Psychosocial Distress Screening for Patients with Cancer: A Value-Based Approach to the Integration and Delivery of Holistic Care

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Psychosocial Distress Screening for Patients with Cancer:
A Value-Based Approach to the Integration and Delivery of Holistic Care

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DNP Committee Member: Dr. Victoria Chaudhary
DNP Project Mentor: Lisa McNey
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Abstract

**Background:** Patients with cancer (PWC) have a high prevalence of experiencing psychosocial distress as they bear the burden of the disease. Emphasis is needed on psychosocial care, as the COVID-19 pandemic negatively impacts mental health. Psychosocial distress screening is considered a standard practice by the National Comprehensive Cancer Network (NCCN), which recommends using the validated Distress Thermometer (DT) as a screening tool.

**Local Problem:** The DNP project ambulatory infusion clinic (AIC) site does not have a standardized distress screening tool for staff. There was a lack of awareness of an existing non-validated distress screening and little to no intervention or process for addressing distress in cancer patients.

**Methods:** Nurse Practitioners (NPs) were given a pre-intervention survey to assess their knowledge of distress screening and later received an educational module on the importance of screening. They were given a post-intervention survey to assess their frequency of distress screening, knowledge, acceptability, and efficacy of the DT. The DT questionnaire was distributed to hematology patients to assess distress levels and referral needs.

**Interventions:** The implementation of the DT screening across all hematology patients at the ambulatory infusion clinic. NPs received a DT educational training module and patients were provided a pamphlet with psychosocial resources or referred appropriately.

**Results:** Distress screening by NPs increased from 50% to 60%. The DT had low efficacy and acceptability by NPs. None of the patients that met the cutoff score ≥4 received referrals. Reasons included (a) they already have resources or support, (b) they did not perceive their distress to be severe enough for interventions, or (c) mental health stigma. All the screened patients were offered an educational pamphlet on distress with resources. Two patients suggested
including more COVID questions due to the impact of the pandemic on their distress. Another questioned the accuracy of the screening because the DT only assesses the patient’s level of distress experienced in the past week rather than an extended time.

**Conclusions:** Screening PWC for psychosocial distress is vital for delivering thorough care, and opportunities to optimize screening and mitigate psychosocial distress are readily available. One of the core challenges is having institutions adopt a standardized screening tool.

Recommendations for institutions to improve distress screening consist of (a) selecting a standardized screening tool, (b) incorporating the tool in the electronic health record to improve clinician workflow, and (c) ongoing education and training on distress screening for new and current clinicians.

**Keywords:** Psychosocial distress, cancer care, distress, oncology, psycho-oncology, psychosocial screening, psychosocial support
Background

Cancer care and research have advanced over the years, but psychosocial distress experienced during the cancer care trajectory is often overlooked, contributing to adverse health outcomes (Adler & Page, 2008). The diagnosis and treatment for patients with cancer (PWC) can come with the sequelae of ailments affecting the patient physiologically, psychologically, financially, and socially. Cancer-related distress may precipitate psychosocial costs that can negatively impact one's quality of life (Essue et al., 2020). Evidence from the literature sheds light on the importance of incorporating screening for distress, and it should be highly considered the sixth vital sign among PWC (Howell & Olsen, 2011).

The National Comprehensive Cancer Network [NCCN] (2021) defines distress as an unpleasant condition that encompasses mental, physical, social, or spiritual factors that influence how one may cope with cancer. It is reported that approximately 46% of PWC are challenged with a remarkable level of distress (Carlson et al., 2019). Undetected and untreated psychosocial distress can further lead to detrimental health consequences, including poor management of illness and recovery, delay in treatment, decreased treatment adherence, increased healthcare expenditure, and, ultimately, increased morbidity and mortality (Y. Wang et al., 2020).

The Institute of Medicine (IOM) stated that health is not solely based on biological factors but psychosocial factors as well, emphasizing the need for a holistic approach in cancer care. As a result, the IOM released a report in 2008, *Cancer Care for the Whole Patient*, to raise more awareness of the psychosocial health of PWC as they make up a growing population of people living with chronic illnesses in the United States (Adler & Page, 2008). Given the increased risk of distress experienced by PWC, the National Comprehensive Cancer Network (NCCN) developed a detailed guideline recommending routine distress screening to promote the
integration of psychosocial care in cancer management (Andersen et al., 2014). Additionally, the American College of Surgeons Commission on Cancer [ACSCoC] (2020) published accreditation standards (Standard 5.2), requiring routine screening and monitoring of PWC for psychosocial distress while offering referrals for psychosocial interventions if deemed necessary.

**Problem Description**

Distress screening tools remain underutilized despite various well-validated and reliable instruments available to cancer centers and the treatment team. Although cancer-related distress is frequently recognized as a persistent concern in the growing body of literature and mandatory guidelines have long been established since 2015, screening rates are suboptimal due to numerous barriers encountered by clinicians and patients. Improvements to psychosocial screening are imperative to identify PWC for distress and allocate the necessary resources to enhance psychosocial care (Carlson et al., 2019).

The emergence of the coronavirus disease 2019 (COVID-19) has profoundly shifted the way providers deliver care to cancer patients, as the population faces lockdown measures, social isolation, uncertainty, and disruption in receiving cancer care (WHO, 2020). The psychological impact of the COVID-19 pandemic adds an emotional burden as people are suffering more stress, anxiety, and depression worldwide (C. Wang et al., 2020). Considering the population's high susceptibility, COVID-19 can produce an increased risk of psychosocial distress among PWC.

**Local Problem and Setting**

The DNP project was implemented in the ambulatory infusion clinic (AIC) in an academic medical center in the San Francisco Bay Area that provides care for adult hematology patients. The stakeholders include two clinic nurse managers, registered nurses, NPs,
oncologists, social workers, psycho-oncologists, and patients and their caregivers. The facility did not have a standardized distress screening tool for staff, which is an issue given that PWC are susceptible to experiencing distress. There was also a lack of awareness of available distress screening tools contributing to inconsistency in patient care and missed opportunities for detecting patients with distress. Therefore, clinicians and the administration were willing to approve and support the quality improvement project to improve psychosocial care (Appendix D).

**Project Aim**

This project aim was to develop, implement, and evaluate a psychosocial distress screening program at the AIC to increase NP-administered distress screening by 25% three months post-intervention. Another goal of the DNP project includes increasing clinician knowledge of practice guidelines and social work and psycho-oncological services to 100% so that PWC can receive appropriate psychosocial care. The overall goal is to improve cancer care, reduce the risk of adverse health outcomes, and enhance the patient experience during treatment.

**Available Knowledge**

**PICOT Question**

In a population of hematology patients challenged by COVID-19 in the AIC (P), would incorporating a psychosocial distress screening program (I) compared with current practices (C) improve NP knowledge and increase distress screening (O) in a time frame of three months?

**Search Methodology**

A comprehensive literature search was completed using the following databases: CINAHL, Scopus, PubMed, and the Cochrane Library of Systematic Reviews to identify research on psychosocial distress screening in PWC. Keywords and free-text terms transcribed
into the previously mentioned databases included barriers, cancer, cancer care, distress, oncology, psycho-oncology, psychosocial, psychosocial distress, psychosocial screening, and psychosocial support. The initial search of the databases yielded a total of 314 articles, of which 12 were selected for review. The evidence was evaluated for strength and quality using the Johns Hopkins Nursing Evidence-Based Practice Research Evidence Appraisal Tool (Newhouse et al., 2007). The articles reviewed ranged from level I B to level V B (Appendix A).

Review of the Literature

Psychological Impact of COVID-19 Pandemic

Romito et al. (2020) and Y. Wang et al. (2020) investigated mental health problems among PWC during the COVID-19 pandemic. Y. Wang et al. (2020) conducted a cross-sectional cohort study and reported that patients' concerns about the inconveniences of receiving treatment were associated with a higher risk of depression. Furthermore, there was a significant relationship between female patients and increased frequency of worrying about disease management because of COVID-19; increased psychological pressure due to COVID-19; and lower sleep quality (Y. Wang et al., 2020). Similarly, Romito et al. (2020) found that female patients had significantly higher anxiety levels than male patients in their mixed-method cohort study. Both studies screened patients for COVID-19 related stress factors and mental health outcomes (Y. Wang et al., 2020; Romito et al., 2020). The two studies found a high prevalence of mental health issues, raising awareness on the importance of mental health screening during the pandemic. Despite this, many patients did not seek psychological support, and neither study reported the reasoning (Y. Wang et al., 2020; Romito et al., 2020).
**Benefits of Psychosocial Distress Screening**

The benefits of psychosocial distress screening were also addressed, highlighting its positive impact on PWC, providers, and the healthcare system. An accessible screening tool facilitates conversations between the provider and patient while allowing patients to engage and express their concerns (Groff et al., 2018). Furthermore, providers have reported that a standardized distress screening tool improved multidisciplinary team collaboration and documentation (Groff et al., 2018). More importantly, routine screening for distress will help triage PWC and connect them to the appropriate resources they need through provider referrals. Early distress detection can prevent long-term psychosocial problems and significantly decrease psychiatric morbidity, resulting in decreased mental healthcare costs (Riba et al., 2019).

Moreover, distress screening can improve patient satisfaction, adherence to treatment, and experience during their cancer journey to enhance their overall quality of life (Zebrack et al., 2015).

**Summary of the Evidence**

The results from the literature shed light on the importance of distress screening among cancer patients during the pandemic. Findings revealing the high prevalence of mental health problems and psychosocial distress are expected as the population is being compounded by the pandemic (Y. Wang et al., 2020; Romito et al., 2020). Regarding the evidence, there is enough strength to recommend a change in clinical practice, given the majority of level II and III evidence included in the review. Based on the studies, healthcare environments have a significant opportunity to improve health outcomes and provide holistic care for PWC.
Rationale

The theoretical framework chosen for the project is the Biopsychosocial Model developed by psychiatrist and internist Engel (1977). The traditional biomedical approach was believed to be engrossed in pathophysiology, and Engel (1977) wanted a more holistic approach to promote patient-centered care. As a result, the Biopsychosocial Model is a multidisciplinary standpoint that focuses systematically on the relationship between the three concepts: biological (genetics), psychological (mood, personality, behavior), and social factors (familial, socioeconomic, cultural, education) in the patients' health and well-being as depicted in Appendix B (Perspectives Clinic, n.d.). The model helped address the project’s AIM statement to understand the phenomena of hematology patients' psychosocial distress by viewing them as a whole person and assessing their biological, psychological, and social factors. The three concepts of the model can influence the manifestation of a disease, health treatment, and the patient's outcome.

The framework helped explain the phenomenon of interest, as it addressed the biological, psychological, and social factors among PWC coping with the pandemic. Furthermore, the Biopsychosocial Model application to the project facilitates the promotion of quality patient care by addressing psychosocial needs, enhancing the professional role of nurse practitioners, and improving health outcomes among hematology patients.

Ethical and Policy Considerations

One of the core Jesuit values that resonate with this DNP project and relate to the Biopsychosocial Model is Curas Personalis, which means caring for the entire person – mind, body, and spirit (University of San Francisco, 2021). It is vital to address not just the biological aspects of the hematology patients but to provide care for them as a whole by considering their
psychosocial needs. The American Nurses Association (ANA) Code of Ethics principles embodied by this project includes Provision 2.3, stating the importance of collaborating with other health professionals to ensure high-quality patient care. The DNP project interventions require collaboration with the multidisciplinary team to improve workflow and utilize existing resources. Provision 3 states, "The nurse promotes, advocates for, and protects the right, health, and safety of the patient." This provision will be integrated throughout the project by protecting the patients' privacy and ensuring confidentiality. Another principle related to this project is Provision 7.2, "Contributions through developing, maintaining, and implementing professional practice standards." This quality improvement project adheres to the IOM, NCCN, ACSCoC guidelines and recommendations of best practices for distress screening for cancer patients. The DNP chair and committee reviewed the DNP project and Statement of Determination (Appendix C) and determined that this quality improvement project was non-research. Therefore, an Institutional Review Board (IRB) approval was not required.

**Implementation/Intervention**

**Description of the Interventions**

**Distress Thermometer and Questionnaire for Patients**

The Distress Thermometer (DT) is a validated, self-reported tool based on evidence from the literature, and it is recommended by the NCCN (Appendix D). The instrument is available in over 50 languages and allows patients to rate their level of distress on a scale of 0 (no distress) to 10 (extreme distress). A problem list is also included for patients to check off boxes on possible stressors potentially contributing to their distress. The list includes: (a) practical problems, (b) family problems, (c) emotional problems, (d) spiritual/religious problems, (e) physical problems (NCCN Distress Thermometer for Patients, 2013). The DNP student developed a separate
questionnaire to collect patient demographic information (Appendix E). The original plan was to educate the medical assistants to distribute the questionnaire. However, the DNP student administered the questionnaires (paper format) to patients after check-in due to time constraints. The patients had enough time to complete the surveys while actively receiving treatments. An interpreter on an electronic tablet was used to include patients that spoke another language other than English. Based on the DT results, the DNP student checked off the appropriate boxes on the top left corner indicating the interventions that were made for the patient during that time, such as (a) Not needed, (b) Social work referral, (c) Psycho-oncology referral, (d) Patient declined, and (f) Other (indicate reasoning). The DNP student brought attention to patients that met the cutoff score (≥ 4) for distress to the NPs for appropriate follow-up. Patient identifiers on the surveys were then removed to ensure confidentiality.

