

Patients' and Caregivers' Perception of Safety and Accessibility of Cancer Care During the COVID-19 Pandemic: A Survey in a Tertiary Academic Cancer Center in the Philippines



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ABSTRACT

Background The COVID-19 pandemic has caused a global public health emergency. High levels of fear and limited access to cancer treatment may jeopardize the delivery of optimal oncologic care, potentially influencing treatment outcomes. This study aimed to identify patients' and their caregivers' perception of safety and accessibility of cancer care during the COVID-19 pandemic.

Methods A cross-sectional survey of patients and caregivers at the Benavides Cancer Institute, University of Santo Tomas Hospital was performed

from August to October 2020 using a 20-item investigator-developed questionnaire.

Results A total of 207 participants answered the survey. Frequency of hospital visits varied from none to more than ten times in the previous month; but having multiple postponements were uncommon. Eighty-two percent, 77%, 62%, and 55% of participants reported being afraid of contracting COVID-19 from other patients, hospital surroundings, hospital staff, and doctors, respectively. Twenty-six percent and 12% had difficulty finding transportation and passing through checkpoints, respectively. Twenty-eight percent strongly expressed financial limitations in prioritizing cancer care. Participants were amenable to the use of telemedicine and stringent protocols to reduce in-hospital transmission risk, but had some reluctance to spend out of their pockets for screening tests.

Conclusion The perceived safety of cancer care was influenced by fears of contracting COVID-19; and accessibility was influenced by limited transportation and financial constraints. Despite these, multiple postponements and cancelled hospital visits were uncommon. Institutional approaches

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targeting these concerns will be crucial to ensure safe and timely delivery of cancer care during the COVID-19 pandemic and further mitigate its impact on oncologic outcomes.

Key words cancer care, COVID-19 pandemic, safety, accessibility

INTRODUCTION

Since the emergence of a respiratory disease caused by a novel coronavirus in China in December 2019, the virus has now spread to more than 200 countries, causing what is now known as the coronavirus disease 2019 (COVID-19).[1] In March 2020, the World Health Organization (WHO) declared the COVID-19 outbreak as a pandemic; and it has since caused a global public health emergency.[2] As of November 12, 2020, a total of 52,177,708 cases and 1,286,063 deaths have been reported across 220 countries,[1] of which 402,820 cases and 7,721 deaths have been confirmed only in the Philippines.[3]

Research on the impact of this pandemic on cancer patients and its implications on cancer management is likewise rapidly evolving. COVID-19 poses a significant threat to cancer patients because of the immunocompromised state brought about by their disease and treatment that they receive. Morbidity and mortality are higher among patients with cancer, with early reports identifying 3.5 times higher risk of mechanical ventilator use, ICU admission, or death compared to the general population.[4] Oncologists are thereby advised to weigh the benefit of treatment against risks of morbidity and mortality from COVID-19 and make difficult decisions on how and when to treat on a case-to-case basis. [5-7] Minimizing visits may substantially mitigate exposure and decrease the risk for COVID-19 in cancer patients, but this should be weighed against the risk of disease progression.

Despite measures in place to reduce the risk of COVID-19 transmission in treatment facilities, some oncologists encounter patients expressing their hesitation in going to the hospital for treatment or follow-up visits. Surveys from Italy during the height of its first pandemic wave report queries from cancer patients regarding postponing hospital visits. Researchers identified that as much as 57%

of their patients expressed negative emotions, predominantly fear, anger, and sadness as a general sentiment when their pandemic-related queries were analyzed by a software.[8] A report from Singapore highlighted that 66% of patients and 72.8% of caregivers reported high level of fear from COVID-19.[9] In the Philippines, access to cancer care is likewise complicated by limited mobility in the setting of a community quarantine, where public transportation is operating at reduced capacity and logistical challenges limit inter-city and inter-province travel.[10] These barriers may altogether jeopardize the delivery of optimal oncologic care, potentially influencing treatment outcomes. The objective of this study was to identify patients' and their caregivers' perception of safety and accessibility of cancer care during the COVID-19 pandemic in order to tailor management strategies that ultimately ensure the safe and timely delivery of cancer treatment.

