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Geriatrics communication skills training program for oncology healthcare providers to improve the management of care for older adults with cancer

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Abstract

Objective: We evaluated the feasibility, acceptability, and preliminary efficacy of a novel intervention, the Geriatric Communication Skills Training Program (Geriatric Comskil Training) for multidisciplinary healthcare providers (HCPs).

Methods: Three 2-h modules comprised the training: Geriatrics 101, Cognitive Syndromes, and Shared Decision-Making. Modules consisted of didactic knowledge, exemplary videos, and experiential learning role plays with standardized patients. We collected pre- and post-training data from 11 HCPs (module evaluations, self-efficacy, communication skills uptake in interaction with standardized patients, perceived ageism) and 44 patients (perceived HCP empathy, satisfaction with HCP communication).

Results: HCPs rated all modules high, with over 90% agreement on all course evaluation items assessing involvement, critical thinking, and reflectiveness, and significant improvements in self-efficacy. HCPs demonstrated an uptake in communication skills from pre- to post-training in agenda setting and overall skill use and reported promising trends towards lower ageism scores ($d = 0.58$). Promising trends in patient-reported HCP empathy ($d = 0.39$) and satisfaction with communication ($d = 0.29$) emerged from pre- to post-training.

Conclusion: Continued efforts are needed to strengthen HCP education related to geriatric communication across the cancer continuum.

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Declaration of Competing Interest

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Innovation: The Geriatric Comskil Training demonstrated feasibility, acceptability, and increases in self-efficacy and communication skills uptake for HCPs.

Keywords

Gerontology; Geriatrics; Communication; Ageism; Cancer; Oncology

1. Introduction

The geriatric population in the United States is expected to grow to 20.2% (from 16.1%) by 2050 [1,2]. Older adults are one of the most health-compromised populations, with high likelihood for comorbid conditions, lower likelihood of medical compliance, and high numbers of medical encounters [3–5]. In the United States, the median age of cancer diagnosis is 66 years old [6]. Older adults are more likely than their younger counterparts to have a poorer cancer prognosis and lower survival rate [7,8]. Additionally, older adults with cancer may experience increased depression, neurodegenerative conditions such as dementia, and compromised decision making [9–11].

One critically important aspect of geriatric care is effective communication. Across many studies, patients and family report feeling strong trust in their doctors' judgment and recommendations [12,13]. Cancer patients report that they would like a high level of information as they and their doctor begin making decisions about their treatment. Further, patients and their families desire communication with their medical provider to be honest, empathic, and tailored to their needs in the context of an established, positive therapeutic relationship [14]. However, there are numerous barriers to effectively meeting patients' needs, including implicit and explicit communication problems, lack of understanding of healthcare systems, and health system barriers (e.g., insufficient resources, poor continuity of care, lack of appropriate planning and evaluation) [15].

Despite these factors, healthcare providers (HCPs) do not routinely receive training in how to effectively support geriatric patients in their medical care and decision-making [16]. Studies show that HCPs endorse varying levels of confidence in their communication skills with older adults [17]. HCPs' assessment of their communication also does not strongly correlate with the views of patients, family members, or observers [18]. Surveyed patients – particularly older adults – routinely report they do not always have time to communicate with their doctor or have their emotional needs met [19]. Further, patients often do not fully grasp the prognosis or treatment of their condition, impairing their ability to make the most effective decisions for themselves [20]. Because of these problematic communication patterns, patients are at risk for poor decision-making and less effective treatment. These issues are of paramount importance as individuals in this age group are more likely to be making difficult medical decisions, such as initiating palliative or hospice care or determining end-of-life goals of care.

A further problem faced by this population is the experience of ageism. Over 75% of older adults reported experiencing prejudice or micro-aggressions due to their age [21,22]. These might include lack of respect for their opinion or capacity and assumptions about their physical or mental functioning. Older adult patients are slower to be referred to

specialty care and less likely to be participants in medical trials [23]. In the medical system, patients may have their concerns ignored or downplayed, be talked down to, or be treated in an overly cautious way [24]. Overt and covert experiences of ageism can reduce effective patient-provider communication and impair necessary medical decision making. Older adults who also identify as a racial or ethnic minority, sexual or gender minority, or other marginalized group may face an increased burden of biased care that impacts cancer-related experiences and outcomes [25–27].

Despite their emphasis by professional organizations, geriatric education and communication skills training are not comprehensively taught in medical education [28,29]. A proposed solution to these issues is effective communication skills training for HCPs in geriatrics. A few communication skills training programs have been developed for this population [30–32]. These programs often are focused on specific skills such as active listening, providing empathy, sharing bad news, and shared decision-making [33]. Typically, these programs are well received by recipients and show good short-term results [32,34,35].

There are several notable obstacles to effective communication skills training for providers for older adults. While trainings may be offered within medical training programs, providers already in practice would not benefit or the training may have occurred years ago. Trainings often are brief or are incorporated into other didactic training [16]. Learning objectives and topics covered may be basic, vague, or difficult to replicate [36]. Often, participant self-report of acceptability and efficacy are the only outcome measures. However, participant self-report of acceptability or efficacy of communication skills training may be an insufficient measure of actual skill acquisition [35]. The gold standard for measuring communication skills is standardized patient assessments (SPAs), in which a trained actor portrays a patient in a clinical scenario with the HCP with the purpose of assessing communication skill usage [37].

