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The Impact of the PHQ-8 on Referrals to Psychotherapy Services for Oncology

Patients

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Abstract

Problem: Nearly seven million individuals will be struggling with both cancer and depression by 2040. Patients with cancer face a multitude of challenges. These challenges can impact a patient's mental health and ability to cope with a cancer diagnosis. Currently, there is a large treatment gap among patients who are coping with both cancer and depression. Healthcare providers are neglecting to use evidence-based screening tools to assess patients for depression upon admission to inpatient treatment.

Methods: This quality improvement project took place at a large metropolitan comprehensive cancer center in the Midwest. A descriptive observational design was utilized. Prescreen-post screen data was compared to determine if there was a relationship between evidence-based PHQ-8 screenings and referrals to counseling. Convenience sampling was utilized for patients who were admitted to a medical oncology unit over two months.

Results: Overall, this quality improvement initiative did increase the number of referrals to counseling services (4.8% pre-screen vs. 5.2% post-screen), however the impact was not statistically significant (p = 0.43; CI = 95%). However, there may be positive qualitative outcomes.

Implications for practice: Recommendations for sustaining change include involving advanced practice providers in obtaining screenings on patients admitted to the medical oncology unit. Doctorally prepared nurses can also work with information technologists to generate a best practice advisory based on score. Areas for future studies include screening nurses, assessing provider attitude toward mental health screening for oncology patients, and evaluating patient's pre-counseling and post-counseling PHQ-8 scores.

The Impact of the PHQ-8 on Referrals to Psychotherapy Services for Oncology

Patients

A cancer diagnosis at any stage of life brings a wide spectrum of intense physical, psychosocial, spiritual, and emotional changes. Traditionally, health care providers in inpatient settings are educated to develop a care plan for treating the physical symptoms. Consequently, many providers are missing a critical part of a patient's wellbeing - their mental health. Common psychological problems for cancer patients include depression, anxiety, traumatic-stress, cognitive issues, and somatic-symptom disorders, with anxiety and depression being most prevalent (Caruso & Breitbart, 2020). The American Cancer Society (2020) reports that at least one in four individuals with cancer face depression. In 2018, 17 million individuals received a new cancer diagnosis, with the number of new cancer diagnoses expected to increase to 27.5 million by 2040 (American Cancer Society, 2020). This means nearly seven million individuals will be struggling with both cancer and depression by 2040.

A chronic illness with acute complications, such as cancer, tests one's mental health and adds to the psychological burden for patients and their families. Wen, Xiao, and Yang (2019) found that depression is associated with many factors such as nutritional status, loss of appetite, sleep disturbances, fatigue, and anxiety. Further complicating matters, these are also common presenting symptoms in cancer patients. In addition, Smith (2015) found that depression led to a decline in life quality and increased the rate of mortality up to 39%.

The American Society of Clinical Oncology (ASCO) recommends screening patients for depression at the first visit, during regularly planned periods, and when there

are clinical signs that indicate depression (Andersen et al., 2014). Screenings are also recommended with treatment changes, disease progression, and with changes in goals of care (Andersen et al., 2014). Traditionally, inpatient medical oncology patients are not screened for depression despite recommendations for mental health assessment from key stakeholders. However, in a recent study, Naser et al., (2021) reported depressive symptoms among cancer inpatients were more prevalent than in outpatients (37.1% vs 14.5%). Furthermore, due to the COVID-19 pandemic, cancer patients have been isolated for protection due to immunosuppression, which has further exacerbated the issue.

Professionals caring for patients with cancer in the inpatient setting include a large multidisciplinary team of physicians, advanced care providers, nurses, pharmacists, case managers, social workers, therapists, and chaplains. Of these professionals, bedside nurses have the most interaction with patients and families, thus creating an opportunity for nurses to address depression among cancer patients and have a profound impact on their care.