**Patient Pamphlet**

All patients were offered a pamphlet with education on distress and resources available online and at the AIC (Appendix F).

**Distress Screening Education for NPs**

NPs were educated on the importance of distress screening and utilization of the DT on a virtual platform via a 15-minute PowerPoint during an NP staff meeting (Appendix G).

**Pre-and-Post Intervention Survey for NPs**

NPs completed a pre-and-post intervention survey on Qualtrics (Appendix H & I). The pre-intervention survey was distributed before the PowerPoint education module to assess their knowledge and compliance with distress screening. The post-intervention survey evaluated their knowledge, compliance, and acceptability of the DT at the end of the project.
Gap Analysis

The gap identified from the literature was that the main barriers to distress screening included inadequate staff, lack of time or competing demands, and staff turnover (Knies et al., 2019). Other factors include resistance to change, lack of training or awareness of available distress screening tools, provider knowledge and skills when conducting screenings, provider-patient rapport, absence of psycho-oncological referral services, and collaboration between stakeholders (Ehlers et al., 2019). (See Appendix J).

Gantt Chart

The DNP project consisted of four phases depicted in the Gantt chart (See Appendix K). In the first phase, the DNP student completed a needs assessment to identify available distress screening tools and current practice guidelines at the AIC, where the project was approved. In the second phase, a distress screening tool for patients and surveys for clinicians were finalized. In the third phase, a team kickoff meeting was held with stakeholders to provide education and training on distress screening. Surveys were also collected from NPs and patients. Project interventions concluded in the fourth phase.

SWOT Analysis

A SWOT analysis was used to identify and assess the project's strengths, weaknesses, opportunities, and threats while examining internal and external factors (See Appendix L).

Strengths

The project's strengths included implementation at an academic medical center in a specialized hematology clinic with trained, experienced clinicians. Leadership from the hematology clinic was supportive of the project, and the clinic offered a wide availability of clinical resources and a collaborative interdisciplinary team.
**Weaknesses**

There was a lack of knowledge among clinicians regarding current recommendations for distress screening among cancer patients. Additional weaknesses include a lack of protocol regarding distress screening at the organization and resistance to change by staff members.

**Opportunities**

The NCCN developed a guideline recommending routine screening for distress among patients with cancer, given the prevalence of distress experienced by the population (Andersen et al., 2014). The project could assist in standardizing distress screening training in the organization and utilizing psycho-oncological or social work services.

**Threats**

The project's threats include potential changes in the local, national, or global guidelines in distress screening.

**Work Breakdown Structure**

The work breakdown structure (WBS) provides a visual of the project organized in different levels to identify all the activities needed to execute the project effectively by the project team (see Appendix M & N). The deliverables comprised meeting with the organization, completing a gap analysis, developing educational material for clinicians on distress screening, collecting pre-and-post intervention surveys from clinicians, and collecting questionnaires from hematology patients.

**Budget and Financial Analysis**

The budget for the project was primarily for printing expenses which were calculated to be about $380. There will be no expenses for clinicians' education and training as the session will occur during a scheduled staff meeting. Non-monetary benefits include compliance with
ACSCoC accreditation standards, early detection, and interventions for patients experiencing a significant level of distress that may decrease unmeasurable healthcare costs and increase clinician knowledge and skills in distress screening (See Appendix O).

**Return on Investment**

The return on investment (ROI) was challenging to measure for this QI project. However, educating patients and clinicians on distress increases awareness of available resources, which can improve patient outcomes, increase patient satisfaction, and decrease complications of psychosocial distress. Quality care may not be directly measured but provides benefits to the healthcare system and the patient.

**Responsibility and Communication Matrix**

At the start of the project, the DNP project team, project sponsors, and stakeholders were invited to a kickoff meeting on Zoom to introduce the project, objectives, goals, and deliverables. The project team had monthly Zoom meetings to review the project's status. The project sponsor and stakeholders received monthly emails about project updates. Project managers, project sponsors, and stakeholders met monthly via Zoom to update project status and were allowed to provide feedback. The project manager, project sponsor, project team, and stakeholders communicated via email to provide feedback by completing a post-intervention survey at the end of the project. The DNP student worked closely and communicated with clinicians and clinic managers throughout the project to manage risk or threats to ensure the efficiency of the proposed plan. (See Appendix P).

**Outcome Measures**

- NP knowledge, attitude and beliefs towards distress screening will improve by at least 50%
• Increase NP distress screening by 25% (Likert scale questions from pre-and-post intervention survey)

• Increase referral rate to 100% for at-risk patients (Number of referrals out of the number of patients that meet the cutoff score)

CQI Method, Data Collection Tools & Analysis

A pre-and-post intervention survey on Qualtrics (Appendix I & J) for NPs was distributed through email or QR code to assess their knowledge, attitude, and beliefs toward the distress screening. The survey included Likert-scale questions that were not validated due to time constraints. Patients were given the DT questionnaire (paper format) since not all patients could complete the survey electronically. Patient responses were then collected and transcribed to Qualtrics for analysis.

Results

Pre-Intervention NP Surveys

Six NP participants responded to the pre-intervention survey, and five NP participants that completed the pre-intervention survey responded to the post-intervention survey. In the pre-intervention survey, 66.67% and 50% of NPs stated they knew the NCCN and ACSCoC guidelines to screen PWC for distress, respectively. Fifty percent of the NPs who took the pre-intervention survey responded that they screen for distress 'most of the time' compared to 60% post-intervention. When asked if it is essential to screen patients for distress, 83.33% answered 'strongly agree.' 100% of the NPs 'strongly agree' that the COVID-19 pandemic has had a negative impact on hematology patients. In the pre-intervention survey, only 33.33% of NPs were aware of a non-validated psychosocial screening tool that was already in place in the electronic medical record. 100% of NPs 'strongly agree' that it is important to have a distress
screening tool accessible to patients, and 100% were also aware of psycho-oncological and social work services available for patients. When asked how often they made psycho-oncological referrals, 40% of the NPs answered, 'most of the time.' Furthermore, 33.3% stated they 'always' reach out to social work for assistance (See Appendix R).

**Post-Intervention NP Surveys**

In the post-intervention survey, 40% of NPs 'strongly agree' the DT was an effective tool, 80% 'neither agree nor disagree' they were able to identify more patients with distress using the DT, and 80% 'neither agree nor disagree' they made more referrals to psycho-oncology by using the DT. When asked how often psycho-oncology referrals were made for at-risk patients during the implementation of the project, only 20% stated 'always.' Furthermore, only 20% of NPs answered 'strongly agree' that they will continue to use the DT. 80% of NPs 'neither agree nor disagree' that the DT impeded their workflow, and 40% 'strongly agree' that the DT was easy to use. One of the NPs reported that they did not use the DT (See Appendix S.)

**Patient Questionnaire**

Fifty-six (n=56) hematology patients completed the questionnaire, and the mean DT score was 3.0, which indicates mild levels of distress. Of the 15 patients that met the cutoff score >4, 12 declined interventions, and three stated they already had resources. The most frequently reported emotional problem was 'worry' (41.1%); the physical problem was 'fatigue' (51.8%); the practical problem was 'treatment decisions' (17.9%); and the family problem was 'dealing with children' (8.9%) (See Appendix T).

**Qualitative Responses**

Two patients reported that the questionnaire should include more questions relating to the COVID-19 pandemic because it contributed to their distress level. Patients that met the cutoff
score >4 were not referred or did not require interventions for the following reasons: (a) they already have resources (e.g., psychiatrist, psychologist), (b) were already referred to social work or psycho-oncology, (c) did not believe their distress severe enough to seek interventions, (d) mental health stigma, and (e) they already have support at home. Dilworth et al. (2014) also reported similar findings regarding mental health stigma as their patients voiced negative perceptions and stigma toward psychosocial care. Two visibly distressed patients declined the survey, but the DNP student notified the appropriate NP to follow up. All patients were offered an educational pamphlet with resources regardless of their DT score.

**Conclusion**

Although distress level scores were low and no referrals were made during the project's timeframe, distress screening remains an essential part of cancer care. The rate of distress screening by NPs only increased by 10%, instead of the projected target of 25%. The reason is likely due to a change of the interventions by having the DNP student administer the screening tool instead of the NPs. Despite the outcome, the NP education and training component of the intervention contributed to increased awareness of the importance of distress screening. Overall, PWC are among those who experience a greater risk of psychosocial distress, given the various challenges with their diagnosis (Y. Wang et al., 2020). It is integral to screen and monitor PWC for psychosocial distress to ensure that they are provided with appropriate psychosocial care to address their needs and preserve their mental health and quality of life. It is paramount to provide PWC access to prevent adverse health outcomes that may contribute to worsening morbidity and mortality. Recommendations for institutions to improve distress screening include adopting a standardized distress screening tool, incorporating the tool in the electronic health record to
improve clinician workflow, and developing education and training on distress for new and current clinicians.

**Limitations**

Despite the DT being a validated tool, some limitations include its instructions for the patient to rate their level of distress based on how they feel in the past week. A patient provided feedback that the tool only captures their level of distress in a moment in time. Moreover, the DNP project is not sustainable since the initial intervention plan changed. The DNP student was the designated person to carry out all the interventions, which may have reflected the low acceptability and efficacy of the DT by NPs. The psycho-oncology team provided feedback on incorporating a modified DT in the patient's electronic medical record for improved documentation accessible to the multidisciplinary team, which is a consideration for future studies.

**Implications for Practice**

Screening PWC for distress and improving their access to psychosocial care is crucial to reducing the psychosocial burden. PWC has a high prevalence of distress, and NPs must consider taking a holistic approach to health care rather than solely focusing on the disease. Without a doubt, NPs have the potential to be part of a multidisciplinary team caring for PWC. Education and training for NPs will help improve uptake of distress screening, remove existing barriers and stigma to psychosocial care for PWC, and mitigate psychosocial distress (Riba et al., 2019; Zebrack et al., 2015). Altogether, improvements in current clinical practices are needed to be congruent with the most recent NCCN and ACSCoC standards of care for distress management to promote psychosocial care, especially in the setting of an ongoing global pandemic.
Funding

The DNP student did not receive funding for this project, and there are no competing conflicts of interest to disclose.
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http://dx.doi.org/10.1080/07347332.2018.1521490


https://doi.org/10.1002/pon.5516

Götz, A., Kröner, A., Jenewein, J., & Spirig, R. (2020). Adherence to the distress screening through oncology nurses and integration of screening results into the nursing process to


