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Spotlight on International Quality: COVID-19 and Its Impact on Quality Improvement in Cancer Care

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This report from ASCO's International Quality Steering Group summarizes early learnings on how the COVID-19 pandemic and its stresses have disproportionately affected cancer care delivery and its delivery systems across the world. This article shares perspectives from eight different countries, including Austria, Brazil, Ghana, Honduras, Ireland, the Philippines, South Africa, and the United Arab Emirates, which provide insight to their unique issues, challenges, and barriers to quality improvement in cancer care during the pandemic. These perspectives shed light on some key recommendations applicable on a global scale and focus on access to care, importance of expanding and developing new treatments for both COVID-19 and cancer, access to telemedicine, collecting and using COVID-19 and cancer registry data, establishing measures and guidelines to further enhance quality of care, and expanding communication among governments, health care systems, and health care providers. The impact of the COVID-19 pandemic on cancer care and quality improvement has been and will continue to be felt across the globe, but this report aims to share these experiences and learnings and to assist ASCO's international members and our global fight against the pandemic and cancer.

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INTRODUCTION

The COVID-19 pandemic (2020-2021) has disrupted the worldwide cancer care system and provided a worldwide stress test to cancer care delivery systems. In a 2015 New England Journal of Medicine perspective, published after the Ebola outbreak, Bill Gates observed that readiness for the potential effects of epidemics requires pre-emptive planning strategies similar to "another sort of global threat—war."¹ In the manufacturing and financial sectors, simulation models, or stress tests, are designed to ensure that major institutions have the capacity to survive when unexpected and uncontrolled disruptions occur.

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Accepted on September 24, 2021 and published at ascopubs.org/journal/ go on October 29, 2021: DOI https://doi. org/10.1200/G0.21. 00281 These simulations have two central elements: one is time to be restored to full functionality after a disruption and the other is the time that the service can match supply with demand following the disruption.² We thought it to be useful to reflect on our collective response to this COVID-19–precipitated health system stress test.

The illness caused by SARS-CoV-2, known as COVID-19, was first recognized in late 2019.³ SARS-CoV-2 emerged in Wuhan, China, and soon spread worldwide. The destructive effects of the pandemic stress and its aftermath were felt globally throughout all social and economic segments. In health care, the viral

pandemic brought out dysfunctions, not the least of which were social determinants of population health and quality deficits existing prepandemic, including in countries with resources, training levels, and health care systems as in the United States⁴ and European countries. Upstream management using public health mitigation tools⁵ and supply chain flaws, including critical ones for industries such as pharma and medical supplies,² all became apparent.

The unprecedentedly fast development and emergency approval of mRNA-based vaccines⁶ offers the promise that this and potential future pandemics may be rapidly controlled without widespread disruption to society or the medical care system; the ultimate success will depend on a diverse public health approach including upstream management with simulated stress tests.⁷

As patients with cancer have been disproportionately affected by the COVID-19 pandemic,⁸ members of ASCO's International Quality Steering Group (IQSG; previously referred to as the International Quality Task Force) participated in and hosted two Web-based seminars, early in the pandemic, to share initial lessons from the early reactions to this inadvertent stress test on the cancer care delivery system. We offer this preliminary summary of these seminars, regarding the



CONTEXT

Key Objective

ASCO's International Quality Steering Group convened a series of webinars to review the impact of the COVID-19 pandemic and its stresses that have disproportionately affected cancer care outside of the United States.

Knowledge Generated

We share perspectives from eight different countries, including Austria, Brazil, Ghana, Honduras, Ireland, the Philippines, South Africa, and the United Arab Emirates. Our key recommendations include focus on access to care, expanding and developing new treatments for both COVID-19 and cancer, access to telemedicine, collecting and using COVID-19 and cancer registry data, establishing measures and guidelines to further enhance quality of care, and expanding communication among governments, health care systems, and health care providers.

