Journal Pre-proof

Sigal Israilov, Mona Krouss, MD, Milana Zaurova, MD, Hillary S. Jalon, MS, Georgia Conley, RN, BSN, MPA, Pavel Shulman, MD, Marina Ivanyuk, MD, Elizabeth Jalkut, MD, Carla Saladini-Aponte, MD, Haseen Sharma-Cooper, MD, Robert Smeltz, MA, RN, NP, ACHPN, Robert T. Faillace, MD, Eric K. Wei, MD, MBA, Hyung J. Cho, MD

Please cite this article as: Israilov S, Krouss M, Zaurova M, Jalon HS, Conley G, Shulman P, Ivanyuk M, Jalkut E, Saladini-Aponte C, Sharma-Cooper H, Smeltz R, Faillace RT, Wei EK, Cho HJ, National outreach of telepalliative medicine volunteers for a New York City safety net system COVID-19 pandemic response, *Journal of Pain and Symptom Management* (2020), doi: https://doi.org/10.1016/j.jpainsymman.2020.05.026.

This is a PDF file of an article that has undergone enhancements after acceptance, such as the addition of a cover page and metadata, and formatting for readability, but it is not yet the definitive version of record. This version will undergo additional copyediting, typesetting and review before it is published in its final form, but we are providing this version to give early visibility of the article. Please note that, during the production process, errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

TITLE

National outreach of telepalliative medicine volunteers for a New York City safety net system

COVID-19 pandemic response

AUTHORS

Sigal Israilov[1,2]; Mona Krouss, MD[1,3]; Milana Zaurova, MD[1,4,5]; Hillary S. Jalon, MS[1]; Georgia

Conley, RN, BSN, MPA[1]; Pavel Shulman, MD[6,7]; Marina Ivanyuk, MD[8]; Elizabeth Jalkut, MD[9];

Carla Saladini-Aponte, MD[10]; Haseen Sharma-Cooper, MD[11]; Robert Smeltz, MA, RN, NP,

ACHPN[12,13]; Robert T. Faillace, MD[10,14]; Eric K. Wei, MD, MBA[1]; Hyung J. Cho, MD[1,13]

AUTHOR AFFILIATIONS

1-Department of Quality and Safety, NYC Health and Hospitals, New York, NY

2-Department of Medical Education, Icahn School of Medicine at Mount Sinai, New York, NY

3-Department of Medicine, Icahn School of Medicine at Mount Sinai, New York, NY

4-NYC Health and Hospitals/Elmhurst, New York, NY

5-Department of Emergency Medicine, Icahn School of Medicine at Mount Sinai, New York, NY

6-NYC Health and Hospitals/Kings County, New York, NY

7-Department of Medicine, SUNY Downstate, New York, NY

8-Department of Medicine, NYC Health and Hospitals/Coney Island, New York, NY

9-Department of Medicine, NYC Health and Hospitals/Woodhull, New York, NY

10-Department of Medicine, NYC Health and Hospitals/Jacobi, New York, NY

11-Department of Psychiatry, NYC Health and Hospitals/North Central Bronx, New York, NY

12-NYC Health and Hospitals/Bellevue, New York, NY

13-Department of Medicine, NYU Grossman School of Medicine, New York, NY

14-Department of Medicine, Albert Einstein College of Medicine, New York, NY

CORRESPONDING AUTHOR

Hyung J. Cho, MD

Chief Value Officer

NYC Health and Hospitals

125 Worth St, #507

New York, NY 10013

Phone: 646-815-4062

Fax: 917-900-1489

Email: choh7@nychhc.org

WORD COUNT: 1500/1500

ABSTRACT

The COVID-19 surge in New York City created an increased demand for palliative care (PC) services. In staff-limited settings such as safety net systems, and amid growing reports of healthcare worker illness, leveraging help from less-affected areas around the country may provide an untapped source of support. A national social media outreach effort recruited 413 telepalliative medicine volunteers (TPMV). After expedited credentialing and onboarding of 67 TPMV, a 2-week pilot was initiated in partnership with five public health hospitals without any previous existing telehealth structure. The volunteers completed 109 PC consults in the pilot period. Survey feedback from TPMV and on-site PC providers was largely positive, with areas of improvement identified around electronic health record navigation and continuity of care. This was a successful, proof of concept, quality improvement initiative leveraging TPMV from across the nation for a PC pandemic response in a safety net system.

