Supplementary Table 2. Characteristics of included studies

1st Author (Year)/ Location[a]/ Study type	Aim of the study/ Participants/ Setting	Intervention or strategies/ Main Content/ Target Users/ Intervention applied to CG/ Method of applying intervention	Measures/ Method of data collection	Key Findings	MMAT
Ahrens, T. (2003) [28]/ US/ QI (non-RCT intervention)	To evaluate the effect of a communication team, comprising a physician and clinical nurse specialist, on ICU length of stay and costs for near-EOL patients/ **Patients**: IG (n=43) CG (n=108) **Family** (n= Not reported)/ A medical ICU	Communication team/ a) To provide daily information to the families b) To offer them the opportunity to clarify issues that might arise c) Allowed time for family members to verbalize their thoughts, their values, and their interpretation of the patient's wishes; d) Listened to the narrative unfolding of family decisions and was present as a noncoercive/ Patients, families, and hospital staff/ CG: standard unit practice/ N/R	**Patients;** a) ICU length of stay b) Hospital length of stay c) Hospital variable direct charge per case, hospital variable indirect charge per case d) Hospital fixed cost per case e) Length of stay for patients of the intervention physician during the year preceding the study (i.e., in 1999) f) Length of stay for patients of the intervention physician during the study year (i.e., in 2000) g) Mortality/ Specific method of data collection not provided	a) The IG compared with the CG had significantly shorter stays in both the ICU (IG 6.1 vs CG 9.5 days, p=.009) and the hospital days (IG 11.3 vs CG 16.4 days p=.03) and had lower fixed (IG $15559 vs CG $24080, p=.01) and variable (IG $5087 vs CG $8035, p=.006) costs b) Mortality was no statistical difference (93% vs 74%, p=.14) **c)** The clinical nurse specialist was the primary source of information	*****

Batchelor, C. (2023) [36]/ Australia/ Qualitative study	To explore the experiences of Human Room users to understand its influence on the well-being of patients approaching the EOL and their carers/ **Patients** (n=7) **Carers** (n=3) / Inpatient palliative care	**Human Room/** Relaxing with multi-sensory experiences (music pieces, videos, etc.), or talking and spending time with carer/ Patient and carer/ No CG/ Digital and In-person	**Patients and carers** Interview with questions structured around psychological well-being	**Theme** a) A different space; The final stretch b) Respite and alleviating suffering c) Healing and well-being **Key findings** Patients and carers recognize it as a safe space for reflection, easing pain through relaxation, and sharing memories with loved ones to foster healing and well-being	*****
Battley, J. E. (2012) [25]/ Ireland/ Case Report	To reassess traditional communication styles and define appropriate applications of evolving technologies/ **Patient** (n=1) **Family** (n=not reported)/ Inpatient rooms	**Online visits and communication with the medical team** / a) Keeping patients connected with their children and parents using Skype b) Communication with the healthcare team when the family is out of the hospital/ Patient, family, and hospital staff/ N/A Digital	N/A	a) Provided a useful and effective means of communicating with the patient's spouse and children via Skype. b) Allowed family members in other countries to visit the patient and hear from the medical team.	N/A

Beneria, A. (2021) [37]/ Spain/ Intervention study (non-RCT)	To describe an EOL intervention program implemented during COVID-19/ **Patients** (n=219) **Families** (n=359)/ Patients admitted to a tertiary care hospital	**EOL Intervention Program** (Provide one of the two interventions below)/ a) EOL type: activation and coordination, social assessment, psychological assessment and pre-intervention, bad news communication, farewell, post-intervention b) Communication of bad news, psychosocial intervention: activation and coordination, initial contact, meeting with the EOL team, bad news communication, post-intervention/ Patient, family, and hospital staff/ No CG/ Digital and In-person	**Patients and families;** Analysis of socio-demographic data of intervention participants **Families;** Level of engagement based on intervention type Specific method of data collection not provided	a) Concerning the functioning of the program: it was activated in most situations (85%), although in some cases it was not, mostly during the night shift. b) Main interventions were EOL type (92.5%), and in most cases they were performed face-to-face (76.2%). c) Up to 78% of relatives were able to come and say goodbye to their loved ones.	****

