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Implementing Distress Screening and Hospital Management of Oncology Patients with Distress

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DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

Implementing Distress Screening and Hospital Management of Oncology Patients with Distress

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By

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The areas marked with asterisks (***) are de-identified data. Please get in touch with the author for questions or concerns.

Executive Summary

Of the nearly 2 million new cancer cases projected to occur in the United States in 2022, up to 65% of patients may be hospitalized in the first year of their diagnosis. Hospitalized oncology patients have been documented to experience psychological distress during their hospitalization related to physical and emotional challenges related to their disease. In ***, a tertiary hospital located in ***, Oregon, hospitalized cancer patients with hematologic malignancies and aggressive or advanced solid cancers have verbalized distress, including depression, anxiety, feelings of isolation, and fatigue during prolonged hospital stays. According to the National Comprehensive Cancer Network (NCCN), distress in cancer patients is exceedingly common. It is associated with significant reductions in a patient's emotional and physical well-being, decreased quality of life, longer hospital length of stays, higher likelihood of hospital readmissions, and increased healthcare costs. Evidence-based oncology literature suggests that multidisciplinary palliative interventions that emphasize patient education and mental, physical, and psychological strategies effectively combat patient distress in the hospital. Observational and translational studies suggest that nurses who are educated in identifying patient distress contribute to better referral rates to psychosocial oncology services and play critical roles in patient decision-making and intervention implementation. Furthermore, ***'s Distress Management Policy and national cancer associations specify that all new cancer patients have "access to psychosocial distress screening at their first new patient visit," which may occur in the inpatient setting for the population specified above.

This scholarly project aimed to assess *** inpatient oncology nurses' knowledge regarding distress in the oncology population and to design an educational intervention that supports nurses' ability to identify distress, improve distress screening, and intervene in the hospital setting. This project integrated the National Comprehensive Cancer Network's (NCCN) distress thermometer into inpatient patient care areas and presented the opportunity to screen for distress during the patient's initial hospital stay. Furthermore, this project utilized institution-approved strategies and educational resources to address multiple facets of what contributes to patients' distress. Finally, this project assessed the impact of the offered distress education on oncology nursing knowledge, skills, and attitudes regarding distress.

The topics and resources covered in the distress education included the definition of oncological distress, the rationale for distress screening, the national guidelines for distress screening and management, the distress screening policy of ***, the NCCN distress thermometer and problem list, a compendium of printed and electronic cancer, and distress related outpatient resources, and nursing interventions to address patients in distress. One hour of continuing nursing education was offered for completing this education.

At the completion of this scholarly project, oncology nurses reported increased efficacy in identifying distress, increased intention in using the NCCN distress thermometer and discussing distress with their patients, and increased confidence in discussing distress and distress-related interventions. During the five-month implementation period of this project, there was a notable increase in distress screening during the patient's hospitalization and increased referral rates to outpatient oncology social workers before hospital discharge.

Keywords: distress, oncology patients, cancer, anxiety, fatigue, isolation, screening

Distress Screening and Management of Hospitalized Oncology Patients

Distress is a reactive, emotional, patient response to a cancer diagnosis, its physiologic symptoms, and the side effects of the drug therapies used to treat or cure cancer (Miller & Massie, 2006; Albrecht & Rosenzweig, 2012). Statistics vary, but literature estimates that the incidence of psychological distress in North American cancer patients ranges between 35-45%, with some global estimates reaching even as high as 70% (Bultz & Carlson, 2005; Nipp et al., 2017; Peters et al., 2020). The National Comprehensive Cancer Network® (NCCN®) defines distress as a "multifactorial unpleasant experience of a psychological (cognitive, behavioral, emotional), social, spiritual, and physical nature that may interfere with one's ability to cope effectively with cancer, its physical symptoms, and its treatment" (Riba, 2022, p. 5). Distress is associated with a significant reduction in the patient's emotional and physical well-being, decreased quality of life, more extended hospital stays, higher likelihood of hospital readmissions (Nipp et al., 2017), and increased overall healthcare costs (Reiche et al., 2004; Powell et al., 2012; Mausbach et al., 2015; Pirl et al., 2012). Additionally, distress can weaken patients' immune responses and could contribute to constant systemic inflammation, tumor growth, or cancer progression due to the persistent activation of the hypothalamic-pituitary-adrenal axis (Reiche et al., 2004; Powell et al., 2013; Mohammadpour et al., 2019). Finally, distress can interfere with a patient's ability to effectively manage their cancer diagnosis, leading to poor engagement with the healthcare team, lower rates of medication adherence, low enrollment in palliative care or hospice services, and worse overall survival (Mausbach et al., 2015; Bultz & Carlson, 2005).

The American Society of Clinical Oncology's (ASCO) Quality Oncology Practice Initiative (QOPI) recommends that oncology-certified organizations recognize the incidence and

prevalence of distress in the oncology population and intervene as necessary in any medical or nursing care setting (2020). In response, *** devised a Distress Management Policy in 2021 to screen for distress during outpatient medical interactions using the NCCN distress thermometer (DT). With the DT screening tool, patients rate their distress on a 1-10 scale, followed by a dichotomous yes/no rating of various common sources of distress (NCCN, 2022). A distress score greater than six (>6) is clinically significant and thus triggers a cascade of interventions and education regarding available resources for the patient's use. If the distress were related to financial toxicity, financial coordinators would be available to discuss insurance questions, concerns, and available financial resources to alleviate anxiety.

Nature and Background of the Local Problem

The inpatient oncology unit at *** does not have a specific distress protocol or distress tool to screen and identify distress in hospitalized patients. Due to the acute nature of the patient's medical status, patient and family distress are discussed in the periphery, if at all. Without a deliberate distress protocol in the inpatient setting, hospitalized patients may experience delays in psychological distress identification and interventions that can negatively impact their health outcomes (Nipp et al., 2017). Since two out of three hospitalized patients are thought to be suffering from psychological distress related to their cancer diagnosis (Peters et al., 2020), inpatient nurses must integrate distress screening and management strategies into their patient care so that patients have the tools to navigate distress and their cancer at any stage of their diagnosis.

Problem Statement

Acutely ill hospitalized patients with unrecognized distress experience access delays to psychological, social, and financial interventions that may contribute to poor health outcomes

(Reiche et al., 2004; Powell et al., 2012; Mausbach et al., 2015; Pirl et al., 2012; Nipp et al., 2017). Some hospitalized patients with new or progressing oncology diagnoses at *** verbalize mental distress, including fatigue, anxiety, and depression, during their hospitalization. To support patients, a multidisciplinary distress intervention strategy that includes distress screening, patient education regarding mental health interventions, outpatient referrals, and coping discussions was developed to improve patient outcomes and enhance oncology care.

Available Knowledge

Unrecognized distress in patients with oncological diagnoses is associated with adverse events that include decreased medication adherence, impaired decision-making capabilities, diminished satisfaction with the healthcare they receive, increased healthcare costs, and overall poorer outcomes (Albrecht & Rosenzweig, 2012; Reiche et al., 2004; Powell et al., 2012; Mausbach et al., 2015; Pirl et al., 2012). David and Cretu (2014) note that depression is at its highest level during the induction phase of chemotherapy (the first step of cancer treatment), followed by the consolidation phase (cancer treatment after induction). Bryant et al. (2015) found that some patients exhibit symptoms of post-traumatic stress disorder, including highly intrusive thoughts, avoidance, and distress during their cancer treatments. Patients with cancer are more likely to experience depression than their same-aged healthy counterparts, which indicates a significant correlation between depression and a cancer diagnosis (Ding et al., 2019; Gu et al., 2019).

Literature Review

Recent literature supports nurse-led patient education as an effective strategy to relieve distress in hospitalized patients (Apor et al., 2018; Schenker et al., 2021; Taylor et al., 2019). Recommended patient education modules should include in-depth discussions regarding

diagnosis, treatment plan and schedules, common symptoms of chemotoxicities and their management, treatment preferences, and identification of surrogate decision makers and emotional supports (Schenker et al., 2021; Ream et al., 2020; Yang et al., 2021). Mental and psychological strategies such as creating a mental mind map-based life review or cognitive behavioral therapy (Kim et al., 2018; Ream et al., 2020; Zhang et al., 2018) were also influential. Supplemental interventions such as physical exercises to combat fatigue (Zhang et al., 2018) and motivational, coping, and supportive communication (Chen et al., 2021; Kim et al., 2018) were also effective.

Synthesis of the Evidence

The appraised literature that supports this scholarly project includes eight randomized controlled trials following patients during pre-, intra-, and post-chemotherapy. These articles tried to establish that nurse-led interventions effectively alleviated oncology patient distress. According to my synthesis evaluation using the Johns Hopkins Evidence Level and Quality Guide (Dang & Dearholt, 2017), there is “good and consistent evidence” that nurse-led interventions are effective in relieving depression and anxiety in hospitalized cancer patients undergoing chemotherapy. This means a pilot change and further investigation of the issue would be extremely beneficial. Furthermore, other distress indicators such as fatigue or insomnia decreased with the inclusion of nurse-led tested interventions. Patient engagement and perceptions of their quality of life and health also improved. The average level of evidence of the eight articles included in this synthesis is 1B, meaning that most of the studies were systematic reviews or randomized control trials with narrow confidence intervals and that the evidence is of good quality, with reasonably consistent results and sample sizes sufficient for the study design (Dang & Dearholt, 2017).

The interventions contained within these articles focused on nurse-led palliative interventions that emphasized patient teaching (Apor et al., 2018; Schenker et al., 2021; Taylor et al., 2019) coupled with mental, physical, and psychological strategies (Kim et al., 2018; Ream et al., 2020; Zhang et al., 2018) that patients can do on their own with nursing and family support. The patient teaching component focused on in-depth discussions regarding diagnosis, treatment plan, treatment schedule, common symptoms and their management, treatment preferences, and identification of surrogate decision makers and emotional supports (Schenker et al., 2021). Nurse follow-ups, whether by telephone or in person, regarding previously discussed topics were also included as these were identified to decrease patients' anxiety levels (Ream et al., 2020; Yang et al., 2021). Other supplemental interventions involved physical exercises in combating fatigue (Zhang et al., 2018) and a cognitive behavioral program with motivational, coping, and supportive elements targeting body image changes, self-concept, and self-acceptance (Chen et al., 2021; Kim et al., 2018).

Rationale

Theoretical Model

The theoretical frameworks used to guide this DNP scholarly project are the Theory of Unpleasant Symptoms by Lenz and Pugh (1995) and Kolcaba's Comfort Theory (1994). Lenz and Pugh's (1995) theory recognizes that patients' symptoms are multidimensional and influenced by their physical, psychological, or situational experiences (Blakeman, 2018). Therefore, the treatment team can impact each distressing patient symptom by accurate recognition and individualized intervention depending on what the patient verbalizes would be most helpful. Kolcaba's comfort theory also focuses on physical, psychospiritual, environmental,

and social comfort constructs, suggesting a holistic approach as the most efficient way to care for patient distress (2018).

These theories underscore the importance of ascertaining the patient's cause of distress and intervening in a personalized manner depending on the patient and their family's needs and personalities. This standard is what the art of medicine and nursing requires, which can be taught to caregivers to safeguard quality of care and foster compassion.

Project Framework

Specific Aims

The goals of this scholarly project include assessing nurses' knowledge of distress in oncology patients and designing an educational intervention to support nurses' ability to identify distress, improve screening and distress management at ***. Once distress is identified, nurses will utilize their interdisciplinary team members and institution-approved resources and strategies to address multiple facets of what contributes to their patient's distress. This may include chemotherapy, energy conservation, symptom management handouts, referrals to social work, rehabilitation services, dietetics, spiritual care or financial coordinators, and connection to outpatient support groups, oncology social workers, local oncology organizations, and palliative care. Finally, the project will assess the impact of the educational interventions on nursing knowledge, skills, attitudes, and overall patient distress.

Population

The target population for this DNP project are hospitalized patients with cancer diagnoses who are admitted to the hospital for an acute illness related to their cancer diagnosis. The project participants will be the frontline nurses who work in the medical oncology unit of ***.

Local Care Environment

*** is a 483-bed tertiary care facility located east of Portland, Oregon (Providence Health and Services, 2022). Their vision is to provide "Health for a Better World" guided by the values of Compassion, Dignity, Justice, Excellence, and Integrity. According to ***'s 2020 annual data report, there are 51,561 emergency department visits yearly, with 17,999 patients admitted to the hospital with an average stay of 6.17 days (Providence Health & Services, 2022).

Relevant Elements of Project Setting

The inpatient medical oncology department at ***, locally known as *** is a 22-bed capacity unit staffed with registered nurses and supported by certified nurse assistants. This inpatient unit can provide acute medical care, continuous chemotherapies or immunotherapies, and access to clinical trials such as adoptive cellular therapies not available in other healthcare centers (Providence News Team, 2018).

SWOT Analysis/Needs Assessment Findings

In the inpatient or outpatient setting, distress in the oncology population is well documented in the literature. Oncology-certifying organizations view distress screening and interventions as integral to quality oncology care. The strength of the *** organization lies in its commitment to following evidence-based practices to administer quality care and ensure better health outcomes for its patients. However, national challenges such as the staffing shortage in the wake of the COVID-19 pandemic, limited financial capabilities, and competing priorities threaten the success of this project. A more detailed SWOT analysis is included in Appendix D.

Memorandum of Understanding (MOU)

Attached in Appendix E is the signed MOU between the DNP student and a representative of *** to complete the DNP project outlined herein within a specific timeframe.

Project Outcomes and Interventions**Short-term Project Outcomes**

The Logic Model attached in Appendix C depicts a detailed list of the projected short-term outcomes and project interventions concerning this DNP project's inputs, outputs, activities, and intermediate to long-term outcomes. In summary, the short-term outcomes and interventions are:

1. By June 30, 2023, 75% of nurse participants will have completed the distress pre-intervention survey regarding baseline knowledge about distress and screening.
2. By July 30, 2023, 50% of nurse participants will have viewed the supplementary PowerPoint presentation regarding distress.
3. By August 31, 2023, 50% of oncology bedside nurses could accurately identify the NCCN's distress thermometer and problem list tool.
4. By August 31, 2023, 70% of surveyed nurses reported improved competence in accessing handouts regarding chemo side effects, meditation, mental health resources, and other recommended resources.
5. By September 30, 2023, 50% of newly diagnosed hospitalized oncology patients will have a distress screening score documented in their chart during hospitalization.
6. By September 30, 2023, 50% of newly diagnosed hospitalized oncology patients will have an outpatient oncology social worker referral before discharge.

7. By September 30, 2023, 50% of patients with new hematologic malignancy diagnoses had palliative care referrals before discharge.

Project Interventions

1. Assess inpatient oncology nurses' knowledge, skills, and attitudes regarding distress, distress screening, interventions, and management.
2. Implement a distress management protocol and educate inpatient nurses about evidence-based strategies to alleviate distress in an oncology patient.
3. Integrate a distress screening tool for patient and family use in the inpatient setting.
4. Collaborate with ancillary team members such as social workers, chaplains, care managers, dietetics, speech and language pathologists, physical and occupational therapists, and outpatient liaisons for a holistic approach to patient distress management.
5. Review existing printed and electronic documents already used for distress management in the outpatient setting and include these in the education initiative regarding distress interventions.
6. Create patient education handouts and update existing available documents.

Correlation of Interventions with the Theoretical Model Elements

Lenz and Pugh (1995) and Kolcaba's Comfort Theory (1994), detailed in Appendix B, have overlapping concepts of physical, psychological, and situational requirements to ensure patient comfort. The nursing education in this DNP project emphasizes interventions that focus on what the patient verbalizes as essential to relieve their distress. For example, if physical symptoms or chemotherapy side effects cause the patient distress, patient education related to this symptom will be the priority for discussion and intervention. If a psychological issue is the

primary source of distress, the interventions include discussing counseling services, the availability of emotional support, and cognitive behavioral interventions.

Timeline

The complete timeline breakdown for this project is listed in Appendix F. Refinement of the project components, priorities, goals, and expected outcomes occurred during the Spring of 2023. Implementation commenced in the Summer of 2023. Data collection and interpretation occurred in the Fall of 2023, with the completion of the final executive report and dissemination during the spring of 2024.

Implementation and Evaluation Plan

Implementation Plan

Project planning consisted of securing a signed Memorandum of Understanding, receiving approval from the Institutional Review Board, applying for continuing education credit from *** Department of Nursing Education to increase participation among the target participants, and creating educational modules, pre- and post-intervention surveys, and collection of institutionally approved handouts and resources.