## Appendices

### Appendix A: Evidence Table

<table>
<thead>
<tr>
<th>Citation</th>
<th>Study Design/Method</th>
<th>Sample/Setting</th>
<th>Variables Studied and Their Definitions</th>
<th>Measurement</th>
<th>Data Analysis</th>
<th>Findings</th>
<th>Appraisal: Worth to Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bodner et al., 2019</td>
<td>Quality improvement. Quantitative, cohort, cross-sectional study to improve distress documentation</td>
<td>N=88 hematology/Oncology veteran patients Setting: VA medical center in Gainesville, Florida</td>
<td>IV: Veteran PWC DV: Documentation of distress screening</td>
<td>-Rates of distress documentation -Percentages of documented problems based on the NCCN Distress Thermometer w/ Problem List</td>
<td>Documentation rates increased with each cycle but was not able to meet the goal of 50% Documentation rates 1st week: 14% 2nd week: 20.5% 3rd week: 36% 42% of patients reported distress level ≥4</td>
<td>-Compliance increased with each cycle due to provider education, email reminders, personal reminders -Distress screening/documentation rates may be low due to increased workload -Lack of buy-in by check-in staff and physicians</td>
<td>Quality of Evidence: Level V, B</td>
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<tr>
<td></td>
<td>Method: Plan-Do-Study-Act (PDSA) cycles Study was implemented in 3 cycles</td>
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<td>IV: Veteran PWC DV: Documentation of distress screening</td>
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<td>Weaknesses:</td>
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<td>IV: Independent variable; DV: Dependent Variable; PWC: Patients with cancer; NCCN: National Comprehensive Cancer Network</td>
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<td>-Small sample size</td>
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<td>IV: Independent variable; DV: Dependent Variable; PWC: Patients with cancer; NCCN: National Comprehensive Cancer Network</td>
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<td>-Single facility</td>
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<td>IV: Independent variable; DV: Dependent Variable; PWC: Patients with cancer; NCCN: National Comprehensive Cancer Network</td>
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<td>-Unclear instructions for clinicians and staff in approaching patients to complete screening</td>
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<td>-No instruction for physicians to document patient refusal of screening</td>
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<td>IV: Independent variable; DV: Dependent Variable; PWC: Patients with cancer; NCCN: National Comprehensive Cancer Network</td>
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<td>-Physicians using the “copy forward” method in documentation in their notes which may decrease validity of results</td>
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<td>-Interventions not feasible/transferrable</td>
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<td>IV: Independent variable; DV: Dependent Variable; PWC: Patients with cancer; NCCN: National Comprehensive Cancer Network</td>
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<td>-Sufficient sample size</td>
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<td>-Use of validated tool</td>
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<tr>
<td>Bush et al., 2020</td>
<td>Quality improvement project to implement distress screening Qualitative, cross-sectional design Method: Plan-Do-Study-Act model -Web-based DSP 2nd outcome: improve referral and access to resources for PWC</td>
<td>N=21 participants Setting: Community cancer setting</td>
<td>IV: CSS DV: Distress scores DV2: Endorsed concerns DV3: Depression risk scores DV4: Referral rates</td>
<td>Demographics Means for distress scores</td>
<td>Mean distress score: 22.14 out of 60 with severe distress being &gt;40 62% (n=13) participants reported moderate to severe for one of the following concerns: feeling sad/depressed, feeling nervous/afraid, feeling lonely/isolated, feeling too tired to do things 38% of participants were at risk for clinically significant depression and were referred for therapy Participants reporting symptoms attributing to distress were offered support to mitigate symptoms 18 participants perceived CSS to be helpful</td>
<td>Staff buy-in was a barrier to screening Recommendations: systematic tracking to evaluate efficacy of screening and the ability to address psychosocial needs; adequate referral and support services to improve DSP; adequate training for staff especially to be comfortable with addressing psychosocial concerns with patients Advanced practitioners play an important role in identifying and mitigating distress</td>
<td>Quality of Evidence: Level V, B Strengths: -Validated instrument Weaknesses -Limited generalizability -Small sample size -Potential lack of access to technology or limited health literacy -Cross-sectional design</td>
</tr>
</tbody>
</table>

IV: Independent variable; DV: Dependent Variable; PWC: Patients with cancer; PDSA: Plan-Do-Study-Act; CSS: CancerSupportSource; DSP: Distress Screening Programs
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Carlson et al., 2018</td>
<td>Quantitative, cross-sectional study to: a) determine the prevalence of distress b) Understand the correlation between demographic variables, cancer, type, and distress c) explore the importance of levels of demographic variables and cancer type in determining distress</td>
<td>N= 4664 PWC w/ DT scores Setting: 55 cancer centers in the United States and Canada from January to April 2015</td>
<td>IV: PWC DV: DT -Rate of level of distress -Demographics -Cancer diagnoses</td>
<td>46% of the participants had a DT score ≥ 4 Those who had a higher probability of distress include females; age 40-59; diagnosis of pancreatic/lung cancer</td>
<td>Detecting patients who are at risk for distress may help patients get the appropriate care/resources they need Adherence to screening may not be feasible Psychoeducational material may be distributed to participants who screened for mild distress Online psychosocial interventions may help increase outreach</td>
<td>Quality of Evidence: Level II, B Strengths: -Large sample size from a diverse geographical location -Multicenter study -Use of validated tool that is translated into 21 different languages Weaknesses: -Cross sectional design</td>
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IV: Independent variable; DV: Dependent Variable; PWC: Patients with cancer; EMR: Electronic medical record; DT: Distress Thermometer
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</tr>
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</table>
| Dilworth et al., 2014 | Qualitative and quantitative SR | 25 articles reviewed the results of barriers to psychosocial care among PWC using the PRISMA Guidelines | IV: PWC DV: Barriers | Percentage of each patient perceived barriers to psychosocial support | Patient perceived barriers to psychosocial care:  
- No Need/Support from elsewhere (38.77%)  
- Lack of information about services (19.01%)  
- Transport/travel/parking/location (17.01%)  
- No confidence in services (12.77%)  
- Negative perception and stigma (10.37%)  
- Health provider/communication (7.89%)  
Other barriers reported at <2% were: Too busy; too unwell; and too expensive.  
Qualitative data reported themes: cultural, | Negative opinions and stigma regarding psychosocial support included “feeling uncomfortable seeking counselling,” “negative attitude,” not wanting psycho pharmacological interventions, and not wanting to join a group.  
- Based on the qualitative results, clinician barriers include lack of knowledge about psycho-oncological services and not viewing psychosocial care as part of standard care. Other barriers include lack of awareness of resources and time burden (Most common barrier). | Quality of Evidence: Level III, B |
|                     |                     |                | |              |              |          | Strengths: Aim is clearly stated  
- Reproducible search strategy with multiple databases and a flow diagram  
- Clearly reported inclusion and exclusion criteria  
- Table showing characteristics from each article  
- Consistent findings | Weaknesses  
- Possible risk of bias in the screening and selection process since only one researcher reviewed articles for relevance |
<table>
<thead>
<tr>
<th>IV: Independent variable; DV: Dependent Variable; SR: Systematic review; PWC: Patients with cancer; PRISMA: Preferred Reporting Items for Systematic Reviews and Meta-Analyses</th>
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</thead>
<tbody>
<tr>
<td>organizational and clinician</td>
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<tr>
<td>-Organizational is the most common theme (lack of formal support, lack of referral to appropriate services, concerns about scope of practice)</td>
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<td>-Cultural: lack of team collaboration, lack of professional dialogue, training marginalizing psychosocial care; clinician hesitance regarding stigma of psychosocial interventions</td>
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<tr>
<td>-Clinician: lack of communication skills</td>
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<tr>
<td>Recommendations: screening at one point in time is not beneficial without frequently screening patients and following up with them; promoting psychosocial care for PWC to decrease stigma; strategies to incorporate psychosocial screening without the added workload; clinician communication skills training; collaborative strategies</td>
</tr>
<tr>
<td>Citation</td>
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</tbody>
</table>
| Götz et al., 2020 | Randomized, retrospective, descriptive, pre-, and post-intervention, cohort study      | N=1111 hematology/oncology inpatients (data extracted from EHR)                  | IV: Screened patients                   | -Nurse documentation rates                                                   | Psychosocial issues were addressed in nursing care plans (51.2%) after implementation compared to 24.6% before implementation. Referrals increased to 11.7% from 4.5% after interventions. Psychosocial referral rate was 19.9% post intervention compared to 4.5% pre-intervention. | Difficulties in including psychosocial issues in care plans may be due to “sounding judgmental,” challenges with developing or making interventions for psychosocial problems, not assessing psychosocial issues because emotional problems are thought to be common among PWC. Nursing documentation focused more on the physical problems (pain, constipation, etc.) - If psychosocial problems are not incorporated into the nursing care plan, the problems will continue to be ignored and inadequately managed. - Being more aware of psychosocial problems can improve patient-oriented care. - Despite high distress levels, some patients | Quality of Evidence: Level I, B  
Weaknesses:  
- One facility  
- Retrospective design  
- Results cannot be interpreted causally to show any correlation  
- Results are based on nursing quality of documentation  
- Results are not generalizable  
Strengths:  
- Large sample size  
- Randomized design  
- First study to explore how nurses include psychosocial concerns in documentation (care plans) and familiarize diagnoses and interventions when caring for their patients |
The notion of distress may give people the impression of a “psychiatric disorder.”

<table>
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<th>IV: Independent variable; DV: Dependent Variable; EHR: Electronic Health Record; DT: Distress Thermometer; PWC: Patients with Cancer</th>
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<tbody>
<tr>
<td>decline psychosocial services</td>
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<td>-The notion of distress may give people the impression of a “psychiatric disorder.”</td>
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</table>
| Groff et al., 2018 | **Design:** Mixed-methods, cross-sectional design over a 3-week period in May 2012 to evaluate the sustainability of an SFD program  
**Method:** Sustainability was assessed 6 months after implementation of SFD program  
Participants received screening tools in the waiting room before their appointment  
Charts were reviewed in the EMR 3 weeks after a patient visit. Information about the SFD process were collected including whether screening tool was completed, whether the provider signed the tool, whether a note was written about discussion of screening tool, which provider led conversation with the | **Sample:** N=163 completed screening tools (out of 184 charts reviewed)  
6 oncologists, 7 nurses, and 3 administrators were interviewed  
**Setting:** Head and neck and neuro-oncology clinics in Calgary, Alberta | **IV:** SFD program  
**DV1:** Screening rate  
**DV2:** Rate of patient screened and discussed tool with HCP  
**DV3:** Rate of patient screened scored above cutoff and intervention was indicated  
**DV4:** Conversations between patients and nurses | **16 semi-structured interviews with administrators, physicians, and nurses to evaluate the barriers and support of sustainability**  
**Chart review of completed screening tools:** Edmonton Symptom Assessment System Canadian Problem Checklist | **Percentage**  
**Qualitative data from healthcare staff interviews to identify themes**  
-data transcribed into QSR NVivo 10® software to identify, analyze, and report themes within the data | **DV1:** 88.6%  
**DV2:** 79.8%  
**DV3:** 76.4%  
**DV4:** 99.2% | **5 themes influencing sustainability:**  
-Attitudes, knowledge, and beliefs about the program  
-Implementation approach  
-Outcome expectancy of providers  
-Integration with existing practice  
-External factors | **Quality of Evidence:** Level III, B |

**Worth to Practice:**  
-SFD programs can be used as a standardized approach to screening psychosocial, practical, and physical factors to improve patients' level of distress and quality of life  
-Sustainability of the program is attained when it is standardized and part of the culture in a practice setting  
-It is essential to complete screenings at the initial visit and follow-up visits  
-SFD program provides an opportunity for patients to improve communication with HCP  

**Strengths:**  
-SFD program can fill current gaps in knowledge and provide the opportunity to clarify the role provider within the program  
-Flow diagram is clear
patient, and if there were interventions/referrals recorded

Interviews with healthcare staff were recorded and transcribed to identify and analyze themes

**Conceptual Framework:**
Sustainability Model

depicting chart review findings

**Weaknesses:**
- Research conducted at a single point in time
- Quantitative data obtained from patient charts and it is possible that HCP did not chart an intervention

**Feasibility:**
Sustainability of SFD program is feasible if it is well integrated into practice, while it is also well perceived by HCP.

**Conclusion(s):**
- SFD program was well accepted by HCP
- Better educational support and training is needed during the implementation process of the SFD program to HCP
- Barriers to sustainability include competing priorities (e.g., time management) and lack of commitment by senior leadership.

**Recommendation(s):**
Gaps in knowledge can be addressed with proper education, skill training, and in-service training.
<table>
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<tr>
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<tbody>
<tr>
<td>Hui et al., 2017</td>
<td><strong>Study Design:</strong> QI Project, Before and after comparison, Cohort design to study the effect of a pilot distress screening program</td>
<td><strong>Sample:</strong> 379 (pre-implementation) 328 (training), 465 (post-implementation) consecutive cancer patients</td>
<td><strong>IV1:</strong> Intervention <strong>DV1:</strong> ESAS completed <strong>DV2:</strong> Social work referrals <strong>DV4:</strong> Palliative care referrals</td>
<td>ESAS assess 10 physical and emotional symptoms using an 11-point numeric rating scales 0 (no symptom) to 10 (worse). ESAS cutoff score ≥4 means further assessment is needed -8 target symptoms: Pain, fatigue, nausea, drowsiness, shortness of breath, and appetite</td>
<td>Descriptive statistics (Percentages and means) Chi-square test Fisher's exact test</td>
<td>Patient characteristics: Majority of participants were either female, of Hispanic origin, had breast and gastrointestinal malignancies, or were in advanced stages of cancer (stage III or IV) Compliance with ESAS: 83% (pre), 91% (training), 96% (post), p&lt;.001. Social work referrals: 21% (pre), 71% (training), 79% (post), p&lt;.001.</td>
<td>Quality of Evidence: Level II-B</td>
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<td><strong>Method:</strong> A steering committee was created to supervise the implementation process, which included medical oncologists, social workers, case managers, clinical nurses, and palliative team. 3 phases</td>
<td><strong>Setting:</strong> General Medical Oncology Outpatient Clinic at Lyndon B. Johnson Hospital providing care to underserved patients in Harris County, Texas.</td>
<td>Patient demographics retrieved retrospectively -Age -Sex</td>
<td></td>
<td></td>
<td>Patient characteristics: Majority of participants were either female, of Hispanic origin, had breast and gastrointestinal malignancies, or were in advanced stages of cancer (stage III or IV) Compliance with ESAS: 83% (pre), 91% (training), 96% (post), p&lt;.001. Social work referrals: 21% (pre), 71% (training), 79% (post), p&lt;.001.</td>
<td>Worth to Practice: -Orientation, education, and feedback helped clinicians adopt ESAS into their routine care efficiently -Routine distress screening is vital especially in low socioeconomic populations, because they are less likely to report symptoms</td>
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<td><strong>1) Pre-implementation</strong> (September 2015): Patients received a paper copy of ESAS immediately after</td>
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<td>Strengths: -Large sample size, consecutive patient cohorts -Provided algorithm/blueprint of distress screening -ESAS is a validated and reliable instrument in 20 different languages that is widely used in clinical and research settings -Chart audits to monitor ESAS documentation and clinical interventions -Offered staff feedback to improve the program</td>
</tr>
</tbody>
</table>
checking in during their clinic visit. This phase was designed to grasp patients' baseline distress levels.