Cahill, P. J. (2021) [38]/ Australia/ Qualitative Study	To assess the experiences of inpatients receiving palliative care and their families after participating in a patient-centered family meeting/ **Patients** (n=9) **Families** (n=9)/ A specialist inpatient PCU	**VOICE**[b]/ a) Duration of the Meeting: 60 min b) Designed to be "patient-centered," with the patient setting the agenda in advance to address their concerns and issues. c) Basic information such as the patient's issues, concerns, and expectations regarding the length of stay can shape the agenda for the family meeting. d) Involved multidisciplinary team (palliative care consultant and/or registrar and social worker)/ Patients, families, and hospital staff / CG: Usual care/ In-person	**Patients;** A semi-structured interview conducted 1 to 2 days after the meeting **Families;** A semi-structured interview conducted on day 14 of the patient's admission date	**Themes;** a) Provides a platform to speak openly about end-of-life concerns and clarify issues, and is of comfort to patients b) Provides the family members with a voice and an opportunity to discuss their concerns and have their needs addressed c) Helps to ensure that everyone is "on the same page" and patient care plans can be discussed **Key findings;** a) The patient-set agenda allowed patients to identify and discuss psychosocial, emotional, and relationship issues and concerns related to their current condition and end-of-life preparation. b) Use meetings to initiate difficult conversations and often resolve important issues that you wanted to have with your family before your dead.	*****

Czynski, A. J. (2022) [39]/ US/ Development of Program and Pilot test	To provide a framework for delivering multidisciplinary, family-centered comfort care to infants born with life-limiting conditions/ **Parents** (n=4), **Nurses** (n=7)/ MBU	**Mother Baby Comfort Care Pathway/** a) Prenatal enrollment b) Communication between the various stakeholders c) Multidisciplinary postpartum care for mothers and prenatal care for children at the MBU d) Involved in services and infant care so that they can make memories with their infant before the EOL, e.g., making hand- or footprints, bathing their infant, performing skin-to-skin contact, dressing the infant/ Parents and hospital staff/ No CG/ In-person	**Parents;** Not reported **Nurses;** Surveyed for satisfaction with Pathway workshops and implementation	**Parents**; Admitted with their dying baby and share as normal a postpartum experience as possible, with a focus on quality of life, memory-making, and time spent together **Nurses;** a) The satisfaction of pathway workshop was positive with a score of 4.71-4.86 out of 5 (5=strongly agree) b) The satisfaction of pathway implementation was positive with a score of 4.33-5 out of 5 (5=strongly agree)	***

Duke, S. (2020) [40]/ England/ Intervention development and pilot test (non-RCT intervention)	To implement research evidence for family support at EOL in acute hospital care/ **Family** (Not reported) **Specialist nurses and occupational therapists** in palliative care (n=7, conducting intervention)/ Acute hospital care	**Family-Focused Support Conversation/** a) Greeting and Introduction: Introduce the topic of conversation b) Meaningfulness: Acknowledge the significance of the situation c) Comprehensibility: Identify concerns d) Manageability: Support family members by addressing their concerns so they can make an informed decision about their role in care e) Summary and ending: Summarize discussion and action plans / Families and hospital staff/ No CG/ N/R	**Specialist nurses and occupational therapists;** Normalization Process Theory is used to review the intervention operator's responses in four areas: a) Coherence, b) Cognitive participation engagement by participants, c) Collective action d) Reflexive monitoring	**Key findings** (around outcomes related to family engagement) **a) Benefits to the family:** · Provides the family with time to acknowledge the situation and the challenges of caregiving, allowing them to consider the necessary support. · Helps family members in decision-making and problem-solving. · Gives the family a voice in planning and collaborates with them in providing care. **b) Challenges faced by the family** · Despite starting the intervention, some family members may become excessively distressed or reveal changes in the discharge plan.	**

Guo, Q. (2018) [30]/ Canada/ Mixed-methods design	To develop 'Dignity Talk' and explore its benefits and challenges/ **Patients** (n=20) **Family members** (n=20) **HCPs** (n=34)/ Two inpatient PCUs	**Dignity Talk/** a) A set of questions to engage patients and families in palliative conversation b) Example question card · MEMORIES: Looking back on life, are there particular memories or moments we might want to talk about? · WHAT YOU MEAN TO ME: Would you like to talk about what we mean or have meant to each other? Patient and family/ No CG/ N/R	**Patients and family members** Survey: demographic data, endorsement rate of clarity, sensitivity, relevance, and importance of questions Individual Interview: suggestions for improvement, comments about perceived impact on patient and family experience. **HCPs** Focus interviews	a) Most Dignity Talk questions were endorsed by the majority of patients and families (>70%) b) Perceived benefits: Conversation prompt, Enhancing family connection and relationship, Enhancing personal value and dignity, Promoting effective interaction, Providing opportunities for reflection c) Perceived concerns and challenges: Questions are important and meaningful, but may not apply to all families based on culture and health conditions, require preparation on how to start the conversation, and may elicit emotionally damaging information	****

