≦ 14 days before death, home death occurrence. Kaplan-Meier 1-year survival rates were significant: 63% intervention vs. 48% control (P = .038)
2	Dionne-Odom et al., (2015)	Early Palliative Care	*See Bakitas (2015) study* – RDC ENABLE intervention: 3 weekly, then 2 monthly NP telehealth calls with CG	83/122 (68%)	CG QOL: CQOL-CG; Care Burden: MBCB; CG Depression: CESD	Primary: At 3-mos., no significant differences in CG QOL, depression, care burden, but significant decline in CG depression (P = .02). For decedent patients, significant difference CG depression (P = .02) & stress burden (P = .01), but not QOL.
3	Temel et al., (2017)	Early Palliative Care	Monthly PC consult with MD until death, plus usual oncology care.	240/350 (69%)	QOL: FACIT-Gen Depression: HADS, PHQ-9; EOL care communication: EHR	Primary: At 3-mos., no significant change in patient QOL. Secondary: At 6 mos., significant change in patient QOL (P = 0.01), patients more likely to discuss EOL care wishes with MD (P = .004)
4	Zimmerman et al., (2014)	Early Palliative Care	Initial PC consult, then monthly visits with MD, follow-up telehealth by RN, 24-hr. emergent telehealth	393/461 (85%)	QOL: FACIT-Sp, QUAL-E. Symptoms: ESAS Care Satisfaction: FAMCARE-P16 Interaction with RN/MD: CARES-MIS.	Primary: At 3-mos., no significant changes in QOL. Secondary: Significant difference in EOL preparation (P = 0.05) & EOL care satisfaction (P = 0.0003), but no difference symptom mgmt. or interactions with care team. At 4 months, significant differences for all outcomes except interactions with care team.
5	Curtis et al., (2013)	Clinician Communication Training	32 hours RDC EOL care communication training; MD/NP's required to consult with patient ≥ 3 sessions	406/472 (86%)	RDC QOC surveys for patient & CG, QEOLC, PHQ-8	Primary: At 10-mos., no significant difference in patient or family reported QOC. Secondary: no significant difference in QEOLC, but significant increase in patient depression (P = .006).
6	Goelz et al., (2011)	Clinician Communication Training	5 hours RDC oncology PC transition communication training; 2 individualized coaching sessions for MD's based on video analysis of patient communication.	41/41 (100%)	RDC assessment of MD's patient & CG GOC communication behaviors at PC consultations by preceptors	Primary: At 5-weeks, significant improvement in MD's GOC communication behaviors (P = .01). Secondary: Significant improvement in MD's involvement of CG in PC consultation
7	Szmuilowicz et al., (2012)	Clinician Communication Training	5 hours RDC ACP & code status communication training: MD residents received individualized coaching based on 6-month MD logs of patient interactions	38/38 (100%)	RDC assessment of MD's patient & CG GOC communication behaviors at PC consultations by preceptor	Primary: At 2-mos., significant improvement in MD resident's CSD checklist of communication skills (P < 0.0001). Secondary: significant improvement in MD resident's CSD skills retention (P < 0.001) & facilitation of significantly longer conversations
8	Detering (2010)	Patient Communication Support	Adapted "Respecting Patient Choices"; Trained facilitator led patients & families in 1 GOC discussion; Completed AD entered into hospital EHR.	108/125 (84%)	Patient ACP completion in EHR at discharge and mortality at 3 & 6 mos.	Primary: At discharge, significant EHR difference in patient ACP completion (P < 0.001) & patient involvement in EOL care decision making (P=0.02). No significant difference in patient mortality at 3 or 6 mos.
9	Lum et al., (2017)	Patient Communication Support	Retrospective EHR review of decedent SNF CHF patients for: POLST, ED visits, hospitalizations, CPR attempts, hospital and ICU admission.	N/A	Valid, completed POLST form in EHR at SNF	Primary: 95% of decedent SNF CHF patients with valid, completed POLST goal-concordant care. Older & female patients had higher odds of choosing "No CPR."
10	Song et al., (2009)	Patient Communication Support	RDC SPIRIT intervention: 3.5 days RN ESRD GOC training; 1-hour GOC discussion interview with patient-surrogate dyad facilitated by RN	53/58 (91%)	GOC congruence, decision-making, QOC & psycho-social: Decisional Conflict Scale, S-PRT, SF12v2, Patient-Clinician Interaction Index	Primary: At 3-mos., no significant improvement in patient & surrogate GOC congruence, decisional conflict, psycho-social-well-being or surrogate decision-making confidence. Significant improvement in QOC for patients (P = < 0.01) and surrogates (P = 0.03).