MATERIALS AND METHODS

Study Design and Participants

A descriptive cross-sectional study was conducted using an online survey to assess cancer patients' and their primary caregivers' perception of safety and accessibility of cancer care during the COVID-19 pandemic. This study was performed in the Benavides Cancer Institute, University of Santo Tomas Hospital, a tertiary academic cancer center in Manila, Philippines. Participants were surveyed using an online questionnaire developed and distributed via Google Forms. Participants must be ≥ 18 years of age and able to complete the online questionnaire on their own device or a dedicated device provided on-site. The questionnaire was directed to diagnosed cancer patients who came to the treatment facility for treatment or follow-up purposes. Primary caregivers of cancer patients were also surveyed. Cancer patients and primary caregivers who did not come to the facility for treatment continuation or clinic visit after recent treatment between 2019 and 2020 were contacted by phone, followed up, and asked to answer the online questionnaire through the link sent via text message.

Study Instrument

The 20-item questionnaire was investigator-developed in response to the most common

queries and concerns expressed by patients and caregivers, which were mainly about safety of their treatment during the pandemic and their risk of contracting COVID-19 in the treatment facility. A panel of oncologists with patient and caregiver representatives evaluated the questionnaire for face and content validity. The demographic characteristics of participants (age, gender, classification whether patient or caregiver, cancer diagnosis) were asked and recorded. Section 1 comprised four questions on details of cancer treatment and frequency of hospital visits and postponements. Section 2 had five items that evaluated perceptions regarding safety of cancer care during the COVID-19 pandemic. Section 3 had three items that evaluated accessibility of cancer care. Section 4 had four items that gathered participants' preferences regarding COVID-related institutional policies.

Ethical Considerations

An electronic informed consent form was utilized in this study. Informed consent was obtained from every participant prior to study participation. The study was performed in accordance with the Declaration of Helsinki and the National Ethical Guidelines for Health and Health-Related Research of the Republic of the Philippines. Approval of study protocol was obtained from the University of Santo Tomas Hospital Research Ethics Committee.

Statistical Analysis

Data were analyzed using descriptive statistics in the Statistical Package for the Social Sciences (SPSS) version 24 (IBM Corporation, Armonk, NY). Demographics and data from categorical variables were reported as frequency and ratio. Data from continuous variables were reported as mean, standard deviation, frequency, and ratio.

RESULTS

Demographic Characteristics

Between August 28, 2020 and October 28, 2020, 287 participants were asked to answer the survey. Responses were obtained from 207 participants (72% response rate). Of these, 112 (54%) were patients and 95 (46%) were primary caregivers. The median age of patients and caregivers was 54 years

(range 18 to 81 years) and 36 years (range 18 to 71 years). Most participants were female (68%). Table 1 lists the main demographic characteristics of participants included in this analysis. The patients' primary cancer diagnoses were breast cancer (30%), ovarian or uterine cancer (12%), colorectal cancer (10%), leukemia (10%), and lymphoma (9%). Patients with head and neck, lung, and gastrointestinal cancer other than colorectal represented 7%, 6%, and 5% of cases, respectively. A total of 85% participants were in the facility for cancer treatment and 15% were undergoing routine follow-up or surveillance either in the clinic or remotely. Of the participants present for treatment, chemotherapy, targeted therapy, or immunotherapy was received by most of them (80%), followed by radiation therapy (32%) and surgery (9%).

Table 2 shows the frequency of hospital visits and postponements of participants in the past month. While 31% visited the hospital once or twice in the previous month, 30% went three to five times, 9% went six to ten times, and 20% went more than ten times. It was seen that the majority did not postpone or cancel a scheduled treatment session or consultation (70%) or had only one to two postponements or cancellations (23%) in the previous month.