Relevance

Covering the first year of the COVID-19 pandemic, we share experiences and learnings to assist ASCO's international members and our global fight against the pandemic and cancer.

delivery of high-quality cancer care in eight countries on the basis of experience from quality practice–oriented oncologists, starting with the first confirmed case through January 30, 2021 (Fig 1), with the aim of disseminating early learnings and providing a foundation for assessment of both positive and negative impact of this stress test.

PERSPECTIVE FROM AUSTRIA

Austria has been hit twice by the pandemic: first in March and April 2020 when a rapid lockdown helped keep numbers at bay and after a quiet summer of 2020 when cases soared during late October. A somewhat delayed reaction by society caused the 7-day incidence (per 100, 000 inhabitants) to raise to 565 (November 2020). This led to another soft lockdown, followed by a complete lockdown that extended into January 2021. Intensive care unit capacity limits were fortunately never reached. Vaccinations began in late 2020.

Patients with cancer were affected during lockdowns, with restricted access to hospitals and physicians. Although all academic societies strongly recommended unchanged proceeding without significant changes, patients were hesitant to visit hospitals. In addition, cancer incidence was (artificially) reduced up to 20% in the first 6 months of 2020, which can only be because of reduction in screening. Cancer prevalence started to catch up during the summer of 2020.

As long as the expected capacity of hospital and intensive care unit beds was unclear, there were temporary delays of cancer surgeries. This has now been clarified that there is no indication for such policy. With the experience and learnings from the first lockdown, cancer care ran more smoothly during the subsequent period. As of March 2021, there were no significant barriers to high-quality cancer care in Austria. We learned that it is important to weigh the risk of delaying or withholding the state-of-the-art cancer diagnosis and treatment with the risk of a SARS-CoV-2 infection. Regular mass testing of health care providers and patients can help keep cancer centers operational. Cancer medicine needs to be classified as priority in a pandemic. Fortunately, vaccination is now available in Austria, will be used widely, and will probably become epidemiologically effective in late 2021.

PERSPECTIVE FROM BRAZIL

Brazil's first COVID-19 case was reported on February 25, 2020. The country experienced its first peak of cases through July and August 2020. Since November 2020, Brazil has experienced a second wave of COVID-19 cases. The reported case numbers probably under estimate the actual cases, as Brazil ranks very low internationally with regard to availability of tests per populace.

Despite government efforts to respond to the pandemic, care was immediately compromised in the already saturated health system contributing to significant delays in cancer diagnosis and treatment. This is particularly problematic as approximately 625,000 new cases of cancer per year are anticipated between 2020 and 2022. In the public system, a 50% reduction in diagnostic procedures has been observed. Diagnostic biopsies, colonoscopies, and mammograms were reduced by 29%, 57%, and 55%, respectively. The extension of the pandemic into a second wave of COVID-19 cases will further affect cancer care in Brazil. A higher than expected mortality rate (33%) of patients with cancer in treatment has also been documented in Brazil.⁹

Measures to reduce hospital visits and risk of infection for the management of patients with cancer during the pandemic include the following: (1) postponing treatments and surgeries in patients for whom a delay would not compromise outcomes, (2) substituting intravenous treatments for oral therapies whenever possible, (3) prioritizing radiotherapy hypofractionation, (4) ensuring measures to reduce contagion such as social distancing and use of



FIG 1. Cumulative confirmed COVID-19 cases per million people. The number of confirmed cases is lower than the number of actual cases; the main reason for that is limited testing. Source: Johns Hopkins University CSSE COVID-19 Data.

personal protective equipment appropriately, and (5) adopting forms of remote clinical monitoring.¹⁰ Remote monitoring of patients through telehealth should also be given special consideration, which has accelerated its implementation in many regions of the world because of the COVID-19 pandemic. It is expected that telehealth will be improved and investments in this area will increase. The Deloitte Center for Health Solutions surveyed the United States health care executives and found that half of responders thought at least a quarter of all well-being, outpatient, and preventive services and long-term care would move to virtual delivery by 2040. Most responses also predict industrywide investments in virtual health will be 25% or higher over the next decade. Restrictions in diagnostic and surgical services will contribute to a stage migration and compromise curative metrics for many years after the pandemic is over.¹¹ Overall, prioritizing care to patients who require curative efforts is crucial to reducing the pandemic's long-term impacts.