The current study seeks to address gaps in the research on effective communication skills training in geriatrics by presenting training efficacy data at multiple levels (i.e., clinician-level, patient-level) using a mixed-methods pre-post design. The Comskil program is a well-researched and efficacious program in training of communication skills for oncology HCPs [38,39]. The purpose of this study is to evaluate feasibility, acceptability, and efficacy of a communication skills training program for oncology providers in geriatrics (referred to as Geriatric Comskil Training, from here on).

2. Methods

2.1. Study design

The study design was a pre-post single arm intervention (see Fig. 1). Geriatric Comskil Training was a day-long training, consisting of three 2-h modules in Geriatrics 101 [30], Cognitive Syndromes [40], and Shared Decision-Making [33]. These training modules were developed in collaboration with experts in geriatrics and communication skills.

For evaluation of the Geriatric Comskil Training, we used the multi-level Kirkpatrick assessment model [41] modified for education in communication skills training: Level 1

– participants' *reaction* to the program through course evaluations; Levels 2A and 2B – *learning* measured through self-reports and SPAs respectively; Level 3 – *attitude* measured through perceived ageism questionnaire; and Level 4 – *patient outcomes* measured through patient surveys. This study received exemption from the Institutional Review Board at Memorial Sloan Kettering Cancer Center.

2.2. Participants

2.2.1. HCPs—Twelve oncology HCPs (e.g., attending physicians, fellows, advanced practice providers) were recruited and eleven ($N = 11$) completed a 6-h duration Geriatric Comskil Training between July–August 2019. The HCPs were recruited from a number of inpatient and outpatient settings across the institution and were selected based on a screening questionnaire they completed (see Table 1). Participation selection was based on convenience sampling, and was determined based on various factors, including the participants' availability to attend the training, willingness to participate, and willingness to be audio-recorded. The PIs of the study sent an introductory letter to eligible HCPs and met individually to describe the project, potential risks and benefits, and to obtain informed consent.

2.2.2. Patients—We attempted to recruit 4 unique patients per HCP, 2 patients before- and 2 after-training. The final sample consisted of forty-four patients (23 patients before-training and 21 patients after) (see Table 2). The before-training patient cohort had a mean age of 71.39 years old ($SD = 5.95$); and the after-training patient cohort had a mean age of 70.90 years old ($SD = 4.60$). Patient eligibility requirements included: patients 65 years and over; English-speaking; undergoing treatment for cancer by one of the participating HCPs; willingness to be audio-recorded; and ability to provide informed consent. Eligible patient participants were recruited from participating oncology clinics. The recruitment process presented minimal risk to patient privacy and minimal use of protected health information. The research study assistant (RSA) reviewed the records and collaborated with the clinic session assistants to review the HCPs' daily clinic schedule to identify eligible patients. The RSA approached eligible patients, confirmed eligibility, explained the study, and obtained consent.

2.3. Training format

The Geriatric Comskil Training was comprised of three 2-h modules: *Geriatrics 101*, *Cognitive Syndromes*, and *Shared Decision-Making*. The blueprints for these modules have been previously published [30,33,40]. The format for all modules included a 30-min didactic presentation of skills, exemplary videos, as well as 90-min experiential learning in small group settings (using role plays with Standardized Patients) that were co-facilitated by trained, experienced geriatricians and communication skills experts.

2.4. Health care provider measures

Demographic data were completed for all HCP participants and patients. All HCPs ($N = 11$) completed surveys prior to and immediately following the completion of each module, and standardized patient assessments (SPAs) pre- and post-training. The surveys assessed module evaluation, self-efficacy in communicating with older adults, and perceived ageism.

HCP interaction with SPs in clinical scenarios (i.e., Standardized Patient Assessments or SPAs) to evaluate communication skills uptake were also video-recorded and blind coded. Three scenarios (one for each module) were created by our team of interdisciplinary experts and used by all participants and SPs. In addition, 2 unique patients per HCP were recruited prior to training and 2 unique patients after training. These patients filled out a patient survey right after their consultation with their respective HCP.

2.4.1. Module evaluations—HCPs evaluated all three-modules through 15 statements using five-point Likert-type scales (1 = “strongly disagree” and 5 = “strongly agree”) to assess levels of agreement or disagreement. The evaluation items focused on the engagement of the role plays, their uniqueness, how they made participants think differently about their communication skills with patients, and how they could integrate new skills into their practice (e.g., “This role play helped me figure out how I can incorporate communication skills into my clinical interactions regularly.”).

2.4.2. Self-efficacy—Participants’ self-efficacy was measured pre- and post-training by asking HCPs to reflect on their confidence and skills to communicate with older cancer patients. Twelve statements were provided using five-point Likert-type scales (1 = “strongly disagree” and 5 = “strongly agree”) that addressed topics ranging from ageism (2 items) and comprehensive geriatric assessment (2 items) to cognitive decline and assessment (3 items) and finally understanding shared decision-making principles and how to conduct family meetings with geriatric patients (5 items). A composite measure of self-efficacy was created by averaging all 12 items, with a high score indicating higher self-efficacy.