On an inpatient medical oncology floor located within a large comprehensive cancer center in the Midwest, there were no evidence-based screenings for depression being conducted. The purpose of this project was to implement the Patient Health Questionnaire-8 (PHQ-8) screening tool and refer appropriate patients to counseling on a medical oncology unit. This quality improvement project utilized the Plan, Do, Study, Act (PDSA) evidence-based framework. A small-scale change was implemented, followed by a continuous evaluation of the process for screening patients and appropriately referring them to psychotherapy services (White, Dudley-Brown, & Terhaar, 2021). The aim of this project was to increase the number of referrals to

counseling services by 10% over two months. The primary measure of interest was the number of referrals. The secondary measures of interest included PHQ-8 scores, cancer diagnosis, and demographics such as patient age and gender. The study question being addressed was the following: In cancer patients aged 18 years and older admitted to a medical oncology unit, does implementing the PHQ-8 screening tool impact the number of referrals to psychotherapy services compared to the current practice of not using the PHQ-8 assessment?

Review of Literature

The search engines used for this literature review included PubMed, CINAHL, Medline, and the Summons database. Key search terms included *depression, oncology, medical oncology, PHQ and oncology, cancer patients, patients with cancer, oncology patients, mental health,* with use of Boolean operators OR and AND. Initially, 903,682 publications were generated for the literature search using the key search terms. Initial criteria for this review included studies published in 2016 or after, adult patients aged 18 years or older, and published in English. Additionally, literature needed to be a peer reviewed source or journal article. However, research from 2016 or newer was sparse, so inclusion criteria had to be altered to include literature from the last 10 years (2011 or newer). Exclusion criteria included studies older than 10 years, studies not in the English language, and studies focused on pediatrics. After inclusion and exclusion criteria were applied, 556 publications were generated. Visual inspection of abstracts and the conclusion sections were reviewed for appropriate data, and 13 publications were selected for this literature review.

The development of depression is largely multifactorial. Although any patient can become symptomatic at any time, a patient's type of cancer and treatment plan may also impact the likelihood of becoming depressed. Lung, breast, prostate, and colorectal cancer are the most prevalent types of cancer (International Agency for Research on Cancer, 2021). Patients with lung malignancies are more susceptible to the development of depression than other cancers, with a prevalence rate of 12.4% (Hung et al., 2017; Nasar et al., 2021). Emergency room usage and hospital admissions were higher in patients with lung malignancies and depression than those with lung malignancies without depression (Hung et al., 2017). Another factor influencing depression is treatment with chemotherapy. Treatment with chemotherapy can induce natural pathways that trigger depressive symptoms (Nasar et al., 2021). Wen, Xiao, and Yang (2018) further evaluated factors that influence depression in patients receiving chemotherapy treatments. Factors identified to impact depression in cancer patients included social support from friends and family, anxiety, perceived stress, and independence (Wen, Xiao, & Yang, 2018). While patients screening positive for depression should always be offered a referral; it is important to understand, patients at higher risk for depression may be those with advanced disease, lung cancer, or undergoing chemotherapy.

There are numerous screenings to assess for depression among cancer patients. Common assessments include the Hospital Anxiety and Depression Scale (HADS), the Distress Thermometer, and the PHQ. There are several variations of the PHQ regarding the number of questions asked, including the PHQ-2, PHQ-8, and PHQ-9. The PHQ-8 was selected for this quality improvement project. The PHQ-8 assessment is a brief and well-researched screening tool that is used across multiple settings and languages to