PERSPECTIVE FROM GHANA

Ghana suffered a complete shutdown of preventive, diagnostic, oncologic, and supportive services in the first 6 weeks beginning in April 2020. Emergency radiotherapy for spinal cord compression, bleeding, or bone fractures and chemotherapy for rapidly growing yet curable disease such as germ cell tumors and trophoblastic disease were prioritized through strict triaging. Many patients were unable to travel for any treatment because of the limited number of comprehensive cancer facilities, which are located in only two cities. Suboptimal penetration and quality of information technology services compounded by the limited workforce compromised the implementation of telemedicine outside of urban areas. Following the easing of restrictions, cancer treatment facilities now operate at full capacity; however, there is reduced attendance and high attrition compared with prepandemic levels. Many patients continue to stay away because of fear, knowledge gaps, use of complementary and alternative medicine, and financial handicaps from income loss and reduced support from family, friends, and churches. Some patients returned with very advanced disease and reduced quality of life. Shift work among limited staff and adherence to COVID-19 protocols have increased clinic waiting times, which translates into higher patient distress and staff burnout.

Challenges to high-quality cancer care delivery in Ghana included the increased urbanization of major cancer services, in particular palliative care, a limited skilled workforce, limited availability of oncology facilities, low integration of psychology and navigation services, and poorer adherence to cancer care guidelines. There is abundant evidence supporting the impact of optimal sequencing of cancer interventions on outcomes. Therefore, expanding access to virtual multidisciplinary tumor boards and clinics has the potential to improve the quality of care especially in regions with a paucity of oncologists including nurses outside of tertiary cancer institutions.

Transitioning trained primary care workers to manage some aspects of cancer services including screening, surveillance, and palliative care is the first step toward safe decentralization. Expanded access to supportive and other medicines including pain medications and hormonal therapies outside of major hospitals would curb unnecessary travel and its accompanying expenditure and reduced quality of life and improve treatment compliance. The importance of expanding a skilled cancer workforce through local capacity building cannot be overemphasized. Based on our Ghana experience during the present COVID-19 pandemic, a resource utilization, sociocultural, and institutionally tailored approach to cancer is recommended to sustain quality services—one size does not fit all.

PERSPECTIVE FROM HONDURAS

The first confirmed COVID-19 case in Honduras was reported on March 11, 2020. Since then, there has been a large reduction in oncology services and have been delays in cancer screenings and administration of chemotherapy, radiotherapy, and surgery treatments. The impact on health care staff has been mostly psychologic because of a shortage of medical supplies and personal protective equipment. The negative impact on patients with cancer has been prominent. Before the COVID-19 pandemic, the time interval between patients presenting with clinical signs of cancer and treatment initiation was approximately 7 months. Because of the additional delays in cancer screenings, the present pandemic has likely increased this time interval.

Barriers to high-quality oncology care include a lack of infrastructure including oncology providers, high rates of poverty, and paucity of national oncology guidelines, educational programs for medical oncologists and nurses, and patient education. Although the medical staff have used video calls to assist with some patients' care because of the pandemic, widespread telemedicine programs do not exist for most patients with cancer in Honduras. During the present pandemic, oncology teams learned to improvise to maintain a level of treatment for patients with cancer and also recognized the importance of the need to develop national oncology guidelines. To achieve a higher quality of oncology patient care in Honduras, it is crucial to improve communication across different sectors of cancer care between the government, private institutions, universities, and health care workers.