2.4.3. Communication skills uptake—Pre- and post-training SPAs were completed by HCPs. Two trained coders coded all the SPA videos using the adapted Comskil Coding System (aCCS). The aCCS consists of a communication skills coding system used previously in provider-patient communication skills trainings [42] and adapted to geriatric cancer patient clinical scenarios. In order to assess reliability, 20% of the video recordings were coded independently by two separate coders. An average of 75.5% agreement was established between coders, with all disagreements reconciled by a team member. After establishing reliability, the two coders independently coded the remaining video recorded SPAs.

2.4.4. Ageism—Pre- and post-training surveys assessed HCP’s perceived ageism with older cancer patients using the UCLA Geriatric Attitude Scale [43]. Fourteen statements were provided using five-point Likert-type scales (1 = “strongly disagree” and 5 = “strongly agree”). The statements addressed a number of ageist assumptions about providing care for older persons with cancer (e.g., “older patients are less organized and more confused, treatment of this population is hopeless”). A composite score was created by averaging the 14 items (5 items were reverse-coded), and a higher score indicated greater degree of ageism.

2.5. Patient measures

Prior to and after oncology HCPs' participation in the Geriatric Comskil Training, a questionnaire was administered to two independent samples of patients with two key measures: perceived HCP empathy and satisfaction with HCP communication.

2.5.1. Perceived HCP empathy—Perceived HCP empathy was measured by using the Consultation and Relational Empathy Questionnaire, a well-validated, 10-item self-report scale that measures patients' perception of how empathic their HCP was during a specific encounter (e.g., HCP making you feel at ease, HCP showing care and compassion etc.) [44]. This measure is rated on a six-point Likert response scale (0 = "poor" and 5 = "excellent"). Items were summed, and a higher score indicated greater HCP empathy.

2.5.2. Satisfaction with HCP communication—Satisfaction with communication was measured by using the Consumer Assessment of Health Care Providers and Systems Program [45]. Patients responded to six items focused around satisfaction with different aspects of HCP-patient communication (e.g., explained things clearly, listened, showed respect etc.) on a five-point Likert scale (1 = "strongly disagree" to 5 "strongly agree"). Items were summed, and a higher score indicated greater satisfaction with HCP communication.

2.6. Analysis

Feasibility was assessed by a descriptive analysis of enrollment, retention, and completion. Acceptability was addressed via participants' module evaluation of the training (Level 1 outcome) and data were analyzed descriptively. We combined "Agree" and "Strongly Agree" scores on all evaluation items to examine endorsement and high acceptability of training

Preliminary efficacy was evaluated through analysis of HCP self-efficacy (level 2A outcome), communication skills uptake (level 2B outcome), ageism (level 3 outcome), and patient reported satisfaction with HCP communication and perceived empathy (Level 4 outcome). Communication skills uptake was evaluated using SPA coding and paired *t*-tests were used to assess frequency of skill use from pre- to post-training. For all other study measures (i.e., HCP measures: self-efficacy and ageism; Patient measures: perceived HCP empathy and satisfaction with HCP communication), paired sample *t*-tests were used to compare between pre-training and post-training scores. Given the pilot nature of the data, the study was not powered to determine significant differences between pre- and post-training but was powered to determine feasibility and initial efficacy. As such, both significance levels and effect sizes (Cohen's *d*) are reported ($d = 0.2$, small; $d = 0.5$, medium; and $d = 0.8$, large effect).

3. Results

Eleven HCPs attended all three modules and completed the relevant survey questionnaires (Table 1). About two-thirds of participants were advanced practice providers (e.g., NP, PA), three were attending physicians, and one was an oncology fellow. The majority identified

as female and white. Participants worked in a broad range of oncology settings, including inpatient and outpatient; more than half had between 0 and 10 years of experience; and more than 80% saw between 16 and 30 patients per week.

A sample of twenty-three patients ($N = 23$) was assessed pre-training and twenty ($N = 20$) patients were assessed post-training (See Table 2 for demographics of both groups). Across pre- and post-training samples, all patients were over 65 and the majority were male and white. Most patients were married and retired, educated at the level of standard college, graduate degree, or professional training, and had a household income of more than \$90 K annually.

3.1. Feasibility

After establishing eligibility, 13 HCP's were approached for participation in the study, and 12 agreed and provided informed consent (92.31% enrollment); 55 patients were approached for participation and 45 agreed and provided informed consent (81.82% enrollment). Of the 12 HCP's, one dropped out mid-study because of medical reasons and could not complete the study requirements (91.67% retention and completion); of the 45 patients, 44 were retained and completed all study requirements (97.78% retention and completion).

3.2. Health care provider results

3.2.1. Module evaluation (level 1 outcome)—Participants consistently rated all three modules as interesting and enjoyable (Table 3). Specifically, 100% of participants either “agreed” or “strongly agreed” that the role play helped them to identify reasons to make changes in communication skills, offered ways they can incorporate communication skills into clinical interactions regularly, and provided new information about communication skills and process tasks. In addition, 64–82% of participants endorsed the overall role plays as unique and 36–64% “agreed” or “strongly agreed” that the role plays were different than other communication skills training they had attended in the past.