Outcomes of Interest

The summary of survey findings on participants' perception of safety and accessibility of cancer care during the COVID-19 pandemic is shown in Table 3. When asked if they were afraid of the possibility of contracting COVID-19 from other patients, 71% of participants strongly agreed, 11% agreed, 13% remained neutral, and 4% disagreed. Regarding contracting COVID-19 from hospital surroundings, 62% strongly agreed that they were afraid. However, when asked about contracting COVID-19 from hospital staff, 48% strongly agreed, 14% agreed, 23% remained neutral, 12% disagreed, and 4% strongly disagreed. Likewise, when asked about contracting COVID-19 from their doctor/s, 41% strongly agreed, 14% agreed, 20% remained neutral, 12% disagreed, and 14% strongly disagreed. On average, 55.6% of participants strongly felt afraid of contracting COVID-19 and 13.5% were afraid, totaling 69.1%. In terms of accessibility of cancer care, 26% of participants expressed having difficulty finding transportation;

Table 1. Characteristics of study participants who were patients and caregivers at the Benavides Cancer Institute, University of Santo Tomas Hospital

	All (n = 207)	Patients (n = 112)	Caregivers (n = 95)
Median age, years (range)	45 (18-81)	54 (18-81)	36 (18-71)
Sex			
Male	66 (32)	37 (33)	29 (31)
Female	141 (68)	75 (67)	66 (69)
Cancer diagnosis			
Breast	55 (27)	34 (30)	21 (22)
Cervix	11 (5)	5 (4)	6 (6)
CNS	4 (2)	2 (2)	2 (2)
Colon and rectum	24 (12)	11 (10)	13 (14)
Gastrointestinal (non-colon and rectum)	8 (4)	6 (5)	2 (2)
Head and neck	15 (7)	8 (7)	7 (7)
Leukemia	21 (10)	11 (10)	10 (11)
Lung	13 (6)	7 (6)	6 (6)
Lymphoma	20 (10)	10 (9)	10 (11)
Ovary and uterus	23 (11)	13 (12)	10 (11)
Prostate	3 (1)	1 (1)	2 (2)
Others ^a	10 (5)	4 (4)	6 (6)
Current cancer treatment classification			
On treatment	176 (85)	97 (87)	79 (83)
Follow-up or routine surveillance	31 (15)	15 (13)	16 (17)
Treatment received^b			
Surgery	15 (9)	10 (10)	5 (6)
Radiation therapy	56 (32)	29 (30)	27 (34)
Chemotherapy, targeted therapy, immunotherapy	141 (80)	81 (84)	60 (76)
Others ^c	2 (1)	1 (1)	1 (1)

Note: Data presented as no. (%) unless otherwise indicated.

Abbreviations: CNS, central nervous system.

^a Renal cancer, skin cancer, sarcoma, multiple myeloma.

^b For participants currently on treatment.

^c Blood transfusion, zoledronic acid infusion.

Table 2. Frequency of hospital visits and postponement of participants in the past month

Frequency	Participants with Hospital Visits Made, No. (%)	Participants with Hospital Visits Postponed or Cancelled, No. (%)
None	19 (9)	144 (70)
1 to 2 times	65 (31)	47 (23)
3 to 5 times	63 (30)	13 (6)
6 to 10 times	18 (9)	1 (1)
More than 10 times	42 (20)	2 (1)

and 12% had difficulty passing through checkpoints to and from the treatment facility. More than one-fourth of patients (28%) strongly expressed financial limitations in prioritizing cancer care during the pandemic.

Participants' preferences regarding COVID-related practices and institutional policies are shown in Table 4. Almost all (97%) felt more comfortable if the medical staff were routinely tested for COVID-19. In terms of strict screening measures for COVID-19

Table 3. Summary of survey findings

	Participants, No. (%)
I am afraid of contracting COVID-19 from other patients.	
Strongly agree	148 (71)
Agree	23 (11)
Neutral	26 (13)
Disagree	8 (4)
Strongly disagree	2 (1)
I am afraid of contracting COVID-19 from hospital surroundings I may come in contact with.	
Strongly agree	128 (62)
Agree	32 (15)
Neutral	26 (13)
Disagree	18 (9)
Strongly disagree	3 (1)
I am afraid of contracting COVID-19 from hospital staff.	
Strongly agree	100 (48)
Agree	28 (14)
Neutral	47 (23)
Disagree	24 (12)
Strongly disagree	8 (4)
I am afraid of contracting COVID-19 from my doctor/s.	
Strongly agree	84 (41)
Agree	29 (14)
Neutral	41 (20)
Disagree	25 (12)
Strongly disagree	28 (14)
I have difficulty finding transportation to bring me to and from the hospital for treatment or consult.	
Strongly agree	35 (17)
Agree	19 (9)
Neutral	44 (21)
Disagree	23 (11)
Strongly disagree	86 (42)
I have difficulty passing through checkpoints between my residence and the hospital.	
Strongly agree	14 (7)
Agree	10 (5)
Neutral	36 (17)
Disagree	34 (16)
Strongly disagree	113 (55)
I am unable to prioritize treatment because of financial problems during the COVID-19 pandemic.	
Strongly agree	58 (28)
Agree	32 (15)
Neutral	69 (33)
Disagree	13 (6)
Strongly disagree	35 (17)