2) **Training** (October and November 2015): Nursing staff received a 15-minute orientation on distress screening practice. Patients that met the criterion for distress were triaged by clinic nurses and followed up by social workers to confirm severe symptom distress. Patients that continue to experience distress were offered services, such as palliative, psychiatric, or psychological care. Weekly meetings with staff were held to safeguard proper screening process and triage.

3) **Post-implementation** (December 2015): Reinforcement of program by steering committee; monitor ESAS charting, distress levels, and

<table>
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<tr>
<th>Race</th>
<th>Cancer diagnosis</th>
<th>Cancer stage</th>
<th>Palliative care referrals: 12% (pre), 20% (training), 28% (post), p=.21.</th>
</tr>
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</table>

**Weaknesses:**
- Only one social worker was involved in the study, which limited the number of patients triaged
- Some patients that screened positive for distress did not complete a social work evaluation, because the social worker was unavailable to carry out screening within a 48-hour timeframe or the social worker did not receive referral notification from the nurse
- Study was conducted in one clinical setting so it limits generalizability of results

**Feasibility:**
DSP is feasible if social work, palliative care, and psycho-oncology services are readily available in the practice setting. The triaging and referral process in this study were created to supplement the current practice.

-EAS screening was perceived well by patients

**Conclusion(s):**
- Social work triage process showed that 30% of positively screened patients could not be contacted and 20% previously had their
**Conceptual Framework:** None

- DSP significantly increased number of social work referrals
- From pre-to-post implementation, there was an increase in symptom distress documented using ESAS
- Clinicians showed increased adherence to DSP
- Implementation of DSP can be successful through collaboration by the interdisciplinary team

**Recommendation(s):**
- Electronic alerts of referrals may help increase the rate of social work assessments
- Or creating alerts in the EMR to inform clinicians if patients screen positive
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<th>Quality of Evidence:</th>
</tr>
</thead>
</table>
| Knies et al., 2019 | Longitudinal, pre- and post-test, mixed methods, cohort, qualitative and quantitative design | N=36 Cancer care clinicians from 18 institutions that were recruited from online advertisements | IV: Cancer care clinicians  
DV: SPDP | -Rate of goal achievement measured at 6-, 12- and 24-months post-intervention using an investigator developed Goal Evaluation Form  
-Staff interviews to determine distress screening goals, institutional barriers, and facilitators, as well as perceived benefits of the SPDP | The most common goal by clinicians was creating stakeholder buy-in (n=12)  
Goal achievement were 25.9%, 65.5%, and 94.8% at 6, 12, and 24 months  
Top 3 barriers:  
- Lack of staff (n=15)  
- Staff turnover (n=11)  
- Competed demands (n=11)  
Facilitators:  
- Buy-in (40.2%)  
- Institution support (14.8%)  
- Dyad perceived as knowledgeable resource (12.2%) | Participants report that conference calls/collaboration with peers was integral to achieving their goals  
SPDP are beneficial to achieve CoC’s distress screening standards | Quality of Evidence:  
Level II, B | Strengths:  
-Multi-institutional study, increasing generalizability  
-Longitudinal design  
-Consistent recommendations | Weaknesses:  
-Small sample size |

IV: Independent variable; DV: Dependent Variable; PWC: Patients with Cancer; SPDP: Screening for Psychosocial Distress Program
<table>
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</table>
| Riba et al., 2019 | Updated clinical practice guideline on distress screening containing RCTs, SRs | -Clinicians caring for PWC Setting: Cancer community centers | IV: Screening DV: Referrals/interventions | Methods used to implement guidelines | Qualitative synthesis of selected articles 20-52% of PWC experience a significant level of distress -There is stigma associated with psychological issues especially when using words, such as “psychiatric,” “psychological,” or “emotional.” -Stigmatization leads to underreported by patients of their feelings of distress -Updated guidelines will help improve delivery of patient-centered care and patient QOL -Screening patients alone are not sufficient without proper referral, treatment, and follow-up -Earlier referrals were linked to | Quality of Evidence: Level IV, A  
Strengths:  
-Includes RCTs  
-Appropriate stakeholders involved in development of CPGs  
-Elimination of potential bias  
-Valid and clear recommendations supported by evidence  
-Guidelines are frequently updated  
-Knowledgeable multidisciplinary panel of experts  
-No risk for bias  
-Consistent results  
Weaknesses: None noted |
improved outcomes
-DT is a well validated tool for distress screening

|-------------------------|------------------------|---------------------------|---------------------------------|---------------------------------|---------------------|---------------------|------------------------|

IV: Independent variable; DV: Dependent Variable; PWC: Patients with Cancer; CPG: Clinical Practice Guidelines; RCT: Randomized controlled trial; SR: Systematic Review; QOL: Quality of life; DT: Distress thermometer
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</table>
| Tonsing, K. N., & Vungkhanching, M. (2018) | **Study Design:** RCT, Cohort Study during May 2014 | N=43 cancer patients receiving treatment | IV1: DT with PC | DT included a thermometer with a number scale from 0 (no distress) to 10 (extreme distress) | -Frequency  
-Mean score  
-Percentage  
-Chi-square  
-t-tests | DV1 >4 for 51.2% (n=22) of the participants | Mean DT scores for IV1 (M=9.23) were significantly higher than IV2 (M=2.76) | **Level of Evidence (Critical Appraisal Score):** I-B |
|                          | **Method:** Participants were screened for psychosocial distress experienced in the past week by social workers with the DT and PC then received referrals if necessary | **Setting:** Outpatient cancer treatment center in Central California | IV3: Patient's demographic information: Age, gender, race, reported health insurance, and cancer diagnosis | DT cutoff score: 4  
Score <4 = not distressed  
Score>4 = distressed | | | **Worth to Practice:**  
-Essential to consider distressing factors when assessing psychosocial distress levels  
-Distress levels can affect patient satisfaction, compliance with treatment, and decision-making  
-Identifying sources of distress will allow providers to provide appropriate interventions and psychosocial referral |
|                          | **Conceptual Framework:** None | **Inclusion criteria:**  
-Patients at least 18 years of age  
-English-speaking  
-Capable of giving written consent  
-Receiving treatment | DV1: Distress factors  
DV2: Feasibility | PC consisted of 39 items of probable distress experienced by participants categorized as:  
-Practical problems, family problems, emotional problems, spiritual/religious problems, and physical problems  
-Demographic sheet documented patient age, gender, race, | | | **Strengths:**  
-No conflicts of interest  
-Provided possible sources of distress |
|                          | **Attribution:** NR | | | | | | |
| scores, demographic and clinical characteristics between distressed and non-distressed participants | health insurance, and cancer diagnosis | -Fatigue (45.5%)  
-Sleep problem (45.5%)  
-No significant relationship between DT scores and demographic and clinical factors | -Research design and collection method clearly stated  
-The ability to screen for distress and sources of distress using DT and PC screening tool

**Weaknesses:**  
- Small sample size  
- Validity of instrument not discussed  
- Lack of diversity in participants  
- Results limit generalizability  
- Interventions led by social workers that might limit access to care

**Conclusion(s):**  
- DT and PC screening tool is practical and allows providers to identify sources of distress

**Feasibility:**  
DT and PC is reasonable to implement

**Recommendation:**
n(s):
- Further research on patient acceptability of DT and PC
- Future studies with larger sample size
- More information needed to study the relationship between interventions/referals and lower levels of distress

| Include in project? | Yes |

Definition of abbreviations: RCT – Randomized controlled trial; IV-Independent variable; DV- Dependent variable; DT-Distress thermometer; PC-Problem checklist; NR – Not reported
<table>
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<tr>
<td>Y. Wang et al.,</td>
<td>Study Design: Cohort, Cross-sectional, cluster study conducted between April 9-April 19-2020</td>
<td>Setting: Sun Yat-Sen University Cancer Center, China</td>
<td>Exclusion Criteria: Incomplete surveys, surveys with invalid information</td>
<td>Socio-demographic and clinical characteristics: Age, Sex, Residence, Annual family income, Education, Marital status, Employment status, Mental health history (diagnosed by psychiatrist), Alcohol intake during pandemic measured by symptom level (4-point Likert scale to measure intake frequency), Medical conditions were obtained from EMR</td>
<td>Frequency Percentages Regression models</td>
<td>Prevalence Depression: 23.4% Anxiety: 17.7% PTSD: 9.3% Hostility: 13.5%</td>
<td>Level of Evidence (Critical Appraisal Score): III-B</td>
</tr>
<tr>
<td></td>
<td>Method: Patients were recruited by the cancer center through mobile messaging with a website to complete a survey. They were provided an information sheet and consent</td>
<td>N Sample: N= 6213 cancer patients (out of 9978 invited)</td>
<td>IV1: Survey IV2:COVID-19 related risks IV3: Psychosomatics factors DV: Mental health outcomes</td>
<td></td>
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<td>36% of patients had difficulties continuing cancer therapy because of inconveniences from COVID-19</td>
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<td>Conceptual Framework: None</td>
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<td>2.6% of the participants had history of mental disorder</td>
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<td></td>
<td>Investigate mental health problems in cancer patients through the COVID-19 pandemic</td>
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<td>Inconveniences to receive treatment was associated with higher risk of depression ($b=0.043, p&lt;0.01$).</td>
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<td>Frequency of worry regarding cancer management due to COVID-19 -Likert scale</td>
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<td>High levels of PTSD symptoms were associated with longer time since diagnosis ($b=0.035, p&lt;0.01$) and high</td>
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<td>Strengths: No conflicts of interest One of the first few studies regarding mental health of cancer</td>
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</tbody>
</table>
Barriers to accessing treatment during COVID-19
-1 (no barriers) to 4 (severe barriers)

Frequency of feeling overwhelming psychological pressure due to COVID-19
-1 (never) to 5 (very often)

Psychosomatic characteristics: Fatigue and pain measured using a VAS

Quality of life and degree of satisfaction about physical health
- WHOQOL-BREF assessment tool
1 (extremely unsatisfied) to 5 (extremely satisfied)

Sleep quality –

from 1 (never) to 5 (very often)

Risk factors:
- History of mental health disorder
- Excessive alcohol use
- High levels of fatigue and pain

Protective factors:
- Better QOL
- Good relationships with family
- Younger age (against hostility)

Lower risk of anxiety associated with:
- Younger age ($b=0.028$, $p<0.01$)
- Male sex ($b=-0.031$, $p<0.01$)
- Being employed ($b=-0.030$, $p<0.01$)
- Longer time since diagnosis ($b=-0.023$)

Results identified risk factors as well as protective factors for mental health problems

Weaknesses:
- Cross-sectional design limits causality in variables
- Self-report questionnaires by patients may increase risk of bias and decrease reliability

Feasibility:
- Electronic mental health screening is feasible especially in the time of COVID. However, it is essential to consider patients that lack the technology or technological skills.

Conclusion(s):
- During the
### DSMIV-Insomnia Criteria

**Social support and interpersonal relationships**
- Quality of relationship with friends and family ranging from 1 (very bad) to 5 (very good)

**Social support**
- Ranging from 1 (no) to 4 (very much)

### Mental health outcomes

- **Anxiety** – GAD-7 on a 4-point Likert scale
- **Depression** – PHQ-9 on a 4-point Likert scale
- **Hostility** – BSI PTSD-IES-R (a 22-item 5-point Likert scale)

### Frequency of psychological or psychiatric counseling services use and attitudes

**COVID-19 pandemic, cancer patients are more likely to experience higher levels of mental health symptoms**
- The study revealed only a small number of patients sought psychological care
- It is vital to screen high risk groups for mental health problems so they can promptly receive adequate treatment to manage their mental health symptoms
- More collaboration between stakeholders is needed to create psycho-oncological care

### Recommendation(s):
- Study findings can be integrated into the DNP project to assess different factors contributing to
with:
- Male sex ($b = -0.058, p < 0.001$)
- Good sleep quality ($b = -0.251, p < 0.001$)
- Good relationship with friends ($b = -0.062, p < 0.001$)

Only 1.6% of patients sought psychological counseling, 48.1% did not care for online mental health services, and 11.2% perceived online mental health services to be beneficial.