3.2.2. Self-efficacy (level 2A outcome)—HCPs' overall self-efficacy related to their confidence in communication with older cancer patients improved significantly from pre- ($M = 3.44$, $SD = 0.66$) to post-training ($M = 4.45$, $SD = 0.38$), $t(10) = -5.54$, $p < 0.001$. In particular, 11 of the 12 individual self-efficacy items improved significantly from pre- to post-training (Table 4).

3.2.3. Communication skills uptake (level 2B outcome)—Participants demonstrated an uptake in communication skills from pre- to post-training in agenda setting, $t(10) = -2.89$, $p < 0.05$; and overall skill use, $t(10) = -2.45$, $p < 0.05$. Uptake of skills were also promising for three additional skill categories: questioning [$t(10) = -1.15$, $d = 0.54$], empathic communication [$t(10) = -1.63$, $d = 0.78$], and geriatric-specific skills [$t(10) = -1.66$, $d = 0.69$] (see Table 5).

3.2.4. Ageism (level 3 outcome)—Participants did report a significant shift in the ageist misnomer that old people act too slow for modern society from pre-training ($M = 1.80$, $SD = 1.14$) to post-training ($M = 1.30$, $SD = 0.48$), $t(9) = 2.24$, $p = 0.05$, as well as

trending improvements in ageism on a variety of individual items, as well as overall ageism [$t(9) = 1.37, d = 0.58$] (see Table 6).

3.3. Patient results

3.3.1. Perceived empathy (level 4 outcome)—Results showed trending improvements in patients' perception of HCP empathy, pre- or post-training [$t(42) = -1.27, d = 0.39$; see Table 7]. On average (on a scale of 1–5), the pre-training perceived empathy was noted as 4.71 (SD = 0.43), and the post-training perceived empathy was 4.88 (SD = 0.44).

3.3.2. Satisfaction with communication (level 4 outcome)—Results showed trending improvements in patient satisfaction with HCP communication, when comparing between pre- and post-training [$t(42) = -0.89, d = 0.29$; see Table 8].

4. Discussion and conclusion

4.1. Discussion

In this study, we evaluated the feasibility, acceptability, and preliminary efficacy of the Geriatric Comskil Training for oncology providers using a mixed-methods pre-post design. A key strength of this paper is that we measured multi-levels outcomes for both HCPs and patients. While we did not find significant changes among patient survey responses, the HCP data was encouraging and builds directly on our previous work. Specifically, in these prior studies we developed and implemented modules that addressed communication challenges and shared decision-making for older cancer patients and their caregivers, as well as addressing the quality of communication with older cancer patients experiencing cognitive deficits [30,33,40]. Our analysis in this manuscript expands provider-focused implications to include patient outcomes and experiences.

Our findings show that the Geriatric Comskil Training was feasible, acceptable, and showed moderate efficacy. Participants in this study consistently rated all three modules favorably on eleven of twelve evaluation items with regards to involvement, critical thinking, and reflectiveness, validating our previous investigations with each of these programs [30,33,40]. However, participants rated novelty low, likely due to prior experiences with communication trainings that offered similar didactic and experiential learning opportunities. During video-recorded interactions with standardized patients, participants demonstrated a significant improvement in agenda setting skills and overall uptake of communication skills from to pre- to post-training). Although results did suggest trending improvements in patients' perceived empathy, questioning, and geriatric-specific skills, the scores were not statistically significant owing to a smaller sample size. The changes observed in information organization and checking skills did not signal significance or trending improvements. It is possible that the scenario for interaction with the standardized patient did not lead the conversation towards information provision. In addition, participants showed trending improvement in two geriatric-specific skills including taking permission or checking patient preferences to include caregivers in the discussion and in initiating clinician-suggested referrals (i.e., discussions to connect patients to other resources).

Although other intervention studies have evaluated patient elicitation of specific communication goals [46,47], our study contributes a unique multi-module approach that addresses well-documented barriers to inclusive communication for older cancer patients (e.g., provider self-efficacy, ageism) [48]. Empathic communication strategies are a core component of our trainings [49–52]. This emphasis on empathy aligns with other findings that support the need for increased individualization, caring, and sensitivity for older cancer patients to promote patient communication satisfaction and clinical understanding [53–56].

Our study also demonstrated that participating HCPs reported attitudes towards older adults (ageism) that reduced (i.e., became more favorable) from pre-to-post training. Ageism from HCPs has been associated with poorer outcomes for patients, as reported in prior studies [21–24], and must be addressed to improve patient reported outcomes. Despite a small sample size, we were able to shift HCP attitudes in the desirable direction. This is a promising result of the current study and needs to be examined in future research.