Hannon, B. (2012) [31]/ Canada/ A prospective study (non-RCT intervention)	To assess the effectiveness of family meetings/ **Family members** (n=31)/ A specialist inpatient PCU	**Family meeting** a) Meetings last between 40 and 60 minutes b) Offer family members an opportunity to meet with several key members of the multidisciplinary team simultaneously c) Serve to provide a medical update, discuss potential discharge plans where feasible, sensitively discuss prognosis, and open the lines of communication among family members themselves/ Patients, families, and hospital staff / No CG/ N/R	**Family members:** Survey with SRI and FIN before the family meeting (T0), immediately after the meeting (T1), and 48 hours after the meeting (T2)/	a) No statistically significant difference between scores at T1 and T2. b) SRI - All four questions are more positive at T1 than at T0 - Q1: upset or worried (T0 8.7±1.7 VS T1 5.3±2.3, p< .001) - Q2: concerns arise (T0 8.3±2.4 vs T1 5.8±2.5, p<.001) - Q3: concerns interfering with life (T0 7.2±2.5 VS T1 5.8±2.5, p<.01) - Q4: confident in dealing with the concerns (T0 5.6±2.3 vs T1 7.6±1.9, p<.01) **c)** FIN - Statistically significant that 12 out of 20 items were met at T1 than at T0 (at p<.05 significance level)	****

Hudson, P. (2009) [29]/ Australia/ Pilot test (Mixed-methods)	To conduct family meetings based on guidelines and evaluate the usefulness of such meetings/ **Patients** (n=4) **Family carers** (n=20) **HCPs** (n=16)/ Palliative units	**Family meeting** according to guidelines/ Principles incorporated for conducting family meetings; a) premeeting procedures such as liaising with the patient/ family b) prioritizing issues; c) follow-up after the meeting/ Patients, families, and medical team/ No CG/ N/R	**Family members** Survey a) Family care needs; FIN before the meeting (T1), immediately after the meeting (T2), and 48 hours after the meeting (T3) b) Questionnaires about key concerns, how often and how much the concerns interfered with their lives, how confident they were to deal with the problems before the meeting and 48 hours after the meeting **Patients and Family members** Family meeting evaluation forms: usefulness, perceived benefits, and any areas for improvement **HCPs** Focus interview about barriers and facilitators for ongoing implementation	**Family members** a) Statistically significant increase in having their care needs met, from T1 to T2, which was maintained at T3 (T1 51.92±8.19 vs T2 62.46±9.64 vs T3 61.86±7.78, p<.001) b) Statistically significant mean changes observed in concerns (T1 7.64±2.50 vs T2 5.03±2.88, p<.01), as well as how often (T1 7.70±2.27 vs T2 5.20±3.08, p<.01) and how much they interfered with life (T1 8.71±1.53 vs T2 5.85±2.71, p<.01) from pre- to post-meeting, but no change in confidence (T1 6.35±2.29 vs T2 6.56±2.50, p=NS) **Patients and Family members** a) All 20 family members in the study identified at least one benefit of attending family meetings. b) Negative comments from some about lack of time (10%) or not having the right mix of people in the meeting (15%) **HCPs** a) Meetings run smoothly and are rated as having a	****