Female patients had increased frequency of worrying about disease management because of COVID-19 ($t = 2.13, p < 0.05$); increased psychological pressure due to COVID-19 ($t = 6.65, p < 0.001$); lower sleep quality ($t = -$...
|   |   |   |   | 4.15, *p* < 0.001). |

Definition of abbreviations: RCT – Randomized controlled trial; IV-Independent variable; DV- Dependent variable; DT-Distress thermometer; PC-Problem checklist; NR – Not reported
<table>
<thead>
<tr>
<th>Citation</th>
<th>Study Design/ Method</th>
<th>Sample/ Setting</th>
<th>Variables Studied and Their Definitions</th>
<th>Measurement</th>
<th>Data Analysis</th>
<th>Findings</th>
<th>Appraisal: Worth to Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zebrack et al., 2015</td>
<td>Retrospective, quantitative study to assess the fidelity of distress screening protocols in 12 weeks</td>
<td>N=583 PWC extracted from EMRs Setting: Two tertiary cancer care treatment centers</td>
<td>IV: Patients with DT scores DV1: Rates of adherence DV2: Responsiveness to patients with a significant level of distress based on DT score DV3: Clinician acceptability</td>
<td>-Adherence to protocol -Responsiveness -Acceptability (Analyzed via counts, percentages, and means)</td>
<td>Overall adherence rate was 69.2% while rates ranged from 63.8% to 73.3% across clinics More female patients (64.7%) had DT screening when compared with male patients (57.2%) Documentation of psychosocial services/referral averaged 50%-63% when DT scores were high (level 8-10) Feedback regarding the distress screening protocol were mostly positive</td>
<td>Ranging from 14.7% to 36% of clinicians across clinics report the protocol slows down clinic operations 40% to 80.4% of clinicians believe screening is beneficial for patients to receive appropriate follow-up care 44% 89.5% report the protocol helps address patient issues Implementation of protocol was successful likely due to training, preparation, and coordination of providers (collaboration) Recommendatio ns to ensure vulnerable subpopulations</td>
<td>Quality of Evidence: Level II, B</td>
</tr>
<tr>
<td><strong>Strengths:</strong></td>
<td>-Multicenter study -Use of validated tool</td>
<td>Weaknesses</td>
<td>-Retrospective design relying on data from EMR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
are not excluded from being screened (e.g., non-English speakers)

Adherence and responsiveness may be enhanced from staff feedback, continued training, and adaptation to protocol

Screening alone is not beneficial without appropriate interventions to follow

| IV: Independent variable; DV: Dependent Variable; PWC: Patients with Cancer; DT: Distress thermometer; EMR: Electronic medical record |
Appendix B: Biopsychosocial Model

BIOPSYCHOLOGICAL APPROACH TO UNDERSTANDING HEALTH

BIOLOGY
- Gender
- Physical illness
- Disability
- Genetic vulnerability
- Immune function
- Neurochemistry
- Stress reactivity
- Medication effects

PSYCHOLOGY
- Learning/memory
- Attitudes/beliefs
- Personality
- Behaviours
- Emotions
- Coping skills
- Past trauma

HEALTH

SOCIAL CONTEXT
- Social supports
- Family background
- Cultural traditions
- Social/economic status
- Education

(Perspectives Clinic, n.d.)
Appendix C: Statement of Determination

General Information

<table>
<thead>
<tr>
<th>Last Name</th>
<th>Cheung</th>
<th>First Name</th>
<th>Candy</th>
</tr>
</thead>
<tbody>
<tr>
<td>CWID Number</td>
<td>11327865</td>
<td>Semester/Year</td>
<td>Spring 2021</td>
</tr>
<tr>
<td>Course Name &amp; Number</td>
<td>NURS 749B Qualifying Project</td>
<td>Advisor Name</td>
<td>Dr. Jodie Sandhu</td>
</tr>
<tr>
<td>Chairperson Name</td>
<td>Dr. Jodie Sandhu</td>
<td>Advisor Name</td>
<td>Dr. Jodie Sandhu</td>
</tr>
<tr>
<td>Second Reader Name</td>
<td>Dr. Victoria Chaudhary</td>
<td>Advisor Name</td>
<td>Dr. Jodie Sandhu</td>
</tr>
</tbody>
</table>

Project Description

1. **Title of Project:** Implementation of a Nurse Practitioner-Led Psychosocial Distress Screening Tool Among Hematology Patients During COVID-19 Pandemic

2. **Brief Description of Project:**
Hematology patients are recognized as an immunocompromised and vulnerable group facing the ongoing physical and emotional burden of cancer. The National Comprehensive Cancer Network (NCCN) developed a guideline recommending routine screening for distress among patients with cancer, given the prevalence of distress experienced by the population. Nonetheless, distress screening tools are underutilized, and screening rates are suboptimal. The emergence of the coronavirus disease 2019 (COVID-19), an infectious disease caused by a severe acute respiratory syndrome coronavirus 2 (SARS-CoV2), has profoundly shifted the way health care providers deliver care to cancer patients, as the population faces lockdown measures, social isolation, and uncertainty. The psychological impact of the COVID-19 pandemic adds an emotional burden as people are suffering more stress, anxiety, and depression worldwide. Undetected and untreated psychosocial distress can lead to undesirable health outcomes, including decreased survival rate, delay in treatment, reduced treatment adherence, and increased healthcare expenditure. Additionally, considering the population's high susceptibility, COVID-19 can produce an increased risk of psychosocial distress among hematological patients and potentially contribute to increased morbidity and mortality. The purpose of this project is to emphasize the importance of screening, monitoring, and treating psychosocial distress in hematological patients to preserve their health-related quality of life.

3. **AIM Statement:**
From September 2021 to December 2021, UCSF's hematology NPs will increase the percentage of psychosocial distress screening among adult hematology patients at the ambulatory infusion center by 25% through:
- Increasing clinician knowledge on the importance of administering screening tool
- Increasing clinician compliance of administering screening tool
- Increasing the number of referrals for psycho-oncological/psychiatric/social work services for at-risk patients through implementing a distress screening training program.
4. Brief Description of Intervention:

The project's interventions will include conducting a pre-intervention survey to assess clinicians' current practices and knowledge about distress screening, followed by educating NPs on the importance of distress screening. Education sessions will be completed during staff meetings. At-risk patients will be followed up and will be offered referrals if necessary.

4a. How will this intervention be implemented?

- Where will you implement the project?
  - UCSF outpatient hematology clinic
- Attach a letter from the agency with approval of your project.
- Who is the focus of the intervention?
  - The focus of the intervention will be hematology patients.
- How will you inform stakeholders/participants about the project and the intervention?
  - This will be done through an education session during staff meetings, and participants will be introduced to the questionnaire during their clinic visits.

5. Outcome measurements: How will you know that a change is an improvement?

- Measurement over time is essential to QI. Measures can be outcome, process, or balancing measures. Baseline or benchmark data are needed to show improvement.
  - To evaluate the tool's effectiveness, a pre-and-post-intervention survey will be distributed to clinicians to assess their knowledge and perceived efficacy of the screening tool.
- Align your measure with your problem statement and aim.
  - Independent variable: screening tool
  - Dependent variable: distress level
  - DV2: screening rates
  - DV3: screening efficacy
- Try to define your measure as a numerator/denominator.
  - The percentage of patients screened divided by the total number of patients served during the project period.
  - The percentage of patients that actually received referrals divided by the number of patients that are at-risk based on screening results
- What is the reliability and validity of the measure?
  - Provide any tools that you will use as appendices. Distress Thermometer is a validated and reliable tool recommended by the NCCN. (see Appendix C)
- Describe how you will protect participant confidentiality.
  - Patient identifiers on the questionnaire will be removed by clinicians after completion of the questionnaire and patient received appropriate care depending on if they screened negative/positive, declined referral, or accepted referral.
DNP Statement of Determination
Evidence-Based Change of Practice Project Checklist

**Project Title:** Implementation of a Nurse Practitioner-Led Psychosocial Distress Screening Tool Among Hematological Patients During COVID-19 Pandemic

<table>
<thead>
<tr>
<th>Mark an &quot;X&quot; under &quot;Yes&quot; or &quot;No&quot; for each of the following statements:</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>The aim of the project is to improve the process or delivery of care with established/accepted standards, or to implement evidence-based change. There is no intention of using the data for research purposes.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>The specific aim is to improve performance on a specific service or program and is a part of usual care. All participants will receive standard of care.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>The project is not designed to follow a research design, e.g., hypothesis testing or group comparison, randomization, control groups, prospective comparison groups, cross-sectional, case control). The project does not follow a protocol that overrides clinical decision-making.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>The project involves implementation of established and tested quality standards and/or systematic monitoring, assessment or evaluation of the organization to ensure that existing quality standards are being met. The project does not develop paradigms or untested methods or new untested standards.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>The project involves implementation of care practices and interventions that are consensus-based or evidence-based. The project does not seek to test an intervention that is beyond current science and experience.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>The project is conducted by staff where the project will take place and involves staff who are working at an agency that has an agreement with USF SONHP.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>The project has no funding from federal agencies or research-focused organizations and is not receiving funding for implementation research.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>The agency or clinical practice unit agrees that this is a project that will be implemented to improve the process or delivery of care, i.e., not a personal research project that is dependent upon the voluntary participation of colleagues, students and/or patients.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>If there is an intent to, or possibility of publishing your work, you and supervising faculty and the agency oversight committee are comfortable with the following statement in your methods section: &quot;This project was undertaken as an Evidence-based change of practice project at X hospital or agency and as such was not formally supervised by the Institutional Review Board.&quot;</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

**Answer Key:**
- If the answer to all of these items is "Yes", the project can be considered an evidence-based activity that does not meet the definition of research. IRB review is not required. Keep a copy of this checklist in your files.
- If the answer to any of these questions is "No", you must submit for IRB approval.

*Adapted with permission of Elizabeth L. Hohmann, MD, Director and Chair, Partners Human Research Committee, Partners Health System, Boston, MA.

To qualify as an Evidence-based Change in Practice Project, rather than a Research Project, the criteria outlined in federal guidelines will be used: [http://answers.hhs.gov/ohrp/categories/1569](http://answers.hhs.gov/ohrp/categories/1569)
DNP Statement of Determination
Evidence-Based Change of Practice Project Checklist Outcome

The SOD should be completed in NURS 7005 and NURS 791E/P or NURS 749/A/E

☐ This project meets the guidelines for an Evidence-based Change in Practice Project as outlined in the Project Checklist (attached). Student may proceed with implementation.

☐ This project involves research with human subjects and must be submitted for IRB approval before project activity can commence.

Comments:

Student Last Name: Cheung
Student First Name: Candy

Student Signature: __________________________ Date: March 28, 2021

Chairperson Name: Dr. Jodie Sandhu
Chairperson Signature: __________________________ Date: __________________________

Second Reader Name: Dr. Victoria Chaudhary
Second Reader Signature: __________________________ Date: __________________________

DNP SOD Review Committee Member Name: __________________________

DNP SOD Review Committee Member Signature: __________________________ Date: __________________________
Appendix D: Letter of Support

DNP Project Letter of Support from Agency

This is a letter of support for Candy Cheung to implement her DNP Comprehensive Project - Implementation of a Nurse Practitioner-Led Psychosocial Distress Screening Tool Among Hematology Patients During COVID-19 Pandemic at UCSF.

We give her permission to use the name of UCSF in her DNP Comprehensive Project Paper and in future presentations and publications.

Sincerely,
Lisa McNey, NP
UCSF Hematology/Blood and Marrow Transplant Program
Appendix E: NCCN Distress Thermometer

## NCCN Distress Thermometer and Problem List for Patients

**NCCN DISTRESS THERMOMETER**
Distress is an unpleasant experience of a mental, physical, social, or spiritual nature. It can affect the way you think, feel, or act. Distress may make it harder to cope with having cancer, its symptoms, or its treatment.

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**
- **No distress**

### Problem List
Please indicate if any of the following has been a problem for you in the past week including today. Be sure to check YES or NO for each.

