

Journal Pre-proof



Development of a Palliative Care Toolkit for the COVID-19 Pandemic

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40 **Abstract**

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42 The COVID-19 pandemic has led to high numbers of critically ill and dying patients in need of
43 expert management of dyspnea, delirium, and serious illness communication. The rapid spread
44 of SARS-CoV-2 creates surges of infected patients requiring hospitalization and puts palliative
45 care programs at risk of being overwhelmed by patients, families, and clinicians seeking help. In
46 response to this unprecedented need for palliative care, our program sought to create a
47 collection of palliative care resources for non-palliative care clinicians. A workgroup of
48 interdisciplinary palliative care clinicians developed the Palliative Care Toolkit, consisting of a
49 detailed chapter in a COVID-19 online resource, a mobile and desktop web application, one-
50 page guides, pocket cards, and communication skills training videos. The suite of resources
51 provides expert and evidence-based guidance on symptom management including dyspnea,
52 pain, and delirium, and also on serious illness communication, including conversations about
53 goals of care, code status, and end-of-life. We also created a nurse resource hotline staffed by
54 palliative care nurse practitioners and virtual office hours staffed by a palliative care attending
55 physician. Since its development, the Toolkit has helped us disseminate best practices to non-
56 palliative care clinicians delivering primary palliative care, allowing our team to focus on the
57 highest-need consults, and increasing acceptance of palliative care across hospital settings.

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61 Introduction

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63 Palliative care can play a central role in a healthcare institution's response to the COVID-
64 19 pandemic.¹ The high numbers of critically ill and dying patients create a sharp increase in the
65 need for expert management of dyspnea, delirium, and serious illness conversations, in
66 particular. With the rapid spread of COVID-19 driving surges of infected patients requiring
67 hospitalization, the demand for palliative care consultation can accelerate quickly, putting
68 programs at risk of becoming overwhelmed by the volume of patients, families, and referring
69 teams in need of help.²

70 Aware of this possibility, our palliative care program at Dana-Farber Cancer Institute
71 (DFCI) and Brigham and Women's Hospital (BWH) created a compendium of palliative care
72 educational materials over six weeks that could serve as a resource to non-palliative care
73 clinicians caring for these patients. To build the primary palliative care skillset of these
74 clinicians and to expand our reach, we organized these resources into a Palliative Care Toolkit
75 that we made available to frontline clinicians caring for patients with palliative care needs
76 during the pandemic.

77

78 Methods

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80 First, we put together an interdisciplinary workgroup comprised of attendings, fellows,
81 nurse practitioners, educators, and informaticians to create the Toolkit. Team members were
82 assigned to work on particular sub-projects, with ongoing collaboration and exchange of
83 resources across the larger group. The workgroup met several times a week for several weeks
84 and then weekly thereafter to monitor the progress of projects and strategize about next steps.

85 We identified and followed several principles: 1) tools should focus on the care of patients with
86 COVID-19, although they may have wider applicability, 2) tools should be clear, concise, and
87 reflect palliative care best practices, 3) tools should be accessible to a wide variety of clinicians
88 in a wide variety of settings, and 4) although tools may take different forms and formats, they
89 should have internal consistency in content. As we created the Toolkit, we referenced materials
90 at our institutions³⁻⁵ as well as outside institutions, including materials from Massachusetts
91 General Hospital and VitalTalk.^{6,7}

92 We started by writing a detailed palliative care chapter for covidprotocols.org, a
93 comprehensive online resource created by the BWH Division of Pulmonary and Critical Care
94 Medicine to disseminate best practices in treating patients with COVID-19. A subgroup of us
95 subsequently distilled information from that chapter to create one-page palliative care
96 summaries and pocket cards. We gave these to clinicians working in the Emergency
97 Department, COVID ICU's, and COVID Hospital Medicine services and also adapted them for use
98 by bedside nurses. Simultaneously, a separate subgroup built a web application (Pallicovid.app)
99 to host these resources online and to make them universally accessible by any mobile or
100 desktop device. An additional subgroup scripted and filmed six short communication skills
101 videos modeling techniques to use in goals of care conversations in the Emergency
102 Department, ICU, and Hospital Medicine settings.

103 Once our resources were developed, we worked with the leadership of each
104 collaborating clinical service to disseminate our tools by email communication and by posting to
105 their online platforms for clinical resources. Additionally, we realized that some clinicians would
106 have questions not covered by the tools, no matter how comprehensive. To meet this need, we

107 created two additional resources: 1) a 24/7 palliative care COVID nurse resource line covered by
108 our nurse practitioners to advise bedside nurses, and 2) daily videoconference office hours
109 staffed by one of our attending physicians available to hospital teams with palliative care
110 management questions.

111
112 **Results**
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114 The Toolkit, available at pallicovid.app, includes a collection of resources described in
115 Table 1. Users can access links to the one-page summaries, pocket cards, covidprotocols.org,
116 and the communication skills videos.

117 The combination of physical tools (pocket cards and one-page summaries), online tools
118 (the palliative care section of covidprotocols.org and communications skills videos), real-time
119 support tools (the 24/7 nurse resource line, daily palliative care office hours), and the Pallicovid
120 app has been well received by referring teams. We are able to direct clinicians to these
121 resources to answer straightforward questions and as a result we have been better able to
122 focus on more complex consultations that require higher-level palliative care expertise.