				positive impact on families and patients b) Recognize that the nurse is in a good position to start the meeting c) Meeting guidelines can be overly demanding	
Hudson, P. (2012) [32]/ Australia/ Pilot test (non-RCT intervention, pre-post design)	To undertake preliminary testing of a group psychoeducational program, conducted in an in-patient setting/ **Family caregivers** (n=126) Palliative units	**Educational Intervention/** a) Five specific topics - what is palliative care? - the typical role of family caregivers - support services available to assist caregivers - preparing for the future - self-care strategies for caregivers. b) 1.5 hours for each session c) Arranged a time for family caregivers to meet with the multidisciplinary team after the program to discuss their needs Family/ No CG/ In-person	**Family caregivers** Survey the self-report questionnaires at the commencement of the education program and 3 days after the intervention a) Psychological well-being: GHQ b) Unmet caregiver needs: using Family inventory of need c) Preparedness for the caregiver role: PREP scale d) Competence for the caregiver role: COMP scale	a) Significant improvements in caregivers' sense of preparedness (pre 16.80±6.21 vs post 18.80±5.91, p<.001) and a significant reduction in unmet caregiver needs (55.96 ±11.07 vs 57.99±12.02, p=014). b) There was no significant effect on psychological well-being(p=.92) and the improvement on competence fell short (p=.066).	****

Hudson, P. (2021) [41]/ Australia/ RCT	a) To determine the effectiveness (QOL and preparedness for families and reduced psychological distress) of structured family meetings b) To determine whether patient outcomes differ across different settings (patients referred to palliative care units versus hospital consultation services c) To identify the cost-benefit of routine implementation of family conferences/ **Primary family caregiver:** CG (n = 153) IG (n = 144)/ Inpatient PCU	**Structured family meeting/** a) Single-session, face-to-face family meetings of up to 1 hour b) Conducted structured meetings according to the meeting guidelines. Following are the main contents of the guidelines: · pre-meeting procedures, such as liaising with the patient/family and prioritizing issues · deciding who needs to attend the family meeting · a set procedure for conducting the meeting · strategies for follow-up after the meeting/ Patients, families, and hospital staff/ CG: Standard care/ N/R	**Family caregivers** Survey upon admission (T1), 10 days later (T2), and two months after patient death (T3) a) Psychological distress: GHQ on T1, T2 and T3 b) Sense of preparedness for role: PCS on T1 and T2 c) Needs met/unmet: FIN on T1 and T2 d) QOL: CQOLC on T1 and T2, SF12 on T1, T2 and T3 **Health services utilization data**: Includes the number of treatments and hospitalization days in ICU or palliative units or ED during the last 30 days of life.	a) IG demonstrated significantly lower psychological distress (Diff: –1.68, $p < 0.01$) and higher preparedness (Diff: 3.48, $p < 0.001$) than CG at T2 b) No significant difference in QOL and meeting needs in IG c) No differences in any of the outcomes were noted in comparative analyses between inpatients of palliative care units versus those receiving palliative care as part of a consultative service d) A cost-benefit analysis of family conferences was not performed, because there were no significant differences in measures of health service utilization between groups	****

Johansson, M. (2018) [33]/ Sweden/ Qualitative Study	To explore the family members' experience with sharing an ICU diary when a relative does not survive his or her stay/ **Family members** (n=9)/ Three ICUs	**Shared ICU diary/** The ICU diary written by staff members is shared with the patient's family/ Patients, families, and hospital staff/ No CG/ In-person	**Family members** Interview about the diary-sharing experience	**Theme:** a) The diary promoted a rational understanding b) The diary promoted an emotional understanding c) The diary promoted social interactions **Key Findings:** a) A diary provides information about the patient and reveals their daily activities. b) It offers comfort and serves as a tool for communication	*****

Johnson, H. (2020) [42]/ UK/ Multi-method design	a) To understand individual and contextual facilitators and barriers surrounding the implementation of the AMBER care bundle b) To identify strategies to strengthen facilitators and mitigate barriers, informing the optimization of the intervention and its future sustainability in acute hospital clinical care/ **Interviews** Patients (n=2), Relatives(n=10) **Clinical note reviews** Patients (n=29) **Focus groups** Staffs (n=26) / General medical ward	**AMBER care bundle**/ A four-step intervention to overcome communication challenges a) Identification b) Day one intervention · Discussion with patient and carer held and documented · Medical plan document in patient record · Escalation decision documented · Medical plan discussed and agreed with nursing staff c) ACT - Daily monitoring and review d) Discontinue the AMBER care bundle/ Patients, families, and hospital staff/ No CG/ N/R	**Quantitative** **Issues note;** Issues noted during the non-participant observations of multi-disciplinary team meetings **Qualitative** **Ward staffs;** Focus groups interviews **Patients and/or relatives;** Semi-structured interviews **Patients;** Review of participating patient's clinical notes	**Key findings** (around outcomes related to family engagement) a) Differing skills and confidence led to variable engagement with difficult conversations with patients and families about, for example, nearness to end-of-life. b) Relatives could not always have important discussions on time.	*****