Implementation began in the medical oncology unit of *** with the administration of pre-intervention surveys that measured inpatient oncology nurses' (target participants) knowledge, skills, and attitudes regarding oncological distress. Two separate educational sessions were planned to maximize nursing attendance, with additional ad hoc educational sessions depending on initial participation. The teaching sessions were to coincide with the unit-based council meetings, huddle meetings, and during work hours. A supplementary PowerPoint presentation was also available for those unable to attend in person.

Methods

Data collection instruments to measure nursing participation and baseline knowledge about distress (Outcome #1 noted in Appendix H) included attendance records, unit employment records, and completed pre-intervention survey forms utilizing Likert scales. The information gathered from the attendance records was tabulated in a frequency distribution table and summarized to demonstrate the percentage total. The information included in the pre-intervention surveys will cover questions about supplementary education completion, knowledge about distress, and comfort level in discussing distress issues.

A post-intervention survey was collected after the completion of distress education to measure nursing distress knowledge and self-efficacy in managing distress. The post-intervention survey included questions about distress symptoms, identification of the distress thermometer tool, knowledge about available physical and psychosocial distress interventions, confidence in recommending reliable internet information, and efficacy in discussing distress with patients.

Sustainability of the Project

Once the initial distress education is complete, education for future newly hired nurses can occur as part of nursing orientation. Furthermore, additional resource updates and services can be done in partnership with the social work department, rehabilitation services, nutrition services, case management department, and the unit-based council of the medical oncology inpatient unit.

Ethical Considerations

Ethical considerations for this project include the protection of each participant's confidentiality and their rights to accept or decline participation.

CITI training (Appendix G), a core training module for individuals who wish to work with human research subjects that focuses on human subject protections, ethical issues, and current regulatory information, was completed by the DNP student in June 2022. A memorandum of understanding between Boise State University *** has been successfully attained.

Conflicts of Interest

There are no declarable conflicts of interest for this scholarly project.

Biases

Due to nurses' proximity and relationships with patients, this project is at risk for confirmation and information bias – believing that the patient may be in psychological distress even when the facts are otherwise, or prematurely assuming that the patient will be in distress because of their situation (Spencer & Heughan, 2018; Bankhead et al., 2019). Distress is subjective information and will be perceived differently depending on each patient experiencing their journey with cancer. Additionally, this project is privy to confounding evidence since an observer may project their specific beliefs onto the patient, contrary to the patient's precise needs (Aronson et al., 2018). The influence that medical, nursing, and interdisciplinary personnel hold towards their patients and the regard that patients feel towards their treatment teams may also result in an inadvertent imbalanced influence on patients' or families' decision-making and ultimate participation in this project.

Threats to Quality

Potential threats to quality include time limitations: the time required to educate nurses during their regular working hours and the limited time registered nurses have in their workday to integrate this project and communicate with their patients. Another threat to quality is the

broad nature of interventions that can be instituted to intervene with distress. Since distress interventions will be individualized depending on patient needs, the intervention quality will depend on the resources available for a particular reason for distress. For instance, a physical source of distress (nausea, cancer-related pain) will be relatively easier to manage rather than a situational (lack of housing, financial toxicity) source of distress.

IRB application and project determination

Attached in Appendix L is the Human Research Protection Program (HRPP) determination at *** that the above project falls under the Clinical Inquiry and Quality Improvement category, which, therefore, does not constitute human research or require approval by the Institutional Review Board (IRB).

Project Budget

The expenses associated with this scholarly project include figures associated with personnel wages and the costs associated with training target participants about oncologic patient distress and interventions. Appendix I includes the expense report that explains the breakdown of the necessary dollars for administering the educational activity for both trainers and trainees. In addition, the supportive costs of physical space, materials and supplies, information technology equipment, and advertising are also included.

Given that the DNP student has the support of upper management and is donating her time and supplies to the development of this scholarly project, the statement of operations shows an operating income that calculates to zero. Although this project does not generate income on paper, the long-term knowledge gained by the inpatient nurses who are caring for oncological patients who are in distress and the interventions and educational handouts created for this

project should manifest themselves in intangible gains such as improved patient satisfaction, improved patient distress scores, and increased knowledge for oncology staff.

Results

Steps of the intervention

After completing a literature search of national recommendations and recent oncology literature and assessing the ***'s distress policy, I arranged formal and informal meetings with stakeholders to discuss the utility of a nursing educational initiative that includes implementing systematic distress screening in the inpatient setting for hospitalized oncology patients:

1. I spoke with the outpatient oncology nursing supervisor, social worker manager, and outpatient support staff, including medical assistants and nurses, about the distress screening process and steps that connected patients to outpatient referrals. Referrals included social workers, rehabilitation services, financial and mental health counselors, and palliative care services.
2. I set up a meeting with the inpatient oncology nursing manager and the director of nursing to propose my scholarly project of bringing distress screening to the inpatient setting.
3. I presented my project proposal to the medical oncology unit-based council, the Education Department, the Human Resources Protection Program Council, and the Institution Review Board and received permission from all the councils to proceed.
4. I requested permission from the National Comprehensive Cancer Network (NCCN) to adapt the distress thermometer tool for patient use in the inpatient setting.
5. I made a landscape document of an adapted NCCN distress thermometer tool. This document briefly defined patient oncological distress, the distress thermometer tool (DT),

and a problem list. I presented several iterations of the DT to the oncology unit-based council and the oncology social work manager and integrated feedback regarding the addition of *** outpatient support resources, the DT in different languages, and other inpatient resources available at Providence to the final product. Pictures of these documents' initial and final iterations can be viewed in Appendix N. The DT is central to this scholarly project since it highlights patient education regarding oncological distress and is impactful in integrating distress screening into patient care.

6. I created a PowerPoint presentation with an accompanying distress binder containing outpatient resources and handouts for oncology patients. I added and deleted material according to the feedback I received from stakeholders. My initial intention was to have four one-hour educational offerings weekly, consisting of an oral presentation about distress and distress screening alongside a demonstration of how to use the DT tool and navigation of the *** website's outpatient resources. However, organizational challenges, such as a planned nursing strike and the likelihood of poor in-person participation during work hours, encouraged me to pursue a different strategy. I opted instead to add audio to my initial PowerPoint presentation for electronic distribution. I created a poster board for display in the medical oncology shared area with supplementary materials and contact information for questions, concerns, and suggestions. I also attended daily huddles at shift change to promote nursing participation, encourage questions, and maximize the project's reach.

Implementation commenced on April 26, 2023, with the e-mail distribution of an eight-item pre-intervention survey to all medical oncology inpatient nurses at *** (see Appendix O). Due to an issue with the Qualtrics survey distribution link, the e-mail was re-sent the next day

with instructions on how to complete the survey. Paper copies of the pre-intervention surveys were distributed in person during the daily shift change huddle to improve nursing participation.

After at least 50% of the target nursing participants completed the pre-intervention surveys, I e-mailed the Distress PowerPoint presentation to all target participants and commenced the distress education initiative. I set up a physical station for distress education that included a distress poster board and a distress binder. The distress binder contained outpatient resources and handouts immediately available to patients from the *** library (an oncology library located on the first floor that caters to oncology patients, their caregivers, and oncology staff), the distress thermometer tool, and a printed copy of the distress education PowerPoint presentation. The PowerPoint and poster board content were discussed during the daily huddle at shift change. Furthermore, I entertained questions during huddle time, downtime, and after work hours in front of the poster board or around the oncology unit, with a printed copy of the PowerPoint presentation or the DT tool.

Details of the process measures and outcomes

The short-term outcomes for this scholarly project are detailed in the Logic model (see Appendix C).

Short-term outcome 1 specified that 75% of oncology nurses completed the pre-intervention survey that assessed nursing baseline knowledge about distress and screening by June 30, 2023. This measure was evaluated by comparing the number of responses from the pre-intervention and returned surveys to the original target participant goal. This short-term outcome was met with 90.6% oncology nurse participation.

Short-term outcome number 2 stated that 50% of nurse participants acknowledged that they had viewed the supplementary distress education PowerPoint presentation, either digitally

or in person, by July 30, 2023. This outcome was evaluated by reviewing the answers from the returned post-intervention surveys received from 21 participants. This short-term outcome was met with 17 out of the 21 participants, or 81% of nurses, affirming their review.

Short-term outcome number 3 required 50% of bedside nurses self-reporting identification of the National Comprehensive Cancer Network's (NCCN) distress thermometer and problem list tool by August 31, 2023. This short-term outcome was met, achieving 95% affirmation.

Short-term outcome number 4 specified that 70% of surveyed nurses self-reported improved competence in accessing handouts regarding chemo side effects, mental health, and oncology resources by August 31, 2023. This goal was met with 77.8% of nurse participants indicating they "somewhat agree" or "strongly agree" with this sentiment.

Short-term outcome number 5 stated that by September 30, 2023, 50% of newly diagnosed cancer patients admitted to the hospital will have a distress screening documented during their hospitalization. This short-term outcome was measured by a patient chart audit between May and September 2023, corresponding with the dates of this project's initial implementation and completion of data collection. Short-term outcome 5 was met with distress scores documented in 67% of the newly diagnosed patients. There was also an increase in rates of distress screening documentation between May and September from 33% to 67%. Though not required for short-term outcome number 5, the charts of patients with known hematologic malignancies admitted during this project's time frame were audited for distress score documentation. There was a notable increase in distress score documentation for this population from May to September, from 0 to 100% (see Table 9).

Inclusion parameters for the chart audits used to measure short-term outcome numbers 5 to 7 were: a new diagnosis of a hematologic malignancy, inpatient chemotherapy administration for disease treatment, and greater than one-week hospital stay. Data was also collected on established patients with hematologic malignancies admitted during this period. To be included, their hospitalization must be related to an elective admission for chemotherapy treatment, a treatment-related complication, or disease progression. Hospital admissions for comorbid conditions not related to oncology were excluded. Additional exclusion criteria were patient death within the five months of project implementation or patients who have opted to pursue care at different facilities after their initial treatment.

Short-term outcome number 6 stated that by September 30, 2023, 50% of newly diagnosed patients with hematologic malignancy had an oncology social worker referral prior to their hospital discharge. This short-term outcome was met with 100% of patients discharged with a referral to oncology social work. For established patients, there was also an increased trend in oncology social work referrals prior to patient discharge (See Table 10).

Short-term outcome number 7 stated that by September 30, 2023, 50% of newly diagnosed hematology cancer patients will have palliative care referrals before their hospital discharge. This short-term outcome was not met. Zero percent of the patients with either new or known hematologic malignancies in September 2023 were discharged with a palliative care referral. Though some patients had palliative care referrals between May and September before their hospital discharge, the percentage rate was still less than 50%, which is below the goal (See Table 11).

Outcomes analysis

Short-term outcomes numbers 1 to 4, which measured improvement in nursing skills, knowledge, and attitudes about patient oncological distress, were all met. Short-term outcomes numbers 5 to 6, which measured improvement in distress screening for patients with distress, and the presence of additional outpatient referrals were also met. This demonstrates that providing education opportunities for nurses profoundly impacts the trajectory of a patient's symptom assessment and overall patient care. Short-term outcome 7 was not met, likely due to the common misconception of what palliative care can offer. A future education initiative that explains the purpose of palliative care in oncology would benefit patients, their families, direct care nurses, and the patient care team.

Contextual elements that interacted with the intervention

Contextual elements impacting this scholarly project include the strengths, weaknesses, opportunities, and threats analysis completed before project commencement (see Appendix D). The culture of learning, commitment to patient care, and the supportive customs inherent within our oncology nurses are paramount to the success and longevity of this project. Despite having busy patient loads, the nurses have been receptive and open to education and integrating a new process, such as distress screening, into their workflow. They have been gracious and purposeful in their patient care, participated in the surveys required by this scholarly project, and asked thoughtful questions regarding distress, screening, and management.

However, an event that impacted project intervention was a 5-day nurse strike. After a 10-day notification of intent to strike, all unionized registered nurses were temporarily replaced by travel nurses to continue healthcare operations for the hospital. After the strike, patient care

operations resumed their usual norms, though tensions persisted until contract agreements were reached in August 2023 (Thomas, 2023).

Associations between outcomes, intervention(s), and contextual elements

Drivers for nurse engagement, which is defined as nurses' commitment to and satisfaction in their jobs, include items such as feeling respected by an organization, finding value in the work that is done, feeling equipped to do the job that is required, and believing that the organization conducts business in a manner that is fair and ethical (Dempsey & Reilly (2016). Organizational strife and dissatisfaction may lead to poor nursing engagement, which can be manifested in a "less-than-optimal attitude, taking longer to complete routine tasks, failing to go above and beyond when needed," and staff turnover (Dempsey & Reilly (2016). There are studies investigating nursing engagement and patient outcomes. Reports show improvement in patient satisfaction and perception of care in organizations with higher nurse engagement scores (Brooks et al., 2015; Dempsey & Reilly, 2016; Kutney-Lee et al., 2019). Assessment of nursing engagement and patient satisfaction is not within the parameters of this scholarly project. However, it can be deduced that achieving short-term outcome goals and increased participation in quality improvement projects is directly proportional to nursing engagement scores and nurses' perception of their workplace and their team members.

Since the implementation of this project, at least 20.6% of the original 29 surveyed participants have had a job position change and are no longer employed in their previous positions. This information is known through personal conversations between the remaining nurses, additional staff, and the participants who left. There were multifactorial reasons for the staff turnover within this brief time. These include personal necessity or better external opportunities.

Missing Data

To maintain nursing participant privacy, basic demographic information such as age, gender, education, race, and personal contact information were not collected. While the elements of this project were created to protect participant privacy and to ensure optimal results, complete anonymity was impossible due to personal conversations and face-to-face engagement to garner support. The nurses who claimed credit for one hour of continuing nursing education may be identified after the intervention, though the project does not require this.

Other information should include historical data from patients' charts about demographics, diagnosis, distress rating, distress interventions, and other multidisciplinary referrals. To maintain complete privacy and anonymity, only pertinent elements required for this project were audited from patient's charts. Any information outside the data collection period of May to September is also missing.

Ultimately, it would be ideal to measure quarterly, or yearly metrics of patient distress rating scores collected in the inpatient setting. Change over time would be a good indicator of areas where nursing re-education or reinforcement is necessary. Additionally, this manner of tracking will allow insight into additional patient resources or referrals that could be offered.

Actual project revenues/expenses

The expenses associated with this scholarly project (see Appendix I) include personnel wages and the material costs of training target participants about oncologic patient distress and recommended interventions. The initial project budget included costs related to physical space, materials and supplies, information technology equipment, and advertising. Due to the changes applied during project implementation, equipment to facilitate face-to-face education was no longer required. Instead, the costs were redistributed towards creating online and physical

materials and using online and digital applications such as an audio-equipped PowerPoint presentation and its video equivalent, the use of Microsoft programs such as Outlook for e-mail distribution, OneDrive subscription for hosting larger-sized program files, the creation of a physical poster board for advertising, and the printing of a colored PowerPoint presentation for physical use. The estimated expenses for this project were below budget due to lower participation numbers for pre-intervention, implementation, and post-intervention. The allotted time for the educator's wages was also not fully utilized due to the position exit of the nursing educator who was previously involved in the proposal stage. Additional expenses, such as using SurveyMonkey, were not realized due to the pivot towards Qualtrics, a free service offered by Boise State University.

No income was expected from the implementation of this project. The donated time, effort, and supplies from the DNP student and the *** system will manifest as gains in long-term nursing knowledge, additional skills in identifying and screening for patient distress, and a change in attitudes toward the importance of distress management integration for oncological patients. The projected expenses of \$80,954.81 were above the actual utilized costs.

Interpretation

Association between interventions and outcomes

This scholarly project assessed oncology nursing knowledge, skills, and attitudes about oncology patient distress at ***. The nursing knowledge questions included queries about the definition of oncological distress, knowledge about the distress thermometer and its use, and knowledge about the institution's distress management policy. Before project implementation and nursing education, 41% of nurse participants (12 out of 29 nurses) knew what oncological distress was. 31% (9 out of 29 participants) knew what a distress thermometer was, but only 1

out of the 29 surveyed (3%) had used it before to screen for patient distress. The nursing skills questions queried confidence and ability to access patient-related educational materials and distress-related interventions. 24% of nurses (7 out of 29 participants) strongly agreed they were confident speaking to their patients about distress, and 20% (6 out of 29 participants) strongly agreed they could access educational materials and information on outpatient support services. Nurse attitudes included questions about the contribution of distress to the patient's overall recovery and the nurse's eagerness to learn about distress and distress management. 97% of nurses (28 out of 29 participants) felt that distress affects a patient's recovery, and 100% voiced that they want to learn more about managing distress and supporting oncology patients better. See Tables 1, 2, and 3 for pre-intervention survey statistics information.