Table 4. Preference regarding COVID-19-related institutional policies

	Participants, No. (%)
Preference for routine testing of hospital staff	
Yes	200 (97)
No	7 (3)
Preference for strict screening policy for all patients and companions prior to entry into the treatment facility	
Yes	201 (97)
No	6 (3)
Willingness to spend for additional screening tests prior to entry into the treatment facility (ie, chest radiograph, complete blood count, and/or SARS-CoV2 RT-PCR)	
Very willing	56 (27)
Willing	39 (19)
Neutral	75 (36)
Unwilling	19 (9)
Very unwilling	18 (9)
Preferred mode of consultation with healthcare provider	
Face-to-face consultation	61 (29)
Teleconsultation	15 (7)
Combination of both	131 (63)

(ie, symptom checking, chest radiographs, blood tests, and/or SARS-CoV2 RT-PCR testing), almost all participants (97%) preferred that these be required of all patients and caregivers prior to their entry into the treatment units. However, only 27% were very willing to spend for additional tests for screening purposes; 19% were willing; 36% remained neutral; 9% were unwilling; and 9% were very unwilling. The majority of participants (63%) preferred a combination of face-to-face and virtual consultations with their health care provider in the setting of a pandemic. Only 7% preferred purely virtual consultations online or via telephone calls.

DISCUSSION

Since the emergence of the COVID-19 pandemic in the Philippines last March 2020, Metro Manila and other major cities have been placed on community quarantine or partial lockdown. Despite the gradual easing of restrictions toward the last quarter of 2020, most sectors are still not fully operational; and public transportation operations and capacities are still drastically reduced.[10] The Benavides Cancer Institute has remained operational, but with

a reduced workforce and limited patient capacity. Fewer hospital beds have been allotted for elective admissions including chemotherapy and cancer surgeries to redirect hospital efforts to the COVID-19 response. In our center, the patient census for 2020 has dropped to roughly 50-60% of the previous year's. In an effort to collect the perspective of patients and their caregivers who equally influence medical decision-making, we undertook this online survey-based study to identify their perception of safety and accessibility of cancer care during the COVID-19 pandemic. This is ultimately to develop and implement strategies that ensure safe and timely delivery of cancer treatment.

A total of 112 cancer patients and 95 caregivers answered the questionnaire. The frequency of primary cancer diagnoses reflects most of the incident cases in the Philippines, except for cervical and prostate cancer which only comprised 5% and 1% of the current study population, respectively. The majority of participants were undergoing active treatment with chemotherapy, targeted therapy, or immunotherapy. The frequency of hospital visits in the previous month varied from none to more than ten times; but having multiple postponements were uncommon.

In terms of participants' perception of safety, a total of 82% and 77% were afraid of contracting COVID-19 from other patients and hospital surroundings, respectively. Additionally, 62% and 55% were afraid of contracting the disease from hospital staff and their doctors. In the absence of a direct comparison, we can only hypothesize that the fear of contracting COVID was concerning other patients and the hospital environment to a higher degree than the medical staff. In total, 69% of participants were afraid of contracting COVID-19. This is comparable to results of a similar study conducted in Singapore, in which 66% of cancer patients and 72.8% of caregivers reported having high levels of worry and fear about COVID-19.[9] In Italy, 80% of surveyed adolescents and young adults receiving cancer treatment or in follow-up reported feeling afraid of contracting COVID-19.[11] The difference in timing of these studies in relation to the local pandemic timeline is worth mentioning here. The Singapore study collected data days after the lockdown was initiated in April 2020. The Italy study collected data within two weeks from the beginning of the COVID-19 outbreak in March 2020. In contrast, our study was conducted in August to October 2020, five to seven months after the lockdown was initiated; and we still saw a high level of fear among participants.