Klankaew, S. (2023) [43]/ Thailand/ A quasi-experimental study	To examine the effect of a nurse-led family involvement program on anxiety and depression in patients with advanced hepatocellular cancer/ **Patients** (n=40) IG (n=20) CG (n=20)/ Male medical unit	**Nurse-led family involvement program** a) Day 1: Information sharing, care provision, psychological care b) Day 2-4: Information sharing, care decisions, care provision, psychological care/ Patients, families, and hospital staff/ CG: conventional care/ In-person	**Patients and family caregivers;** Demographic characteristics **Patients;** Hospital Anxiety and Depression Scale (HADS) Data collection method: survey	a) Statistically significant differences in anxiety (pre 10.65±0.67 vs post 9.15±0.81, p<.001) and depression (10.40±0.82 VS 8.80±1.10, p<.001) from pre- to post-intervention within the experimental group b) Statistically significant difference in post-intervention anxiety (IG 9.15±0.81 vs CG 10.15±0.74, p<.001) and depression (8.80±1.10 vs 9.80±1.32, p=.013) between experimental and control groups	*****

Lin, C. (2020) [44]/ Taiwan/ A single-group, non-controlled, mixed-methods study	To examine the feasibility and acceptability of a culturally adapted advance care planning intervention in a Taiwanese inpatient hospital for advanced cancer patients, family members, and healthcare professionals/ **Patients** (n=10) **Family members** (n=10) **Healthcare professionals** (n=9)/ Hospice and PCU in a tertiary university hospital	**Culturally adapted advance care planning intervention** a) Pre-advance care planning · Provided an individual-based communication coaching session to patient and family dyads · Informative material provided to enhance participants' motivation and competence for involvement in the advance care planning discussions b) Advance care planning discussion · Had a one-time discussion with the consultation team · Adjusted care plan based on patient preferences · At least one family member attends · Disagreements between patient and family are discussed and reconciled Patients, families, and hospital staff/ No CG/ N/R	**Qualitative Data** Semi-structured qualitative interviews with patients, family members, and healthcare professionals **Quantitative Data** A study fidelity checklist evaluated by researchers	**Qualitative Data** Key contextual moderators a) Resource constraints resulting in increased workload b) Care decisions informed by relatives' experiences of care c) The requirement for financial and policy support d) Presumption for EOLC provision and surrogate decision-making Additional enhancement requirements a) Initiating an EOLC discussion in advance b) Enabling patients to make informed decisions c) Documentation to guide future care and relieve patient and family members' distress d) Make the process less abstract and more acceptable e) Potential for advance care planning to provoke conflict between patients and family members f) Concordance with preferred care provision **Quantitative Data** Study fidelity achieved 70% of the overall checklist	*****

Menkin, E. S. (2007) [26]/ US/ Case Reports	To describe the development of the Go Wish cards and report on some of the diverse cases in which they have been useful/ **Cases with application of Go wish cards in EOLC** (n=7, involving family members and patients)/ ICU and other units	**Go Wish/** a) Used when approaching the EOL b) Cards are sorted into three piles: very important, important, and not important. c) From the very important pile, the top 10 items are selected d) To prioritize EOLC and establish a treatment plan/ Patients and families/ No CG/ In-person	N/A	a) Beneficial for promoting conversations between patients, their loved ones, and their medical care providers b) Can be proctored by both professional and quasi-professional staff or even by a caregiver after minimal instruction. c) Useful, inexpensive, and intuitive tool for furthering goals and value-oriented conversations about illness and preferences to enhance care, facilitate patient-proxy-provider understanding, and identify expectations	N/A