According to the collected data, nurses require and would prefer additional nursing education regarding oncological patient distress, distress screening, and distress intervention. There is a documented association between increased nursing skills, knowledge, and attitudes regarding oncological distress and an increased percentage of patients getting distress screening in the hospital and having outpatient social worker referrals before discharge. This correlation shows that nurses who are offered continuing education have improved diagnostic skills and, thus, patients with better outcomes (Collins, 2013).

Comparison of results with previous findings

After project implementation, nursing knowledge, skills, and attitudes were reassessed. For nursing knowledge, 91% of nurses (20 out of 22 participants) self-reported that they knew what oncological distress meant, and 96% (21 out of 22 participants) knew the purpose of a distress thermometer, when to use it and viewed distress screening and management as integral to patient care. For the nursing skills portion, 86% of the nurses (19 out of 22 participants) plan

to integrate the distress thermometer into their patient care, and 96% verbalized plans for discussing distress with their patients and the patient's support network. Finally, for nurse attitudes, 77.3% of the nurses (17 out of 22 participants) indicated increased confidence in speaking to patients about oncological distress and distress-related interventions and resources. Further details can be found in Tables 4, 5, and 6.

For patient impact, there was a 34% increase in distress screening between May 2023, when project implementation started, and September 2023, when data collection ended. On average, 50% of patients were getting distress screening during their hospitalization for a new diagnosis of cancer. Additionally, 76% of patients with new cancer diagnoses were discharged from the hospital with an oncology social worker referral, which has also had an increased trend from May to September.

Impact of the project on people or systems

Oncology literature underscores the value of systematically analyzing patients' needs to provide patient-centered care. Oncology nurses and treatment team members must update themselves regarding new policies, available local and digital resources, and care services to inform their care. Healthcare institutions must advance nursing education to improve front-facing patient care and outcomes. When comparing the pre-intervention and post-intervention survey responses, there were improvements in self-reported nursing skills, knowledge, and attitudes regarding oncologic patient distress. This project impacts inpatient oncology nurses, the oncology nursing unit, and, by extension, its cancer care program by making the first steps in patient distress education regarding distress-related interventions. Best practice in oncology distress management includes tailored education and close follow-up. To improve distress

screening in practice, clinicians must prioritize the value of screening to the patients and their families because increased patient knowledge increases patient participation (Smith et al., 2018).

Reasons for the difference between observed and anticipated outcomes

There were no differences between observed and anticipated outcomes. All short-term outcomes and intended aims outlined for this scholarly project were met.

Policy implications

The *** has a Distress Management Policy crafted in 2021 that requires cancer patients to have access to psychosocial distress screening at their first patient visit and a cascade of interventions if their distress level is over six (***, 2021, p.3). The National Comprehensive Cancer Network (NCCN) guidelines recommend that, at a minimum, patients are assessed for distress at their initial visit, as clinically indicated, during a change in disease status that includes cancer recurrence, disease progression, or development of treatment-related complications. The implementation of this project expands the scope of the *** Distress Management Policy into the inpatient setting. It integrates the NCCN guideline to assess patient distress during different periods of a patient's disease continuum. Before this scholarly project, there were no easily accessible distress thermometers for inpatient use; patients would have had to look independently online to discover Providence offered oncology resources, and 96% of nurses have not used a distress thermometer as part of their patient care. After project implementation, a laminated distress thermometer is now posted in each inpatient hospital room. This laminated poster includes the definition of distress, problem lists contributing to patient distress, and a QR code that automatically forwards the user to oncology-related outpatient resources offered by the institution and other local and national organizations. Additionally, 86% of nurses have self-reported positive intentions to integrate distress screening into their patient care.

Conclusions

Usefulness of the work

This DNP project may be helpful to oncology leaders, hospital administrators, oncology nurses, and interprofessional colleagues caring for oncology patients. As mentioned above, distress is widespread in oncology patients and can cause a significant reduction in quality of life and negatively affect overall outcomes. Multidisciplinary team members interested in improving oncology patients' quality of life can use this quality improvement project as a step-by-step guide in the processes needed to implement a similar intervention in their institution. Interested parties can use the educational distress presentation included in Appendix M to craft a similar educational presentation for hospital staff. They can also improve on the steps included in this DNP project to make nursing education more effective and distress screening and intervention more prevalent. Finally, interested oncology patient caregivers can utilize this work to evaluate their distress screening processes and improve their distress education offerings through electronic, printed, or in-person resources.

Sustainability

The main goal of this project was to educate inpatient oncology nurses regarding the definition of oncological patient distress, the importance of distress screening, and the interventions and resources available to patients. Because the distress thermometer is now readily accessible in each patient room and part of the patient's hospitalization, the knowledge acquired and imparted during project implementation is expected to be passed on to newly hired nurses, including new graduates, new to the specialty, or seasoned new to the institution nurses. Due to the interdisciplinary collaboration to design and implement this project, ongoing partnerships with the social work department, rehabilitation services, nutrition services, case

management department, and the unit-based councils are expected to continue to serve the oncology patient population better.

Potential for spread to other contexts

Distress is not only present in cancer patients. This phenomenon is also experienced by patients with chronic disease (Zalai et al., 2022), patients with chronic pain (Dworkin, 1994), people with mental health illnesses, young adults, healthcare workers, and 41% of the American population during the COVID-19 pandemic (Pasquini & Keeter, 2022). The implementation of distress screening using the distress thermometer is a small practice change that significantly impacts patient outcomes.

Implications for practice and further study

Evidence-based oncology literature suggests that nurses instructed in assessing distress contribute to better referral rates to psychosocial oncology services. These nurses also play critical roles in patient decision-making and intervention implementation (Grassi et al., 2011; Scott & McSherry, 2009; Tavernier, 2014). Since this scholarly project demonstrated increased nursing knowledge, improved nursing skills, and better attitudes regarding oncology distress, the next step would be determining whether offering nursing or patient education regarding palliative care will improve outpatient referrals to palliative care. Further study on whether overall patient distress scores throughout the cancer continuum could be improved by increased knowledge from their professional care team or caregivers can also be assessed.

Next steps and dissemination

Oncology-certified organizations must continue recognizing the incidence and prevalence of distress in their oncology population and intervene as necessary in any medical or nursing care setting. The next steps for this project include the integration of distress screening into standard

nursing care and making distress ratings part of a patient's physical assessment. Referrals can also expand from oncology social workers to physical therapy, financial services, nutrition, or other multidisciplinary teams essential to patient success. Furthermore, a yearly refresher course about distress can be offered to oncology caregivers and patient care providers to offer whole-person care to address the needs of the physical body, mind, and soul. Dissemination for this project will include submitting a brief overview of the results to Providence nursing administration and oncology leaders. An abstract can also be submitted to interested oncology and nursing societies.

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Table 1*Pre-intervention survey: Nurse knowledge*

N=the number of participants who completed the survey

n= number of participants out of N who answered

Survey Questions (N=29)	% of participants who answered “Yes” (n)	% of participants who answered “No” (n)	% of participants who answered “Maybe” (n)
1. I know what oncological distress means.	41.38% (12)	3.45% (1)	55.17% (16)
2. I know what a distress thermometer is.	31.03% (9)	55.17% (16)	13.79 (4)
3. I have used a distress thermometer to care for my patients before.	3.57% (1)	0	96.43% (27)
4. I am familiar with Providence Cancer Institute’s Distress Management Policy.	6.90% (2)	86.21% (25)	6.90% (2)

Table 2*Pre-intervention survey: Nurse skills*

N=the number of participants who completed the survey

n= number of participants out of N who answered

Survey Questions (N=29)	% of participants who “Strongly disagree” (n)	% of participants who “Somewhat disagree” (n)	% of participants who “Neither agree nor disagree” (n)	% of participants who “Somewhat agree” (n)	% of participants who “Strongly agree” (n)
5. I feel confident talking to my patients about their distress and possible distress-related interventions	3.45% (1)	13.79% (4)	13.79% (4)	44.83% (13)	24.14% (7)
6. I know how to access Providence-approved chemotherapy handouts, educational materials regarding chemotherapy toxicities or challenges, and outpatient support services information for my patients.	0	20.69% (6)	6.90% (2)	51.72% (15)	20.69% (6)

Table 3*Pre-intervention survey: Nurse attitudes*

N=the number of participants who completed the survey

n= number of participants out of N who answered

Survey Questions (N=29)	% of participants who answered “Yes / Strongly Agree” (n)	% of participants who “Somewhat agree” (n)	% of participants who answered “Maybe / Neither agree nor disagree” (n)	% of participants who answered “Somewhat disagree” (n)	% of participants who answered “No / Strongly disagree” (n)
7. A patient’s physical, emotional, spiritual, or social state affects overall recovery from their hospitalization.	96.55% (28)	0	0	0	3.45% (1)
8. I want to learn more about how to manage distress and support my patients better.	100% (29)	0	0	0	0

Table 4*Post-intervention survey: Nurse knowledge*

N=the number of participants who completed the survey

n= number of participants out of N who answered

Survey questions	% of participants who answered "Yes"	% of participants who answered "No"	% of participants who answered "Maybe"
N = 22	(n)	(n)	(n)
1. I understand what oncological distress is.	90.9% (20)	0%	9.1% (2)
2. I know the purpose of a distress thermometer and when to use it.	95.5% (21)	0%	4.6% (1)
3. Distress screening and management is an important part of patient care.	95.5% (21)	0%	4.5% (1)

Table 5*Post-intervention survey: Nurse skills*

N=the number of participants who completed the survey

n= number of participants out of N who answered

Survey questions (N = 22)	% of participants who answered "Yes" (n)	% of participants who answered "No" (n)	% of participants who answered "Maybe" (n)
4. I plan to use the distress thermometer to care for my patients.	86.4% (19)	4.5% (1)	9.1% (2)
5. I will discuss distress with my patients and their support network.	95.5% (21)	0%	4.5% (1)

Table 6*Post-intervention survey: Nurse attitudes*

N=the number of participants who completed the survey

n= number of participants out of N who answered

Survey questions (N = 22)	% of participants who “Strongly disagree” (n)	% of participants who “Somewhat disagree” (n)	% of participants who “Neither agree nor disagree” (n)	% of participants who “Somewhat agree” (n)	% of participants who “Strongly agree” (n)
6. I feel more confident talking to my patients about distress and distress- related interventions.	9.1% (2)	9.1% (2)	4.6% (1)	27.3% (6)	50% (11)
7. I feel confident recommending resources to my patients and their resources to access additional information.	13.6% (3)	4.5% (1)	9.1% (2)	31.8% (7)	41.0% (9)

Table 7*Project Outcomes*

Short-term outcomes	Pre-intervention survey		Post-intervention survey		Totals	
1. 75% of oncology nurses completed the pre-intervention survey regarding baseline knowledge about distress.	29/32 participants (90.6%)		N/A			
2. 50% of nurse participants viewed the supplementary PowerPoint presentation.	N/A		17/21 participants (81%) *1 participant did not answer this question		17/29 of the original participants (59%)	
3. 50% of oncology bedside nurses were able to identify the distress thermometer and problem list tool.	9/29 participants (31.0%)		21/22 participants (95%)		21/29 of the original participants (72%)	
4. Confidence in discussing distress interventions and accessing distress-related information.	Strongly agree: 7/29 (24.1%)	Somewhat agree: 13/29 (44.8%)	Strongly agree: 11/22 (50%)	Somewhat agree: 6/22 (27.8%)	Strongly agree: 11/29 (38%)	Somewhat agree: 6/29 (21%)
					38%+21% = 59% participants felt more confident discussing distress interventions and accessing distress-related information with their patients	

Table 8*Nursing years of experience:*

N=the number of participants who answered this question

n= number of participants out of N who answered

Number of years of nursing experience N = 21	% of nurses who responded (n)
1-5 years	47.6% (10)
6-10 years	42.9% (9)
11-15 years	4.8% (1)
Greater than 16 years	4.8% (1)

Note: Some questions were left blank at the survey submission. Thus, some questions have missing data and do not reflect the total number of participants.

Table 9

Short-term outcome: Percentage of patients with a distress score during hospitalization. Completed by computer audit.

Year 2023	Numbers of newly diagnosed cancer patients with hematologic malignancies.	Number of patients with hematologic malignancies admitted for treatment, treatment-related complication, or disease progression.	Percentage of patients who had a distress score during their hospitalization.	
			New Patients	Established patients
May 1-31	3	5	33% (1/3)	0% (0/5)
June 1-30	1	1	100% (1/1)	0% (0/1)
July 1-31	2	0	50% (1/2)	n/a
August 1-31	1	3	0% (0/1)	50% (1/2)
September 1-30	3	1	67% (2/3)	100% (1/1)

Table 10

Short-term outcome: Percentage of patients with a social worker referral at discharge. Completed by computer audit.

Year 2023	Numbers of newly diagnosed cancer patients with hematologic malignancies.	Number of patients with hematologic malignancies admitted for treatment, treatment-related complication, or disease progression.	Percentage of patients who had a social worker referral at their hospital discharge.	
			New Patients	Established patients
May 1-31	3	5	33% (1/3)	40% (2/5)
June 1-30	1	1	100% (1/1)	0% (0/1)
July 1-31	2	0	50% (1/2)	n/a
August 1-31	1	3	100% (1/1)	50% (1/2)
September 1-30	3	1	100% (3/3)	100% (1/1)

Table 11

Short-term outcome: Percentage of patients with a palliative care referral at discharge.

Year 2023	Numbers of newly diagnosed cancer patients with hematologic malignancies.	Number of patients with hematologic malignancies admitted for treatment, treatment-related complication, or disease progression.	Percentage of patients who had a palliative care referral at their hospital discharge.	
			New Patients	Established patients
May 1-31	3	5	0% (0/3)	40% (2/5)
June 1-30	1	1	100% (1/1)	0% (0/1)
July 1-31	2	0	50% (1/2)	n/a
August 1-31	1	3	0% (0/1)	0% (0/2)
September 1-30	3	1	0% (0/3)	0% (0/1)

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Appendix A: Literature Review Summary Table

TITLE OF ARTICLE	AUTHORS	RESEARCH QUESTION OR AIM OF THE ARTICLE	TYPE OF STUDY (DESIGN)	LEVEL OF EVIDENCE	DESCRIPTION OF SAMPLE (IF APPLICABLE)	OUTCOME MEASURES / (MEASURING RESEARCH QUESTION)	RESULTS / KEY FINDINGS
Articles that Include Possible Nurse Interventions for the Searchable Question							
Patient teaching							
Prechemotherapy Education: Reducing Patient Anxiety Through Nurse-Led Teaching Sessions	Apor, E., Connell, N. T., Faricy-Anderson, K., Barth, P., Youssef, R., Fenton, M. A., Sikov, W. M., Thomas, A., Rosati, K., Schumacher, A., Lombardo, A., Korber, S., Khurshid, H., Safran,	Evaluate the effect of a nurse-led chemotherapy teaching session on patients' knowledge, anxiety, and preparedness for cancer-directed therapy.	Successive Independent Sample Study This survey study assessed perceived patients' knowledge of the treatment plan and anxiety levels on a Likert-type	Level 3b. Good quality, except it needs to be clarified if this is generalizable. This study used the Hospital Anxiety and Depression Scale (HADS) tool, which is not the only tool for assessing depression and anxiety in the	N= 196. Patients were older than 18 and selected across different cancer types to receive chemo between October 2011 and March 2013.	1. Knowledge and chemo preparedness were measured using a Likert Scale (1- no knowledge, 4 - well-informed), comparing results from the first and second treatments. 2. Anxiety level was measured	1. Significant increases were observed in patients' understanding of their treatment schedule and potential side effects by the first cycle. (p<0.0019) 2. Reduction in treatment-related anxiety by the second cycle of therapy. (p=0.0187)