Our findings highlight the need to train multidisciplinary HCPs - not just physicians - with the communication skills needed to effectively care for older patients with cancer. For instance, data show that nurses account for up 59% of the health workforce globally and deliver between 60 and 90% of primary care for patients [57]. In addition, they spent the largest proportion of direct patient contact time when compared to other HCPs [58,59]. Researchers have shown that communication training for nurses is feasible, acceptable, and effective [49]. In this sample, we were able to include nurse practitioners, attendings, as well as a physician assistant and an oncology fellow. Interprofessional communication courses have shown that participants across disciplines report the need for enhanced communication skills and many are able to apply training content directly to their oncology work settings to help achieve quality improvement goals [60].

There are some limitations to consider. Our sample was relatively small, limiting generalizability of findings. Although we used a pre- post design to evaluate uptake of communication skills, self-efficacy and perceived ageism, we did not measure long-term provider integration of the communication skills that trainees may have developed during this one-day training. Additional longitudinal research is needed to follow-up on utilization and maintenance of communication skills over time [35]. However, our self-efficacy findings support that meaningful progress was achieved for provider trainees over the course of the Geriatric Comskil Training. While all patients evaluated were over the age of 65, the majority both pre- and post-training were between the ages of 65–75 and most identified as white, limiting the information we were able to gather on the communication experiences of the “oldest old” (e.g., >80 years) with cancer, as well as on racial, ethnic, or cultural minoritized groups. Given that adults over 85 are the fastest-growing age demographic in the United States, and that racial and ethnic minority disparities within this age group need urgent attention, future research must explore cancer communication delivery among more heterogeneous cohorts [61–63]. Our post-training results based on an independent sample of patients did not support a significant change during the average patient-provider encounter, but there are several data points that support positive shifts in the perception of ageist communication. Patient changes may have been blunted due to ceiling effects of the measures used or the change in patient participants recruited (e.g., different patients pre- and

post-training as opposed to longitudinal measurement of a single sample). Despite a single-site study which may limit the generalizability of findings, our results fill a substantive literature gap related to communication skills for providers caring for geriatric populations.

4.2. Innovation

Our study provides a novel innovation in the field of HCP education to enhance empathic communication for older people that strategically aims to mitigate ageism and ageist beliefs. The training model we tested represents a multi-pronged, evidence-based approach to person- and family-centered care for older people confronting the challenges of cancer at the intersection of comprehensive didactic knowledge and experiential learning. The results suggest that the Geriatric Comskil Training can promote self-efficacy among providers in their engagement of older oncology populations and enhance awareness of ageism regarding clinical care delivery. Cancer centers must invest in developing and ensuring access to communication skills training for all clinicians who will interface with older populations throughout cancer continuum. Since older patients are cared for in all health and cancer settings, providers must be encouraged to reflect on ageist assumptions – both conscious and unconscious – that may interfere with high-quality care delivery for older patients and their caregivers.

In the wake of COVID-19, when many health systems are confronting multi-level resource constraints, it is particularly important to ensure age-appropriate communication skills for all patients, especially for those considered vulnerable at baseline, such as geriatric populations. Empathic and inclusive communication is the backbone of relationship-based cancer care and should be integrated into all requisite oncology clinician training programs as a foundational component of patient engagement. Evaluating the dual impact of communication skills education on both providers and patients is key to understanding how improved provider self-efficacy and knowledge informs patients outcomes and experiences. Our novel intervention provides an innovative method to enhance the quality of cancer care communication in this context.

4.3. Conclusion

Fostering evidence-based communication skills that advance provider competence while enhancing the patient experience is critically important for all health care providers, particularly those delivering care for older adults. Our findings offer a hopeful and empirically rigorous approach for closing a dire knowledge-practice gap pertaining to efficacious communication with older patients with cancer. This study builds on a substantial body of work that has been developed through the MSK Comskil Training Program and provides our team with future directions to strengthen multi-professional provider education in this field. Overall, the Geriatric Comskil Training demonstrated feasibility, acceptability, and promising preliminary efficacy. This one-day training achieved the aims of our team in alignment with the needs of geriatric oncology populations as identified in the literature and through the clinical expertise of our team.

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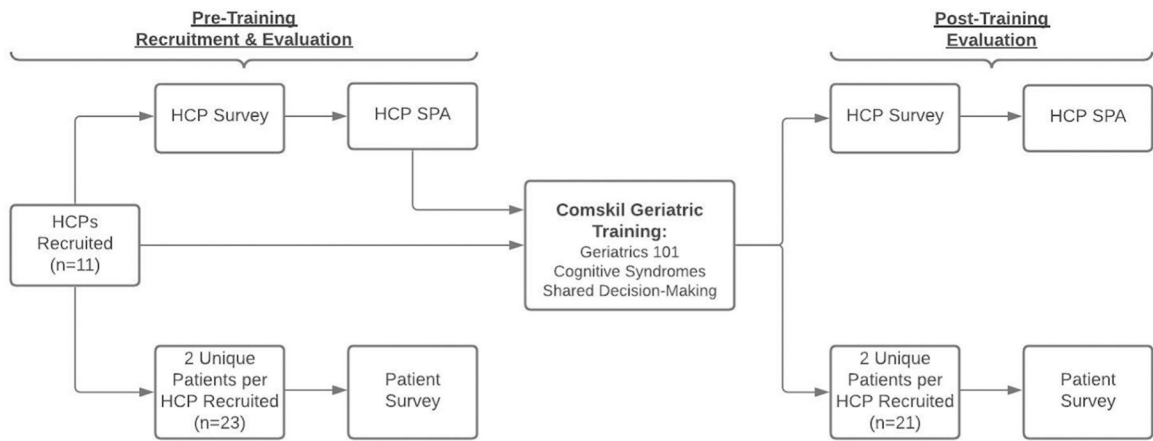


Fig. 1. Geriatric comskil training pre-post design workflow. SPA = Standardized Patient Assessment. HCP=Healthcare Provider.