Mercadante, S. (2020) [45]/ Italy/ N/R (Presumably a mixed study)	To evaluate the use of WhatsApp for allowing family members to participate in clinical rounds/ **Family members** (n=16)/ Acute PCU and hospice unit	**Participate in clinical rounds using WhatsApp/** The family members were called live from the patient's telephone number during the doctors' visit to exchange information on the clinical progress and discuss the choices to be made/ Patients, families, and hospital staff/ No CG/ Digital	**Families;** Interviews and survey questions a) Are you happy to virtually attend the clinical round? b) Are you happy with the information gained on this occasion? c) Do you think that your loved one was happy to see you during the clinical rounds? d) This technology may substitute your presence during the clinical rounds? The scores were 0 = no, 1 = a little bit, 2 = much, 3 = very much	a) Question score ・ Q1: (median, range) 3 (2-3), ・ Q2: 3 (2-3), ・ Q3: 3 (2-3) ・ Q4: 0 (0-2). b) Comment aggregation ・ Most family members were happy to attend the visit virtually ・ Most family members declared that this modality of communication cannot substitute physical presence at the bedside.	***

Neville, T. H. (2020) [46]/ Canada and US / Multi-methods study	To characterize and enumerate keepsakes created as part of the 3WP and to understand their value from the perspective of bereaved family members/ **Patients** (n=730) **Family members** (n=75)/ ICU	**3WP /** a) Invitation to participate in the EOLC process if your doctor has determined that you have a 95% or greater chance of dying or has decided to withdraw life-sustaining treatment. b) Clinicians ask dying patients and their families about their wishes in the last moments of life. c) Wishes are documented and categorized. d) 3WP items, including keepsakes, are stored in cupboards, shelves, or carts where they are easily accessible to staff/ Patients and families/ No CG/ In-person	**Quantitative Data (for patients);** a) Frequency of Keepsakes in the 3WP b) Types of Keepsakes **Qualitative Data (for families);** Interviews	**Quantitative Data** a) Of the 730 patients, 345 (47%) received keepsakes b) Of the 3407 wishes, 513 (15%) were keepsakes c) Most keepsakes were either technology-assisted items (such as family photographs) or items that served as tangible reminders of the patient's presence (i.e., thumbprints and locks of hair). **Qualitative Data** **Themes** a) Keepsakes as Tangible Items Are Highly Valued b) Creation of a Keepsake With the Clinical Staff is Viewed as a Gesture of Compassion **Key findings** a) Even seemingly insignificant items have value to the family and reduce the pain of loss b) The process of creating a keepsake helps families transition to EOL care c) Support from the healthcare team helps the patient and family feel that they are not alone.	****

Nwosu, A. C. (2024) [47]/ England/ QI (non-RCT intervention)	To explore the feasibility of implementing VR therapy, for patients and caregivers, in a hospital specialist inpatient palliative care unit and hospice/ **Patients** (n=12), **caregiver** (n=3)/ Hospice inpatient setting (n=7, 46.7%) Hospital (n=6, 40%) Outpatients(n=2, 13.3%) **Hospital staff** (n=7) **Public people** (n=6)/ Inpatient PCUs	**VR System/** VR system used to experience any of the following: a) a 5-minute-guided relaxation video of a beach (Relax VR) b) a 10-minute-guided meditation through a computer-generated forest (Forest of Serenity—St Giles Hospice) c) a 5-minute-video rollercoaster ride/ Patients and family/ No CG/ Digital	**Participants** To record feedback using the 'evaluation of VR intervention questionnaire' **Staff** The survey: helpfulness of VR in clinical practice, what went well, problems, barriers, and opportunities for future use. **Public** public opinion to VR in palliative care by organizing a public engagement event	**Key Findings** **Participants** a) Relaxation was the most common reason for using VR (n=11, 73.3%) b) Most participants had a positive experience with the VR (n=14, 93.3%). c) All participants indicated that they would like to use the VR again. d) No major complications were noted; two participants (13.3%) reported minor problems. **Staff** All respondents rated VR as helpful, providing high Likert scores of 4 (n=4, 57.1%) and 5 (n=3, 42.9%)	****

Reid, J. C. (2023) [48]/ Canada/ Multicomponent cohort study	To develop and evaluate 3WP expansion strategies for patients in general internal medicine wards/ **Patients** (n=62)/ Four general internal medicine wards	**3WP** a) Realizing three wishes of dying patients and their families b) Wishes are simple, meaningful, individualized expressions of a request or a need that can be fulfilled for a dying patient and/or grieving family member. c) Anyone who knows something about the patient can make a wish/ Patients and families/ No CG/ In-person	**Patients and Families;** a) Patient demographics and hospital stay characteristics b) Proportion of wishes **Collect 3WP** information recorded in the patient chart	a) Wishes (n=281) b) The most common wish categories were: personalizing the environment (67 wishes, 24%), rituals and spiritual support (42 wishes, 15%), and facilitating connections (39 wishes, 14%). c) The median [1st, 3rd] cost per patient was $0 [0, $10.00] (range, $0–$86); 91% of wishes incurred no cost to the program.	****