KEY WORDS

Palliative care; telehealth; COVID-19; pandemic response

RUNNING TITLE

Telepalliative Medicine Outreach in COVID-19

INTRODUCTION

The first confirmed case of COVID-19 in New York City (NYC) occurred on March 1, 2020.[1] Since then, the city became the unfortunate epicenter of the pandemic in the US, with over 40 thousand hospitalizations and 13 thousand deaths, as of May 1, 2020.[1] NYC Health and Hospitals (NYC H+H), the largest public health system in the US, was pivotal in its role to deliver care to the people of the city. Amidst the growing number of critically ill patients, a centralized response was mobilized for palliative care (PC).

Previously published models for COVID-19 response in PC included strategies from institutions that relied on high levels of staffing[2,3], which many safety-net health systems lack[4]. Within our system, most hospitals had two or fewer full-time equivalents (FTE), with some lacking any PC clinicians (Table 1). In staff-limited settings, and amid growing reports of healthcare worker illness and further reduction of staffing[5], leveraging help from less-affected areas around the country may provide an untapped source of support. Telepalliative medicine allows for consultative services from remote locations, limiting provider exposure and personal protective equipment (PPE) use.[3] As a part of the NYC H+H surge response, we rapidly developed a multi-hospital quality improvement strategy to support local PC efforts through sourcing of telepalliative medicine volunteers (TPMV) from across the country.

METHODS

NYC H+H is an urban, safety-net health system with 11 hospitals and 5 post-acute care facilities, serving over 1.1 million patients yearly. The system-wide PC response began on March 30,

2020, with peak surge on April 9. Central office quality and safety team partnered with the system PC council and convened conference calls 1-2 times/week during the peak surge, centering on how to rapidly expand PC efforts. The call for external TPMV was initiated on April 2 through social media outreach (Twitter, LinkedIn). Site visits or calls were made over a 3-week period to each of the system's hospitals and included discussion with various leads from PC, medicine, emergency medicine, critical care, as well as hospital executive leadership, to determine if and how TPMV would be helpful for their site.

TPMV who could volunteer for at least three shifts received expedited cross-credentialing at all acute care facilities, including remote access to the electronic health record (EHR) for documentation. The central coordinators developed a schedule for each site of 1-2 volunteers/day, and modified coverage for weekends. Central coordinators relayed contact information and orientation materials via group email daily. Site leads reached out to volunteers daily to orient and coordinate consults. Brief surveys and verbal feedback were elicited from TPMV after each shift. Additionally, a survey was sent to site leads after the pilot period.

RESULTS

Five hospitals agreed to participate. The other hospitals felt they had adequate staffing, either from internal staff redeployment or external in-person volunteers. Among participating hospitals, the dedicated FTE prior to the surge averaged 1.0 per site (range 0-2.0), with two

sites having no existing PC service. In contrast, the hospitals that did not participate averaged

4.2 FTE per site (range 2.0-4.5), with 3 sites having additional fellows. Hospital capacity ranged

from 213 to 627 beds (Table 1).

The external recruitment process enlisted 413 volunteers (150 physicians, 96 chaplains, 66

nurse practitioners, 39 nurses, 28 social workers, 15 medical students, 2 physician assistants

and 17 other). Sixty-four clinicians were emergency credentialed and onboarded for a 14-day

pilot period, from April 15-28, 2020. A total of 109 consults were completed over this 2-week

period, staffed by 22 volunteers over 67 shifts, averaging 8.7 TPMV consults per day.