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Table 1Health Care Provider (HCP) sociodemographic characteristics ($N = 11$).*

Variable	Range	N (%)
Position	RN	0 (0)
	NP	6 (55)
	PA	1 (9)
	Fellow	1 (9)
	Attending Physician	3 (27)
Gender	Male	1 (9)
	Female	10 (91)
Race	White	7 (64)
	Black or African American	1 (9)
	American Indian or Alaska Native	0 (0)
	Asian	2 (18)
	Native Hawaiian or Other Pacific Islander	0 (0)
	Other	1 (9)
Hispanic or Latino	Yes	0 (0)
	No	11 (100)
Years of experience	0–5	3 (27)
	6–10	4 (36)
	11–15	3 (27)
	16–20	1 (9)
Oncology setting	Bone marrow transplant	4 (36)
	Hematology	1 (9)
	Hospital or clinic	2 (18)
	Ambulatory	1 (9)
	Outpatient	2 (18)
	N/A	1 (9)
Patients seen per week	0–5	0 (0)
	6–10	1 (9)
	11–15	1 (9)
	16–20	3 (27)
	21–25	1 (9)
	26–30	5 (45)
	30+	0 (0)

RN = registered nurse; NP = nurse practitioner; PA = physician assistant.

*No missing values unless otherwise noted.

Table 2Patient sociodemographic characteristics (pre-training $N = 23$; post-training, $N = 21$; total $N = 44$).

Variable	Range	Pre-training N (%)	Post-training N (%)	
Age	65–75	14 (61)	12 (60)	
	76–85	7 (30)	8 (40)	
	85+	2 (9)	0 (0)	
Gender	Male	15 (65)	13 (65)	
	Female	8 (35)	7 (35)	
Race	White	19 (83)	14 (70)	
	Black or African American	3 (13)	0 (0)	
	American Indian or Alaska Native	0 (0)	0 (0)	
	Asian	0 (0)	5 (25)	
	Native Hawaiian or Other Pacific Islander	0 (0)	0 (0)	
	Other	1 (4)	1 (5)	
	Hispanic or Latino	Yes	1 (4)	1 (5)
	No	22 (96)	19 (95)	
Marital status	Single	1 (4)	5 (25)	
	Married/Living with partner	18 (78)	13 (65)	
	Divorced/Separated	2 (9)	2 (10)	
	Widowed	2 (9)	0 (0)	
Educational level	High school graduate/GED	1 (4)	3 (15)	
	Partial college (1 year)/Vocational training	7 (30)	2 (10)	
	Standard college or university graduate	5 (22)	9 (45)	
	Graduate degree or professional training	10 (43)	6 (30)	
Current occupation	Employed	2 (9)	7 (35)	
	Student	0 (0)	0 (0)	
	On leave	4 (17)	1 (5)	
	Homemaker	1 (4)	0 (0)	
	Disabled	0 (0)	0 (0)	
	Retired	16 (70)	12 (60)	
	Unemployed	0 (0)	0 (0)	
Annual household income*	Less than \$10,000	1 (4)	1 (5)	
	\$10,000–\$29,000	0 (0)	0 (0)	
	\$30,000–\$49,000	2 (9)	2 (10)	
	\$50,000–\$69,000	1 (4)	0 (0)	
	\$70,000–\$89,000	1 (4)	6 (30)	

Variable	Range	Pre-training N (%)	Post-training N (%)
	More than \$90,000	15 (65)	10 (50)

GED = general educational development.

*Missing values.

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Table 3

HCP evaluation (n = 11) of three modules in the geriatric communication skills training program: geriatrics (Geri) 101, cognitive syndromes (CS), and shared decision-making (SDM) (N = 11).

Course evaluation items	Geri 101 Endorsement ^d N (%)	CS Endorsement ^d N (%)	SDM Endorsement ^d N (%)
1. The role play was interesting to me.	11 (100%)	11 (100%)	11 (100%)
2. I got easily distracted during the role play. (R) ^b	8 (72.7%)	9 (81.8%)	9 (81.8%)
3. I enjoyed this role play.	11 (100%)	10 (90.9%)	10 (90.9%)
4. The role play was boring. (R) ^b	10 (90.9%)	10 (90.9%)	10 (90.9%)
5. I've never done anything like what I did in the role play today.	5 (45.5%)	7 (63.6%)	5 (45.5%)
6. The role play was different than other communication skills training I have participated in.	4 (36.4%)	7 (63.6%)	5 (45.5%)
7. The role play was unique.	8 (72.7%)	9 (81.8%)	7 (63.6%)
8. This role play made me think about the importance of communication skills.	11 (100%)	11 (100%)	11 (100%)
9. This role play made me think about reasons for making changes in my communication with patients.	11 (100%)	11 (100%)	11 (100%)
10. This role play made me think about specific things I can do about my communication skills.	11 (100%)	11 (100%)	11 (100%)
11. This role play helped me figure out how I can incorporate communication skills into my clinical interactions regularly.	11 (100%)	11 (100%)	11 (100%)
12. This role play encouraged me to maintain my communication skills.	11 (100%)	11 (100%)	11 (100%)
13. This role play provided new information about communication skills and process tasks.	11 (100%)	11 (100%)	11 (100%)
14. The role play made me think about my communication skills with patients.	11 (100%)	11 (100%)	11 (100%)
15. The role play made me think about my peers' communication skills.	11 (100%)	10 (90.9%)	10 (90.9%)