Sanderson, C. R. (2017) [34]/ Australia/ QI (mixed-method)	To improve communication with patients and their families through a new patient-centered palliative care family meeting approach/ **Patients** (n=31)/ Thirty two-bed public specialist PCU	**Patient-centered family meeting** a) A 60-minute patient-centered family meeting was offered routinely within seven days of admission. b) Patients and families were given a booklet with the same questions to help them organize the meeting agenda (expectations for hospitalization, current emotional state, concerns, help wanted, and things staff should know)/ Patients, families, and hospital staff/ No CG/ In-person and Digital	**Patients, Families, and Medical staffs;** Interviews of experiences with the meeting **Case Reports;** Case reports on participant demographic and clinical information. **Field notes;** Using structured observation tools (standardized, detailed descriptions of meetings, participants, their interactions, and observed distress and themes)	a) Twenty-six patient-centered family meetings held, typically within the first week of hospitalization (day 5 ± 2.1) b) Topics and content of family meetings, · Information/problem-focused: how to manage symptoms, discuss treatment, what support the patient or caregiver needs, etc. · Family-centered: understanding the patient in the context of the family, patient's relationships, concerns about the impact of the illness on other family members, etc. · End-of-life focus: is the patient in the terminal stage of the disease, have treatment goals changed due to a shorter prognosis, etc. c) Experiences with meetings, · Patients: the majority of those interviewed (n=19) found the meetings useful · Families: The majority of families found the	****

				invitation to the meeting reassuring (77%), helpful (83%), "not at all" distressing (84%), and not worrisome (86%). However, some families (8%) found it "very distressing."	
Smith, S. (2020) [49]/ US/ QI (non-RCT intervention)	To describe the development, implementation, and outcomes of an inpatient rehabilitation-based Short Stay Family Training program for patients with life-limiting conditions/ **Patients and Families** (n=30)/ IPR	**Short Stay Family Training** a) Structured over 6-7 days b) Progress · Day 0: Admission · Day 1: Evaluations of patients and family · Day 2: Family Conference Day · Day 3-4: Family Training · Day 5: Last Treatment Day_ Nursing staff should encourage family to assist with ADL and apply skills · Discharge/ Patients, families, and hospital staff/ No CG/ In-person	**Patients and Families;** a) LOS b) Caregiver presence c) Patient satisfaction (Press Ganey survey) d) Palliative involvement e) Discharge position f) FIM	a) LOS: average 7±2.1 day (compared to 11 days for traditional IPR patients) b) Family presence: 100% c) Greater than 95% patient satisfaction for entire unit (this score included the SSFT patients, but data for evaluating their satisfaction scores were unavailable) d) Since program, five patients (17%) required readmission to acute care e) FIM: average 14.8 (compared to 26.2 for traditional IPR patients)	****

Suen, A. O., (2021) [50]/ US/ A Pilot Randomized Trial	To assess the feasibility, usability, acceptability, and perceived effectiveness of a communication intervention that pairs proactive family meetings with an interactive, web-based tool to help surrogates prepare for clinician–family meetings/ **Surrogates** IG (n=23) CG (n=25)/ Two ICUs	**Family Support Tool/** Session are conducted using family support tools before the two family meetings. a) Section 1: to orient surrogates to the ICU and provide support along with self-care tips (online). b) Sections 2 and 3: to help surrogates prepare for online family meetings regarding possible questions, treatment pathways, and interaction methods (before family meeting)/ Tool: Family Family meeting: Patients, families, and hospital staff/ CG: received usual care enhanced with scheduled family meetings/ In-person and Digital	**Surrogates;** a) Before family meeting: questionnaire (demographic information, before each family meeting, intervention surrogates completed questionnaires about tool usability and acceptability) b) After family meeting: questionnaire (experience communicating with the ICU team during the meeting as well as their understanding of the patient's medical condition and their feelings of decision-making preparedness) c) At the 3 months of intervention: Interview(quality of communication and shared decision-making)	**Surrogates** a) 96% of surrogates (24/25) accessed the tool before the first family meeting. b) The tool was reported as useful (82.4/100), acceptable (mean, 4.5/5 ± 0.9), and effective (mean, 4.4/5 ± 0.2). c) Compared to the control group, surrogates reported higher quality of communication (mean, 8.9/10 ± 1.6 vs. 8.0/10 ± 2.4) and shared decision-making (mean, 8.7/10 ± 1.5 vs. 8.0/10 ± 2.4), but the differences were not statistically significant.	****

