



Visitation policies at NCI-designated comprehensive cancer centers during the COVID-19 pandemic

Jonathan C. Yeh¹ · Ishwaria M. Subbiah²  · Natasha Dhawan³ · Benjamin W. Thompson⁴ · Zachary Hildner⁵ · Areeba Jawed⁶ · Eric Prommer⁷ · Christian T. Sinclair⁵

Received: 12 December 2020 / Accepted: 24 March 2021 / Published online: 2 April 2021
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Abstract

Purpose Family/caregiver visitation provides critical support for patients confronting cancer and is associated with positive outcomes. However, the COVID-19 pandemic brought historic disruptions including widespread visitation restrictions. Here, we characterize in-depth the visitor policies of NCI-designated comprehensive cancer centers (CCCs) and analyze geographic/temporal patterns across CCCs.

Methods The public-facing CCC websites, including archived webpages, were reviewed to abstract initial visitation policies and revisions, including end-of-life (EoL) exceptions and timing of visitation restrictions relative to regional lockdowns. Chi-squared and Fisher's exact tests were employed to analyze associations between geographic region, timing, and severity of restrictions.

Results Most CCCs ($n=43$, 86%) enacted visitation restrictions between March 15 and April 15, 2020. About half barred all visitors for COVID-negative inpatients ($n=24$, 48%) or outpatients ($n=26$, 52%). Most ($n=36$, 72%) prohibited visitors for patients with confirmed/suspected COVID-19. Most ($n=40$, 80%) published EoL exceptions but the specifics were highly variable. The median time from initial restrictions to government-mandated lockdowns was 1 day, with a wide range (25 days before to 26 days after). There was no association between timing of initial restrictions and geographic location ($p=0.14$) or severity of inpatient policies ($p=1.0$), even among centers in the same city. Outpatient policies published reactively (after lockdown) were more restrictive than those published proactively ($p=0.04$).

Conclusion CCCs enacted strict but strikingly variable COVID-19 visitation restrictions, with important implications for patients/families seeking cancer care. A unified, evidence-based approach to visitation policies is needed to balance proven infection control measures with the needs of patients and families.

Keywords COVID-19 · Visitation · Oncology · Supportive care

Jonathan C. Yeh and Ishwaria M. Subbiah contributed equally to this manuscript.

✉ Ishwaria M. Subbiah
isubbiah@mdanderson.org

¹ Section of Palliative Care, Department of Medicine, Beth Israel Deaconess Medical Center, Boston, MA, USA

² Department of Palliative, Rehabilitation and Integrative Medicine, Division of Cancer Medicine, University of Texas MD Anderson Cancer Center, 1515 Holcombe Blvd, Unit 1414, Houston, TX 77030, USA

³ Hematology and Oncology, Dartmouth-Hitchcock Medical Center, Lebanon, NH, USA

⁴ Section of Palliative Care, Department of Medicine, Prisma Health, Columbia, SC, USA

⁵ Division of Palliative Medicine, Department of Internal Medicine, University of Kansas Medical Center, Kansas City, KS, USA

⁶ Department of Medicine, Division of Nephrology and Supportive Care, Wayne State University School of Medicine, Detroit, MI, USA

⁷ UCLA/VA Hospice and Palliative Medicine Program, UCLA School of Medicine, Los Angeles, CA, USA

Introduction

The coronavirus disease 2019 (COVID-19) pandemic has disrupted health care delivery for patients and families confronting serious illnesses such as cancer. At many cancer centers, the earliest steps to mitigate disease transmission and preserve protective equipment (PPE) centered on policies to restrict family/caregiver visitation.

Previous studies have associated visitation with improved patient/family satisfaction, reduced anxiety/distress, and improved communication [1]. Patients in intensive care report the presence of loved ones to be reinforcing and humanizing as they confront serious illness [2]. Recognizing the benefits of visitation and the competing need to limit contagion, we examined visitation policies implemented by NCI-designated comprehensive cancer centers (CCCs) during the COVID-19 pandemic and quantified the restrictiveness and variation between centers.

Methods

The public-facing websites of all 50 NCI-designated CCCs caring for adults were searched. The authors abstracted inpatient/outpatient visitor restrictions (as of June 17, 2020), the number of visitors allowed, and any exceptions, including for end-of-life (EoL). The Internet Archive, a digital repository of websites over time, was used to ascertain the initial date of each policy using each center's archived visitation- and COVID-19-related webpages. Later policies (archived October 2020 and January 2021) were similarly reviewed. Dates of regional lockdowns were obtained from government websites. Data abstraction/coding discrepancies were resolved by the principal investigator. Descriptive statistics summarized the results. Chi-square test and Fisher's exact test evaluated associations between timing of policies and geographic region or restrictiveness of policies, respectively.