PERSPECTIVE FROM IRELAND

Ireland's first case was identified on March 11, 2020, but it was with the third wave, which started in November 2020, that Ireland suffered its most sustained and devastating hammering from COVID-19. The COVID-19 pandemic has had far-reaching consequences in Ireland. It has revealed how poorly prepared we were to deliver cancer care in a safe, effective manner during a pandemic. The first wave highlighted the inadequate infrastructure and insufficient staff numbers required to maintain services during the pandemic. Screening programs halted, all nonemergent cancer surgeries were delayed, and systemic anticancer therapy (SACT) administration was re-evaluated to allow a focus on COVID-19–related care.

Early in 2020, key figures in the Health Service Executive and the National Cancer Control Program, a directorate of the Health Service Executive, met with the Irish medical oncology community to rapidly introduce changes to manage cancer care delivery. Although there are many different SACT ambulatory care models, the majority were located within acute hospitals battling for resources during the COVID-19 crisis. Significant efforts ensued to find safer temporary locations, allowing separation from COVID-19–related care. One hospital group devised a novel electronic organizational checklist to comprehensively track all resources integral to a highly functioning day-ward facility. There was a rapid adoption of telemedicine by health care providers, patients, and their families in spite of barriers that previously seemed insurmountable. Training modules for health care professionals and checklists to ensure standardized, effective documentation of medical decisions were developed. Preassessment became a fundamental part of the SACT delivery process; these efficiencies devised to maximize staff and patient safety.

SACT treatment decisions incorporating risk and benefit discussion in the setting of an individual patient became even more complex given the uncertainty as to how COVID-19 may complicate therapy. Careful evaluation of any changes in treatment choices on the basis of risk may have long-term implications. In an unprecedented manner, medical communities came together to share information in real time. Barriers, perceived or otherwise, were broken down with the focus on patient-centered care. As the pandemic progressed, the COVID-19 resources through other organizations such as the ASCO, American Society of Hematology, European Society for Medical Oncology, European Society for Blood and Marrow Transplantation, etc became a source of knowledge; the oncology community at large was more easily accessible through social media and information sharing was occurring openly, so we drew on our international colleagues' experiences to guide treatment paradigm decisions. Although appreciating that the overarching principle of safety was paramount in the middle of a global pandemic and although some patients require a bespoke approach, certain treatments were reconsidered, for example, combined immunotherapy in metastatic melanoma, avoidance of maintenance rituximab in low-grade non-Hodgkin lymphoma, and reduced use of profoundly lymphogenic therapies. Recognizing the need to collate and integrate data regarding cancer, its treatment, and COVID-19, Irish physicians contributed to international registries for both solid tumor and hematologic malignancies.

To ensure we emerge from this pandemic armed with the tools necessary to better provide for our patients, the need for ongoing research is vital. The Science Foundation Ireland together with Irish Government departments and other agencies (IDA Ireland, Enterprise Ireland, Health Research Board, Irish Research Council, and others) are providing funding to ensure a coordinated and meaningful contribution to solving some of the challenges presented by the current COVID-19 crisis. The more important goals are the ongoing international collaboration and sharing of information to ensure ongoing cancer care is consistent with the ASCO mission of effective, equitable care for all.

PERSPECTIVE FROM THE PHILIPPINES

The Philippines is one of the countries with the longest lockdowns because of the pandemic. Despite this, it has the second highest number of confirmed COVID-19 cases in Southeast Asia (after Indonesia). The height of the pandemic was in August 2020.¹² It has overwhelmed the already fragile health care system of the Philippines. There was widespread disruption of routine oncology services, from screening, surgery, medical treatment, and palliative and end-of-life care. The socioeconomic impact of the pandemic has worsened the current state of oncology. More advanced cancer cases are being seen. More patients have died at home without the comforts of palliative care. With travel restrictions and closure of borders, access to lifesaving cancer medicines has been disrupted. The pandemic disrupts the government's implementation of Universal Healthcare Coverage and National Integrated Cancer Control. With the recent decrease in the number of new COVID-19 cases, easing up of restrictions, and easier access to testing, oncology care has been gradually returning to its prepandemic state. Patients have been resuming standard clinic follow-ups and monitoring. They are able to undergo diagnostic tests and procedures. The number of patients seeking oncology care is increasing although it has not returned yet to what was seen during the prepandemic period.

