

Commentary

## COVID-19 — A Review of the Impact it has made on Supportive and Palliative Care Services Within a Tertiary Hospital and Cancer Centre in Singapore

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### Introduction

Singapore experienced its first case of COVID-19 on 23 January 2020 and within 2 weeks, the Disease Outbreak Response System Condition (DORSCON) was elevated from yellow to orange to escalate and guide national response.<sup>1,2</sup> In order to halt community spread of the infection, which had gained momentum in the course of 2 months, Singapore introduced the ‘circuit breaker’ on 7 April 2020. This saw movement and interactions in public and private places restricted, with schools closing, travel and gatherings limited, and work-from-home measures instituted.<sup>3,4</sup>

The COVID-19 virus and the extraordinary measures set in place led to significant changes in the healthcare landscape and the delivery of Supportive and Palliative Care (SPC) services in Singapore. To meet these challenges, the Division of SPC (DSPC) at National Cancer Centre Singapore (NCCS) had to adapt its in-patient consult service to the oncology, haematology, renal, respiratory and Intensive Care Units (ICU) at Singapore General Hospital (SGH) and its own outpatient SPC services.

Our applied strategies, their impact and lessons learnt are featured in Table 1. Here, we focus on the key learning points that may offer guidance to other healthcare professionals (HCP)s facing similar problems brought on by the crisis.

### Inpatient service

In light of the pandemic, consultant led inpatient services saw 3 significant changes to its practice.

First, to ensure social distancing, joint ward rounds and in-person multidisciplinary team meetings (MDM) s with haematology, oncology and ICU teams were suspended. In their place, small segregated autonomous teams, each consisting of a specialist nurse, medical officer and a senior clinician (henceforth “small teams”), were formed. These small teams functioned within specific geographical locations within the campus and were an adaption to redeployments of HCPs to specialised COVID-19 wards, and screening areas on and off-site. To circumvent the shortage of SPC presence on many wards, the small teams established symptom control guidelines, provided telephone advice and made palliative care resources available online.<sup>5</sup>

Secondly, in pre-empting the overwhelming of the healthcare system, focus was placed on discharge and advanced care planning conversations whenever possible. Although symptom management was not at risk, manpower limitations raised concerns over the compromise of holistic support provided to sickly patients and families that were physically separated from one another. Indeed, whilst DSPC saw a 22.2% reduction in referrals, the proportion of complex clinical and psychosocial referrals increased. As such, medical social workers (MSWs) from NCCS were called to participate in online case discussions and MDMs, and to provide telephone and teleconferencing support for patients and families who were facing difficulties with bereavement and grief.

Thirdly, in preparing for potential disruptions to supply chains and a surge in COVID-19 related ICU

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Table 1. Strategies, Reasons, Impact and Lessons Learnt for a Supportive and Palliative Care Service in Singapore in the first 3 months of COVID-19 Pandemic<sup>1</sup>

Areas of Practice and Strategies Implemented	Reasons	Impact	Lessons Learnt
<b>Inpatient Service</b>			
Cessation of joint rounds with haematology, oncology, and Intensive Care Unit (ICU) teams	To prevent potential transmission of infection through safe distancing measures	Small teams were required to provide symptom control and psychosocial care to patients	Importance of adapting to e-platforms such as Tiger Text to enhance care coordination
Creation of small and segregated teams (henceforth small teams)	Redeployment of healthcare professionals (HCP)s to ICU and isolation wards leading to a decrease in medical and nursing manpower	Easily accessible symptom control guidelines and online resources were created Less coordination and synergy observed with small teams	Importance of prioritising daily reviews based on patient data available on Citrix platform, including general observations, nursing reviews and case documentations Importance of upskilling generalist palliative care capabilities amongst small teams
Video conferencing in multidisciplinary team meetings (MDM)s	To prevent potential transmission of infection through safe distancing measures	Allowed for timely and greater participation from more members of the MDM Served as a convenient means of staying in touch even when working remotely Less effective debrief, reflection and support observed	Practice improved comfort in using Zoom, Skype and MS Teams for MDMs, ameliorating initial concerns over ability to effectively discuss complex psychosocial and clinical issues Enhanced security measures and improved internet connections is essential in building trust in this new practice
Conservation of parenteral medications (e.g. opioids, sedatives)	Concerns over disruptions to supply chain Concerns over potential surge in COVID-19 cases requiring ICU beds and an increase need for intravenous fentanyl, morphine and midazolam	Heightened vigilance in employment and stockpiling for ICU use Use of fentanyl patch and oral morphine to control symptoms in lieu	Sublingual and oral preparations could be used instead of parenteral formulations for anxiety and agitation, and fentanyl patches or oral morphine for pain control with reasonable efficacy and outcome Use of infusions of opioids and midazolam pose a significant risk to overall patient care and should only be used when absolutely necessary More frequent online and physical reviews of patients are required to ensure effective symptom control

<sup>1</sup>EOC – Extent of Care  
HCP – Healthcare Professional  
ICU – Intensive Care Unit  
MDM – Multidisciplinary team meetings  
MSW – Medical Social Worker  
NC – Senior Specialist Nurse

Table 1. Strategies, Reasons, Impact and Lessons Learnt for a Supportive and Palliative Care Service in Singapore in the first 3 months of COVID-19 Pandemic<sup>2</sup> (Cont'd)