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>Practical Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>❑</td>
<td>❑</td>
<td>Child care</td>
</tr>
<tr>
<td>❑</td>
<td>❑</td>
<td>Food</td>
</tr>
<tr>
<td>❑</td>
<td>❑</td>
<td>Housing</td>
</tr>
<tr>
<td>❑</td>
<td>❑</td>
<td>Insurance/financial</td>
</tr>
<tr>
<td>❑</td>
<td>❑</td>
<td>Transportation</td>
</tr>
<tr>
<td>❑</td>
<td>❑</td>
<td>Work/school</td>
</tr>
<tr>
<td>❑</td>
<td>❑</td>
<td>Treatment decisions</td>
</tr>
</tbody>
</table>

#### Family Problems
- ❑ Dealing with children
- ❑ Dealing with partner
- ❑ Ability to have children
- ❑ Family health issues

#### Emotional Problems
- ❑ Depression
- ❑ Fears
- ❑ Nervousness
- ❑ Sadness
- ❑ Worry
- ❑ Loss of interest in usual activities

#### Spiritual/religious concerns

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>Physical Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>❑</td>
<td>❑</td>
<td>Appearance</td>
</tr>
<tr>
<td>❑</td>
<td>❑</td>
<td>Bathing/dressing</td>
</tr>
<tr>
<td>❑</td>
<td>❑</td>
<td>Breathing</td>
</tr>
<tr>
<td>❑</td>
<td>❑</td>
<td>Changes in urination</td>
</tr>
<tr>
<td>❑</td>
<td>❑</td>
<td>Constipation</td>
</tr>
<tr>
<td>❑</td>
<td>❑</td>
<td>Diarrhea</td>
</tr>
<tr>
<td>❑</td>
<td>❑</td>
<td>Eating</td>
</tr>
<tr>
<td>❑</td>
<td>❑</td>
<td>Fatigue</td>
</tr>
<tr>
<td>❑</td>
<td>❑</td>
<td>Feeling swollen</td>
</tr>
<tr>
<td>❑</td>
<td>❑</td>
<td>Fevers</td>
</tr>
<tr>
<td>❑</td>
<td>❑</td>
<td>Getting around</td>
</tr>
<tr>
<td>❑</td>
<td>❑</td>
<td>Indigestion</td>
</tr>
<tr>
<td>❑</td>
<td>❑</td>
<td>Memory/concentration</td>
</tr>
<tr>
<td>❑</td>
<td>❑</td>
<td>Mouth sores</td>
</tr>
<tr>
<td>❑</td>
<td>❑</td>
<td>Nausea</td>
</tr>
<tr>
<td>❑</td>
<td>❑</td>
<td>Nose dry/congested</td>
</tr>
<tr>
<td>❑</td>
<td>❑</td>
<td>Pain</td>
</tr>
<tr>
<td>❑</td>
<td>❑</td>
<td>Sexual</td>
</tr>
<tr>
<td>❑</td>
<td>❑</td>
<td>Skin dry/itchy</td>
</tr>
<tr>
<td>❑</td>
<td>❑</td>
<td>Sleep</td>
</tr>
<tr>
<td>❑</td>
<td>❑</td>
<td>Substance use</td>
</tr>
<tr>
<td>❑</td>
<td>❑</td>
<td>Tingling in hands/feet</td>
</tr>
</tbody>
</table>

Other Problems: ____________________________

---

(NCCN Distress Thermometer for Patients, 2013)

Version 2.2020. 03/11/20. The NCCN Clinical Practice Guidelines (NCCN Guidelines®) are a statement of evidence and consensus of the authors regarding their views of currently accepted approaches to treatment. Any clinician seeking to apply or consult the NCCN Guidelines is expected to use independent medical judgment in the context of individual clinical circumstances to determine any patient’s care or treatment. The National Comprehensive Cancer Network® (NCCN®) makes no representations or warranties of any kind regarding their content, use or application and disclaims any responsibility for their application or use in any way. The NCCN Guidelines are copyrighted by National Comprehensive Cancer Network®. All rights reserved. The NCCN Guidelines and the illustrations herein may not be reproduced in any form without the express written permission of NCCN. ©2020.
Appendix F: Patient Questionnaire

You are invited to participate in a survey on a quality improvement project in implementing a distress screening tool for hematology patients. This is a project being conducted by Candy Cheung, a student at the University of San Francisco. It should take approximately 5-10 minutes to complete.

PARTICIPATION
Your participation in this survey is voluntary. You may refuse to take part in the project at any time without penalty. You are free to decline to answer any particular question you do not wish to answer for any reason.

BENEFITS
You will receive no direct benefits from participating in this quality improvement study. However, your responses may help us learn more about the usefulness of the distress screening tool.

RISKS
There is the risk that some questions may cause emotional discomfort and may be distressing to you as you think about your experiences.

CONFIDENTIALITY
Your survey answers will be transferred to Qualtrics where data will be stored in a password protected electronic format. Qualtrics does not collect identifying information such as your name, email address, or IP address. Therefore, your responses will remain anonymous. No one will be able to identify you or your answers, and no one will know whether or not you participated in the study.

CONTACT
If you have questions at any time about the study or the procedures, you may contact the DNP student, Candy Cheung via email at [ccheung3@dons.usfca.edu].

CONSENT: Please select your choice below. You may request a copy of this consent form for your records. Selecting on the “Agree” button indicates that

- You have read the above information
- You voluntarily agree to participate

☐ Agree

☐ Disagree
### NCCN Distress Thermometer and Problem List for Patients

**NCCN DISTRESS THERMOMETER**

Distress is an unpleasant experience of a mental, physical, social, or spiritual nature. It can affect the way you think, feel, or act. Distress may make it harder to cope with having cancer, its symptoms, or its treatment.

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

- 10: Extreme distress
- 0: No distress

**PROBLEM LIST**

Please indicate if any of the following has been a problem for you in the past week including today. Be sure to check YES or NO for each.

**YES** or **NO**

#### Practical Problems
- Child care
- Food
- Housing
- Insurance/Financial
- Transportation
- Work/school
- Treatment decisions

#### Family Problems
- Dealing with children
- Dealing with partner
- Ability to have children
- Family health issues

#### Emotional Problems
- Depression
- Fears
- Nervousness
- Sadness
- Worry
- Loss of interest in usual activities

#### Spiritual/religious concerns

**YES** or **NO**

#### Physical Problems
- Appearance
- Bathing/dressing
- Breathing
- Changes in urination
- Constipation
- Diarrhea
- Eating
- Fatigue
- Feeling swollen
- Fevers
- Getting around
- Indigestion
- Memory/concentration
- Mouth sores
- Nausea
- Nose dry/congested
- Pain
- Sexual
- Skin dry/itchy
- Sleep
- Substance use
- Tingling in hands/feet

**Other Problems:**

---

 Version 2.2020. 03/1/20. The NCCN Clinical Practice Guidelines (NCCN Guidelines®) are a statement of evidence and consensus of the authors regarding their views of currently accepted approaches to treatment. Any clinician seeking to apply or consult the NCCN Guidelines is expected to use independent medical judgment in the context of individual clinical circumstances to determine any patient’s care or treatment. The National Comprehensive Cancer Network® (NCCN®) makes no representations or warranties of any kind regarding their content, use or application and disclaims any responsibility for their application or use in any way. The NCCN Guidelines are copyrighted by National Comprehensive Cancer Network®. All rights reserved. The NCCN Guidelines and the illustrations herein may not be reproduced in any form without the express written permission of NCCN. ©2020.
Patient Questionnaire

1) Age: ________

2) What gender do you identify as?
   - □ Male (including transgender men)
   - □ Female (including transgender women)
   - □ Prefer to self-describe as ___________ (non-binary, gender-fluid, agender, please specify)
   - □ Prefer not to say

3) Please specify your ethnicity.
   - □ Caucasian
   - □ African American
   - □ Latino/Hispanic
   - □ Asian
   - □ Native American
   - □ Native Hawaiian or Pacific Islander
   - □ Other, please specify __________
   - □ Prefer not to say

5) Are you married/in a relationship?
   - □ Yes
   - □ No
   - □ Prefer not to say

8) What is your current employment status?
   - □ Employed Full-Time
   - □ Employed Part-Time
   - □ Seeking opportunities
   - □ Retired
   - □ Prefer not to say

9) Have you ever been diagnosed with COVID-19?
   - □ Yes
   - □ No

11) Have you ever been diagnosed with a mental health disorder?
    - □ Yes
    - □ No

12) If you responded 'yes' to the previous question, are you currently seeking treatment?
    - □ Yes
    - □ No

Comments/Feedback:

Thank you for your participation!
Patient Questionnaire

Office Use Only
- Not needed
- SW
- Psych-Onc
- Declined
- Other ________

Patient identifier

(Remove identifier after completion of screening/referral)
Appendix G: Patient Pamphlet

Other helpful organizations and list of resources can be found on the Leukemia & Lymphoma Society website at
www.lls.org
1 (800) 955-4572

Please reach out to your provider if you want to connect with a social worker or psycho-oncologist.

If you're in crisis, there are options available to help you cope. You can also call the Lifeline at any time to speak to someone and get support.

CLINICAL CARE COUNSELING
COVID-19 Crisis Support for Cancer & Transplant Patients

Free 25-minute appointments with licensed therapists and resource counselors for emotional support and logistical guidance. Schedule an appointment using the link provided:

Mental Health & Wellness
Your mental health is important to us.

We have gathered a list of resources to help you cope and manage the emotional challenges of cancer.

**Smartphone Apps**

- **Create To Heal™** - Guided meditation for stress relief
- **Cancer.Net Mobile** - Provides appointment, provider, medication, and symptom tracking
- **LivingWith** - Track mood, pain, sleep and steps and stay connected to loved ones
- **CaringBridge** - A safe, secure place for patients and caregivers to provide health updates without using public social media

**FREE APPS**

- Stop, Breathe, & Think
- Insight Timer

**SLEEP STORIES, MEDITATIONS, SOUNDS, MUSIC, MINDFULNESS & GUIDED IMAGERY**

- Breathe: Meditation & Sleep
- Sanvello: Anxiety & Depression
- Headspace
- Calm

---

**UCSF Blood Cancer Support Group**

This group is held via Zoom and currently meets every 2nd Tuesday from 3-4:30 pm and every 4th Thursday from 10:30 am-12 pm.

Call & register with Ana Zemeno (Clinical Social Worker)

(415) 353-2423

---

**RESOURCES**

UCSF Patient and Family Cancer Support Center
https://cancer.ucsf.edu/support/crc/patient-support-center

CancerSupportCommunity.org
A Cancer Support helpline is available to offer resources and emotional support from licensed mental health professionals

CancerCare.org
Free, professional support services to individuals, families, caregivers

GetPalliativeCare.org
Focused on providing relief from the symptoms and stress of a serious illness for patients and caregivers

BMTHelpLine.com
An organization dedicated to help transplant patients, survivors, and loved ones with emotional support
1 (888) 597-7674

BeTheMatch.org
Offers a Patient Support Center with telephone counseling, support groups, and caregiver support
1 (888) 999-6745

**SERVICES FOR ADOLESCENT AND YOUNG ADULTS WITH CANCER**

DearJackFoundation.org
StupidCancer.org

GET MATCHED WITH A VOLUNTEER WHO FACED SIMILAR EXPERIENCES

BoneMarrow.org
CancerHopeNetwork.org
Implementation of a Psychosocial Distress Screening Tool Among Hematology Patients During the COVID-19 Pandemic

Candy Cheung
August 19th, 2021

Introduction

Name: Candy Cheung
School: University of San Francisco
Program: Doctor of Nursing Practice – FNP (4th year)
Project Chair: Dr. Jodie Sandhu, DNP – FNP
Project Co-Chair: Lisa McNey, MSN – NP
Work: UCSF inpatient 11/12L Heme/Onz/BMT RN

Background

Hematology patients are an immunocompromised group facing ongoing physical and emotional burden of cancer.

The NCQA developed a guideline recommending routine screening for distress among patients with cancer (Andersen et al., 2014).

Distress screening tools are still utilized, and screening rates are suboptimal.

The American College of Surgeons Commission on Cancer (ACOSOC) accreditation standards (Standard 5.2)

The psychological impact of the COVID-19 pandemic is coming to light.

People are suffering from more stress, anxiety, and depression

Survey

Purpose

Considering the population’s high susceptibility, COVID-19 can produce an additional risk of psychosocial distress among hematology patients

• Increased morbidity and mortality

Undetected and untreated psychosocial distress can lead to undesirable outcomes (Y. Wang et al., 2020)

• Decreased survival rate
• Delay in treatment
• Decreased treatment adherence
• Increased healthcare expenditure

• Essential to screen, monitor, and treat psychosocial distress in hematology patients in the outpatient hematology clinic to preserve their health-related quality of life

Rationale

Biopsychosocial Model

• Developed in 1977 by psychiatrist Dr. George Engel
• More holistic approach compared to traditional biomedical approach
• 3 components: Biology, psychology and social
Timeline

Project Kickoff Date: September 1st, 2021
Project End Date: December 1st, 2021
Duration: 3 months

Key Stakeholders

- Administrators (chief executives)
- Clinical staff (nurse practitioners, registered nurses, oncologists)
- Social workers
- Quality department
- Information technology
- Patients and caregivers

Interventions

- Pre- and post intervention survey
  - Via Qualtrics (QR code or email)
  - Paper version will also be available
  - Assess current knowledge and practices
- Screening tool will be printed and distributed to patients during their clinic visits by NP student
- NP student will inform clinicians of at-risk patients
  - Follow-up and referrals will be completed if necessary

Patient Questionnaire

1. Distributed as a physical print-out to each patient when they check in for their in-person clinic visit (administered once)
   - While the patients are waiting for their lab results, they have time to complete the questionnaire
   - Questionnaire includes patient demographics
2. After the screening is completed, the DNP student will deliver the results to the assigned clinician for review and interpretation.