The existing issues on affordability and access to cancer care services are magnified within an already strained health care system. Access to comprehensive and coordinated multidisciplinary services has been a challenge. The Philippines is an archipelago of 7,100 islands. Most patients travel long distances for cancer care. This became more evident during strict community lockdowns. Fourteen-day guarantine requirement was imposed in most towns and municipalities disrupting and delaying provision of care. Access to information and clear understanding of the diagnosis, treatment plans, and prognosis had been limited to mostly via telemedicine. There are areas in the country where good and reliable Internet access is still a challenge. Commonly, elderly patients have difficulty navigating this new way of accessing information and means of communication during the pandemic. Resource stratification has primarily put consideration for COVID-19 cases and has set aside other conditions including cancer. There is no existing local core set of quality measures that can be used to measure and monitor quality of care.

Effective hospital policies on infection control can ensure the safety and maintain the health of oncology staff and patients. A more effective communication model or information dissemination strategy is needed to allay fears during pandemic. Patients fear of contracting COVID-19 but do not realize the significant impact on health outcomes of delay in cancer care. Appropriate resource allocation will ensure continuity of care especially for patients requiring urgent and immediate cancer care. Public-private partnership must be enhanced to allow resource allocation for all vulnerable populations. Prioritizing treatment on the basis of patient-specific factors, treatment benefit, and resource availability while maintaining multidisciplinary team approach should be well-enforced. Clinicians must continue to share clinical experiences, strategies, and lessons learned on a more collaborative setting through webinars and regional virtual conferences. Scaling up digital technology in health care delivery is a significant step to improve care. A national cancer data system and research collaboration within the country and the region are important initiatives that can provide quality benchmarks for use by hospitals and provider groups.

PERSPECTIVE FROM SOUTH AFRICA

As the world population ages, with fewer people dying of communicable diseases, there is a growing incidence of noncommunicable diseases including cancer. This is especially true in low- to middle-income countries such as South Africa, which has seen a significant reduction in deaths owing to HIV/AIDS because of the development of the largest antiretroviral treatment program in the world. Cancer is a worldwide problem with the International Agency for Research in Cancer GLOBOCAN Population-based Cancer Registry Program reporting more than 18 million new patients with cancer being diagnosed globally in 2018. Unfortunately, the cancer mortality rate remains extremely high with more than 9.5 million cancer-related deaths reported in 2018.

The first confirmed COVID-19 case in South Africa was reported on March 5, 2020. Since then, the peak of daily cases in the first wave occurred on July 24, 2020, with 13, 944 cases. An initial attempt to continue cancer care including surgery (considered emergency care), radiation, and medical oncology occurred during the first wave. As lockdown began, cancer referrals and quality of care initially dropped because of patient fear, inability to access care centers at primary, secondary, and tertiary level, diversion of resources to COVID-19, and oncology medicine shortages.

The present pandemic has exacerbated oncology medicine shortages in South Africa. This is in part because of the high costs of new chemical entities. In addition, there is increasing challenge of abandonment of older medicines by pharmaceutical companies because of decreased profits, lack of active pharmaceutical ingredients (API) production in China early in the pandemic, reduced production and export of generics by India, reduction of air travel to deliver supplies, diversion of production priorities to development of COVID-19 medicines, inappropriate off-study use of medicines for COVID-19 (eg, chloroquine, artemesin, favipiravir, interferons, tocalizumab, and other antiinflammatory medicines), and funding shortfalls.