assess for depression. This Likert-scale tool is scored based on the total number of points generated from eight questions in the screening. The PHQ-8 is supported by numerous studies and stakeholders within mental health. Recent research shows both the PHQ-8 and PHQ-9 helps healthcare providers obtain an objective measure of patients who may benefit from a referral to psychotherapy and has been deemed a dependable and effective tool for use in oncology patients (Andersen et. al, 2014, Defega et al., 2020, PDQ Supportive and Palliative Care Editorial Board, 2021). A cutoff score of four or greater was found to be acceptable in detecting depression in cancer patients with a sensitivity of 88% and specificity of 79.1% (Degefa et al., 2020). Furthermore, Hinz et al., (2016) found the PHQ-9 to be a useful and economical tool in screening for depression due to the two-dimensional nature of the screening questions. The questions for this screening tool assess aspects of affective-cognitive mental health (such as feeling depressed, self-blame, and suicidal thoughts), and physical components (including trouble sleeping, fatigue, and decreased or low appetite). Both qualities make it appropriate when assessing oncology patients. In the inpatient setting, the PHQ tool can quickly but accurately screen patients who may benefit from depression interventions, such as psychotherapy.

Across comprehensive cancer centers, treatment for depression is lacking and needs improvement to provide holistic care for cancer patients. There is a large gap in treatment for cancer patients with depression. Nakash et al. (2014) found 56% of cancer patients were not being treated for depression and dysthymia. Additionally, only 12% of individuals with cancer and depression were treated with antidepressants and only 5% utilized a counselor to treat their depression (Nakash et al., 2014). Kim et al., (2018) further evaluated the treatment gap for patients with depression by collecting data on the

stigma towards mental health on a hematology/oncology floor. The nurses on the floor used the PHQ-9 to evaluate patients at risk for depression. Nurses notified the physician of patients who scored a five or greater on the screening tool (a positive screen indicating depression) and recommended referral to psycho-oncology. Kim et al., (2018) found 40% of patients with possible depression were not referred to psychotherapy services. This could be due to provider bias towards mental health services. Additionally, female physicians were more likely to refer to psychotherapy services than male physicians, and patients with blood cancers were more likely to receive referral than patients with solid tumors (Kim et al., 2018). Cancer patients are not receiving holistic care with a treatment gap this large, and factors influencing this should be explored.

Psychotherapy is an effective and harmless intervention for patients with dual diagnoses of depression and cancer. Hallet et al. (2020) found 46% of patients with a new cancer diagnosis reported depressive symptoms. When psychological interventions such as counseling were applied, patients reported remarkably alleviated depression, anxiety, and mood disorders. However, one limitation of this study was the initial referral rate to psychotherapy services was low when screening for depression was initially conducted. Anderson et al., (2014) reviewed the ASCO guidelines on the treatment recommendations for cancer patients with anxiety and depression. Within this guideline is a published algorithm for the screening, assessment, and interventions based on the PHQ-9 score. Of note, regardless of the patient's score, psychotherapy is highly recommended. This may be in an individual or group setting, but mild to severe depression scores always include recommended psychological interventions. Psychological nursing interventions, such as face-to-face counseling and telephonic

counseling, were also found to significantly reduce depression after four weeks of therapy when compared to the control group of individuals receiving routine cancer care (Wang et al., 2020). Psychological intervention for depression in cancer patients is widely supported and should be included as part of the treatment plan to address the strain of a cancer diagnosis.

A strength of this literature review was the inclusion of several publications from large oncology stakeholders such as the ASCO, the American Cancer Society, and the PDQ Supportive and Palliative Care Editorial Board from the National Cancer Institute. Secondly, the PHQ-8 has been studied in different countries such as Africa and Ethiopia and remains a reliable, free, and efficient assessment tool (Degefa et al., 2020). Some studies only looked at specific PHQ screenings, such as the PHQ-2 or PHQ-9. Literature on all PHQ screening variations were included in this literature review, as all forms are evidence-based.