Patient COVID Questionnaire

Based on the DT results, the clinician will check off the appropriate boxes on the top left corner indicating the interventions that were made for the patient during that time.

The DNP student will collect all screening forms, remove the patient identifiers to ensure confidentiality.
Conclusion

• The COVID-19 pandemic poses a threat to global health, and hematology patients are among those that face greater risk due to their immunocompromised state and high prevalence of psychological distress (Y. Wang et al., 2020).

• Screen and monitor hematology patients for psychosocial distress to ensure that they are provided with appropriate psycho-oncological care to address their needs and preserve their mental health.

• Patients are less likely to express their psychosocial needs openly if clinicians do not address it in the first place (Buxton et al., 2014).

• Evidence from the literature supports incorporating a validated psychosocial distress screening tool to increase screening rates and remove barriers to delivery of psycho-oncological care.

References


Questions?
Appendix I: NP Pre-Intervention Survey

You are invited to participate in an online survey on a quality improvement project in implementing a distress screening tool for hematology patients. This is a project being conducted by Candy Cheung, a student at the University of San Francisco. It should take approximately 5 minutes to complete.

PARTICIPATION
Your participation in this survey is voluntary. You may refuse to take part in the study or exit the survey at any time without penalty. You are free to decline to answer any particular question you do not wish to answer for any reason.

BENEFITS
You will receive no direct benefits from participating in this quality improvement study. However, your responses may help us learn more about the usefulness of the distress screening tool.

RISKS
There are no foreseeable risks involved in participating in this project.

CONFIDENTIALITY
Your survey answers will be transferred to Qualtrics where data will be stored in a password-protected electronic format. Qualtrics does not collect identifying information such as your name, email address, or IP address. Therefore, your responses will remain anonymous. No one will be able to identify you or your answers, and no one will know whether or not you participated in the study.

CONTACT
If you have questions at any time about the study or the procedures, you may contact the DNP student, Candy Cheung via email at [ccheung3@dons.usfca.edu].

ELECTRONIC CONSENT: Please select your choice below. You may print a copy of this consent form for your records. Clicking on the “Agree” button indicates that
- You have read the above information
- You voluntarily agree to participate

☐ Agree
☐ Disagree
1) Are you aware of the National Comprehensive Cancer Network’s recommendations to screen patients with care for distress?

☐ Yes ☐ No

2) How often do you screen patients for psychosocial distress?
3) Are you aware of the Commission on Cancer of the American College of Surgeons accreditation standards requiring practices to screen cancer patients for psychosocial distress?

- [ ] Yes
- [ ] No

4) I think it is important to screen patients for distress.

- [ ] Strongly agree
- [ ] Somewhat agree
- [ ] Neither agree or disagree
- [ ] Somewhat disagree
- [ ] Strongly disagree

5) The COVID-19 pandemic has had a significant negative impact on hematology patients.

- [ ] Strongly agree
- [ ] Somewhat agree
- [ ] Neither agree or disagree
- [ ] Somewhat disagree
- [ ] Strongly disagree

6) I am aware there is a distress screening tool in EPIC.

- [ ] Strongly agree
- [ ] Somewhat agree
- [ ] Neither agree or disagree
- [ ] Somewhat disagree
- [ ] Strongly disagree

7) I think it is important to have a distress screening tool accessible for our patients.

- [ ] Strongly agree
- [ ] Somewhat agree
- [ ] Neither agree or disagree
- [ ] Somewhat disagree
- [ ] Strongly disagree

8) Are you aware of the psycho-oncological care and social work services available for patients?

- [ ] Yes
- [ ] No

9) How often do you make psycho-oncological referrals?

- [ ] Always
- [ ] Most of the time
- [ ] About half the time
- [ ] Sometimes
- [ ] Never
10) How often do you reach out to social work services for assistance?

☐ Always
☐ Most of the time
☐ About half the time
☐ Sometimes
☐ Never

We thank you for your time spent on this survey.
Appendix J: NP Post-Intervention Survey

You are invited to participate in an online survey on a quality improvement project in implementing a distress screening tool for hematology patients. This is a project being conducted by Candy Cheung, a student at the University of San Francisco. It should take approximately 5 minutes to complete.

PARTICIPATION
Your participation in this survey is voluntary. You may refuse to take part in the study or exit the survey at any time without penalty. You are free to decline to answer any particular question you do not wish to answer for any reason.

BENEFITS
You will receive no direct benefits from participating in this quality improvement study. However, your responses may help us learn more about the usefulness of the distress screening tool.

RISKS
There are no foreseeable risks involved in participating in this project.

CONFIDENTIALITY
Your survey answers will be transferred to Qualtrics where data will be stored in a password-protected electronic format. Qualtrics does not collect identifying information such as your name, email address, or IP address. Therefore, your responses will remain anonymous. No one will be able to identify you or your answers, and no one will know whether or not you participated in the study.

CONTACT
If you have questions at any time about the study or the procedures, you may contact the DNP student, Candy Cheung via email at [ccheung3@dons.usfca.edu].

ELECTRONIC CONSENT: Please select your choice below. You may print a copy of this consent form for your records. Clicking on the “Agree” button indicates that
· You have read the above information
· You voluntarily agree to participate

☐ Agree
☐ Disagree
1) How often did you screen patients for psychosocial distress in the past 6 months?

☐ Always
☐ Most of the time
☐ About half the time
☐ Sometimes
☐ Never

2) I think it is important to screen patients for distress.

☐ Strongly agree
☐ Somewhat agree
☐ Neither agree or disagree
☐ Somewhat disagree
☐ Strongly disagree

3) The COVID-19 pandemic has had a significant negative impact on hematology patients.

☐ Strongly agree
☐ Somewhat agree
☐ Neither agree or disagree
☐ Somewhat disagree
☐ Strongly disagree

4) I think it is important to have a distress screening tool accessible for our patients.

☐ Strongly agree
☐ Somewhat agree
☐ Neither agree or disagree
☐ Somewhat disagree
☐ Strongly disagree

5) Are you aware of the psycho-oncological care and social work services available for patients?

☐ Yes
☐ No

6) I thought the Distress Thermometer was an effective tool.

☐ Strongly agree
☐ Somewhat agree
☐ Neither agree or disagree
☐ Somewhat disagree
☐ Strongly disagree

7) I was able to identify more patients with distress using the Distress Thermometer compared to pre-intervention.

☐ Strongly agree
☐ Somewhat agree
☐ Neither agree or disagree
☐ Somewhat disagree
☐ Strongly disagree

8) I was able to make more referrals to psycho-oncological services because of the Distress Thermometer.
9) How often did you make psycho-oncological referrals during the project for at-risk patients?

☐ Always
☐ Most of the time
☐ About half the time
☐ Sometimes
☐ Never

10) I was able to reach out to social work more because of the Distress Thermometer.

☐ Strongly agree
☐ Somewhat agree
☐ Neither agree or disagree
☐ Somewhat disagree
☐ Strongly disagree

11) I will continue to use the Distress Thermometer on my patients.

☐ Strongly agree
☐ Somewhat agree
☐ Neither agree or disagree
☐ Somewhat disagree
☐ Strongly disagree

12) The Distress Thermometer does not impede my workflow.

☐ Strongly agree
☐ Somewhat agree
☐ Neither agree or disagree
☐ Somewhat disagree
☐ Strongly disagree

13) How easy was it to use the Distress Thermometer?

☐ Extremely easy
☐ Somewhat easy
☐ Neither easy or difficulty
☐ Somewhat difficult
☐ Extremely difficult

14) Comments/Feedback:
Appendix K: Gap Analysis

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>There are no clinicians promoting best practice with distress screening.</td>
</tr>
<tr>
<td>2.</td>
<td>There are no distress screening education or training.</td>
</tr>
<tr>
<td>3.</td>
<td>No standardized distress screening tool in the outpatient hematology clinic.</td>
</tr>
<tr>
<td>4.</td>
<td>Lack of knowledge or awareness by clinicians on available screening tools.</td>
</tr>
<tr>
<td>5.</td>
<td>No data on adherence or compliance with distress screening in the outpatient hematology clinic.</td>
</tr>
<tr>
<td>6.</td>
<td>Competing demands and workload may impact clinicians’ screening compliance or adherence.</td>
</tr>
</tbody>
</table>
# Appendix L: Gantt Chart

## Candy Cheung DNP Journey

**START DATE**
January 31, 2021

<table>
<thead>
<tr>
<th>Phases &amp; Tasks</th>
<th>START DATE</th>
<th>END DATE</th>
<th># of Days</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phase 1: Initiation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finalize project site</td>
<td>01/31/21</td>
<td>02/04/21</td>
<td>4</td>
</tr>
<tr>
<td>Need assessment/Gap Analysis</td>
<td>02/18/21</td>
<td>02/28/21</td>
<td>10</td>
</tr>
<tr>
<td>SWOT Analysis</td>
<td>02/21/21</td>
<td>03/02/21</td>
<td>11</td>
</tr>
<tr>
<td>Develop instrument/tools/algorithms/surveys</td>
<td>03/02/21</td>
<td>03/10/21</td>
<td>7</td>
</tr>
<tr>
<td>Get approval</td>
<td>03/11/21</td>
<td>03/18/21</td>
<td>7</td>
</tr>
<tr>
<td><strong>Phase 2: Planning &amp; Development</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Determine project team</td>
<td>03/19/21</td>
<td>03/31/21</td>
<td>12</td>
</tr>
<tr>
<td>Develop prospect/business plan</td>
<td>04/01/21</td>
<td>04/15/21</td>
<td>14</td>
</tr>
<tr>
<td>Develop instrument/tools/algorithms/surveys</td>
<td>04/16/21</td>
<td>04/26/21</td>
<td>10</td>
</tr>
<tr>
<td>Finalizing materials/resources for implementation</td>
<td>04/27/21</td>
<td>05/10/21</td>
<td>13</td>
</tr>
<tr>
<td>Project plan approval</td>
<td>05/11/21</td>
<td>05/18/21</td>
<td>7</td>
</tr>
<tr>
<td><strong>Phase 3: Implementation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project kickoff meeting</td>
<td>06/01/21</td>
<td>06/08/21</td>
<td>7</td>
</tr>
<tr>
<td>Training/education for staff/patients</td>
<td>06/09/21</td>
<td>06/16/21</td>
<td>7</td>
</tr>
<tr>
<td>Developing policy/protocol</td>
<td>06/17/21</td>
<td>06/21/21</td>
<td>4</td>
</tr>
<tr>
<td>Go live</td>
<td>06/25/21</td>
<td>09/25/21</td>
<td>90</td>
</tr>
<tr>
<td>Survey Collection</td>
<td>06/25/21</td>
<td>09/25/21</td>
<td>90</td>
</tr>
<tr>
<td><strong>Phase 4: Evaluation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gather data</td>
<td>09/26/21</td>
<td>09/30/21</td>
<td>4</td>
</tr>
<tr>
<td>Analyze data</td>
<td>10/01/21</td>
<td>10/31/21</td>
<td>30</td>
</tr>
<tr>
<td>Write &amp; submit manuscript</td>
<td>11/01/21</td>
<td>12/15/21</td>
<td>44</td>
</tr>
<tr>
<td>Build conclusion/Present data to site</td>
<td>12/16/21</td>
<td>12/30/21</td>
<td>14</td>
</tr>
<tr>
<td>Write DNP project paper</td>
<td>01/01/22</td>
<td>03/15/22</td>
<td>74</td>
</tr>
<tr>
<td>Presentation at USF</td>
<td>05/01/22</td>
<td>05/15/22</td>
<td>14</td>
</tr>
</tbody>
</table>
Appendix M: SWOT Analysis