As lockdown continued, cancer referrals and quality of care dropped further because of increasing patient and doctor

TABLE 1. A Summary of Global Perspectives in Quality Improvement in Cancer Care Under COVID-19^a

Attribute	Austria	Brazil	Ghana	Honduras	Ireland	The Philippines	South Africa	The United Arab Emirates
Date of first confirmed COVID-19 case	February 25, 2020	February 25, 2020	March 12, 2020	March 10, 2020	March 11, 2020	March 1, 2020	March 5, 2020	January 29, 2020
State of oncology under COVID-19 within country	Oncology patients hesitant to visit clinics or hospitals Cancer prevalence decreased 20% between January and June (because of decreased screenings)	COVID-19–specific mortality rate is 33% higher among patients with cancer	Increased patient wait times Decrease in patient education on cancer because of decrease in communications owing to lockdowns Increased advanced stage diagnosis	Before COVID-19, 7 months time interval between diagnosis and treatment. Additional delays under COVID-19	Screening programs paused and all non- emergent cancer surgeries delayed in the first wave. Private hospitals taken over to increase bed capacity	Increased advanced cancer cases Increased patient mortality rates at home Disrupted access to cancer medicines and routine oncology care	Cancer referrals decreased because of patient fear of COVID-19 and lockdowns Diversion of resources to COVID-19	Self-delayed therapy by patients because of COVID-19 A large cohort of national patients who were treated abroad were repatriated back to the UAE
Barriers to quality improvement under COVID-19 (if any)		Lack of available COVID-19 testing 50% reduction in diagnostic procedures in public health system	Urbanization of major cancer services (including palliative care) Limited availability of oncology facilities Low integration of care (psychology, patient navigation, etc)	Lack of infrastructure, oncology providers, poverty, national oncology guidelines, educational programs for medical oncologists and nurses, and patient education	Early on, telemedicine served as a barrier. Ireland rapidly overcame this during COVID-19 allowing access for health care providers, patients, and their families	Resource stratification (medicines) Access to reliable Internet for telemedicine Enhanced community quarantines and strict lockdowns	Increase in oncology medicine shortages Hospital inability to admit nonurgent patients Shared facilities with COVID-19 and oncology patients	Restriction of screening programs during first wave
Key recommendations to maintain quality improvement	Regular mass testing of health care providers and patients Prioritize development of cancer medicines	Implement telehealth (virtual check- ins and remote clinical monitoring) Postpone treatments that would not compromise patient outcomes	Expanding access to virtual multidisciplinary tumor boards and clinics Transfer of some tasks to primary care staff including screening, surveillance, and palliative care Expanded access to supportive and other medicines outside of major hospitals Increased skilled cancer workforce	Develop national oncology guidelines Improve communication across different sectors of cancer care between the government and private institutions	Collate and integrate cancer data; collaborate with international institutions Develop electronic organizational checklist to track all integrated resources	Develop a national set of quality measures to assess quality of care Create an integrated and effective communication model to disseminate information to patients	Admit COVID-19 patients to nonteaching hospitals Emphasize screening and triage on the basis of curability or treatability Focus on resource utilization; prioritize availability of essential cancer medicines	Prioritization of diagnostic, surgical, and therapeutic services Revision of hospital policies and procedures to improve safety Implement teleconsultation with training

^aObservations reflect experiences from date of first confirmed case through January 30, 2021.

fear of COVID-19, hospitals' unwillingness and inability to admit nonurgent patients, further diversion of resources to COVID-19 including medicines and laboratory services, diversion of oncology doctors to COVID-19–related care, filling hospitals with COVID-19 patients to the detriment of non-COVID-19 patients, financial impact on funding health care at public and private levels, medicine stockouts, and fake news affecting use of chloroquine, corticosteroids, and vaccines, including entry onto clinical studies especially vaccine studies at community, patient, and doctor level.