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	H., & Mega, A. (2018).		scale from 1-4. (The study used a generalized linear mixed model to Model random effects while analyzing results over time).	general population.		using the HADS scale.	
Mental/Psychological interventions							
Effects of a Mind Map–Based Life Review Program on Anxiety and Depressive Symptoms on Cancer Patients Undergoing Chemotherapy	Chen, Y., Zheng, J., Xiao, H., Lin, X., & Zhang, X. (2021).	Determine the effects of the mind-based life review program (MBLRP) on anxiety and depressive symptoms in cancer patients undergoing chemotherapy .	Randomized Control trial The study used a single-blinded, randomized, controlled, parallel-group pretest and post-test.	Level 1b. Good quality, but the study has a small sample size and was conducted in a single hospital, which may be different from the whole population. Note: The study mentions that Fujian Province has a	N = 84 cancer patients were recruited in a hospital in Fujian, China, between May and November 2017. N=40 were in the experimental group and N = 44 were in the control group.	1. Zung Self-rating Anxiety scale (SAS) was used on a 4-point Likert Scale. 2. Zung Self-rating depression scale (SDS) was used on a 4-point Likert scale.	1. Anxiety - Multivariate test statistics showed significant differences in anxiety levels of the within-group ($F = 11.343$, $P < .001$), between-group ($F = 8.873$, $P = .004$), and interaction effects (group time) ($F = 19.595$, $P < .001$). -There was a statistical difference between pretest and

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				higher incidence of gastrointestinal and respiratory cancers than the general population.			<p>post-test results before, during, and after MBLRP.</p> <p>2. Depression -There was a statistical difference between before, during, and after MBLRP depression rates with the MBLRP program. (F=12.385, p<0.01 vs F =18.000, p<0.01 vs F=26.544, p<0.01)</p>
A psychological intervention program for patients with breast cancer under chemotherapy and at a high risk of depression: A randomized clinical trial.	Kim, Y. H., Choi, K. S., Han, K., & Kim, H. W. (2018).	To develop a nurse-led psychological intervention program and to evaluate its effects on psychological distress and quality of life in patients with breast cancer undergoing chemotherapy and at a high risk of depression.	Pre and post-test randomized clinical trial	<p>Level 1b.</p> <p>It is a good quality study, but due to the small sample size, only female gender, and a single university hospital in Seoul, it is unclear if it is representative of all South Korea or all breast cancer patients.</p>	<p>N = 60 patients with breast cancer were randomly and evenly assigned to the intervention (N=30) versus the control group (N=30).</p> <p>The patients had a mean age of 48 years and were receiving care at a university hospital in</p>	<p>1. Mood disturbance and psychological distress were measured with the Profile of Korean version of the Mood States – Brief (K-POMS-B). This has 30 items rated on a 5-point Likert scale.</p>	<p>1. QOL/Global health status was higher in the intervention group than in the control group (F=8.78, p=.01)</p> <p>2. Compared with the control group, the intervention group reported significantly lower mood disturbance (p<0.1), anxiety, and depression</p>

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					Seoul. Inclusion criteria include diagnoses of stage I-III breast cancer.	<p>2. Anxiety and depression were measured using the Hospital Anxiety and Depression Scale (HADS) translated into Korean. This contained seven items rated on a 4-point scale.</p> <p>3. Quality of Life was measured using the European Organization for Research and Treatment of Cancer (EORTC) Quality of Life Questionnaire.</p>	and showed an improved global health status and physical, role, and emotional functions. They also reported fewer symptoms, such as fatigue ($p=0.01$), nausea ($p<0.01$), vomiting, pain, and insomnia ($p<0.01$).
Meditation for adults with	Salhofer, I., Will, A.,	To review the benefits and	Systematic review	Level 4C.	The databases MEDLINE	Grading of Recommendation	There is evidence of bias and inconsistent

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hematological malignancies (Review)	Monsef, I., & Skoetz, N. (2016).	harms of meditation practice as an additional treatment to standard care for adults with hematological malignancies.		This review included RCTs, but only one study was determined to fit the Cochrane standard and included in the synthesis.	(1950-2015), Cochrane Central Register for Controlled Trials (CENTRAL, 2015), and meta-Register for Controlled Trials (RCT) were searched. Out of 29 eligible articles, only one study was included in the synthesis. Of the one study included in the synthesis, N = 91 patients were enrolled, but only 42 remained due to other factors.	s Assessment, Development, and Evaluation (GRADE) criteria.	methods in the trials included. The evidence for all predefined outcomes must be revised due to the missing data, study population, and small sample sizes.
Nurse-led exercise and cognitive-behavioral care against nurse-led usual care between and after	Yang, W., Xi, J., Guo, L., & Cao, Z. (2021).	To evaluate the effectiveness of nurse-led exercise and cognitive-behavioral therapy	Randomized Control Trial was conducted from October 2017 to July 2019.	Level Ia High-quality study. The data and outcomes measured in this study were validated	N = 389 Han Chinese women with ovarian cancer were divided into the exercise and CBT care group (EC) (N=118),	1. Fatigue Piper Fatigue Scale (consisted of 24 items, with a rating from 0 (no fatigue) to 10 (severe fatigue)	1. Fatigue Only the exercise and cognitive-behavioral care (EC) group had a decrease in the number of women with depression. (EC,

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chemotherapy cycles in Han Chinese women of ovarian cancer with moderate to severe levels of cancer-related fatigue		(CBT) care against nurse-led usual care in Han Chinese women with ovarian cancer. To evaluate results in cancer-related fatigue, depressive symptoms, and sleep quality.		against previously done randomized trials, pilot studies, and meta-analyses.	the nurse-led usual care group (UC) (N=126), and no intervention (exercise or CBT group) (NC) (N=145). According to the Piper Fatigue Scale, women have moderate to severe levels of cancer-related fatigue.	2. Depression Zung self-rating depression scale (20 self-rated items measured on a 4-point Likert scale) 3. Sleep Pittsburgh Sleep Quality Index questionnaire (consisted of 19 items rated on a 3-point Likert scale)	p<0.001) vs UC, p = .128, NC, p=0.71) 2. Depression Only the EC group had a decrease in the Zung Self-rating Depression Scale score. EC, p<0.01 vs UC p = .371 vs NC, p = .979). 3. Sleep Only women of the EC group had an improved Pittsburgh sleep quality score (EC, p=.045 vs. UC, p=.381 vs. NC, p=.743).
Effects of nurse-led home-based exercise & cognitive behavioral therapy on reducing cancer-related fatigue in patients with ovarian cancer during and after chemotherapy:	Zhang, Q., Li, F., Zhang, H., Yu, X., & Cong, Y. (2018).	To investigate the feasibility of a nurse-led home-based exercise and cognitive behavioral therapy (E & CBT) for ovarian cancer adults with cancer-	A randomized, single-blind control trial was conducted between November 2014 and 2015.	Level IB. The study is of good quality, but the specificity of the cancer diagnosis and the gender limitation may not represent	N = 72 women with ovarian cancer. The sample consisted of patients between 18-80 years old who recently completed surgical intervention and	1. Fatigue A Chinese version of the Piper Fatigue Scale (four subscales of Behavior, Affect, Sensory, and Cognition) uses a 10-point numeric rating scale (0-	1. Depression After the interventions, the experimental group participants had lower symptoms of depression compared to the comparison group. In addition, the scores decreased over time. (T2: p = 0.001 and T3: p <

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A randomized controlled trial		related fatigue on outcomes of fatigue, sleep disturbance, and depression, either during or after completion of primary cancer treatment.		the general population.	their first cycle of adjuvant chemotherapy. The participants were divided into two groups. The first group received E & CBT (N=36), while the other received no interventions (N=36).	not at all to 10-severely). 2. Depression The self-rating depression scale comprised 19 questions and was rated with a 3-point Likert scale. 3. Sleep Pittsburgh Sleep Quality Index questionnaire	0.001). There was no change in the control group. 2. Fatigue After the interventions, fatigue was significantly reduced in the intervention group over time. (T1=4.37, T2=4.24, T3=3.90). The control group did not have any change. 3. Sleep Sleep duration, sleep dysfunction, daytime dysfunction, and total sleep quality significantly improved.
Nurse-led Palliative Care							
Effect of an Oncology Nurse-Led Primary Palliative Care Intervention on Patients with Advanced Cancer: The	Schenker, Y., Althouse, A. D., Rosenzweig, M., White, D. B., Chu, E., Smith, K. J., Resick, J. M., Belin, S.,	To assess the effect of CONNECT (Care Management by Oncology Nurses to Address Supportive	Randomized Clinical trial Conducted from July 2016 to October 2020 at 17 community	Level IA. The study had a good sample size and used rigorous statistical methods. Their baseline data	N = 672 patients with a mean age of 69 were enrolled in this study. Inclusion criteria included patients with	1. Quality of Life (QOL) Functional Assessment of Chronic Illness Therapy - Palliative (FACIT-pal). Scored from 0-	At three months, there were no significant differences in quality-of-life scores nor anxiety reporting between the standard care and experimental groups.

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CONNECT Cluster Randomized Clinical Trial.	Park, S. Y., Smith, T. J., Bakitas, M. A., & Arnold, R. M. (2021).	Care Needs), a primary palliative care intervention delivered by oncology nurses, on patients' quality of life outcomes, symptom burden, and distress scores.	oncology practices in Western Pennsylvania .	also mirrored other studies evaluating the same population outside Pennsylvania. The lack of statistically significant results in the key findings was related to logistical deficiencies, staff, and time shortages to implement the intervention adequately.	solid metastatic tumors undergoing oncologic therapy or receiving oncologic care. N=336 patients were randomized to the intervention group, while N=336 were randomized to the standard care group.	184, with higher scores indicating better QOL. 2. Symptom Burden Edmonton Symptom Assessment Scale (ESAS). Scored from 0-90, with higher scores indicating more symptoms. 3. Depression and Distress Hospital Anxiety and Depression Scale (HADS). Scored from 0-21, with higher scores indicating higher levels of depression and anxiety.	1. QOL/FACIT-pal score, p=.55 2. ESAS, p=.11 3. HADS - Depression, p= .82 - Anxiety, p=.34
Care After Lymphoma (CALy) trial: A phase II pilot pragmatic randomized	Taylor, K., Chivers, P., Bulsara, C., Joske, D., Bulsara, M., &	To develop and evaluate an evidence-based nurse-led lymphoma survivorship	Randomized control trial (RCT)	Level Ib. It is a good quality study, but 60 sample patients may be	N= 60 patients over 18 years old were recruited between July 2015 and	1. Unmet needs Short-form survivor Unmet Needs Survey (SF-SUNS) rated between 0 (no	Statistical significance was set at 0.05 (2-tailed). 1. SF-SUNS

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controlled trial of a nurse-led model of survivorship care	Monterosso, L. (2019).	model and determine its impact on lymphoma patients.		inadequate to see the actual effect of the intervention. Also, there was a disproportionate number of men to women, which does not reflect current lymphoma statistics.	January 2017. N=30 patients were randomized into the intervention group, while N=30 were randomized into the control group. Inclusion criteria: diagnosis of Hodgkin (HL) or Non-Hodgkin Lymphoma (NHL), treated in a tertiary cancer center in Australia, and completed curative first-line therapy or second-line curative autologous therapy stem cell transplant.	unmet need) and 4 (very high unmet need). 2. Depression and Anxiety Depression, Anxiety, Stress Scale (DASS21) scored between 0 (does not apply) to 3 (applies very much). 3. Coping Strategy Mini-mental Adjustment to Cancer Scale. Scored 0 (does not apply) to 4 (applies very much)	Intervention participants (n = 30), reported less unmet needs (M = 21.41 vs M = 25.72, p = .506) 2. Distress (DASS21) Intervention participants reported less distress ((M = 13.03 vs M = 15.14, p = .558) 3. Coping Intervention participants report increased empowerment (M = 50.21 vs. M = 47.21, p = .056) compared with control participants (n = 30).
Telephone interventions for symptom management in	Ream, E., Hughes, A. E., Cox, A., Skarparis, K., Richardson,	To assess the effectiveness of telephone interventions for reducing	Systematic review	Level IA. This high-quality evidence used	Medline (years 1946-2019), Embase (1980-2019), CINAHL (1982-2019),	Grading of Recommendation s Assessment, Development,	Twenty-one studies provided evidence of the effectiveness of telephone-delivered interventions, and the

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adults with cancer.	A., Pedersen, V. H., Wiseman, T., Forbes, A., & Bryant, A. (2020).	symptoms of anxiety, depression, fatigue, and emotional distress in cancer patients undergoing active chemotherapy .		Cochrane methods for trial selection, data extraction, and analysis. In addition, it spans many years of literature and includes high-evidence studies (RCTs).	British Nursing Index (1984-2019) and PsycInfo (1989-2019) databases were searched. 32 studies that were RCT and quasi-RCTs were included. The sample included 6250 people with varied cancer types and diagnoses across different stages of cancer treatments.	and Evaluation (GRADE)	majority appeared to reduce symptoms of depression compared to the control. Many telephone interventions appeared effective compared to control in reducing anxiety (16 studies; 5 contributed quantitative change scores (CS) results).
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DEPRESSION/ANXIETY IN AML**ARTICLES USED TO SUPPORT SIGNIFICANCE PAPER IN NURS 602**

Patient-reported symptoms and quality of life in adults with acute leukemia: a systematic review	Bryant, A.L., Walton, A.L., Shaw-Kokot, J., Mayer, D., & Reeve, B. (2015).	Summarize the findings from different research articles conducted on adult acute leukemia survivors pertaining to	Systematic review		For this systematic review, the authors evaluated 16 quantitative studies and one qualitative study published from 1990–2013 that	1. Brief Symptom Inventory (BSI) questionnaire	1. Fatigue was the most commonly reported symptom for patients with acute leukemia. 2. The second most reported symptom is depression.
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		symptoms and quality of life (QOL) after treatment.			used quality of life (QOL) questionnaires to evaluate symptom burden and QOL of patients with acute leukemia.		3. Anxiety and depressive symptoms are experienced by patients during treatment, with exhibitions of post-traumatic stress disorder symptoms including highly intrusive thoughts and avoidance after treatment completion.
The evolution of depression and anxiety in leukemia cases depends on the disease phases and treatment.	David, A.M. & Cretu, R.Z. (2014).	Investigate the variations of depression and anxiety in patients with acute leukemia during three distinct phases of chemotherapy treatment (induction, consolidation, and	Cohort study		<p>Included in this study were 327 persons with a recent diagnosis of acute leukemia.</p> <p>The average age was 51 years old. In addition, 54.7% of the sample were males, while the</p>	<p>1. The covariate (blast cells) treatment phase factor had a significant effect on the levels of anxiety $F(2, 320) = 7.67$, $p < .01$. Patients showed higher incidences of</p>	<p>2. Depression is at its highest level during the induction phase of chemotherapy treatment and then in the consolidation phase.</p> <p>3. The highest level of anxiety is during the consolidation phase.</p>

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		maintenance) for both genders.			rest were females.	depression during induction and consolidation.	4. Men showed higher levels of anxiety compared to women.
Anxiety and depression predict unfavorable survival in acute myeloid leukemia patients.	Ding, T., Wang, X., Fu, A., Xu, L., & Lin, J. (2019).	Investigate the prevalence and severity of anxiety and depression in patients with acute leukemia. Correlate the findings above with clinical characteristics and survival profiles in acute myeloid leukemia (AML) patients.	Case-control study		There were 208 AML patients in the study, accompanied by 200 age and sex- matched healthy persons for the control group. The mean age of the AML patients was 48.6 years old, and 56.2% were males.	1. Hospital Anxiety and Depression Scale (HADS)	1. Anxiety - Anxiety prevalence - ($P<.001$) and anxiety severity ($P<.001$) were all greatly increased in AML patients than those in the healthy cohort (HC). 2. Depression - depression severity ($P<.001$) was also dramatically increased for leukemia patients compared to their healthy cohort.