Results

All 50 CCCs published visitor restrictions, the majority ($n=43$, 86%) between March 15, 2020, and April 15, 2020. The initial dates of two policies could not be determined. The median time between initial visitation restriction and state-imposed lockdown was 1 day. Centers published policies from 25 days before lockdown to 26 days after, with 26 (52%) centers enacting restrictions before lockdown. While more South and Southwest CCCs published restrictions before lockdown, and CCCs in the West published restrictions with or after, these associations were not statistically significant ($p=0.14$, Table 1), and likely reflect regional differences in government pandemic response rather than coordination between CCCs.

As of June 2020, about half of CCCs allowed zero visitors for inpatients ($n=24$, 48%) or outpatients ($n=26$, 52%). Most centers ($n=36$, 72%) allowed zero visitors for patients with confirmed/suspected COVID-19. Few CCCs allowed more than one visitor for inpatients ($n=4$, 8%) or outpatients ($n=1$, 2%). Of CCCs with both outpatient and inpatient restrictions, nearly half ($n=23$, 46%) had identical outpatient/inpatient policies, while the remaining were divided between more restrictive inpatient ($n=12$, 24%) or outpatient ($n=13$, 26%) policies. Most centers ($n=40$, 80%) mentioned an exception for EoL patients, but the details provided were highly variable (Table 1). Some centers also made exceptions for patients with physical/cognitive disability ($n=19$, 38%) or for caregiver education/discharge planning ($n=14$, 28%). Visitor policies remained restrictive over time, with 96% and 98% of centers allowing 1 visitor or less in October 2020 and January 2021, respectively.

Temporally, CCCs that enacted later initial restrictions (with or after lockdown) were more likely to restrict all outpatient visitors (Table 1, $p=0.04$). Timing of restrictions had no association with severity of inpatient restrictions ($p=1.0$) or presence of EoL exceptions ($p=1.0$). Additionally, there was no congruence between centers in close geographic proximity — even within the same city. For example, of the three CCCs in New York City, one allowed neither inpatient nor outpatient visitors, another allowed one visitor in either setting, and the third allowed one inpatient visitor but no outpatient visitors. For these CCCs, EoL exceptions were either not mentioned, mentioned without further information, or allowed two or more visitors.

Discussion

In this observational study, we characterized all COVID-19 visitor restrictions implemented by NCI-designated CCCs. Nationally, nearly half of centers disallowed visitors altogether, and most of the remaining allowed only one. While pre-pandemic visitor policies were not locatable on archived webpages, to our knowledge, policies enacted during the pandemic were universally aimed at reducing visitation. Furthermore, policies remain highly restrictive nearly a year into the pandemic, despite improved PPE supply and testing/tracing capabilities.

The risk of contagion by hospital visitors remains poorly characterized. To our knowledge, no studies have demonstrated that visitation, when paired with rigorous hygiene measures, increases contagion. Observational studies have shown that multimodal infection control measures (symptom screening and protective equipment for visitors and employees, hand hygiene, and isolation precautions) reduced nosocomial transmission of seasonal RSV, and during the 2009 H1N1 influenza pandemic [3, 4]. Meanwhile, one trial of unrestrictive

Table 1 Visitor policies and end-of-life exceptions at NCI CCCs

Numbers of visitor allowed in different settings ^a						
Number of visitors	Non-COVID inpatients	COVID/PUI ^b inpatients	Outpatients	End-of-Life, non-COVID inpatients	End-of-Life, COVID/PUI ^b inpatients	
0	24 (48%)	36 (72%)	26 (52%)	1 (2.5%)	5 (12.5%)	
1	22 (44%)	0	21 (42%)	5 (12.5%)	4 (10%)	
2 or more	4 (8%)	0	1 (2%)	22 (55%)	2 (5%)	
Case-by-case	0	0	1 (2%)	5 (12.5%)	0	
Not specified	0	14 (28%)	1 (2%)	7 (17.5%)	29 (72.5%)	
Geographic region and timing of initial policies at NCI CCCs (<i>n</i> = 48) ^c						
Region	Atlantic	South	Midwest	Southwest	West	
Before lockdown (<i>n</i> = 25)	7	5	7	5	2	
Same day or after lockdown (<i>n</i> = 23)	8	2	5	1	7	
Restrictiveness vs. timing of initial policies (<i>n</i> = 48) ^d						
Policy	Inpatient visitors (non-COVID patients)		Outpatient visitors		End-of-life exception	
	Zero	One or more	Zero	One or More	Present	Not Present
Before lockdown (<i>n</i> = 25)	13 (52%)	12 (48%)	10 (40%)	15 (60%)	20 (80%)	5 (10%)
Same day or after lockdown (<i>n</i> = 23)	11 (48%)	12 (52%)	15 (65%)	6 (26%)	18 (78%)	5 (22%)

^a Visitor policies at 50 NCI-designated comprehensive cancer centers, and end-of-life policies at 40 centers as of June 17, 2020. Ten centers did not have a published EoL policy