Some weaknesses of this literature review included varying cut off scores for the PHQ-8 and PHQ-9. Menea, Gilbody and McMillan (2012) and Degefa (2020) support that a score between 8-11 is indicative of major depression. Scoring the PHQ-8 and PHQ-9 is recommended as follows: Zero to one indicates minimal depression, five to nine is consistent with slight depression, 10-14 indicates moderate depression, a score of 15-19 is consistent with somewhat severe depression, and scores of 20 or greater are indicative of severe depression (Raymond, Maurer, & Davis, 2018). The varying scoring and interpretation of scores in research studies may impact the outcomes of referring to counseling services. Additionally, patients in this review of literature may have other psychosocial services or support groups that researchers were unaware of which has

potential to alter findings (Hallet et al., 2020). Lastly, some studies assessed depression in cancer patients in the inpatient setting, while others focused on outpatient and rehab settings. Setting could impact depressive symptoms.

Some gaps in research included a lack of research related to depression and oncology within the last five years. Although this timeframe was ideal, inclusion criteria had to be widened to include studies completed within the last ten years to adequately review the literature on depression within the oncology population. There was limited research on why patients refuse mental health treatment and support (Chan et al., 2015). Offering patients individual or group psychotherapy support from a counseling center can greatly improve their life quality and is supported through literature (American Cancer Society, 2020). Further research should evaluate why patients do not accept treatment as well as provider bias towards mental health to help close the treatment gap. Studies used various screening tools to evaluate patients for depression including the Distress Thermometer, the HADS, and the PHQ of numerous variations.

The PDSA evidence-based framework was appropriate for this quality improvement project. Small scale change was implemented on a medical oncology floor, followed by continuous evaluation of the process to enhance systematic change (White, Dudley-Brown, & Terhaar, 2021). In current practice, there were no screenings being conducted for depression. Successful implementation of this tool required continuous evaluation and refinement of the process for nurses to impact patients.

In summary, depression among oncology patients is a public health problem. With 20-25% of cancer patients impacted by depression, there is a critical need for evidence-based screenings for depression and referral to psychotherapy services as

appropriate. Distress and depression negatively impact patient compliance with treatment and healthcare, satisfaction with their care, and quality of life (Hallet et al., 2020). Furthermore, not addressing mental health can lead to a maladaptive coping mechanism that may increase mortality (Chan et al., 2015; Smith, 2015). Comprehensive cancer centers should care for the whole patient, including mental health and consider that individuals who are not in remission have higher rates of mental health disorders than those in remission (Nakash et al., 2014). As the rates of cancer continue to increase, it is critical for health care professionals to assess the need for referral to psychotherapy services in the inpatient setting. Patients with cancer are commonly facing enormous life stressors including the financial burden of treatments and appointments, their physical appearance changing, interrupted normal routine and roles, coping with a possibly terminal illness, and feeling physically fatigued and ill. Mental wellbeing is essential to being able to manage these stressors while having a satisfactory quality of life.

Methods

Design

This quality improvement project utilized a descriptive observational design. Prescreen-post screen data was compared to determine if there was a relationship between evidence-based PHQ-8 screenings and referrals to counseling. Secondary data including patient age, gender, and cancer diagnosis, and PHQ-8 score was also evaluated to determine if there was also a relationship between these secondary outcome measures.

Setting

This project took place at a large metropolitan cancer center in the Midwest. The specific medical oncology unit where the project took place had 32 private patient rooms.

Sample

This project utilized convenience sampling for patients who were admitted to a medical oncology unit over two months. Patients were required to be 18 years or older, have a confirmed or suspected cancer diagnosis, and be alert and oriented to person, place, time, and situation upon screening to ensure data is valid. The DNP student worked with patients admitted to the medical oncology unit at a large comprehensive cancer center in a midwestern city. The ideal sample size was 30 patients over two months.

Procedures

Prior to the implementation of this quality improvement project, nurses received education on how to administer the PHQ-8 screening tool (Appendix D). Education took place in person, over Zoom, or electronically and was delivered by the DNP student or the unit educator. All education provided was the same. During the implementation phase, registered nurses selected appropriate patients as outlined above. Upon admission, nurses asked the patient to complete the PHQ-8 (Appendix A), which was provided to them as a paper copy. The patient filled this out themselves or with assistance from the nurse. If a patient was unable to fill out the screening, the nurse asked the patient the questions verbally exactly as they were stated on the screening tool. After the screening tool was completed, the nurse scored the screening tool immediately (Appendix B, Table B1). Of note, the scoring guidelines for the PHQ-9 and the PHQ-8 were the exact same as stated in the instruction manual.