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							<p>3. Anxiety and depression were much more prevalent and severe for patients with leukemia compared to their age and sex-matched healthy cohort.</p> <p>4. Anxiety and depression rates were similar between patients who were in complete remission and those who were not.</p> <p>5. Event-free survival was worse for patients who had anxiety.</p> <p>6. Overall survival was worse for patients who had depression and anxiety.</p>
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Depression and hopelessness in patients with acute leukemia: the psychological impact of an acute and life-threatening disorder	Gheihman, G., Zimmermann, C., Deckert, A., Fitzgerald, P., Mischitelle, A., Rydall, A., Schimmer, A., Gagliese, L., Lo, C., & Rodin, G. (2016).	Assess the prevalence of depression and hopelessness in patients with acute leukemia.	Cohort study		For this study, 341 patients were recruited within one month of an acute leukemia diagnosis. The patients completed the Beck Depression Inventory (BDI) and Beck Hopelessness (BH) scale as a measuring scale for depression.	1. Beck Depression Inventory (BDI)	<p>1. Depression</p> <ul style="list-style-type: none"> - The outcomes show that 17.8% of the sample size reported clinically significant depressive symptoms (BDI-II>15), and 40.4% were in the moderate-severe range (BDI-II>20). <p>2. Depression was associated with a more significant physical symptom burden (adjusted $R^2 = 48.4\%$), while hopelessness was associated with older age and lower self-esteem.</p> <p>3. Clinically depressive</p>
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DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

							<p>symptoms were common in the early course of acute leukemia and related to physical symptom burden.</p> <p>4. Hopelessness was less common in the early treatment course but was mainly associated with older age and lower self-esteem.</p>
The prevalence, risk factors, and prognostic value of anxiety and depression in refractory or relapsed acute myeloid leukemia patients of North China	Gu, M., Hao, X., Cong, L., & Sun, J. (2019).	Investigate the prevalence of anxiety and depression, their risk factors, and the correlation with prognosis in refractory or relapsed (R/R) acute myeloid leukemia (AML)	Observational study		<p>There were 180 patients with relapsed and refractory AML enrolled in this study.</p> <p>In addition, the Hospital Anxiety and Depression Scale (HADS) was used to evaluate 180 other patients with de novo (primary) AML</p>	<ol style="list-style-type: none"> 1. Hospital Anxiety and Depression Scale (HADS) 2. Eastern Cooperative Oncology Group (ECOG) 	<ol style="list-style-type: none"> 1. Anxiety and depression were 53.9% and 45.6% in R/R AML patients, respectively, which were also significantly increased compared with de novo AML patients and other healthy cohorts (HC) (all $P < .01$).

DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

		patients in Northern China.			prior to treatment.		<ol style="list-style-type: none"> 2. Anxiety and depression were increased in relapsed/refractory (R/R) AML compared to de novo AML. 3. Higher Eastern Cooperative Oncology Group (ECOG) scores and lines of salvage therapy were correlated with anxiety and depression in R/R AML. 4. Anxiety and depression were associated with shorter overall survival (OS) in R/R AML patients.
Effect of intensive chemotherapy on physical, cognitive, and emotional health of older adults with acute	Klepin, H.D., Tooze, J.A., Pardee, T.S., Ellis, L.R., Berenzon, D., Mihalko, S.L., Danhauer,	Measure short-term changes in physical and cognitive function and emotional well-being of	Prospective observational study		The study includes 49 newly diagnosed acute myeloid leukemia patients who received induction	<ol style="list-style-type: none"> 1. Instrumental activities of daily living (IADL) 2. Short physical performance battery 	<ol style="list-style-type: none"> 1. IADLs dependence worsened (mean 1.4 baseline vs 2.1 follow-ups, $P < .001$) for the older adults who recently received

DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

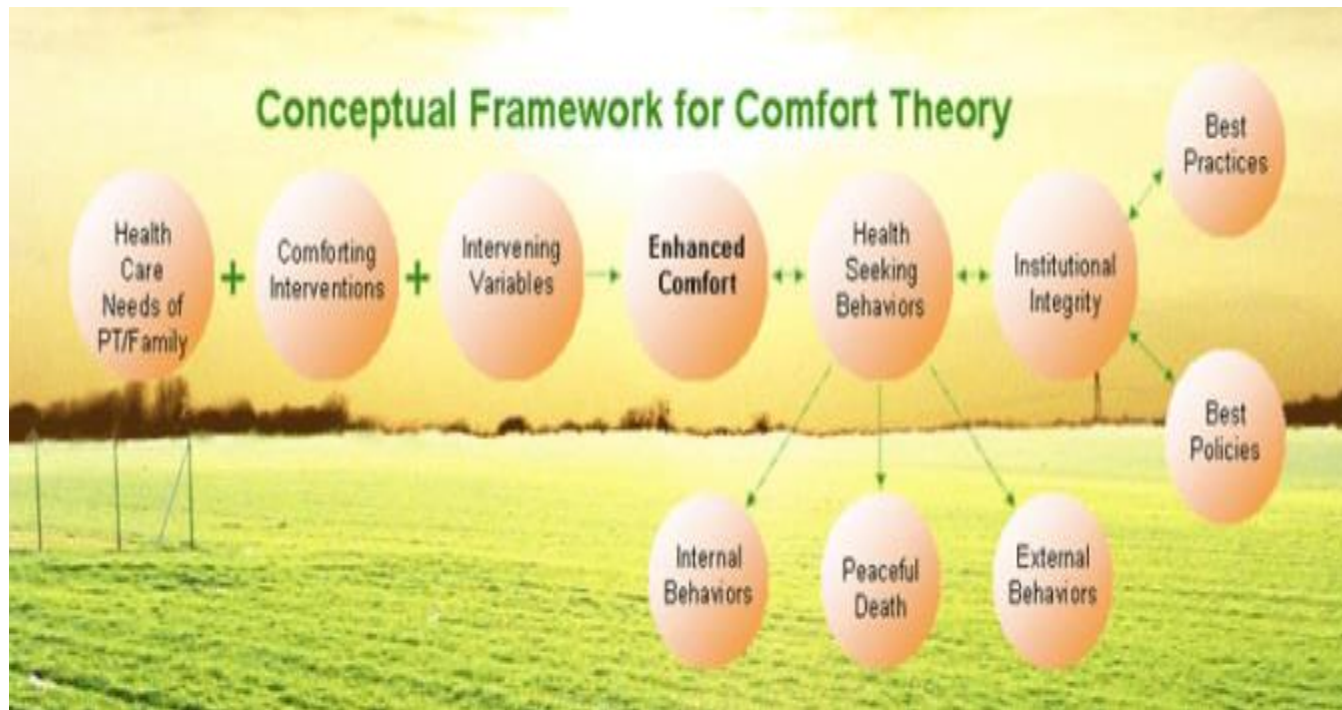
myeloid leukemia	S.C., Rao, A.V., Wildes, T.M., Williamson, J.D., Powell, B.L., & Kritchevsky, S.B. (2016).	older adults receiving intensive acute myeloid leukemia (AML) chemotherapy .			chemotherapy. The mean age of the sample was 70 years old, 56.2% of which were male.	(SPPB) scores 3. Depressive symptoms	<p>induction chemotherapy.</p> <p>2. Short physical performance battery (SPPB) scores (7.5 vs. 5.9, $P=.02$ for total) decreased after treatment.</p> <p>3. The people who had depression at baseline and follow-up had more significant declines in SPPB scores compared to those who were without symptoms prior to therapy start.</p> <p>4. Depressive symptoms (14.0 vs. 11.3, $P = .11$) were detected in the patients who finished chemotherapy.</p> <p>5. Older-aged patients who</p>
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DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

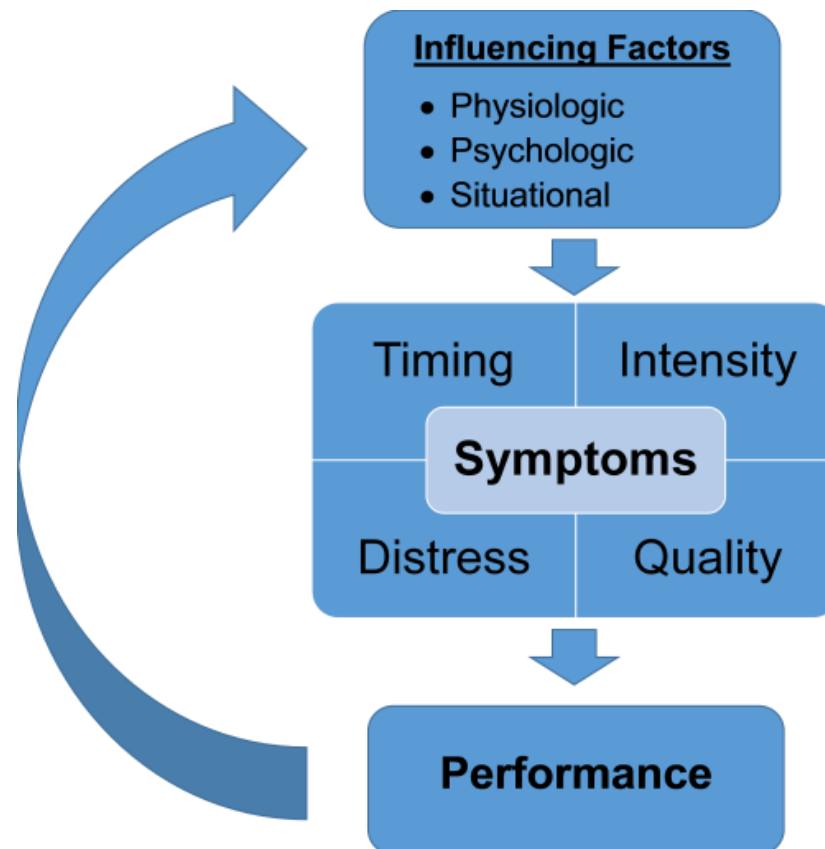
							<p>received intensive induction chemotherapy for AML had meaningful declines in physical function compared to baseline.</p> <p>6. Depressive symptoms during chemotherapy were linked to potentially modifiable physical function declines.</p>
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Appendix B: Theoretical / Conceptual Model
Kolcaba's Comfort Theory



DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

Theory of Unpleasant Symptoms

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Appendix C: Logic Model

Step 5	Step 3	Step 4		Step 2a	Step 2b	Step 1
Resources/Inputs	Activities	Outputs		Outcomes: Short term	Outcomes: Intermediate	Outcomes: Long term
What we invest: resources and contributions	What we do	What we accomplish or produce from the activities	Whom we reach with our activities	The expected changes attainable during the DNP Scholarly Project timeline.	The expected changes are attainable six months - 2 years after the DNP Project is implemented.	Fundamental changes for participants or community because of project activities, 3-5 years after project implementation.

DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

Step 5	Step 3	Step 4		Step 2a	Step 2b	Step 1
Resources/Inputs	Activities	Outputs		Outcomes: Short term	Outcomes: Intermediate	Outcomes: Long term
Human, financial, organizational, and community resources are available to direct the project activities.	The processes, tools, events, technology, and actions that are intended to bring about changes	Direct products and services generated from program activities	Intended targets of the program services and activities	Specific changes in the program. SMART. Label as Process Outcome (PO) or Change Outcome (CO) Number each outcome (down the column)	Specific changes in the program. SMART. Label as Process Outcome (PO) or Change Outcome (CO) Number each outcome (down the column)	Represent changes in status, condition, or well-being. Consider health impacts, economic impacts, environmental impacts, and societal impacts. Number each outcome (down the column)

DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

Step 5 Resources/Inputs	Step 3 Activities	Step 4 Outputs		Step 2a Outcomes: Short term	Step 2b Outcomes: Intermediate	Step 1 Outcomes: Long term
-DNP student time -NCCN distress thermometer tool -Office Supplies -Facility for training -Training resources and handouts -Unit manager and her leadership -Work e-mail lists -Survey Monkey or a similar survey system -Inpatient nurse time and attention	- Print distress thermometer tool for education and use -Create pre- and post-intervention surveys to use -Tabulate answers received from the survey -Determine epic configuration to integrate distress tool rating	- Pre- and post-intervention measurement of distress thermometer tool use via self-reported survey	- Inpatient oncology nurses working in the medical oncology unit.	1. 75% of oncology nurses completed the pre-intervention survey regarding baseline knowledge about distress and screening by June 30, 2023 (PO).	8. 50% of medical oncology nurses (project participants) reported feeling "comfortable" or "very comfortable" caring for oncology patients with mental health distress nine months after the initial intervention, noted via the Likert scale in a post-intervention survey follow-up. (CO)	10. Distress interventions, management, and current protocol will be part of the new hire nursing orientation for inpatient oncology unit 2-5 years after intervention.

DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

Step 5 Resources/Inputs	Step 3 Activities	Step 4 Outputs		Step 2a Outcomes: Short term	Step 2b Outcomes: Intermediate	Step 1 Outcomes: Long term
-DNP student time -NCCN distress thermometer tool -Office Supplies -Facility for training -Training resources and handouts -Unit manager and her leadership -Work e-mail lists -Survey Monkey or a similar survey system -Inpatient nurse time and attention	- Print distress thermometer tool for education and use -Determine where in the patient care interaction can the distress thermometer be integrated -Train inpatient oncology nurses on distress thermometer use -Determine epic configuration to integrate distress tool rating	- Education regarding the NCCN thermometer tool as part of a one-hour class addressing mental health distress in oncological patients.	- Inpatient oncology nurses working in the medical oncology unit.	2. By July 30, 2023, 50% of nurse participants will have viewed the supplementary PowerPoint presentation regarding distress and increased knowledge about distress (PO).	8. 50% of medical oncology nurses (project participants) reported feeling "comfortable" or "very comfortable" caring for oncology patients with mental health distress nine months after the initial intervention, noted via the Likert scale in a post-intervention survey follow-up. (CO)	10. Distress interventions, management, and current protocol will be part of the new hire nursing orientation for inpatient oncology unit 2-5 years after intervention.

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Step 5 Resources/Inputs	Step 3 Activities	Step 4 Outputs		Step 2a Outcomes: Short term	Step 2b Outcomes: Intermediate	Step 1 Outcomes: Long term
-DNP student time -NCCN distress thermometer tool -Office Supplies -Facility for training -Training resources and handouts -Unit manager and leadership -Work e-mail lists -Survey Monkey or a similar survey system -Inpatient nurse time and attention	- Print distress thermometer tool for education and use -Determine where in the patient care interaction can the distress thermometer be integrated -Train inpatient oncology nurses on distress thermometer use -Create pre- and post-intervention surveys to use -Tabulate answers received from the survey -Determine epic configuration to integrate distress tool rating	- Pre- and post-intervention measurement of distress thermometer tool use via self-reported survey - NCCN thermometer tool - Education regarding the NCCN thermometer tool as part of a one-hour class addressing mental health distress in oncological patients.	- Inpatient oncology nurses working in the medical oncology unit.	3. 50% of oncology bedside nurses identified the NCCN's (National Comprehensive Cancer Network) distress thermometer and problem list tool by August 31, 2023. (PO)	8. 50% of medical oncology nurses (project participants) reported feeling "comfortable" or "very comfortable" caring for oncology patients with mental health distress nine months after the initial intervention, noted via the Likert scale in a post-intervention survey follow-up. (CO)	10. Distress interventions, management, and current protocol will be part of the new hire nursing orientation for inpatient oncology unit 2-5 years after intervention.

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<ul style="list-style-type: none"> -DNP student time -Sharepoint website -Mental health resources available online and recommended by Oncology specific organizations -Oncology social work team -Nursing education staff and unit-based council 	<ul style="list-style-type: none"> -Determine what existing documents are already available on the Sharepoint site -Create patient-friendly handouts and get approval for their use from leadership and unit-based council -Determine administrative requirements to add to the SharePoint website -Coordinate with the unit-based council to access and edit documents already on the Sharepoint site -Upload these resources to the SharePoint site. -Create a pre-and post-intervention survey to determine 	<ul style="list-style-type: none"> - Pre- and post-intervention measurement survey of knowledge in education retrieval for patient education. -Education handouts for chemo side effects, meditation -List of mental health resources for patients -Sharepoint folder for easy access 	<ul style="list-style-type: none"> - Inpatient oncology nurses working in the medical oncology unit. 	<p>4. 70% of surveyed nurses report improved competence in accessing handouts regarding chemo side effects, meditation, mental health resources, and other preferred documents by August 31, 2023, as shown by a self-reported survey. (PO)</p>	<p>8. 50% of medical oncology nurses (project participants) reported feeling "comfortable" or "very comfortable" caring for oncology patients with mental health distress nine months after the initial intervention, noted via the Likert scale in a post-intervention survey follow-up. (CO)</p>	<p>10. Distress interventions, management, and current protocol will be part of the new hire nursing orientation for inpatient oncology unit 2-5 years after intervention.</p>
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DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

Step 5	Step 3	Step 4		Step 2a	Step 2b	Step 1
Resources/Inputs	Activities	Outputs		Outcomes: Short term	Outcomes: Intermediate	Outcomes: Long term
	baseline knowledge, skills, and attitudes -Administer the survey to inpatient nurses. -Tabulate answers received from the survey -Make a list of pertinent patient education handouts for the master information binder					

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Step 5 Resources/Inputs	Step 3 Activities	Step 4 Outputs		Step 2a Outcomes: Short term	Step 2b Outcomes: Intermediate	Step 1 Outcomes: Long term
-DNP student time -Computer hardware, software, and printing supplies -Nurse time -Educational facility -Social work team -Oncology manager	-Determine the current process for assessing distress. -Determine the process in the outpatient setting -Training nurses to assess for distress per the NCCN guidelines -Reinforce behaviors to include social worker referrals prior to the patient's discharge -Include the outpatient social work team in activity planning occurring in the inpatient	-Pre- and post-intervention survey of oncology social work involvement -Filled out distress thermometer tools with patient answers -Documented scores on EPIC computer software	-Admitted oncology patients -Oncology social worker (inpatient and outpatient) - Inpatient oncology nurses working in the medical oncology unit. -Admitting provider team -Care management team	5. By September 30, 2023, 50% of newly diagnosed patients in the hospital will have a distress screening score documented in their chart during their hospitalization. (PO).	9. Outpatient palliative care services and outpatient ancillary disciplines received a 60% improvement in referral rates 6-9 months after the intervention, with referrals tracked via EPIC. (CO)	11. 70% of assessed patients with hematologic and advanced stage solid tumor malignancies reported median or lower levels of distress and verbalized well to excellent overall quality of life, assessed via distress thermometer 2-5 years after intervention.

DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

Step 5 Resources/Inputs	Step 3 Activities	Step 4 Outputs		Step 2a Outcomes: Short term	Step 2b Outcomes: Intermediate	Step 1 Outcomes: Long term
-DNP student time -Computer hardware, software, and printing supplies - Local/state/national websites that assist oncology patients with distress -Nurse time -Educational facility -Social work team	-Research all the peer-support groups offered at the institution. -Make a list of system-preferred educational materials that we can share with patients -Educate the nurses about the recommended information to share information -Make the information readily available so this can be used for future patient interactions.	-List of peer support groups and reliable information for patient use.	-Admitted oncology patients -Patient's family and other support systems - Inpatient oncology nurses	6. By September 30, 2023, 50% of newly diagnosed patients with hematologic malignancy had an oncology social worker referral before hospital discharge. (PO)	9. Outpatient palliative care services and outpatient ancillary disciplines received a 60% improvement in referral rates 6-9 months after the intervention, with referrals tracked via EPIC. (CO)	11. 70% of assessed patients with hematologic and advanced stage solid tumor malignancies reported median or lower levels of distress and verbalized good to excellent overall quality of life, assessed via distress thermometer 2-5 years after intervention.

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Step 5	Step 3	Step 4		Step 2a	Step 2b	Step 1
Resources/Inputs	Activities	Outputs		Outcomes: Short term	Outcomes: Intermediate	Outcomes: Long term
-DNP student time -Computer hardware, software, and printing supplies -Social work team -Patient's chart	-Outline the differences between inpatient and outpatient palliative care services. -Make a document that delineates the difference between inpatient and outpatient services -Monitor documentation on EPIC about patient interaction with palliative care and their perspectives (appreciative, resistant, etc.)	-Contact information handout for palliative care services in the outpatient -Patient distress toolbox handout	-Admitted oncology patients -Patient's family and other support systems - Inpatient oncology nurses -Palliative care team -Oncology social workers (inpatient and outpatient) -Care management team	7. By September 30, 2023, 50% of patients with a new hematologic malignancy diagnosis had palliative care referrals before their hospital discharge.	9. Outpatient palliative care services and outpatient ancillary disciplines received a 60% improvement in referral rates 6-9 months after the intervention, with referrals tracked via EPIC. (CO)	11. 70% of assessed patients with hematologic and advanced stage solid tumor malignancies reported median or lower levels of distress and verbalized good to excellent overall quality of life, assessed via distress thermometer 2-5 years after intervention.

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Appendix D: SWOT Analysis

<p>Strengths</p> <ul style="list-style-type: none"> ❖ Passionate and supportive oncology staff and leadership team. ❖ Organization puts value in evidence-based practices and welcome practice changes as necessary ❖ Outpatient program for distress management is already in place, guided by the Quality Oncology Program Initiative QOPI Accreditation. ❖ Organization has a robust ancillary support including social work and spiritual care. ❖ Has an outpatient and inpatient palliative care team. ❖ Sharpoint site is up and running and accessible for all staff members. 	<p>Weaknesses</p> <ul style="list-style-type: none"> ❖ Recent high nursing turnover and many new hires/new grads who are also learning the system/patient care. Additional staff time will be required. ❖ Resistance to change from staff. Wariness of "another" protocol. ❖ Subjective rating of distress and difficulty monitoring improvements in a continuum. ❖ Nursing shortage and lack of oncology certified nurse staff ❖ Change in leadership in other disciplines and/or loss of existing programs or staff. ❖ Sustainable financial backing.
<p>Opportunities</p> <ul style="list-style-type: none"> ❖ Possibility of including other specialties outside [REDACTED] oncology (primary care, psychiatry, integrative medicine etc). ❖ Having possible additional services in the future ❖ Ability to keep improving as more evidence and literature trickles in. 	<p>Threats</p> <ul style="list-style-type: none"> ❖ Ongoing COVID pandemic. ❖ Change in organization priorities depending on competition and insurance restrictions. ❖ Loss of staff to other oncology programs. ❖ Decreasing reimbursement for care.

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Appendix E: Signed MOU

Memorandum of Understanding	
Memorandum of Understanding	
Between	
Rheza Agtarap, Doctor of Nursing Practice (DNP) student	
Boise State University	
and	
[REDACTED]	
<p>This Memorandum of Understanding (MOU) outlines the terms and understanding between Rheza Agtarap, a DNP student at Boise State University, and [REDACTED] regarding completing the DNP student's scholarly project. The DNP student will develop and provide nursing education regarding distress in the oncology population to the inpatient medical oncology registered nurses employed by [REDACTED]. Furthermore, the DNP student will provide teaching regarding evidence-based interventions and strategies and offer resources to assist nurses in relieving distress in the oncology setting. Lastly, the DNP student will introduce distress screening in the inpatient setting and utilize a multi-disciplinary approach to support patients with distress.</p>	
<p>Background</p> <p>Distress is defined by the National Comprehensive Cancer Network (NCCN) as a "multifactorial unpleasant experience of a psychological (cognitive, behavioral, emotional), social, spiritual, and/or physical nature that may interfere with one's ability to cope effectively with cancer, its physical symptoms, and its treatment" (Riba et al., 2022, p.5). Literature suggests that distress in cancer patients is exceedingly common (Mehnert et al., 2018; Raphael et al., 2017; Miller & Massie, 2006) and is associated with a significant reduction in the patient's emotional and physical well-being, decreased quality of life, longer hospital length of stays, higher likelihood of hospital readmissions (Nipp et al., 2017), and increased overall health care costs (Reiche et al., 2004; Powell et al., 2012; Mausbach et al., 2015; Pirl et al., 2012).</p>	
<p>Purpose</p> <p>This scholarly project aims to assess [REDACTED] inpatient oncology nurses' knowledge of distress in oncology patients and design an educational</p>	

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intervention to support nurses' ability to identify distress and improve screening and management in the hospital setting. This project also aims to utilize a multi-disciplinary strategic intervention to address multiple facets of what contributes to patients' distress.

Intended Project Outcomes

- Improved nursing knowledge, skills, and attitudes regarding oncologic distress.
- Improved nursing efficacy in accessing distress-related material to assist patients exhibiting or verbalizing distress symptoms.
- Increased knowledge of the distress thermometer in the inpatient setting for improved continuity in the outpatient setting.
- Increased multi-disciplinary outpatient referrals prior to a hospitalized patient's discharge.

Duration

This Scholarly Project will begin in March 2023 and end by May 2024. The start date will include project planning and coordination with multi-disciplinary departments such as social work, rehabilitation services, nutrition services, case management, nursing education, and nursing departments. Project implementation will occur in June 2023 and will include printing of distress thermometers, patient education and resources handouts, nursing education, data collection, and process evaluation.

Reporting

The DNP Scholarly Project will include a final report, an abstract, an oral presentation of the report, and a potential publication. The DNP student will submit a Preliminary Project Report to the organization's stakeholders by December 31, 2023. The Final Project Report will be submitted by May 31, 2024.

There will be no personal identifiers included in the project reports. The author welcomes any comments or suggestions from [REDACTED] but reserves the right to publish findings and analyses according to the professional standards and principles of academic freedom. For any work of a scholarly nature, the author agrees to follow the organization's preferences in how it is to be named (or not) in the work.

Agency preferences for how they are named/referred to within the student's work: by organizational name or solely by general type of agency within a region? [REDACTED]

[REDACTED] Tertiary medical center in the Pacific Northwest

In the student's Final Report? same

In an abstract? same

In professional presentations? same

In professional publications? same

Any restrictions in the discussion of project details? same

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Student Contact Information

[Redacted] Date: 2/2/23
(DNP Student signature)
Rheza Agtarap, Boise State University DNP student

[Redacted] Date: 02/03/2023
(Organizational Contact signature)



[Redacted]

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[illegible]

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Appendix G: CITI training



Completion Date 13-Jul-2022
Expiration Date 12-Jul-2025
Record ID 49674163

This is to certify that:

Rhezarie Mae Agtarap

Has completed the following CITI Program course:

Human Research
(Curriculum Group)

Social & Behavioral Researchers
(Course Learner Group)

1 - Basic Course
(Stage)

Not valid for renewal of certification through CME.

Under requirements set by:

Boise State University



Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?w85f446ec-50e8-467d-83a3-6eb4a5268944-49674163

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Appendix H: Outcomes Evaluation Table

Outcome	Data Collection Instrument / Data	Analysis Goal	Analytic Technique
1. 75% of oncology nurses completed the pre-intervention survey regarding baseline knowledge about distress and screening by June 30, 2023 (PO).	<p>Data collection instrument: Attendance records, unit records of employed nurses, and completed survey forms collected after nursing education.</p> <p>Data:</p> <ul style="list-style-type: none"> - A single sheet of paper will record attendees' names and attendance. - The attendance sheet will be checked against the completed pre-education surveys collected after the educational activity. <ul style="list-style-type: none"> o First, the number of participants and completed surveys will be compared to ensure they match. Then, the total number of returned surveys will be compared to the total number of nurses in the medical oncology unit. 	<ul style="list-style-type: none"> - The data collection will accurately quantify the number of participants in the educational intervention to the total number of oncology nurses working in the unit. - The goal is to demonstrate that most participating nurses were assessed on their baseline knowledge of distress definition and screening. 	<p>A frequency distribution table will be an excellent tool to demonstrate the total number of employed oncology nurses compared to the intervention participants and those who completed the baseline knowledge check. Similarly, a pie chart will help summarize categorical data and demonstrate relationships between data points.</p> <p>The descriptive statistic that will be used for this outcome is the measure of frequency.</p>

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			Outcomes will be a percentage of yes/no (nominal data) answers for completed pre-intervention surveys.
2. By June 30, 2023, 50% of nurse participants will have viewed the supplementary PowerPoint presentation regarding distress and increased knowledge about distress (PO).	<p>Data Collection Instrument: Pre-intervention survey collected after educational activity.</p> <p>Data:</p> <ul style="list-style-type: none"> - Before the planned educational activity, the participants will receive a supplementary PowerPoint. The pre-intervention survey will include the question, "Have you viewed the supplementary PowerPoint before this educational activity?" The available answer will be either "yes" or "no." <ul style="list-style-type: none"> o A follow-up question will have a Likert scale from 1-5 evaluating "knowledge about distress prior to viewing the PowerPoint," with 1 being "none at all" and 5 being "very competent." - The answers will be collected and placed in a frequency distribution table. 	<ul style="list-style-type: none"> - The data collected will evaluate whether the supplementary PowerPoint helped improve baseline knowledge about distress before the educational activity. - It will also evaluate and compare the number of nurses who completed supplementary education and its outcome in knowledge retention. 	The descriptive statistic that will be used for this outcome is the measure of frequency. The percentage of collected nominal data (yes/no) who viewed the supplementary PowerPoint will be compared to the number of nurses who did not, compared to the whole population of oncology nurses.
3. 50% of oncology bedside nurses accurately identified the NCCN's (National Comprehensive Cancer Network)	<p>Data Collection Instrument: Post-intervention survey collected after educational activity.</p> <p>Data:</p> <ul style="list-style-type: none"> - A post-intervention survey will be given three weeks after the initial educational intervention. At this point, distress 	<ul style="list-style-type: none"> - This will measure knowledge and proper use of the distress thermometer. 	The descriptive statistic that will be used for this outcome is the measure of frequency. In addition, the

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distress thermometer and problem list tool by August 31, 2023. (PO)	<p>thermometers will be posted in patient rooms, and educational materials will be distributed to nurses and shared on SharePoint website.</p> <ul style="list-style-type: none"> - A question in the post-intervention survey will include a picture of the distress thermometer and a Likert scale asking, "I know the purpose of this tool," with 1 being "not at all" and 5 being "Yes, absolutely." <ul style="list-style-type: none"> o Any other answer besides 5 will be a negative count. o A follow-up fill-in-the-blank free-choice answer will be placed after the question, and the expected answer is "distress measurement." 		<p>percentage of nurses who viewed the supplementary PowerPoint will be compared to the number of nurses who did not, compared to the whole population of oncology nurses.</p>
4. 70% of nurses report improved competence in accessing handouts regarding chemo side effects, meditation, mental health resources, and other preferred documents that will be uploaded to the Oncology SharePoint site by August 31, 2023, as shown by a self-reported survey. (PO)	<p>Data Collection Instrument: Post-intervention survey collected after educational activity.</p> <p>Data:</p> <ul style="list-style-type: none"> - A post-intervention survey will be given three weeks after the initial educational intervention. In this questionnaire, the questions will include items listed below. In addition, a Likert scale will follow, with 1 being "not at all" and 5 being "yes, absolutely." <ul style="list-style-type: none"> o I know where to access handouts regarding chemotherapy side effects and mental health resources. o I feel confident speaking to my patients about recommendations for managing their distress. o I recommend reliable internet websites where patients can go to access additional information. 	<ul style="list-style-type: none"> - This tool measures the confidence nurses are applying distress interventions learned from the educational activity and the ease with which they integrate this information into their workflow. 	<p>The answers from the post-intervention survey will be compared to the pre-intervention survey administered before the educational activity. The percentage difference will then be calculated to determine whether the goal was achieved.</p>

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	<ul style="list-style-type: none"> ○ I have spoken to my patients about distress and have given information to alleviate their concerns. 		
5. By September 30, 2023, 50% of newly diagnosed patients in the hospital will have a distress screening score documented in their chart during their hospitalization. (PO).	<p>Data collection instrument: Electronic medical record (EMR).</p> <p>Data:</p> <ul style="list-style-type: none"> - Firstly, the charts of the patients who received a new cancer diagnosis in the inpatient setting will be reviewed to see if they have a distress score documented during their inpatient stay. - The data gathered would be quantitative because the answer would be yes or no. - The answers collected will be used in a frequency distribution table to measure the proportion of how often distress screening was performed in relation to the time frame from when nursing education was completed. 	<ul style="list-style-type: none"> - To tabulate the frequency of completed distress screening scores during patient hospitalization. 	<p>A frequency distribution table will be used to group the categories noted by the participants and the frequency of each category.</p>
6. By September 30, 2023, 50% of newly diagnosed patients with hematologic malignancy had an oncology social worker referral before hospital discharge. (PO)	<p>Data Collection Instrument: Electronic medical record (EMR).</p> <p>Data:</p> <ul style="list-style-type: none"> - The EMR will be reviewed to see if the patient has an outpatient social worker referral before discharge. 	<ul style="list-style-type: none"> - This will measure the number of patients diagnosed with an oncological disease and whether they received an outpatient social worker referral. - This analysis will show whether the educational intervention administered in the summer of 2023 was effective in increasing 	<p>The descriptive statistic that will be used for this outcome is the measure of frequency. A simple percentage calculation will evaluate the number of patients with distress scores and whether they received outpatient social worker referrals.</p>