11	Steinhauser et al., (2017)	Patient Communication Support	1) RDC Outlook intervention: 3 1-hour sessions facilitated by trained SW with patient re: EOL concerns; patient received transcripts of interviews. 2) RDC Relaxed Meditation intervention:	185/221 (84%)	QOL: QUAL-E. Psycho-social: POMS, FACIT-G, CESDS, FACIT-Sp	Primary: At 7-weeks, no significant improvement for Outlook in QOL, EOL preparation, life completion improved preparation and life completion vs. Relaxed Meditation intervention. Secondary: no significant improvement for Outlook in psycho-social well-being anxiety or depression.

			3 facilitated sessions listening to guided relaxation CD's			
12	Carson et al., (2016)	Family Communication Support	2 ICU Patient-surrogate structured family meetings led by PC clinicians: First meeting after 7 days of mechanical ventilation; Second 7 days after 1st patient-surrogate meeting	130/256 (51%) patient &184/365 (50%) family	Surrogate psycho-social: HADS, PTSD, IES-R, GOC discussion in EHR & 90-day survival rate	Primary: At 3-mos., no significant difference in CG anxiety. Secondary: no significant difference in CG depression, GOC discussion in EHR, hospital inpatient days or 90-day survival rate. PTSD significantly higher in intervention group (P = .0495).
13	McDonald et al., (2016)	Family Communication Support	*See Zimmerman et al. (2014) study*. 3 monthly telehealth consults for CG with RN re: PC resources & support for patient homecare. 24-hour CG telephone support was provided by PC MD	151/ 182 (83%)	CG satisfaction with patient's care: FAMCARE, SF-36v2, CQoL-C	Primary: At 4-mos., significant difference in CG-reported CG satisfaction with patient care (P.0.02). No significant improvement in CG assessment of patient's QOL.
14	Sulmasy et al., (2017)	Family Communication Support	RDC TAILORED intervention: RN facilitated 1 dyad discussion btw patient & surrogate for GOC, EOL care decision-making plus AD information	37/166 (83%)	Patient-surrogate GOC decision-making: DCP, MSS. Surrogate psycho-social: IES, CBS, FDMSS.	Primary: At 2-mos., significant improvement in mutual surrogate decision making (patients: P = 0.04, surrogates: P = 0.03), surrogates' stress levels (P = 0.03), CG burden (P < 0.01) & satisfaction P = 0.03). (P = 0.046). No significant improvement in CG decision-making confidence.
15	Au et al., (2012)	Patient - Clinician Communication	RDC COPD patient EOL care preferences survey pre-GOC consult. Survey responses used at 1 clinic GOC consult by patient & MD	306/376 (81%)	RDC patient questionnaires: QOC, GOC preferences, barriers & facilitators to GOC communication.	Primary: At 2-weeks, significant increase in GOC discussions between patients & MD's (P = .001) and QOC (P = .03), and GOC discussions between patients & surrogates (P =.01) with more discussions about feelings, spiritual or religious beliefs. No significant increase in GOC EOL prognosis discussions
16	Curtis et al., (2018)	Patient - Clinician Communication	RDC VitalTalk: 1 clinic visit btw. patient & MD to review results from RDC patient baseline survey plus VitalTalk RDC GOC communication prompts before 1 GOC discussion clinic visit	114/132 (86%) clinicians & 395/537 (74%) patients	RDC patient QOC, questionnaire. Pyscho-social: PHQ-8 & GAD-7	Primary: At 1-week, significant increase in patient-reported GOC discussion with MD (P < .001). Secondary: significant increase in EHR documentation of GOC discussion in HER (P < .001) & patient-reported QOC (P = .01). No significant change in patient depression or anxiety.
17	Tulsky et al., (2011)	Patient - Clinician Communication	2.5 hours RDC MD oncologists GOC communication skills. Review with MD preceptor of ≥ 2 audio recording post-patient GOC discussion consults	52/64 (82%) patients & 48/48 (100%) clinicians	RDC MD GOC communication: NURSE statements; RDC of patient-reported MD empathy & trust in MD	Primary: Post-patient GOC discussion, significant increase in MD's NURSE empathic statements (P = 0.024) & responses to patient's negative emotions (P = 0.028), and significant increase in patient-reported trust in MD (P = 0.036). No significant difference in patient-reported MD communication skills.
18	El-Jawahri et al., (2010)	Patient Decision Aids	6-minute RDC GOC video decision-aid depicting 3 levels of GOC: life-prolonging care, limited care, and comfort care, plus a simulated CPR/intubation. Subsequent patient DNR/DNI decision/declaration	50/50 (100%)	RDC DNR/DNI, GOC preferences form; RDC CPR knowledge survey. Video feasibility: RDC scale. Patient psycho-social: Decisional Conflict Scale.	Primary: Post-intervention, significant difference in patients' preference for comfort care and DNR/DNI (P = .0001) Secondary: significant increase in patient's certainty (P = .002) & increase in patient CPR knowledge (P = .004). 82.6% of GOC video intervention patients very comfortable watching the video.