In terms of accessibility of cancer care, 26% had at least some difficulty finding transportation to and from the hospital; and only 12% expressed difficulty passing through checkpoints. With the easing of local travel restrictions at the time the survey was conducted, inter-city checkpoints within Metro Manila had been lifted, but some inter-province checkpoints were maintained. Public transportation was available but with limited operations, reduced capacity, and higher costs. Alternatively, local government units and non-governmental organizations were also able to provide transportation assistance for medical purposes. Realizing the financial strain brought about by the pandemic, 43% of participants expressed at least some financial difficulty prioritizing cancer treatment during this time.

Regarding specific management policies to mitigate COVID-19 risk in the facility, almost all participants were in favor of routine testing of hospital staff and existing screening policy for all patients and companions prior to entry. Since April 2020, aside from strict symptom tracking and temperature checks, the hospital's infection control committee has implemented

screening chest radiographs and complete blood counts for patients and companions prior to receiving cancer treatment. Those requiring hospital admission for surgery or chemotherapy infusion are required to have a negative SARS-CoV2 RT-PCR nasopharyngeal and/or oropharyngeal swab. However, we found that only 46% were willing to spend out of their pockets for these additional screening tests; and 54% were either neutral or unwilling. We also transitioned into using telemedicine wherever feasible and found that a majority of them were amenable to a combination of personal and virtual consultations.

Taken together, potential barriers to optimal cancer care from the patients' perspective include fear of contracting COVID-19 more from other patients and hospital environment, but also from the medical staff, as well as transportation issues and financial difficulties coupled with additional cost of screening procedures. Whether these factors influence decision-making or to which degree they do so is beyond the scope of this study. However, results suggest that despite having these fears and concerns, with multiple postponed hospital visits whether for treatment, consultation, or laboratory procedures were uncommon. It seems that these factors, even if present, do not prevent them from coming to their appointments. Whether or not it was these factors that prevented those that did not keep their appointments is a matter of speculation. Nonetheless, we can integrate these findings into making adjustments to the delivery of cancer care in the post-pandemic setting. The importance of addressing patients' and caregivers' fears of COVID-19 transmission cannot be overemphasized. Gaps in knowledge about modes of COVID-19 transmission, testing modalities, presenting symptoms, and preventive measures must be continuously reevaluated and addressed, most especially in vulnerable cancer patients and their caregivers. Telemedicine may be an excellent and still underutilized tool to limit office visits for outpatient consultations such as post-treatment follow-up, counseling for adverse events, medication management, routine surveillance, or health education.

This study was limited in scope and asked very specific questions that might not cover the complex situation behind decision-making on cancer care. Participants who were currently not on active treatment were underrepresented, comprising only 15% of the study population due to low response rates from the remote online survey administration.

Perceptions of this specific population of patients and caregivers are important to capture as they may possibly express different concerns or even greater hesitations in coming to the hospital for follow-up or routine surveillance. In addition, recruitment of participants was based on their ability to answer an online questionnaire whether using their own device or a dedicated device provided on-site. Patients and caregivers who had limited resources and ability to access and answer the questionnaire were not represented in this study. Since this study was conducted in a single institution that is not a national COVID referral hospital, findings may have limited generalizability. Despite these limitations, this study provides insights into perceptions of patients and caregivers regarding cancer care during the COVID-19 pandemic that can help shape institutional policies.

CONCLUSION

Perceived safety of cancer care among cancer patients and caregivers was influenced by their

fears of contracting COVID-19; and accessibility was influenced by limited transportation and financial constraints. Patients and caregivers were amenable to stringent protocols to reduce in-hospital transmission risk, but had some reluctance to spend out of their pockets for screening tests. Despite these, multiple postponements and cancelled hospital visits were uncommon. Institutional approaches that target these concerns will be crucial to ensure safe and timely delivery of cancer care in the midst of the COVID-19 pandemic and further mitigate its impact on oncologic outcomes.

Disclosure and Conflict of Interest

Drs. Julie Tapispisan, Jayson Co, Warren Bacorro, Michael Mejia, and Teresa Sy Ortin are active consultants in the Benavides Cancer Institute. Dr. Teresa Sy Ortin serves as the chair of the Benavides Cancer Institute. The other investigators do not have any commercial or financial affiliations.

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