^b PUI, “persons under investigation” for COVID

^c Atlantic: CT, MA, MD, NH, NJ, NY, PA, and District of Columbia; South: AL, FL, GA, NC, TN; Midwest: IL, IN, MI, MN, MO, OH, WI; Southwest: AZ, CO, NM, TX, UT; West: CA, OR, WA. The initial policy date could not be determined for two centers. A chi-square test of independence showed that there was no significant association between timing of initial policy and region. χ^2 (4, *n* = 48) = 6.97, *p* = 0.14

^d Two centers did not specify number of outpatient visitors allowed. Centers that published initial visitor restrictions on the same day or after government lockdown were significantly more likely to allow zero outpatient visitors (*p* = 0.04 by Fisher’s exact test) compared to centers that published restrictions before lockdown. There was no difference in the inpatient visitor policy (*p* = 1.0 by Fisher’s exact test) or presence of end-of-life exception (*p* = 1.0 by Fisher’s exact test) between the two groups

versus restrictive ICU visitation found the former was not associated with infectious complications for patients and, in fact, was associated with decreased patient anxiety and fewer cardiovascular complications (12.6% vs. 28.8%, *p* = 0.03) [5].

We further observed substantial variation in the visitor policies across CCCs, though most policies were implemented in a narrow timeframe and similar geographic/temporal contexts (metropolitan areas during a surge of COVID-19 cases). Thus, patients and families seeking care at one center in a large city may have had dramatically different experiences than at another center miles away.

An important limitation is that the data were obtained from publicly available websites. Institutions may have implemented more nuanced internal policies (case-by-case exceptions) not captured in this study. We purposefully chose this approach to emulate patient/family experiences seeking information online about cancer care amidst a pandemic. Because patients and caregivers greatly value visitation, accessible, detailed hospital policies are crucial to care delivery during a pandemic. [1]

In summary, NCI-designated CCCs enacted highly restrictive but highly variable COVID-19 visitation policies. Although

the pandemic necessitated fast deployment of management plans by individual centers, we propose that it also presents opportunity for greater collaboration between organizations and health systems that share the mission of caring for patients with cancer. Timely guides on care delivery during the pandemic, such as published by the American Society of Clinical Oncology, emphasized the importance of supportive services but did not establish guidelines for implementation of visitation restrictions [6]. On a national level, an evidence-based approach to hospital visitation is warranted — one which balances proven infection control measures with the paramount needs of patients and families.

Author’s contribution All authors contributed to the study conception and design. Material preparation, data collection, and analysis were performed by Jonathan Yeh, Ishwaria Subbiah, Natasha Dhawan, Benjamin Thompson, Zachary Hildner, and Areeba Jawed. The first draft of the manuscript was written by Jonathan Yeh, Ishwaria Subbiah, and Natasha Dhawan. All authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

Availability of data and material Dataset can be provided upon request.

Code availability Not applicable

Declarations

Ethics approval Not applicable

Consent to participate Not applicable

Consent for publication Not applicable

Conflict of interest The authors declare no competing interests.

References

1. Smith L, Medves J, Harrison MB, Tranmer J, Waytuck B (2009) The impact of hospital visiting hour policies on pediatric and adult patients and their visitors. *JBI Libr Syst Rev* 7(2):38–79. <https://doi.org/10.11124/01938924-200907020-00001>
2. Bergbom I, Askwall A (2000) The nearest and dearest: a lifeline for ICU patients. *Intensive Crit Care Nurs* 16(6):384–395. <https://doi.org/10.1054/icc.2000.1520>
3. French CE, McKenzie BC, Coope C, Rajanaidu S, Paranthaman K, Pebody R, Nguyen-Van-Tam JS, Noso-RSV Study Group, Higgins JP, Beck CR (2016 Jul) Risk of nosocomial respiratory syncytial virus infection and effectiveness of control measures to prevent transmission events: a systematic review. *Influenza Other Respir Viruses* 10(4):268–290. <https://doi.org/10.1111/irv.12379>
4. Poalillo FE, Geiling J, Jimenez EJ (2010) Healthcare personnel and nosocomial transmission of pandemic 2009 influenza. *Crit Care Med* 38(4 Suppl):e98–e102. <https://doi.org/10.1097/CCM.0b013e3181d41d45>
5. Fumagalli S, Boncinelli L, Lo Nostro A, Valoti P, Baldereschi G, Di Bari M, Ungar A, Baldasseroni S, Geppetti P, Masotti G, Pini R, Marchionni N (2006) Reduced cardiocirculatory complications with unrestricted visiting policy in an intensive care unit: results from a pilot, randomized trial. *Circulation*. 113(7):946–952. <https://doi.org/10.1161/CIRCULATIONAHA.105.572537>
6. (2020) ASCO Special Report: A Guide to Cancer Care Delivery During the COVID-19 Pandemic. <https://www.asco.org/sites/new-www.asco.org/files/content-files/2020-ASCO-Guide-Cancer-COVID19.pdf>. Accessed 9 May 2020

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