19	El-Jawahri et al., (2015)	Patient Decision Aids	3-min. RDC GOC video decision-aid depicting simulated CPR, intubation and mechanical ventilation. Subsequent patient DNR/DNI decision/declaration	104/150 (69 %) ≥ 1 hospital re-admission within 1 yr.	Valid, completed DNR/DNI & GOC provider orders in EHR. CPR & intubation knowledge: RDC patient survey.	Primary: Post-intervention, significant patient preference for DNR & DNI (P <0.0001). Secondary: Post-intervention, significant increase in patient GOC & DNR/DNI provider orders in EHR at discharge (P <0.0001) & increase in patient CPR and intubation knowledge scores (p<0.0001).
20	El-Jawahri et al., (2016)	Patient Decision Aids	6-min. RDC GOC video decision-aid depicting 3 levels of GOC: life-prolonging care, limited care, and comfort care, plus a simulated CPR/intubation. Subsequent patient DNR/DNI decision/declaration	119/246 (48%)	Valid, completed DNR/DNI & GOC preferences form in EHR. GOC video feasibility: RDC patient scale	Primary: Post-intervention, significant patient preference for DNR & DNI (P <0.0001) & increase in patient CPR and intubation knowledge scores (P <0.0001). At 3 mos., Intervention patients significantly more likely to report GOC conversations with providers vs. control at 1 mo. (P<0.001) & 3 mos. follow-up (P<0.001)

21	Epstein et al., (2018)	Patient Decision Aids	6-min. RDC GOC video decision-aid on GOC preferences: life-prolonging care, limited care, and comfort care. 20-min. Person-Centered Oncologic Care and Choices (P-COCC) interview about patient's ACP & GOC. Subsequent patient DNR/DNI decision/declaration	99/151 (66%)	Valid, completed DNR/DNI & GOC preferences form in EHR. GOC video feasibility: RDC patient scale. Patient psycho-social: FACIT-Sp, FACIT-TS-G, Distress Thermometer, Perceived Stress Scale, GAD-7, PHQ-9, PEACE Scale and Decisional Conflict Scale.	Primary: Post-intervention, significant difference in patient rating of P-COCC ($P < 0.001$). Secondary: No significant differences for patient well-being, perceived stress, anxiety, peacefulness, depression, treatment satisfaction, QOL or decision-making conflict for ACP decisions. Significant increase in patient distress scores for P-COCC ($P = .03$).
22	Volandes et al., (2012)	Patient Decision Aids	6-min. RDC GOC video decision-aid depicting 3 levels of GOC: life-prolonging care, limited care, and comfort care, plus a simulated CPR/intubation. Subsequent patient DNR/DNI decision/declaration	101/101 (100%)	Valid, completed DNR/DNI & GOC preferences form in EHR. GOC video feasibility: RDC patient scale of acceptability & perceived value	Primary: Post-intervention, greater likelihood of patient choosing comfort care in GOC preferences ($P = 0.02$). Secondary: 90% intervention patients ''very comfortable'' or 'somewhat comfortable'' viewing GOC video, 86% ''definitely'' or ''probably'' recommend GOC video, 8% found GOC video ''not helpful.'' Acceptability and perceived value of GOC intervention video.
23	Volandes et al., (2013)	Patient Decision Aids	3-min. RDC GOC video on CPR resuscitation, intubation & intravenous medicines. Subsequent patient DNR/DNI decision/declaration	67/150 (45%)	DNR/DNI preferences by survey	Primary: Post-intervention, significant patient preference for DNR ($P = .001$) & increase in patient CPR knowledge score ($P = .001$). 93% intervention patients comfortable watching GOC video.

Legend: ACP: Advance Care Planning; AD: Advance Directive; CG: Caregivers; CHF: Congestive Heart Failure; COPD: Chronic Obstructive Pulmonary Disorder; CPR: Cardio-Pulmonary Resuscitation; DNR: Do Not Resuscitate; DNI: Do Not Intubate; EHR : Electronic Health Record; EOL: End of Life; ED: Emergency Dept; ESRD: End-Stage Renal Disease; GI: Gastro-intestinal; GOC: Goals of Care; ICU: Intensive Care Unit; NP: Nurse Practitioner; MD: Medical Doctor; PC: Palliative Care; RN: Registered Nurse; QOC: Quality of Communication; QOL: Quality of Life; RDC: Researcher-developed content; SNF: Skilled Nursing Facility; SW: Social Worker: VA: Veteran's Affairs