Twenty-eight post-shift volunteer surveys were collected from 20 volunteers. Of all reported

consults, most involved goals of care conversations (56%) and family updates (41%), followed in

frequency by emotional support (39%), anticipatory guidance (24%), hospice placement (5%)

and bereavement (5%). Consults types were not mutually exclusive, as survey respondents

could choose multiple options. Critical care patients comprised the majority of consults (60%),

with the remainder of consults coming from medical-surgical units. TPMV feedback

encompassed the following domains: communication, electronic medical record, familiarity

with local policies, continuity of care, and workload (Table 2). While feedback was largely

positive, the most commonly received constructive feedback included difficulty contacting the

primary team, documenting in the EHR, coordinating social services, and following up on

previously assigned consults. Workflow was rapidly modified in response to feedback through

interventions such as disseminating local directories to TPMV, providing an EHR documentation

tip sheet, pairing TPMV with site-based social workers when appropriate, and connecting TPMV

assigned to the same site on consecutive days to facilitate verbal handoff.

Additionally, all 5 site leads completed a survey sent after the end of the pilot period, consisting

of 7 statements on a Likert scale and 2 open-ended questions regarding the initiative's

challenges and strengths. All respondents strongly agreed that advanced care planning

discussions were needed at a higher rate during COVID-19 surge and that additional PC services

were needed to meet the demand. In addition, all respondents agreed or strongly agreed that

medical teams were receptive to working with TPMV and that the benefits of the consultation

service outweighed the time spent coordinating workflow and orienting new volunteers. Lastly,

all respondents reported an interest in leveraging this program for future surges.

DISCUSSION

We successfully implemented a telepalliative medicine response within a large safety-net

system without a preexisting telehealth infrastructure. Within just 72 hours of the initial

outreach, over 400 volunteers enlisted, reflecting a rapid and robust response. Overall,

volunteers and site leads were appreciative of this program and viewed it as a mutually

beneficial partnership for current and future surges. To our knowledge, this is the first model to

leverage external TPMV from across the country for an institutional COVID-19 pandemic

response. Although early in our operations, several concepts resonated through our process,

which may aid other institutions in future efforts.

Changes to the credentialing and onboarding process were crucial to the program's success. We began expedited disaster-level, cross-credentialing across the facilities and ensured malpractice coverage. Remote EHR access and onboarding were simplified, and dedicated staff helped usher volunteers through this complex process and troubleshoot any issues instead of relying on already busy site leads. Altogether, our modified time for TPMV to "go-live" took 3 days, a dramatic improvement from the 3-month process prior to the surge. We believe this program would not be feasible without the concerted, interdepartmental effort from executive leadership, credentialing, human resources, ambulatory, and informatics to help streamline this cumbersome process.

Through a call for help from the city and state, there were a significant number of in-person volunteers available at the peak of the surge. For many reasons, help on the ground is often preferred over remote, largely stemming from the ease and efficiency of communication. A physically present volunteer can naturally absorb conversations in between phone calls, and communication is augmented through facial and body expressions.[6] However, remote volunteers offer unique advantages. They do not require the additional coordination of hotel, transportation, food, as well as logistical setups such as photo IDs, local orientations, immunization checks, or N-95 fit testing. They spared PPE use, a critical supply during the pandemic. Additionally, and perhaps most importantly, TPMV prevented unnecessary exposure of healthcare workers. Telemedicine should be considered a standard during this pandemic given the potential for healthcare worker harm.[7]

Certain limitations were noted. First, this was a 2-week pilot, with limited data for sustainability or continued need. However, as we continue to see many deaths, intensive care units well beyond capacity, and potential for subsequent surges, we anticipate the need to continue. Additionally, as in-person volunteer numbers are expected to wane, the need for TPMV redeployment may increase. Second, this consult service was seldomly used in some sites. This was largely due to availability of in-person volunteers, and, as with any new consulting service, adoption required significant time and effort to spread the word, troubleshoot, and build trusting relationships among clinicians. The primary goal of this initiative was to support PC team efforts on the ground. Offloading any goals of care discussions from the PC or inpatient teams during a busy day of the pandemic surge was considered a victory. Third, we did not obtain direct feedback from the primary teams or patients regarding the quality of the consults. Lastly, this program depended in part to the uplifting of certain regulations, including HIPAA and the need for a New York medical license.[8] We anticipate these regulatory changes to continue, but some TPMV may come from within-state.