Patients who were appropriate for referral to psychotherapy included patients who scored five or greater on the tool, or who stated they would like to be referred. If a patient

scored a five or above but declined therapy, the nurse made note of this on the screening tool and did not enter an order for referral. For appropriate patients, nurses then entered an order into the electronic medical record, Epic. To do this, nurses went to the orders tab and searched for *oncology services request*. After selecting this order, additional questions required by the counseling service dropped down and nurses filled in appropriate responses regarding reason for request. After the additional questions are answered, the order was then signed. The psychotherapy services then contacted the patient directly to set up an initial counseling visit.

Data Collection and Analysis

Data collection included prescreen retrospective data, which was deidentified by the researcher and was collected by the researcher from the electronic medical record twice weekly from November 14th, 2021, to January 10th, 2022 (Appendix C). Nurses were educated on the PHQ-8 screening tool and the project purpose in December and January 2022 (Appendix D). During the implementation phase, prospective data was collected from the electronic medical record and deidentified by the researcher twice weekly from February 7th, 2022 until April 6th, 2022 (Appendix C). Data collection for both pre-screen and post-screen included the number of PHQ-8 screenings completed, number of referrals to counseling, patient age, gender, and cancer diagnosis. Data was entered into an Excel spreadsheet on a password protected computer with all identifying data such as name and birthday being removed. Individuals were assigned a number. Data was collected by the DNP student. Data that was collected is specific to the large comprehensive cancer center and will not provide generalizable information beyond this specific setting. The information obtained from this quality improvement project

provided information to the organization. The organization will determine if this

evidence-based screening tool will continue to be used after the project is complete.

Approval Process

Stakeholders at site project site were engaged in June 2021 and agreed upon the

project in August 2021. The management team at the site of project implementation

provided written approval for the project to take place. Stakeholders from the doctoral

committee at the University of Missouri St. Louis were presented with project approval in

November 2021 and approved the project idea. Approval was obtained from UMSL IRB

on January 4th, 2022 and from Washington University IRB on January 25th, 2022.

Results

Demographics

The sample included 33 medical oncology patients aged 21 to 82 with an average

age of 58.3 years ($SD= 14.89$) (Appendix E, Table E1). All patients were admitted to the

same medical oncology unit. Of these patients, 30% ($n= 10$) were male and 70% ($n= 23$)

were female. Breast cancer was the most prevalent (18%) followed by lung cancer (9%),

and lymphoma (9%).

PHQ-8 screening

A retrospective chart review of 168 medical oncology patient admissions from

November 14th, 2021 to January 10th, 2022 indicated that zero PHQ-8 screenings were

conducted prior to PHQ-8 screening implementation (Appendix E, Table E2). During this

timeframe, eight patients admitted to the medical oncology floor were referred to

counseling services ($n= 8$, 4.8%). Project implementation began on February 7th, 2022

and continued through April 6th, 2022. During this time, a total of 193 oncology patients

were admitted to the floor and met inclusion criteria. A total of 33 patients were screened

with the PHQ-8. Of the 33 patients screened, 15% (*n*= 5) resulted in direct referrals to

counseling services. There were an additional five patients referred over the course of the

implementation period that were not screened by nurses. Therefore, over the

implementation period, there were a total of 10 referrals out of 193 total patient

admissions (5.2%). Hence, it appears that implementation of the PHQ-8 screening tool

did increase the number of referrals to counseling services (4.8% pre-screen vs. 5.2%

post-screen), however the impact was not statistically significant (p = 0.43; *CI* = 95%).