123 In response to the pandemic, we have also built new clinical programs aligned with the
124 Emergency Department, ICU, and Hospital Medicine teams. As we connected with attendings,
125 trainees, nursing leaders, and bedside nurses in those settings, we distributed information
126 about the Toolkit and made the resources available to all. Doing so has strengthened our
127 credibility as helpful partners in the crisis, even if we were not able to perform a consultation
128 for every patient we were called to see.

129 We plan to continue to enhance the Toolkit, including adding a coaching option for
130 referring teams needing more robust help with a particular case, but not a full consult.
131 Meanwhile, we are finding that the current resources are being met with great enthusiasm.
132 Covidprotocols.org had more than 660,000 page views between March 31, when the palliative
133 care chapter went live, and May 4. Similarly, the pockets cards have been positively received;
134 we ran out of the first order of 300 cards within two weeks. In addition, the Pallicovid app was
135 accessed by over 2000 users between April 7 (its launch date) and May 4th.

136
137 **Discussion**
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139 The COVID-19 pandemic is providing surprising opportunities for creativity in the midst
140 of chaos and hardship. Our group's experience creating the Palliative Care Toolkit is one such
141 example, allowing us to pull our varied skills and interests together in order to rapidly create a
142 suite of helpful resources in anticipation of a surge of seriously ill patients at our hospital. We
143 will continue to track the use of the various resources over time and ask for feedback from
144 referring clinicians to determine which ones are proving especially useful. We will also adapt
145 different parts of the Toolkit for different clinical settings where appropriate; the
146 communication skills videos are one example of this kind of specialization.

147 We anticipate that many clinical and educational strategies developed during the
148 pandemic will continue to be useful long afterward. In creating the Toolkit, our group is
149 discovering new opportunities to expand our program's reach and help referring teams without
150 the need to perform a full consultation in response to every request. We are still experimenting
151 with which requests for consults can be adequately addressed by pointing to the resources in

152 the Toolkit and which requests should result in full consults, and we are in the process of
153 creating algorithms to standardize our triage practice. But we are embracing the possibilities
154 afforded by having an array of specific, useful tools to put in the hands of our colleagues to help
155 them care for their patients, especially with real-time back up from the nursing resource line
156 and daily office hours. Our early experience demonstrates that we can provide a high level of
157 support and availability while using our human resources far more efficiently than we have in
158 the past.

159 A more ambitious hope is that the Toolkit will help strengthen the integration of our
160 palliative care program within our hospital. While our team is well supported by the hospital, in
161 the minds of some of our colleagues our specialty still remains inextricably linked to end of life
162 care. As we now help teams care for patients with COVID-19 who sometimes recover from
163 critical illness, it seems possible that the pandemic is creating an opening for real culture
164 change in how palliative care is viewed at our institution. The Palliative Care Toolkit is one
165 tangible demonstration of our intention to be available to teams caring for seriously ill patients
166 regardless of life expectancy or code status.

167 The resources included in the DFCI/BWH Palliative Care Toolkit can serve as a useful
168 example for other programs facing challenges similar to our own. These tools can be adapted
169 to a wide variety of clinical settings that are anticipating or experiencing higher than usual
170 palliative care needs during the pandemic. We hope other programs find – as we have found –
171 that the Toolkit helps disseminate best practices in communication and symptom management,
172 allowing palliative care specialists to focus on the highest-need consults, and increasing
173 acceptance of palliative care across hospital settings.

174

175 **Disclosure/Conflict of Interest**

176 Dr. Abraham reports personal fees from UpToDate, personal fees from Johns Hopkins

177 University Press, personal fees from Pfizer, other from Manipal University and Tata Memorial

178 Hospital, and personal fees from Living Beyond Breast Cancer during the conduct of the study.

179 All other authors have nothing to disclose.

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Table 1. The DFCI/BWH Palliative Care Toolkit for the COVID-19 Pandemic

TOOL	DESCRIPTION	HOW TO ACCESS
Pallicovid.app	Online progressive web application that can be downloaded to a smartphone or desktop with links to the one-page summaries, pocket cards, covidprotocols.org, communication videos, and links to institution-specific resources	Online at pallicovid.app, also available as mobile phone or desktop applications
Palliative Care section of CovidProtocols.org	Online resource with guidelines for managing anxiety, dyspnea, pain, nausea/vomiting, constipation, care of the imminently dying patient, and communication skills, also with links to institution-specific resources	Online at Covidprotocols.org, link from pallicovid.app
One-page summaries	2 one-page guides for managing dyspnea, pain, delirium, constipation, and goals of care conversations	Posted in clinician workrooms; online at covidprotocols.org and pallicovid.app
Pocket cards	Concise guidelines from one-page summaries	Distributed by hand, covidprotocols.org, pallicovid.app
Communication skills videos	Six short videos specific to different clinical settings (3 for the ICU, 2 for Hospital Medicine, 1 for the ED) with guidelines on how to discuss serious news, goals of care, and code status.	Links from covidprotocols.org, pallicovid.app
COVID Nurse resource line	Pager covered 24/7 by palliative care nurse practitioners for nursing advice on communication and symptom management for patients with COVID-19 and their families	BWH pager
Palliative Care office hours	One-hour availability offered daily by a palliative care attending for informal consultation, curbsides	Zoom line