Note. All items were scored on a 5-point Likert scale with anchors at (1) Strongly disagree to (5) Strongly agree.

^aEndorsement refers to the number of participants that responded "Agree" or "Strongly agree" on items 1, 3, and 5-15; and "Disagree" or "Strongly disagree" on items 2 and 4.

^b(R) = Reverse coded statement.

Table 4

HCP-reported self-efficacy in communicating with older cancer patients (N = 11).

Self-efficacy statements	Pre-training <i>M</i> (SD)	Post-training <i>M</i> (SD)	<i>t</i> (df = 10)
1. I am confident in my understanding of what ageism is.	3.82 (0.75)	4.64 (0.51)	-4.50***
2. I feel confident in my ability to appreciate how ageism might interfere with the medical care of older adults with cancer.	3.91 (0.54)	4.73 (0.47)	-4.50***
3. I feel confident in my understanding of what the Comprehensive Geriatric Assessment is.	2.91 (1.22)	4.27 (0.65)	-4.40***
4. I feel confident I understand the role of the Comprehensive Geriatric Assessment in the evaluation of elderly cancer patients with geriatric syndromes such as functional or cognitive decline.	2.82 (0.98)	4.64 (0.51)	-5.16***
5. I feel confident in my ability to differentiate between functional changes due to hearing, vision or gait impairments that present themselves as cognitive changes or depressive symptoms.	3.45 (0.93)	4.09 (0.54)	-1.88
6. I feel confident in my ability to recognize cognitive syndromes in older adults with cancer.	3.27 (0.91)	4.18 (0.60)	-2.89*
7. I feel confident in my ability to appreciate communication challenges in the decision-making process when the patient is cognitively impaired.	3.82 (0.60)	4.27 (0.47)	-2.19*
8. I feel confident in my understanding of the principles of shared decision-making.	3.73 (0.65)	4.55 (0.52)	-4.50***
9. I feel confident in my understanding of the importance of family-centered care and the complexity of facilitating a family meeting, including the concept of the third person.	3.64 (0.67)	4.64 (0.51)	-3.71**
10. I feel confident in my understanding of the challenges of engaging and supporting the family in the care around pivotal cancer-care decisions.	3.55 (1.21)	4.55 (0.52)	-2.80*
11. I feel confident in my understanding of the core communication components of conducting a family meeting with a geriatric patient.	3.09 (0.83)	4.55 (0.52)	-7.02***
12. I feel confident in facilitating shared decision-making with an elderly cancer patient via a family meeting.	3.27 (0.91)	4.36 (0.67)	-6.71***
13. Total self-efficacy.	3.44 (0.66)	4.45 (0.38)	-5.54***

Note. All items were scored on a 5-point Likert scale with anchors at (1) Strongly disagree to (5) Strongly agree.

* *p* 0.05.

** *p* 0.01.

*** *p* 0.001.

Table 5

HCPs' communication skills uptake (SPA skills coding) (N = 11).

Skills	Pre-training <i>M</i> (SD)	Post-training <i>M</i> (SD)	<i>t</i> (df = 10)	Cohen's <i>d</i>
Agenda setting	0.36 (0.50)	1.27 (0.79)	-2.89*	1.38
Checking	0.55 (0.52)	0.55 (0.69)	0.000	0.00
Questioning	2.91 (1.14)	3.45 (0.82)	-1.15	0.54
Information organization	1.09 (0.83)	1.18 (0.75)	-0.25	0.12
Empathic communication	1.36 (1.21)	2.18 (0.87)	-1.63	0.78
All communication skills	6.27 (2.41)	8.64 (1.80)	-2.45*	1.11
All geriatric-specific skills	9.73 (1.27)	10.73 (1.62)	-1.66	0.69

Cohen's guide for interpreting effect sizes: small effect, $d = 0.2$; medium effect, $d = 0.5$; and large effect, $d = 0.8$.* $p < 0.05$.

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HCPs' pre- and post-training scores on ageism in communicating with older cancer patients (N = 11).