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		<p>patient referrals or not.</p> <ul style="list-style-type: none"> - Additional evaluation can include whether the patients kept their social worker follow-up in the outpatient after discharge. 	
<p>7. By September 30, 2023, 50% of patients with a new hematologic malignancy diagnosis had palliative care referrals before their hospital discharge. (PO)</p>	<p>Data Collection Instrument: Electronic medical record (EMR).</p> <p>Data:</p> <ul style="list-style-type: none"> - Like outcome #6, the charts will be reviewed for palliative care referrals before hospital discharge. 	<ul style="list-style-type: none"> - This analysis will determine whether patients had the opportunity to establish with the palliative care team for a more holistic evaluation of symptom management and discuss their distress and new diagnosis. 	<p>A percentage calculation will determine patient statistics and whether the outcome goal was achieved.</p>

DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

Appendix I: Scholarly Project Expense Report

						Grand Total	\$80,954.81
Expense Category	Expense Description	Explanation of Expense	Type of Cost (variable/fixed)	Volume Description	Volume (Total Units)	Cost per Unit	Total
Personnel	Oncology RN wages	These are the Oncology RNs participating in the proposed education program. <i>Hourly rate</i> is an average based on organizational HR data and union pamphlets.	variable	4 hrs X 32 RNs= 128 hrs	128	\$48.00	\$6,144.00
Personnel	Social worker wages	These are the social worker team members participating in this project. The hourly rate is based on the average Oregon salary noted on Salary.com (2022).	variable	1 hr x 4 SW = 4 hrs	4	\$36.11	\$144.44
Personnel	Educator wages	One educator will guide in procuring approvals for the proposed scholarly project and CEU credits per policy.	Variable	12 hrs X 1 educator	12	\$58.00	\$696.00
Personnel	DNP student wages	The DNP student will develop educational materials for handouts to nurses and patients, procure training resources, search and modify validated pre- and post-intervention	Variable	1,000 hours x 1 DNP	1000	\$65.00	\$65,000.00

DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

		surveys for the nurse, search for validated mental health resources for distribution to patients, and upload information to the SharePoint website for future easy access.					
Personnel	Oncology manager wages	One manager will be a resource to gain information regarding timesheet approvals and advise on project implementation to avoid interruptions to nursing workflow and patient care.	Variable	8-hour x 1 nurse manager	8	\$65.00	\$520.00
Materials & Supplies	Paper	Creation of educational packets, 30 pre & post-surveys.	Fixed	One ream of paper	1	\$15.00	\$15.00
Materials & Supplies	Printer Ink	Educational packets and patient teaching handouts will be kept on hand.	Fixed	One black printer ink cartridge	1	\$45.00	\$45.00
Materials & Supplies	NCCN Distress thermometer tool	Laminated distress thermometer signs are to be posted in each inpatient room.	Fixed	Thermal laminator x 1	1	\$45.99	\$45.99
Materials & Supplies	NCCN Distress thermometer tool	Laminated distress thermometer signs are to be posted in each inpatient room.	Fixed	Thermal laminator pouches, count of 30	1	\$19.99	\$19.99

DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

Materials & Supplies	Other office supplies	Pens, clips, binders, and miscellaneous stuff.	Fixed		1	\$20.00	\$20.00
Space	Oncology Conference room	Used to present educational teaching to participating nurses.	Fixed	1 room	1	\$200.00	\$200.00
Equipment	Projector and Screen	Used to present educational teaching to participating nurses.	Fixed	4 hours x 2 days	8	\$200.00	\$1,600.00
IT	Laptop and computer software including Microsoft Office, Microsoft Teams, Epic, Sharepoint	They are used to build educational resources and create handouts. The cost of the laptop bought at the start of the DNP program is included. These programs are loaded onto the DNP student's laptop.	Fixed		1	\$1,300.00	\$1,300.00
IT	SurveyMonkey	Analytics cost	variable	Billed annually	1	\$384.00	\$384.00
IT	Microsoft Office, Microsoft Teams, Epic, Sharepoint	Software programs at the corporate rate	variable depending on the number of users	Billed monthly per user. 38 users x 10usd per person x 12 months	12	\$380.00	\$4,560.00
Travel	DNP student gas	Mileage for travel during project initiation until implementation, including educational sessions.	Variable	28 miles per trip with an average of \$4.90 per gallon (average from January 2022-October 2022) x 4 trips a month for	1	\$235.00	\$235.00

DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

				2022-2023 (12 months)			
Marketing/Advertising	Poster board and advertising materials	Informational e-mails will also be sent, but costs related to these are integrated into the IT section noted above.	variable	One poster was placed in the Staff meeting room (24x26in)	1	\$25.39	\$25.39

[illegible]

DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

Appendix K: Scholarly Project 2-3-Year Budget Plan

Yearly Totals:		\$ 80,954.81	\$ 7,496.70	\$ 6,521.60	
Expense Category	Year 1	Year 2	Year 3	Rationale	
Personnel	\$ 72,504.44	\$ 2,485.32	\$ 1,109.32	<p>Year 1 is based on the total wages, including 32 RNs, 4 SW, 1 RN educator, and one DNP student. Some of these costs are not included in years 2 and 3 because RNs will have learned the education, and the RN educator and DNP student may be available for questions but will not be actively providing teaching. The calculation for Year 2 assumes any RN has a question about distress or the distress thermometer during their work day. These questions could be answered by a fellow RN working on the unit, the RN educator, the DNP student, or SW. There would be four resource hours per month to answer a distress question. The yearly cost would be RN wages x 1 hr per month x 12 months (\$48x12=\$576). Social worker wages x 1 hr per month x 12 months (\$36.11x12=\$433.32). RN educator wages x 1-2 hr (variable) per month x 12 months (\$58x12=696). DNP student wages x 1 hr every other month x 12 months (\$65x12=\$780). Inflation costs will not be included for year two because RN wages are under contract via the nursing union, and there are no expected wage increases until union re-negotiation. The calculation for year three no longer includes the RN educator and DNP student since education will occur during RN orientation and RN-SW interaction. The cost estimate calculation is RN wage x 1 hr x 12 months (\$48x12=\$576)+ SW wage x 1 hr x 12 months (\$36.11x12=\$433.32). I have added a 10% inflation rate (totaling \$100) based on the definition of a running inflation rate, especially since the current inflation rate in 2022 is 8.3% (Bureau of Labor and Statistics, 2022). Years 2 and 3 are estimates since RN wages may range from \$48-65 and SW wages may range from \$36-48. Therefore, the wages included in these calculations are on the lower end of the spectrum.</p>	

DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

Materials & Supplies	\$ 145.98	\$ 86.58	\$ 93.50	Years 2 and 3 have lower costs than year one since the initial costs of printing and laminating the NCCN distress tool have already been completed. The additional materials will be for maintenance, printing other patient educational materials, and handouts to help with distress. The slightly higher materials costs in years 2 and 3 are based on an 8.3% inflation rate (Bureau of Labor Statistics, 2022).
Space	\$ 200.00	\$ -	\$ -	Training space in years 2 and 3 will not be required since further teaching about distress strategies will ideally be completed during nursing orientation for new graduates or newly hired nurses. Therefore, costs will be offset by the nursing orientation budget rather than by this project.
Equipment	\$ 1,600.00	\$ -	\$ -	The projector and screen will be for one-time use. After project implementation, no further teaching sessions will follow. Other education will occur during new nurse orientation, depending on attrition.
IT	\$ 6,244.00	\$ 4,924.80	\$ 5,318.78	Years 2 and 3 will only include the cost of the software programs used at a corporate rate. In year 1, the total for 38 users with a \$10 corporate rate per person cost x 12 months was \$4560. Multiplied by .08 to account for inflation (Bureau of Labor Statistics, 2022), year two will be 4,924.80, and year three will total 5,318.78. This cost will be variable depending on the number of users per month.
Travel	\$ 235.00	\$ -	\$ -	No further travel is required for years 2 and 3.
Marketing/Advertising	\$ 25.39	\$ -	\$ -	The poster is a one-time use expense.

DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

Appendix L: Scholarly Project IRB Acceptance or Letter of Determination**CLINICAL INQUIRY PROJECT – NOT RESEARCH DETERMINATION**

February 6, 2023

Dear Rheza Agtarap:

On 2/6/2023, the [Human Research Protection Program \(HRPP\)](#) reviewed the following submission:

Title:	Implementing Distress Screening and Multidisciplinary Distress Strategies for Hospitalized Oncology Patients
Project ID:	STUDY2023000103
Project Lead Name:	Rheza Agtarap
Funding Source:	None

The HRPP determined that this project, as submitted, does not meet the definition of research as defined in the federal regulations, and does not require IRB review. This determination is based only upon the information submitted.

The project may proceed as described in the documents submitted for review and in line with requirements listed below and on the next page.

This determination does not exempt you from following hospital policies and procedures as they relate to conduct of this project.

As the project was deemed not to be research, any publication discussing the project may not refer to it as a research study, but rather refer to it as a Quality Improvement project, Evidence-Based Practice project, etc.

Should there be any questions, please contact the HRPP at: [\[Redacted Contact Information\]](#)

DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS



Project Leads and Providence Sponsors must comply with all the following:

- Conduct your project in accordance with the information submitted to and reviewed by the HRPP.
- All revisions to this project must be submitted to the HRPP prior to implementation. Revisions can be created by clicking **Create Modification/CR** within the project workspace.
- Students **cannot** directly access any Protected Health Information (PHI) through Epic or any other database, this must be completed by the Providence Sponsor.
- All PHI and confidential information must remain on a campus and on a secure computer.
 - PHI and confidential information must not be recorded on personal computers or other electronic devices including USBs, smartphone (including taking pictures of data), emailing information to a personal e-mail account.
 - Paper copies of PHI cannot leave the facility.
- Project results that leave information for inclusion in a poster/paper presentation/publication must be in aggregate (summary statistics) form only and/or be de-identified. There must be no way to link the data to a patient, either alone or in combination with other information.
- Failure to comply with integrity, compliance, privacy and security standards and requirements will result in appropriate corrective action.
- This project may be audited.

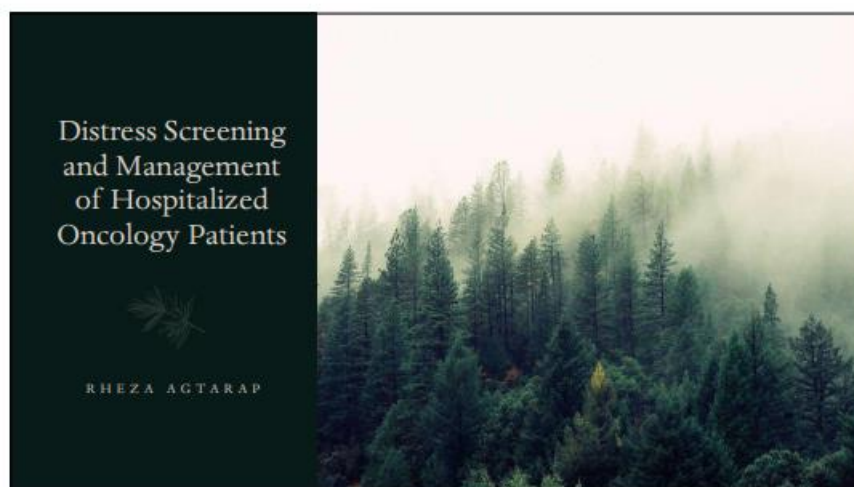
PHI Includes:

- 1) Names
- 2) All geographical subdivisions smaller than a State, including street address, city, county, precinct, zip code, and their equivalent geocodes, except for the initial three digits of a zip code, if according to the current publicly available data from the Bureau of the Census: (1) The geographic unit formed by combining all zip codes with the same three initial digits contains more than 20,000 people; and (2) The initial three digits of a zip code for all such geographic units containing 20,000 or fewer people is changed to 000
- 3) All elements of dates (except year) for dates directly related to an individual, including birth date, admission date, discharge date, date of death; and all ages over 89 and all elements of dates (including year) indicative of such age, except that such ages and elements may be aggregated into a single category of age 90 or older
- 4) Phone numbers
- 5) Fax numbers
- 6) Electronic mail addresses
- 7) Social Security numbers
- 8) Medical record numbers
- 9) Health plan beneficiary numbers
- 10) Account numbers
- 11) Certificate/license numbers
- 12) Vehicle identifiers and serial numbers, including license plate numbers
- 13) Device identifiers and serial numbers
- 14) Web Universal Resource Locators (URLs)
- 15) Internet Protocol (IP) address numbers
- 16) Biometric identifiers, including finger and voice prints
- 17) Full face photographic images and any comparable images; and
- 18) Any other unique identifying number, characteristic, or code (note this does not mean the unique code assigned by the investigator to code the data)

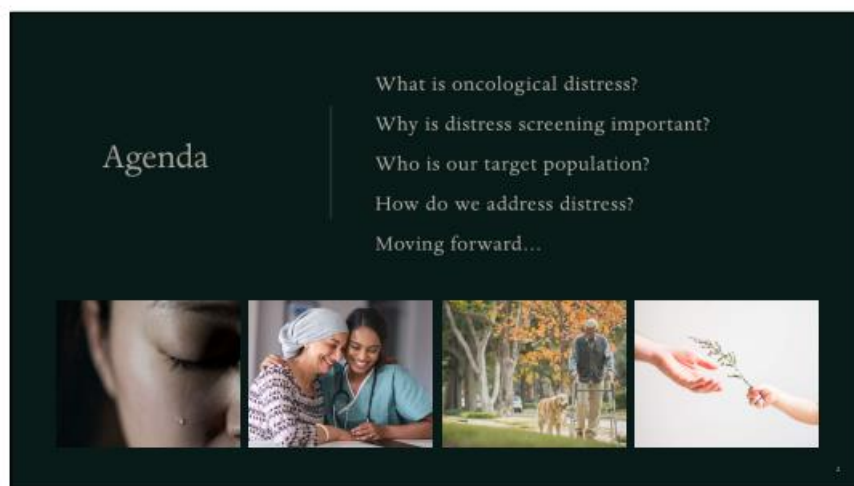
DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

Appendix M: Educational plans and materials



1



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DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS



Distress

- multifactorial unpleasant experience of a psychological (cognitive, behavioral, emotional), social, spiritual, and/or physical nature that may interfere with one's ability to cope effectively with cancer, its physical symptoms, and its treatment.
- Distress extends along a continuum, ranging from common normal feelings of vulnerability, sadness, and fears to problems that can become disabling, such as depression, anxiety, panic, social isolation, and existential and spiritual crisis




3

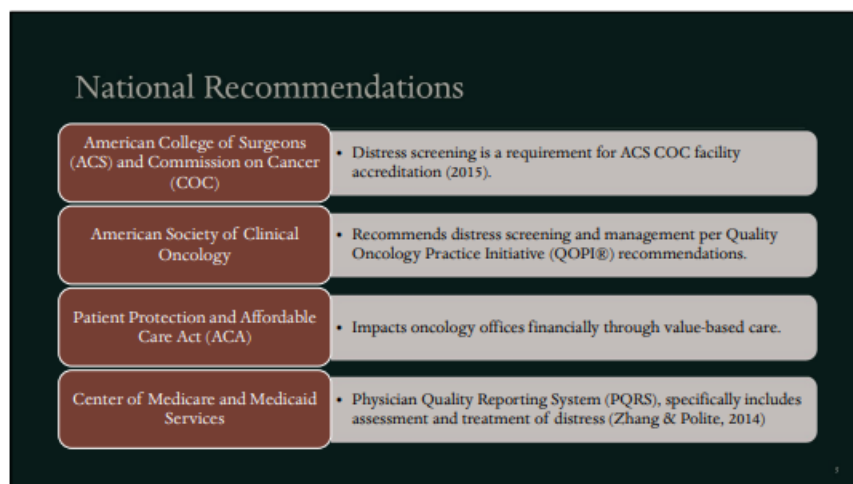
Patients with Distress



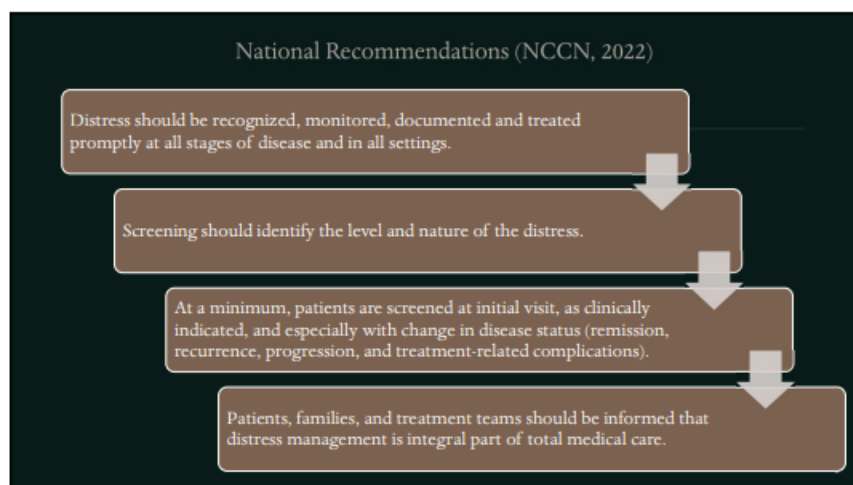
- 65.9% of hospitalized oncology patients
- Decreased quality of life
- Longer hospital length of stays
- Higher likelihood of hospital readmissions
- Increased overall health care costs
- Poor engagement with healthcare team
- Poor overall survival

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DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS



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DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

Providence Policy (Outpatient Setting)

PATIENT IDENTIFICATION	DISTRESS SCREENING TOOL	REFERRAL AND FOLLOW-UP
<ul style="list-style-type: none"> • New patient visit (self or caregiver referral). • Minimum of once during their first course of treatment. • If missed, then screening will occur at another point in time. 	<ul style="list-style-type: none"> • Psychosocial Distress Screening Tool. • Distress is measured from 0 (no distress) to 10 (extreme distress). • Administered through an electronic tablet fully incorporated into Epic (paper is used in radiation oncology clinic) 	<ul style="list-style-type: none"> • If Distress is 6 or higher, this is clinically significant. • Oncology Social Work Pool is alerted. • Referrals are placed: Community therapists, Community resources, chaplain, dietician, rehabilitation.