Patient's scores on the PHQ-8 tool were also collected. The scores from the

sample ranged from zero to 16, with an average score of 6.2 (*SD*= 5.0) (Appendix E,

Table E3). Of the 33 individuals screened, 55% (*n*= 18) scored five or greater. A total of

22% (*n*= 4) of patients who scored a five or greater were referred to counseling services.

Evaluation of the individuals who were not referred but were screened revealed the

following: 30% of patients refused referral, 42% of patients scored less than five on the

PHQ-8 and referral was not indicated, 3% of patients were referred with a score less than

five, 12% were already seeing outpatient therapy, and 12% had a score of five or greater

and were referred to counseling services.

Discussion

The purpose of the quality improvement initiative was to implement the PHQ-8

screening tool and refer appropriate patients to counseling on a medical oncology unit.

Upon retrospective review of charts prior to implementation, zero screenings were

performed compared to 33 screenings completed during the intervention period,

indicating that the purpose of this initiative was accomplished. In cancer patients aged 18

years and older admitted to a medical oncology unit over an eight-week period, the implementation of the PHQ-8 screening tool did not increase the number of referrals to psychotherapy services in a statistically significant manner.

Although the implementation of the PHQ-8 did not result in a statistically significant increase in the number of referrals, there may be positive qualitative outcomes. The project may have raised awareness of the free counseling services available to patients. For example, one patient refused counseling initially, however, was readmitted within the screening period and was referred upon second admission. When patients were educated on filling out the screening tool, nurses were instructed to educate them on free counseling services available. Many nurses provided verbal feedback and reported the patient was not aware of services prior to the screening. The use of the PHQ-8 may also have been a supportive tool to help nurses better care for patients. By providing a screening tool to help assess a patient's mental health, the nurse was able to obtain a more objective assessment to determine further interventions the patient needed, resulting in overall more holistic care.

Some limitations of the study included staffing shortages during the pandemic. Due to staffing imbalances, nurses were often floated to the floor from his/her home unit and were unfamiliar with the project. This may have resulted in a lower number of screenings completed, which may have also affected the number of referrals to counseling. A larger sample size and more time for the intervention may have yielded more significant results.

Recommendations

Recommendations for sustaining change include involving advanced practice providers in obtaining screenings on patients admitted to the medical oncology unit. There may be improved compliance with screening patients if the PHQ-8 was available electronically for providers. Because the tool was not part of the electronic health record (EHR), screenings were collected using a paper copy of the tool. This could be another limitation of the quality improvement initiative, as obtaining the paper copy was an additional step for nurses or providers. Doctorally prepared nurses have a unique opportunity to work with information technologists to add this screening tool to the EHR. Additionally, when a patient's screening is positive (five or greater) (Raymond, Maurer, & Davis, 2018), a best practice advisory could be implicated to alert the provider of a recommendation of referral to counseling services if the patient is amenable.

Areas of potential studies in the future include using the PHQ-8 screening tool on medical oncology nurses, assessing provider attitude toward mental health screening for oncology patients, and evaluating patient's pre-counseling and post-counseling PHQ-8 scores. During project implementation, many nurses screened themselves and scored a five or greater. Caring for cancer patients may lead to depression or compassion fatigue among nurses, which can also impact patient care. As discussed in the review of literature, there may be bias towards mental health screenings from providers, which can decrease the number of patients who are screened for depression. This may be a factor in the initial problem, cancer patients are not being screened for depression in the inpatient setting. Additionally, it may be useful to assess if the intervention of referring patients to counseling services if they do score positive on the PHQ-8 impacts their scores after

receiving counseling services over a specified period of time. This may require a more longitudinal study.

Conclusion

The American Cancer Society (2020) reports that at least one in four individuals with cancer face depression due to the intense physical, psychosocial, spiritual, and emotional changes that occur. While this quality improvement project did not result in a statistically significant increase in the number of referrals to counseling with use of the PHQ-8, there may be several other positive outcomes. Positive outcomes such as educating patients on the services available to them at no cost and supporting nurses in patient care by providing an objective tool to assess patient's mental health may have resulted from this quality improvement project. The total number of new cancer diagnosis expected to reach 27.5 million by 2040 (American Cancer Society, 2020), indicating there is a critical need to further explore the ways in which advanced practice nurses can impact patient care.