Table 6

Statements related to ageism	Pre-training M (SD)	Post-training M (SD)	t (df = 9)	Cohen's d
1. Most old people are pleasant to be with. (R)	1.80 (0.64)	1.60 (0.63)	1.50	0.32
2. The federal government should reallocate money from Medicare to research on AIDS or pediatric diseases.	2.20 (1.03)	2.10 (0.99)	0.22	0.10
3. I would rather see young patients than elderly ones.	2.50 (1.18)	1.80 (1.03)	2.09	0.63
4. It is society's responsibility to provide care for the elderly. (R)	1.60 (0.84)	1.50 (0.53)	0.43	0.14
5. Medical care for old people uses up too much human and material resources.	2.30 (1.57)	1.80 (0.42)	1.10	0.44
6. As people grow older, they become less organized and more confused.	2.60 (0.97)	2.00 (0.67)	1.77	0.72
7. Elderly patients tend to be more appreciative of the medical care I provide than are younger patients. (R)	2.70 (1.16)	2.70 (1.25)	0.00	0.00
8. Taking a medical history from elderly patients is frequently an ordeal.	2.40 (0.84)	2.10 (1.20)	0.76	0.29
9. I tend to pay more attention and have more sympathy towards my elderly patients than my younger patients. (R)	3.10 (1.10)	3.30 (1.34)	-1.50	0.16
10. Old people in general do not contribute much to society.	1.80 (1.14)	1.30 (0.48)	1.63	0.57
11. Treatment of chronically ill old patients is hopeless.	1.40 (0.97)	1.20 (0.42)	1.00	0.27
12. Old persons don't contribute their fair share towards paying for their health care.	1.60 (0.97)	1.50 (1.27)	0.18	0.09
13. In general, old people act too slow for modern society.	1.80 (1.14)	1.30 (0.48)	2.24*	0.57
14. It is interesting listening to old people's accounts of their past experiences. (R)	1.10 (0.32)	1.30 (0.48)	-1.00	0.49
15. Total ageism.	2.06 (0.50)	1.82 (0.31)	1.37	0.58

Note. All items were scored on a 5-point Likert scale with anchors at (1) Strongly disagree to (5) Strongly agree. Cohen's guide for interpreting effect sizes: small effect, d = 0.2; medium effect, d = 0.5; and large effect, d = 0.8.

(R) = Reverse coded statement.

* p 0.05.

Table 7

Patient perception of HCP empathy pre- and post-training (pre-training N = 23; post-training N = 21).

Perceived empathy questions.	Pre-training M (SD)	Post-training M (SD)	t (df = 42)	Cohen's d
1. How was the HCP at making you feel at ease?	4.74 (0.45)	4.90 (0.44)	-1.24	0.36
2. How was the HCP at letting you tell your story?	4.83 (0.39)	4.90 (0.44)	-0.63	0.17
3. How was the HCP at really listening?	4.78 (0.42)	4.90 (0.44)	-0.94	0.28
4. How was the HCP at being interested in you as a whole person?	4.78 (0.42)	4.86 (0.48)	-0.55	0.18
5. How was the HCP at fully understanding your concerns?	4.65 (0.57)	4.86 (0.48)	-0.1.28	0.40
6. How was the HCP at showing care and compassion?	4.74 (0.45)	4.86 (0.48)	-0.84	0.26
7. How was the HCP at being positive?	4.74 (0.45)	4.90 (0.44)	-1.24	0.36
8. How was the HCP at explaining things clearly?	4.73 (0.46)	4.90 (0.44)	-1.30	0.38
9. How was the HCP at helping you to take control?	4.71 (0.46)	4.86 (0.48)	-0.98	0.32
10. How was the HCP at making a plan of action with you?	4.59 (0.91)	4.86 (0.48)	-1.19	0.37
Total Perceived Empathy	4.71 (0.43)	4.88 (0.44)	-1.27	0.39

Note. All items were scored on a 6-point Likert scale with anchors at (0) Poor to (5) Excellent.

Cohen's guide for interpreting effect sizes: small effect, d = 0.2; medium effect, d = 0.5; and large effect, d = 0.8.

Table 8

Patients' satisfaction with communication pre- and post-training (pre-training, N = 23; post-training, N = 21).

Satisfaction with communication statements	Pre-training M (SD)	Post-training M (SD)	T (df = 42)	Cohen's d
1. My provider explained things in a way that was easy to understand.	4.77 (0.53)	4.95 (0.22)	-1.44*	0.44
2. My provider listened carefully to me.	4.78 (0.42)	4.90 (0.44)	-0.94	0.28
3. My provider gave me easy to understand information about my health questions or concerns.	4.82 (0.50)	4.80 (0.41)	0.13	0.04
4. My provider seemed to know the important information about my medical history.	4.68 (0.57)	4.90 (0.30)	-1.60*	0.48
5. My provider showed respect for what I had to say.	4.83 (0.39)	4.89 (0.32)	-0.62	0.17
6. My provider spent enough time with me.	4.83 (0.49)	4.90 (0.30)	-0.63	0.17
Total Satisfaction Score	4.78 (0.44)	4.89 (0.31)	-0.89	0.29

Note. All items were scored on a 5-point Likert scale with anchors at (1) strongly disagree to (5) strongly agree. Cohen's guide for interpreting effect sizes: small effect, d = 0.2; medium effect, d = 0.5; and large effect, d = 0.8.

* $p < .10$.