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Proposal in the Inpatient Setting

PATIENT IDENTIFICATION	DISTRESS SCREENING TOOL	REFERRAL AND FOLLOW-UP
<ul style="list-style-type: none"> • Newly diagnosed cancer patients. • Progressive cancer. • Treatment related complications. 	<ul style="list-style-type: none"> • NCCN Distress thermometer. • Distress is measured from 0 (no distress) to 10 (extreme distress). • Laminated copies will be posted in each patient room. • Administered once during their inpatient stay. 	<ul style="list-style-type: none"> • If Distress is 6 or higher, this is clinically significant. • Appropriate referrals are placed: social work, care management, physical therapy, occupation therapy, dietician. • These referrals can be carried over to outpatient setting. • Community referrals can be given early (instead of waiting until discharge).

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DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

Barriers (O'Connor et al, 2017)

-  Time constraint
-  Lack of training or perception of limited skills
-  Inadequate or unknown referral resources

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Benefits to you...the nurse AND to the patient

- "Let me tell you how we can support you"

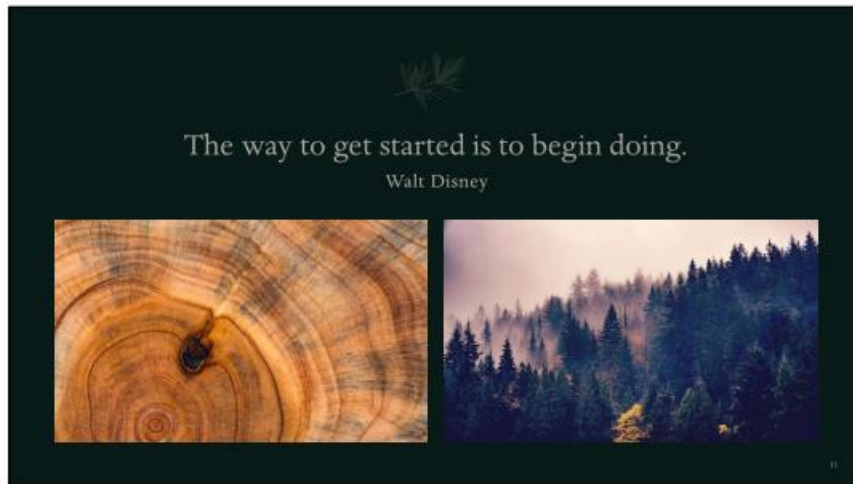


- Physical therapy
- Occupational therapy
- Speech language pathology
- Social work
- Home health services
- Spiritual Care
- Nutrition
- Hospice Liaison
- Palliative Care

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DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS



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Distress is an unpleasant experience of an emotional, social, spiritual, or physical nature that may affect the way people think, feel or act. Distress may make it harder to cope with having cancer, its symptoms, or its treatment.

We at Providence are committed to providing compassionate, reliable, and safe care. Being hospitalized is a difficult time and we want to do our best to support you and your support network the best way we can. Below is a distress thermometer for your use. Please let us know how we can best support you.

Instructions: Please circle the number (0–10) that best describes how much distress you have been experiencing in the past week, including today.

Extreme distress

10
9
8
7
6
5
4
3
2
1
0
No distress

PROBLEM LIST
Have you had concerns about any of the items below in the past week, including today? (Mark all that apply)

Physical Concerns

- ☐ Pain
- ☐ Sleep
- ☐ Fatigue
- ☐ Tobacco use
- ☐ Substance use
- ☐ Memory or concentration
- ☐ Sexual health
- ☐ Changes in eating
- ☐ Loss or change of physical abilities

Emotional Concerns

- ☐ Worry or anxiety
- ☐ Sadness or depression
- ☐ Loss of interest or enjoyment
- ☐ Grief or loss
- ☐ Fear
- ☐ Loneliness
- ☐ Anger
- ☐ Changes in appearance
- ☐ Feelings of worthlessness or being a burden

Social Concerns

- ☐ Relationship with spouse or partner
- ☐ Relationship with children
- ☐ Relationship with family members
- ☐ Relationship with friends or coworkers
- ☐ Communication with health care team
- ☐ Ability to have children

Practical Concerns

- ☐ Taking care of myself
- ☐ Taking care of others
- ☐ Work
- ☐ School
- ☐ Housing
- ☐ Finances
- ☐ Insurance
- ☐ Transportation
- ☐ Child care
- ☐ Having enough food
- ☐ Access to medicine
- ☐ Treatment decisions

Spiritual or Religious Concerns

- ☐ Sense of meaning or purpose
- ☐ Changes in faith or beliefs
- ☐ Death, dying, or afterlife
- ☐ Conflict between beliefs and cancer treatments
- ☐ Relationship with the sacred
- ☐ Ritual or dietary needs

Other Concerns:

Distress Thermometer, Version 1.0/01, adapted with permission from the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines) for Distress Management. 2015 National Comprehensive Cancer Network (NCCN). All rights reserved.

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DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

Documentation

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13

“Medical Oncology Distress Toolkit”

14

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DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

Summary

National standards recommend distress screening, intervention and management as part of complete oncological care for our patients.

This initiative ensures continuity of care regardless of which medical setting a patient is receiving their care.

Multiple studies show that distress screening and intervention positively affects patients' perception of their distress.

Medical oncology nurses are uniquely positioned to positively effect patients' overall quality of life by focusing on barriers to care while continuing to care for their physical health.



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Thank you

Rheza Agtarap

[Rhezariemae.Agtarap@](mailto:Rhezariemae.Agtarap@providence.org)

providence.org

503-215-0790



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DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

Appendix N: Tools



Distress is an unpleasant experience of an emotional, social, spiritual, or physical nature that may affect the way people think, feel or act. Distress may make it harder to cope with having cancer, its symptoms, or its treatment.

We at [redacted] are committed to providing compassionate, reliable, and safe care. Being hospitalized is a difficult time and we want to do our best to support you and your support network the best way we can. Below is a distress thermometer for your use. Please let us know how we can best support you.

Instructions: Please circle the number (0–10) that best describes how much distress you have been experiencing in the past week, including today.

Extreme distress

10
9
8
7
6
5
4
3
2
1
0

No distress

PROBLEM LIST

Have you had concerns about any of the items below in the past week, including today? (Mark all that apply)

Physical Concerns

- ☐ Pain
- ☐ Sleep
- ☐ Fatigue
- ☐ Tobacco use
- ☐ Substance use
- ☐ Memory or concentration
- ☐ Sexual health
- ☐ Changes in eating
- ☐ Loss or change of physical abilities

Emotional Concerns

- ☐ Worry or anxiety
- ☐ Sadness or depression
- ☐ Loss of interest or enjoyment
- ☐ Grief or loss
- ☐ Fear
- ☐ Loneliness
- ☐ Anger
- ☐ Changes in appearance
- ☐ Feelings of worthlessness or being a burden

Social Concerns

- ☐ Relationship with spouse or partner
- ☐ Relationship with children
- ☐ Relationship with family members
- ☐ Relationship with friends or coworkers
- ☐ Communication with health care team
- ☐ Ability to have children

Practical Concerns

- ☐ Taking care of myself
- ☐ Taking care of others
- ☐ Work
- ☐ School
- ☐ Housing
- ☐ Finances
- ☐ Insurance
- ☐ Transportation
- ☐ Child care
- ☐ Having enough food
- ☐ Access to medicine
- ☐ Treatment decisions

Spiritual or Religious Concerns

- ☐ Sense of meaning or purpose
- ☐ Changes in faith or beliefs
- ☐ Death, dying, or afterlife
- ☐ Conflict between beliefs and cancer treatments
- ☐ Relationship with the sacred
- ☐ Ritual or dietary needs

Other Concerns:

DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

Distress is an unpleasant experience of an emotional, social, spiritual, or physical nature that may affect the way people think, feel or act. Distress may make it harder to cope with having cancer, its symptoms, or its treatment.

We at [REDACTED] are committed to providing compassionate, reliable, and safe care. Being hospitalized is a difficult time and we want to do our best to support you and your support network the best way we can. Below is a distress thermometer for your use. Please let us know how we can best support you.

Instructions: Please circle the number (0–10) that best describes how much distress you have been experiencing in the past week, including today.

Extreme distress

10
9
8
7
6
5
4
3
2
1
0

No distress



DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS


PROBLEM LIST
Have you had concerns about any of the items below in the past week, including today? (Mark all that apply)


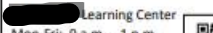
Physical Concerns <input type="checkbox"/> Pain <input type="checkbox"/> Sleep <input type="checkbox"/> Fatigue <input type="checkbox"/> Tobacco use <input type="checkbox"/> Substance use <input type="checkbox"/> Memory or concentration <input type="checkbox"/> Sexual health <input type="checkbox"/> Changes in eating <input type="checkbox"/> Loss or change of physical abilities Emotional Concerns <input type="checkbox"/> Worry or anxiety <input type="checkbox"/> Sadness or depression <input type="checkbox"/> Loss of interest or enjoyment <input type="checkbox"/> Grief or loss <input type="checkbox"/> Fear <input type="checkbox"/> Loneliness <input type="checkbox"/> Anger <input type="checkbox"/> Changes in appearance <input type="checkbox"/> Feelings of worthlessness or being a burden Social Concerns <input type="checkbox"/> Relationship with spouse or partner <input type="checkbox"/> Relationship with children <input type="checkbox"/> Relationship with family members <input type="checkbox"/> Relationship with friends or coworkers <input type="checkbox"/> Communication with health care team <input type="checkbox"/> Ability to have children	Practical Concerns <input type="checkbox"/> Taking care of myself <input type="checkbox"/> Taking care of others <input type="checkbox"/> Work <input type="checkbox"/> School <input type="checkbox"/> Housing <input type="checkbox"/> Finances <input type="checkbox"/> Insurance <input type="checkbox"/> Transportation <input type="checkbox"/> Child care <input type="checkbox"/> Having enough food <input type="checkbox"/> Access to medicine <input type="checkbox"/> Treatment decisions Spiritual or Religious Concerns <input type="checkbox"/> Sense of meaning or purpose <input type="checkbox"/> Changes in faith or beliefs <input type="checkbox"/> Death, dying, or afterlife <input type="checkbox"/> Conflict between beliefs and cancer treatments <input type="checkbox"/> Relationship with the sacred <input type="checkbox"/> Ritual or dietary needs Other Concerns: <hr/> <hr/> <hr/>
--	--


During your hospitalization additional supports include:

- Physical /Occupational therapists
- Dietitians
- Social workers
- Case managers
- Spiritual care / Chaplains

Let us know how we can help.



Cancer Resource Specialist:

 Learning Center
 Mon-Fri: 9 a.m. – 1 p.m.
 For other languages:



Appendix O: Surveys**Pre-intervention Distress Survey**

Distress in cancer care

1. Pertaining to oncology patients, I know what distress means:

Mark only one oval.

- ☐ Yes
☐ No
☐ Maybe

2. I know what a distress thermometer is:

Mark only one oval.

- ☐ Yes
☐ No
☐ Maybe

3. I have used a distress thermometer to care for my patients before:

Mark only one oval.

- ☐ Yes
☐ No
☐ Maybe

DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

4. I feel confident talking to my patients about their distress and possible distress related interventions.

Mark only one oval.

- ☐ Strongly disagree
☐ Disagree
☐ Neutral
☐ Agree
☐ Strongly Agree

5. I know how to access [REDACTED] approved handouts, educational materials, and support services for my patients.

Mark only one oval.

- ☐ Strong disagree
☐ Disagree
☐ Neutral
☐ Agree
☐ Strongly Agree

6. I am familiar with [REDACTED] Distress Management Policy.

Mark only one oval.

- ☐ Yes
☐ No
☐ Maybe

DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

7. A patient's physical, emotional, spiritual, or social state affects their overall recovery from their hospitalization.

Mark only one oval.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

8. I want to learn more about how to manage a patient's distress.

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ Maybe

DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

Post-intervention survey

Distress in cancer care

1. Pertaining to oncology patients, I know what distress means:

Mark only one oval.

- ☐ Yes
☐ No
☐ Maybe

2. I know the purpose of a distress thermometer:

Mark only one oval.

- ☐ Yes
☐ No
☐ Maybe

3. I have used a distress thermometer to care for my patients before:

Mark only one oval.

- ☐ Yes
☐ No
☐ Maybe

DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

4. I am likely to offer the distress thermometer to my patients and their support network.

Mark only one oval.

Strongly disagree

1 ☐

2 ☐

3 ☐

4 ☐

5 ☐

Strongly agree

5. The education I just received makes me feel confident about talking to my patients about their distress and possible distress related interventions.

Mark only one oval.

Strongly disagree

1 ☐

2 ☐

3 ☐

4 ☐

5 ☐

Strongly agree

DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

6. I know how to access [REDACTED] approved handouts, educational materials, and support services for my patients.

Mark only one oval.

Strongly disagree

1 ☐

2 ☐

3 ☐

4 ☐

5 ☐

Strongly agree

7. I am familiar with [REDACTED] Distress Management Policy.

Mark only one oval.

☐ Yes

☐ No

☐ Maybe

DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

8. A patient's physical, emotional, spiritual, or social state affects overall recovery from their hospitalization.

Mark only one oval.

Strongly disagree

1 ☐

2 ☐

3 ☐

4 ☐

5 ☐

Strongly agree

DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

9. I can recommend reliable internet resources to the patients and their support network to access additional information.

Mark only one oval.

Strongly disagree

1 ☐

2 ☐

3 ☐

4 ☐

5 ☐

Strongly agree

10. List your most important take-away from this distress education.

DISTRESS MANAGEMENT IN HOSPITALIZED ONCOLOGY PATIENTS

Appendix P: Permission letters for use of tools

RE: Requests 45064: NCCN.org - Permissions Request Yahoo/Inbox ☆

PermissionRequest <permissionrequest@nccn.org> Tue, Mar 14 at 4:44 AM ☆


Hello,

Thank you for your inquiry. Permission is not required for the use, translation, or adaptation of the content within the Screening Tools for Measuring Distress (DIS-A) from the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Distress Management for personal use (including use with patients). If adaptations are being made to the figure DIS-A, all NCCN logos, trademarks, and names must be removed prior to production.

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Thank you and please let me know if you have any questions.

Thank you,


Business Development Specialist

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Phone: 267-628-3351 | Fax: 215.690.0280 | E-mail: Joseph@nccn.org

[NCCN.org](https://www.nccn.org) – For Clinicians | [NCCN.org/patients](https://www.nccn.org/patients) – For Patients +AJ


Sent: Saturday, February 25, 2023 11:03 PM
To: PermissionRequest <PermissionRequest@nccn.org>
Subject: Requests 45064: NCCN.org - Permissions Request