Oncology practices seeking to maintain high-quality cancer care services during a global pandemic should strive to continue cancer services by admitting COVID-19 patients to nonteaching hospitals without cancer services and reducing the risk of exposure of patients with cancer to COVID-19 through their screening and triage on the basis of their curability or treatability. In addition, they should focus on the utilization of cancer care resources, limit overlap or diversion of non-COVID-19 specialists, prioritize availability of essential cancer medicines rather than high-cost new chemical entities, and mitigate the spread of false information regarding COVID-19 treatments.

PERSPECTIVE FROM THE UNITED ARAB EMIRATES

In the United Arab Emirates, the highest number of confirmed COVID-19 cases occurred in May 2020 with a second wave beginning in September 2020. A large cohort of national patients who were treated abroad were repatriated back to the United Arab Emirates (UAE). Implementing teleconsultation had its own inherent challenges including acceptance among patients and physicians. Patients also became fearful of visiting the hospital for therapy. As a consequence of the COVID-19 pandemic, epidemiologic projections on the basis of estimates from England foresee a 20% increase in cancer mortality, mainly because of delays in diagnosis and/or treatment administration.¹³ Additional challenges stemming from the present pandemic include self-delayed therapy by patients, delay of elective surgeries, restriction of screening programs, and an increase of patients with signs and symptoms of malignancy not seeking treatment. Overall, the UAE saw a sharp increase of patients presenting with more advanced stages of disease.

As the COVID-19 pandemic continues, experiences from the first wave provided insight on future strategies to improve the quality of cancer care. Recommendations include prioritization of diagnostic, surgical, and therapeutic services, maintaining uninterrupted therapy for both existing and repatriated patients, sustaining chemotherapy administration standards, and minimizing risk of COVID-19 spread at facilities. The overall goal is to minimize the impact on prognostic outcomes of patients with either earlyor advanced-stage cancer. Additional recommendations include a review of hospital policies and procedures to improve the safety for both patients and staff. For example, some revisions may consist of the implementation of a strict no visitor policy, teleconsultation and prescreenings for patients, and a mask mandate. To maintain high quality of oncology care across entities at Dubai Health Authority, all center-specific guidelines and policies were reviewed and adapted to each center-specific cohort. Other quality directives included ensuring IV chemotherapy services were not interrupted, an increased usage of granulocyte colonystimulating factor support, and antibiotic coverage. A growing use of telemedicine stemmed from the pandemic. At Dubai Health Authority, physicians are required to complete a mandatory online training and course before the use of teleconsultation. With these recommendations, an oncoming second wave of COVID-19 should not affect the quality of cancer care. During the first wave, 99% of patients received therapy on time and without interruption, demonstrating it is possible to maintain quality oncology care even amid a pandemic.

In conclusion, the COVID-19 pandemic has created an unprecedented stress on cancer care delivery on a global scale. One of the highest priorities of ASCO's International Quality Steering Group is to help international members prioritize quality cancer care during the pandemic. As part of that effort, the Steering Group convened two webinars with ASCO members from eight countries to obtain their perspectives on quality improvement in cancer care during the pandemic with emphasis on the state of oncology care within the countries, barriers to quality improvement during the pandemic, and key recommendations to maintain quality improvement. The participating member countries differ dramatically in the number of confirmed COVID-19 cases (Fig 1) and their economic resources and cancer care delivery infrastructure. This resulted in some key recommendations to maintain quality improvement that are globally applicable (Table 1). Many of these recommendations center on the importance of expanding access to care, developing new treatments for both COVID-19 and cancer, expanding telemedicine, collecting and integrating cancer and COVID-19 registry data, developing guidelines and measures to guide quality care, and enhancing communication among the health care providers and governments in these complex and stressed systems. Other highpriority areas of concern that were addressed during the Steering Group webinars included examining the impact of COVID-19 on oncology staff who are at risk of burnout and the impact on quality of life of patients with cancer coping with their diagnoses during the pandemic. Having identified both positive and negative aspects of the global impact of the pandemic, the Steering Group is now looking ahead to the impact of COVID-19 vaccine development and implementation on delivery of quality cancer care.

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