Vanstone, M., (2020) [51]/ Canada and US/ Mixed-method formative program evaluation	To determine whether 3WP could achieve such goals when implemented as a multicenter program/ Project involvement **Patients** (n=730) For Qualitative data collection **Family members** (n=75), **Clinicians** (n=72), **Managers or Hospital administrators** (n=20)/ Four ICUs	**3WP** a) When the estimated mortality rate exceeds 95%, the patient is invited to the 3WP. b) Discussions about the patient's preferences and values at the EOL c) The wishes of the patient and their family are identified and then implemented by clinicians and WP team, aided by the family/ Patients and families/ No CG/ In-person	**Quantitative Data;** Characteristics of wishes recorded in the patient chart **Qualitative Data for Families;** Semistructured interview about experience of 3WP (Within 1-12 months after patients' death)	**Quantitative Data** a) Wishes (n=3,407) b) Top wish categories: · Personalizing the environment (14.5% · Rituals and spiritual support (13.3%%) · Family care (11.9%) · Facilitating connections (10.8%) c) The mean cost was $5.19 (SD, $17.14) per wish **Qualitative Data** a) Value: Families and clinicians also benefit from the program. Some may feel more distress due to the close proximity. b) Transferability: High potential for transferability to families, promoting family involvement and transfer. c) Affordability: Considered cost-effective due to the significant value it brings compared to the investment. d) Sustainability: The 3WP remains active in practice even after the research concludes, with ongoing support being crucial.	****

Wood, C., (2019) [35]/ US/ QI (non-RCT intervention)	To evaluate the effect of music therapy on symptom management and coping skills of patients receiving palliative care and to measure patient satisfaction with the therapy/ **Patients** (n=57) **Family members** (n=53)/ Inpatient palliative care consulting service	**Music Therapy Program** a) A 20-minute education session b) Implement individualized musical therapy interventions c) Singing therapy, relaxation, self-expression, and supportive counseling through music d) Interventions are selected based on the patient's immediate needs and include music preferred by the patient/ Patients and families/ No CG/ In-person	**Patients and family members** Survey at pre- and post-session a) pain and anxiety using a verbal numeric rating scale (range 0-10) b) 4-point Likert scale to rate the effectiveness of therapy	a) Patient surveys indicated a decrease in anxiety and pain. b) All patients reported that music therapy facilitated stress relief, relaxation, pain relief, spiritual support, emotional support, and a general feeling of wellness. c) All participants recommended music therapy services for others.	****

[a] Location refers to the country where the study was conducted

[b] The specific application of VOICE is described in a paper related to the development of VOICE, which is referenced here (Cahill PJ, Sanderson CR, Lobb EA, Phillips JL. The VOICE Study: Valuing Opinions, Individual Communication and Experience: building the evidence base for undertaking Patient-Centred Family Meetings in palliative care - a mixed methods study. Pilot Feasibility Stud. 2018;4:51. https://doi.org/10.1186/s40814-017-0225-9.)

Abbreviations; 3WP: 3 wishes project, ADL: Activities of Daily Living, BSI: brief symptom inventory, CG: control group, COMP: caregiver competence scale, CQOLC: the caregiver quality of life index-cancer, Diff: mean difference, EBT: existential behavioral therapy, ED: emergency department, EOL: end of life, FIM: functional independence measure, FIN: family inventory of needs tool, GHQ: general health questionnaire, HCPs: healthcare providers, ICU: intensive care unit, IG: intervention group, IPR: inpatient rehabilitation unit, Los: length of stay, MBU: mother-baby unit, N/A: not applicable, N/R: not reported, PCS: the preparedness for caregiving scale, PCU: palliative care unit, PREP: preparedness for care-giving scale, QI: quality improvement, QOL: quality of life, RCT: randomized control trial, SF12: the short form health survey version 2, SRI: standardized self-report instrument, US: united states of America