### Internal Factors

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Trained and experienced hematology staff</td>
<td>• Lack of knowledge regarding current distress screening recommendations</td>
</tr>
<tr>
<td>• Academic medical center/Magnet Hospital</td>
<td>• No policy or protocol concerning distress screening</td>
</tr>
<tr>
<td>• Available clinical resources and</td>
<td>• Increased clinician workload</td>
</tr>
<tr>
<td>interdisciplinary team (e.g., social</td>
<td>• Time constraints</td>
</tr>
<tr>
<td>worker, psycho-oncology services)</td>
<td>• Patient self-reporting on screening tool may impact reliability</td>
</tr>
<tr>
<td>• Supportive staff and leadership</td>
<td>• Paper screening tool may not be as practical as documentation in the EMR</td>
</tr>
<tr>
<td>• Collaborative care</td>
<td>• Screening tool only available in the English language</td>
</tr>
</tbody>
</table>

### External Factors

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>• The NCCN recommends distress screening among oncology</td>
<td>• Potential changes in local, national, and global guidelines in distress</td>
</tr>
<tr>
<td>patients in all healthcare settings</td>
<td>screening</td>
</tr>
<tr>
<td>• Improved patient care</td>
<td>• Potential cost</td>
</tr>
<tr>
<td>• Increased patient satisfaction</td>
<td>• COVID-19 pandemic changes</td>
</tr>
<tr>
<td>• Improve patient outcomes</td>
<td></td>
</tr>
<tr>
<td>• Standardize training and nursing care in distress</td>
<td></td>
</tr>
<tr>
<td>screening</td>
<td></td>
</tr>
<tr>
<td>• Improve referral system</td>
<td></td>
</tr>
<tr>
<td>• Improve staff-patient communication</td>
<td></td>
</tr>
</tbody>
</table>
### Appendix N: Work Breakdown Structure (Table Format)

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Psychosocial Distress Screening Implementation in the Hematology Clinic</td>
<td>1.1 Initiation</td>
<td>1.1.1 Meet with organization to discuss proposed project, conduct needs assessment and finalize project site</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.1.2 Develop Project Charter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.1.3 Deliver Project Charter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.1.4 Organization Reviews Project Charter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.1.5 Project Charter Approved</td>
</tr>
<tr>
<td></td>
<td>1.2 Planning</td>
<td>1.2.1 Determine Project Team</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.2.2 Project Team Kickoff Meeting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.2.3 Develop Project Plan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.2.4 Submit Project Plan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.2.5 Project Plan Approval</td>
</tr>
<tr>
<td></td>
<td>1.3 Execution</td>
<td>1.3.1 Project Kickoff Meeting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.3.2 Review and Validate Instrument/Tools</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.3.3 Develop Psychosocial Distress Screening Interventions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.3.4 Determine Sample Size</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.3.5 Testing Phase</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.3.6 Finalize Project Interventions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.3.7 Training/Education for Staff</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.3.8 Go Live</td>
</tr>
<tr>
<td></td>
<td>1.4 Control</td>
<td>1.4.1 Project Management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.4.2 Project Status Meetings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.4.3 Risk Management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.4.4 Update Project Management Plan</td>
</tr>
<tr>
<td></td>
<td>1.5 Closeout</td>
<td>1.5.1 Audit Procurement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.5.2 Document Lessons Learned</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.5.3 Update Files/Records</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.5.4 Gain Formal Acceptance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.5.5 Archive Files/Documents</td>
</tr>
</tbody>
</table>
Appendix O: Work Breakdown Structure (Hierarchy Format)

1. Psychosocial Distress Screening Implementation in the Hematology Clinic

1.1 Initiation
- 1.1.1 Meet with organization to discuss proposed project, conduct needs assessment, and finalize project site
- 1.1.2 Develop Project Charter
- 1.1.3 Deliver Project Charter
- 1.1.4 Organization Reviews Project Charter
- 1.1.5 Project Charter Approved

1.2 Planning
- 1.2.1 Determine Project Team
- 1.2.2 Project Team Kickoff Meeting
- 1.2.3 Develop Project Plan
- 1.2.4 Submit Project Plan
- 1.2.5 Project Plan Approval

1.3 Execution
- 1.3.1 Project Kickoff Meeting
- 1.3.2 Review and Validate Instrument/Tools
- 1.3.3 Develop Psychosocial Distress Screening Interventions
- 1.3.4 Determine Sample Size
- 1.3.5 Testing Phase
- 1.3.6 Finalize Project Interventions
- 1.3.7 Training/Education for Staff
- 1.3.8 Go Live

1.4 Control
- 1.4.1 Project Management
- 1.4.2 Project Status Meetings
- 1.4.3 Risk Management
- 1.4.4 Update Project Management Plan

1.5 Closeout
- 1.5.1 Audit Procurement
- 1.5.2 Document Lessons Learned
- 1.5.3 Update Files/Records
- 1.5.4 Gain Formal Acceptance
- 1.5.5 Archive Files/Documents
## Appendix P: Proposed Budget

<table>
<thead>
<tr>
<th>Type of Expense</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff pre-and-post intervention survey (Online)</td>
<td>$0</td>
</tr>
<tr>
<td>Patient screening and COVID questionnaire (printing)</td>
<td>$130</td>
</tr>
<tr>
<td>Patient brochure</td>
<td>$250</td>
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<tr>
<td>Estimated Total</td>
<td>$380</td>
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</table>
## Appendix Q: Communication Matrix

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Medium</th>
<th>Frequency</th>
<th>Audience</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Kickoff meeting</strong></td>
<td>-Introduce project</td>
<td>Virtual staff meeting</td>
<td>-Once at the start of project</td>
</tr>
<tr>
<td></td>
<td>-Confirm objectives, goals, and deliverables as needed</td>
<td>(Zoom link for those unable to attend in-person)</td>
<td>-Project team</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-Project sponsors</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-Stakeholders</td>
</tr>
<tr>
<td><strong>Project Team Meetings</strong></td>
<td>-Review status of project</td>
<td>Zoom meeting/phone call</td>
<td>Monthly</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Project team</td>
</tr>
<tr>
<td><strong>Check-ins/Meeting recap</strong></td>
<td>Update stakeholders on the project status</td>
<td>Email</td>
<td>Monthly</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-Project sponsor</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-Stakeholders</td>
</tr>
<tr>
<td><strong>Project status meetings</strong></td>
<td>Update leadership on project status and give opportunity to ask questions</td>
<td>Zoom meeting</td>
<td>Monthly</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-Project manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-Project sponsor</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-Stakeholders</td>
</tr>
<tr>
<td><strong>Project Review</strong></td>
<td>Give stakeholders opportunity to provide feedback on project</td>
<td>Email with survey</td>
<td>Once after project is complete</td>
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<tr>
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<td></td>
<td></td>
<td>-Project manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-Project sponsor</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-Stakeholders</td>
</tr>
</tbody>
</table>
Appendix R: Pre-Intervention NP Results

Are you aware of the National Comprehensive Cancer Network’s recommendations to screen patients with care for distress?

- Yes: 67%
- No: 33%

How often do you screen patients for psychosocial distress?

- Always: 0%
- Most of the time: 5%
- About half the time: 10%
- Sometimes: 15%
- Never: 20%

Are you aware of the Commission on Cancer of the American College of Surgeons accreditation standards requiring practices to screen cancer patients for psychosocial distress?

- Yes: 0%
- No: 100%

I think it is important to screen patients for distress.

- Strongly agree: 90%
- Agree: 10%
- Neither agree nor disagree: 0%

The COVID-19 pandemic has had a significant negative impact on hematology patients.

- Strongly agree: 0%
- Agree: 100%
- Somewhat agree: 0%
- Neither agree nor disagree: 0%
- Somewhat disagree: 0%
- Strongly disagree: 0%

I am aware there is a distress screening tool in EPIC.

- Strongly agree: 35%
- Somewhat agree: 30%
- Neither agree nor disagree: 25%
- Somewhat disagree: 15%
- Strongly disagree: 5%
I think it is important to have a distress screening tool accessible for our patients.

Are you aware of the psycho-oncological care and social work services available for patients?

How often do you make psycho-oncological referrals?

How often do you reach out to social work services for assistance?
Appendix S: Post-Intervention NP Results

**How often did you screen patients for psychosocial distress in the past 6 months?**

- Always: 0.00%
- Most of the time: 20.00%
- About half the time: 40.00%
- Sometimes: 60.00%
- Never: 80.00%

**I thought the DT was an effective tool.**

- Strongly agree: 0.00%
- Somewhat agree: 20.00%
- Neither agree nor disagree: 40.00%
- Somewhat disagree: 60.00%
- Strongly disagree: 80.00%

**I was able to identify more patients with distress using the DT.**

- Strongly agree: 0.00%
- Somewhat agree: 20.00%
- Neither agree nor disagree: 40.00%
- Somewhat disagree: 60.00%
- Strongly disagree: 80.00%

**I was able to make more referrals to psycho-oncological services because of the Distress Thermometer.**

- Strongly agree: 0.00%
- Somewhat agree: 20.00%
- Neither agree nor disagree: 40.00%
- Somewhat disagree: 60.00%
- Strongly disagree: 80.00%

**How often did you make psycho-oncological referrals during the project for at-risk patients?**

- Always: 0.00%
- Most of the time: 20.00%
- About half the time: 40.00%
- Sometimes: 60.00%
- Never: 80.00%

**I was able to reach out to social work more because of the Distress Thermometer.**

- Strongly agree: 0.00%
- Somewhat agree: 20.00%
- Neither agree nor disagree: 40.00%
- Somewhat disagree: 60.00%
- Strongly disagree: 80.00%
I will continue to use the Distress Thermometer on my patients.

The Distress Thermometer does not impede my workflow.

How easy was it to use the Distress Thermometer?
Appendix T: Patient Results

### Practical Problems

<table>
<thead>
<tr>
<th>Problem</th>
<th>% of patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment decisions</td>
<td>17.9%</td>
</tr>
<tr>
<td>Insurance/financial</td>
<td>16.1%</td>
</tr>
<tr>
<td>Housing</td>
<td>8.9%</td>
</tr>
<tr>
<td>Work/school</td>
<td>7.1%</td>
</tr>
<tr>
<td>Transportation</td>
<td>5.4%</td>
</tr>
<tr>
<td>Child care</td>
<td>1.8%</td>
</tr>
</tbody>
</table>

### Family Problems

<table>
<thead>
<tr>
<th>Problem</th>
<th>% of patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dealing with children</td>
<td>8.9%</td>
</tr>
<tr>
<td>Family health issues</td>
<td>8.9%</td>
</tr>
<tr>
<td>Dealing with partner</td>
<td>5.4%</td>
</tr>
<tr>
<td>Ability to have children</td>
<td>1.8%</td>
</tr>
<tr>
<td>Emotional Problems</td>
<td>Percentage of patients</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Worry</td>
<td>41.1%</td>
</tr>
<tr>
<td>Sadness</td>
<td>26.8%</td>
</tr>
<tr>
<td>Fears</td>
<td>23.2%</td>
</tr>
<tr>
<td>Nervousness</td>
<td>21.4%</td>
</tr>
<tr>
<td>Depression</td>
<td>14.3%</td>
</tr>
<tr>
<td>Loss of interest in usual activities</td>
<td>10.7%</td>
</tr>
<tr>
<td>Physical Problems</td>
<td></td>
</tr>
<tr>
<td>Percentage of patients</td>
<td></td>
</tr>
<tr>
<td>Fatigue</td>
<td>51.8%</td>
</tr>
<tr>
<td>Sleep</td>
<td>42.9%</td>
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<tr>
<td>Tingling in hands/feet</td>
<td>33.9%</td>
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<tr>
<td>Pain</td>
<td>28.6%</td>
</tr>
<tr>
<td>Appearance</td>
<td>19.6%</td>
</tr>
<tr>
<td>Skin dry/itchy</td>
<td>19.6%</td>
</tr>
<tr>
<td>Constipation</td>
<td>14.3%</td>
</tr>
<tr>
<td>Eating</td>
<td>12.5%</td>
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<tr>
<td>Getting around</td>
<td>12.5%</td>
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<tr>
<td>Breathing</td>
<td>10.7%</td>
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<tr>
<td>Memory/concentration</td>
<td>10.7%</td>
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<tr>
<td>Nausea</td>
<td>10.7%</td>
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<tr>
<td>Nose dry/congested</td>
<td>10.7%</td>
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<tr>
<td>Diarrhea</td>
<td>8.9%</td>
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<tr>
<td>Indigestion</td>
<td>8.9%</td>
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<tr>
<td>Sexual</td>
<td>8.9%</td>
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<tr>
<td>Changes in urination</td>
<td>7.1%</td>
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<tr>
<td>Bathing/Dressing</td>
<td>3.6%</td>
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<tr>
<td>Feeling swollen</td>
<td>3.6%</td>
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<tr>
<td>Fevers</td>
<td>3.6%</td>
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<tr>
<td>Mouth sores</td>
<td>1.8%</td>
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<tr>
<td>Substance abuse</td>
<td>1.8%</td>
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