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Appendix A

The PHQ-8 Screening Tool

PATIENT HEALTH QUESTIONNAIRE-8 (PHQ-8)				
Over the <u>last 2 weeks</u>, how often have you been bothered by any of the following problems? *(Use "✔" to indicate your answer)*	**Not at all**	**Several days**	**More than half the days**	**Nearly every day**
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself — or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3

Appendix B

Table B1

PHQ-9 Score and Proposed Treatment Actions

PHQ-9 Score	Depression Severity	Proposed Treatment Actions
0 – 4	None-minimal	None
5 – 9	Mild	Watchful waiting; repeat PHQ-9 at follow-up
10 – 14	Moderate	Treatment plan, considering counseling, follow-up and/or pharmacotherapy
15 – 19	Moderately Severe	Active treatment with pharmacotherapy and/or psychotherapy
20 – 27	Severe	Immediate initiation of pharmacotherapy and, if severe impairment or poor response to therapy, expedited referral to a mental health specialist for psychotherapy and/or collaborative management

* From Kroenke K, Spitzer RL, Psychiatric Annals 2002;32:509-521

Appendix C

Data Collection Instruments

Table C1

Data Collection for Pre-Screen and Post-Screen Data

			PHQ-8 Screening and Referral Data with Demographics						
Participant No.	Category	Report Date	Name	Age	Gender	Diagnosis	PHQ Sreening Performed?	PHQ-8 Score	Referral?
1									
2									
3									
4									
5									
6									
7									
8									

Table C2

Total Number of Screening and Referrals with Average Score by Date

Total Number of Screening and Referrals and Average Score by Date of Report

Day Report Ran	No. of Screenings	Avg Score	No. of Referrals

Appendix D

PHQ-8 and Referral to Counseling: Education for Nursing Staff

1. **When to administer??**

   a. Patients must be 18 years or older, have a confirmed or suspected cancer diagnosis, and be alert and oriented to person, place, time, and situation

2. **Provide copy of PHQ-8 screening tool upon admission or as needed**

   a. Patient will fill out independently unless requests help from nurse. If assistance is needed, read the questions to patient directly as stated.

3. **Immediately score the screening by adding up the number of points in the columns on the right.**

   a. Example: If patient marks nearly every day = 3 points.

4. **If the patient scores a 5 or greater – Offer counseling. This is FREE to patients and families.**

   a. Enter an order for counseling services

   b. Go to orders tab

   c. Search *oncology services request* and select this order

   d. Additional questions required by the counseling service will drop down. Fill in appropriate responses regarding reason for request- Including patient is having distress and coping maladaptation

   e. After the additional questions are answered, the order will then be signed

5. **Done! You just potentially made a huge impact on your patient's cancer treatment** ☺

Appendix E

Table E1

Demographic Characteristics of Patients

Demographics	n	%	M	SD
Age	33		58.33	14.89
Gender				
Female	23	69.7%		
Male	10	30.3%		
Diagnosis				
Breast Cancer	6	18%		
Lung Cancer	3	9%		
Lymphoma	3	9%		
Pancreatic	2	6%		
Gastric adenocarcinoma	2	6%		
Colon	2	6%		
Sarcoma	2	6%		
Others individually comprising <3% of total population (13)	13	39%		

Table E2

Pre-Implementation vs. Post-Implementation Results

Period	n	No. Screenings	No. Referrals	%
Pre-Implementation	168	0	8	4.8%
Post-Implementation	193	33	10	5.2%

Table E3

PHQ-8 Screening Score Analysis

Metric	
M	6.2
SD	5.0
Median	5.0
Min	0
Max	16