In summary, this was a proof of concept and pilot harnessing a national source of PC clinicians for a pandemic response for our safety-net health system. Further study is needed to understand the continued need, sustainability, and optimal level of operations. In addition to increasing video communications, next steps can focus on upstream goals of care discussions, integrating automatic inpatient consults, and supporting ambulatory and post-acute facilities. We anticipate this initiative to continue, and we hope this may serve as a model for other institutions during subsequent COVID-19 surges and other disaster events.

DISCLOSURE/CONFLICT OF INTEREST

None

REFERENCES

1.   COVID-10 Data, NYC Health website. https://www1.nyc.gov/site/doh/covid/covid-19-
        data.page Accessed May 3, 2020.

2.   Fausto J, Hirano L, Lam D, et al. Creating a Palliative Care Inpatient Response Plan for
        COVID19 - The UW Medicine Experience. *J Pain Symptom Manage.* 2020.

3.   Humphreys J, Schoenherr L, Elia G, et al. Rapid Implementation of Inpatient
        Telepalliative Medicine Consultations During COVID-19 Pandemic. *J Pain Symptom
        Manage.* 2020.

4.   Lyles CR, Handley MA, Ackerman SL, et al. Innovative Implementation Studies
        Conducted in US Safety Net Health Care Settings: A Systematic Review. *American journal
        of medical quality : the official journal of the American College of Medical Quality.*
        2019;34(3):293-306.

5.   Characteristics of Health Care Personnel with COVID-19 — United States, February 12–
        April 9, 2020. MMWR Morb Mortal Wkly Rep 2020;69:477–481. DOI:
        http://dx.doi.org/10.15585/mmwr.mm6915e6external.

6.   Mehrabian A. *Nonverbal communication.* Transaction Publishers; 1972.

7.   Cho HJ, Feldman LS, Keller S, Hoffman A, Pahwa AK, Krouss M. Choosing Wisely in the
        COVID-19 era: Preventing harm to healthcare workers. J Hosp Med 2020. In press.

8.   No. 202.27: Continuing Temporary Suspension and Modification of Laws Relating to the

        Disaster Emergency, New York State Website. https://www.governor.ny.gov/news/no-

        20227-continuing-temporary-suspension-and-modification-laws-relating-disaster-

        emergency Accessed May 12, 2020.

TABLES AND FIGURES

Table 1. Baseline palliative care staffing and TPMV consults per participating hospital.

Hospital	Bed Capacity	PC staffing prior to surge (FTE)	TPMV consults per day
Coney Island	371	1.0 nurse 1.0 physician	1.7
Jacobi	457	1.5 nurse practitioner 0.5 physician	1.4
Kings County	627	1.0 physician	1.8
North Central Bronx	213	0	0.9
Woodhull	320	0	2.9
TOTAL	1988	1.0 nurse 1.5 nurse practitioner 2.5 physician	8.7

Table 2. TPMV feedback and changes made to operations.

Domain	Changes Made
COMMUNICATION	
Communication with patients/families	Encouraging use of Doximity Dialer or Google Voice to maintain TPMV privacy Instructing medical teams to make families aware of upcoming call from TPMV
Communication with medical team	Providing site-specific team/unit/service directories
Communication with site and central	Creating a daily group message connecting

coordinators	TPMV with coordinators
ELECTRONIC HEALTH RECORD	
EHR access/log-in	Specifying correct EHR context in introductory email
EHR documentation	Creating a remote PC visit documentation template (dot phrase)
Inconsistent location of patient/family contact information	Creating EHR tip sheet Adding family contact information to handoff format
SITE SPECIFIC LOGISTICS	
Role of social work, nursing, medical teams	Including all team members' roles and responsibilities in introductory email
Services available	Creating site-specific orientation manuals
End-of-life policy or guidance	Connecting TPMV to on-site social workers
CONTINUITY	
Sign-out process	Providing contact information of previous day's TPMV to facilitate verbal handoff
TPMV wanting to follow patients daily beyond shift	Allowing continuity of communication beyond "formal" consulting days
Rapport building with families	Encouraging TPMV to take shifts on consecutive days with the same hospital
WORKLOAD	
Not enough consults	Reaching out to primary teams daily Developing shared patient lists for potential consults