Areas of Practice and Strategies Implemented	Reasons	Impact	Lessons Learnt
Prioritise discharge planning	Concerns over mounting cases and fears that the hospital systems would be overwhelmed necessitated more effective discharge planning	Discussions on discharge plans were made as early as possible upon stabilisation of patient's clinical condition	Importance of enhancing working links with home care and community palliative care teams
Advance Care Planning (also pertains to the ICU)	Concerns over mounting cases and fears that the hospital systems would be overwhelmed necessitated more effective advanced care planning	Early initiation of overall goals of care with patients, families, and HCPs ensured patient's desired place of care, extent of care and even place of death (if appropriate for discussion) were respected  New ties built with primary teams	Importance of better engagement and early establishment of links between patients and the Palliative Care team  Working with the primary teams helped Palliative Care residents improve their communication skills and workflow processes
Visitor restrictions (also pertains to the ICU)	To prevent potential transmission of infection through safe distancing measures	Enhanced perception of Palliative Care team amongst primary teams and the role of Palliative Care as a whole  Increased isolation and loneliness amongst patients  Increased family distress, especially for uncommunicative/dying patients  Visitor limitations increased risk of bereavement and grief issues  Small teams became more adept at using online modes of communication  Small teams took on new roles such as bringing phones into isolation rooms to facilitate communication between patients and families and preparing them for the experience  Extended their role to providing psychosocial-spiritual support for patients  Difficulty making initial connections with family over the phone and barriers in communication with families with limited access to telephone or video was observed	Importance of instituting new workflow processes and enhanced internet capabilities to facilitate better communications between patients and families  Family conferences via video conferencing applications may be helpful for large families and those with members overseas or under quarantine  Religious rituals as important sources of comfort were previously overlooked  Families at risk of difficult bereavement and grief require closer follow up by the MSWs  As there is a need to balance the burden of time on HCPs with provision of ideal psychosocial care, HCPs require more support via training and debriefs in adjusting to their new and extended roles

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Table 1. Strategies, Reasons, Impact and Lessons Learnt for a Supportive and Palliative Care Service in Singapore in the first 3 months of COVID-19 Pandemic<sup>3</sup> (Cont'd)

Areas of Practice and Strategies Implemented	Reasons	Impact	Lessons Learnt
<b>ICU for COVID-19 Patients</b>			
Assignment of supportive and palliative care consultants to ICU wards	Support manpower needs of ICU wards Provide early symptom control for patients Provide emotional and psychological support for other HCPs	Early identification and provision of appropriate symptom control and psychosocial care to patients and families Early identification of HCPs in need of emotional and psychological support	Importance of inter-collegial support and building rapport with ICU and isolation teams in the high stress COVID-19 environment Importance of providing personalised, appropriate, specific and timely debriefs and feedback for HCPs Importance of acknowledging HCPs need for self-care and building their support mechanisms through increased accessibility and interactions with MSWs
Twice weekly rounds to discuss identified patients	Improve access to supportive and palliative care	Early identification and provision of appropriate symptom control and psychosocial care to patients and families Challenging cases saw interprofessional input Closer ties built with primary teams	Working with the primary teams helped Palliative Care residents improve their communication skills and workflow processes
Supportive and palliative care referral criteria, basic symptom control guide and a communication aid provided for physicians	To standardise practice as physicians from different specialities are drawn at short notice to work in these clinical areas	Enhanced perception of Palliative Care team amongst primary teams and the role of Palliative Care as a whole Clear identification of patients who require supportive and palliative care Ensure quality of care for basic symptom management	Importance of clear, succinct information for physicians as a quick guide during patient management
Framework for ethical allocation of healthcare resources implemented Triage team with relevant ethics training and clinical experience formed	To improve quality, transparency, accountability and consistency of decision-making regarding resource allocation	Ensured ethically sound decision making by balancing the need for rationalising resources and individualising care	Importance of ethics support and recommendations to help reduce moral distress, stress and burden experienced by HCPs given their role as both patients' healthcare advocate and custodian of healthcare resources

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Table 1. Strategies, Reasons, Impact and Lessons Learnt for a Supportive and Palliative Care Service in Singapore in the first 3 months of COVID-19 Pandemic<sup>4</sup> (Cont'd)

Areas of Practice and Strategies Implemented	Reasons	Impact	Lessons Learnt
<b>Outpatient Service</b> Senior specialist nurse (NC) led teleconsult triage service was implemented	To determine if upcoming outpatient reviews could be deferred to prevent potential transmission of infection through safe distancing measures	Experienced SPC NCs were moved from the consult team to lead this teleconsult service with support from palliative care physicians  Clinical appointments were vetted with non-urgent visits deferred where possible and poorly patients referred to home hospice services  Consent forms and guidelines were designed to ensure that care provisions were met and patients remained supported	NCs felt empowered by their new roles  Importance of clear guidelines and workflow processes to ensure that pertinent queries raised by patients are deferred to and addressed by primary oncologists and SPC clinicians  Importance of weekly MDMs involving all NCs, pharmacists and senior physicians to provide debriefs, support NCs in adjusting to their new roles and discuss improvements to service  Importance of building new workflow processes for referral to home care services
Clinician led video consults	To provide continued follow ups whilst preventing potential transmission of infection through safe distancing measures	Zoom-based consultations by SPC clinicians allowed for continued interactions and reassurances to patients and families	Importance of effective IT support including encouraging and educating patients on how to use such e-platforms  Importance of consent  Video consults proved to be cost and time saving
Triage and screening of patients and visitors before entering clinics	To triage and allow entry of patients with complex and evolving conditions requiring in-person follow ups and one accompanying visitor	Clinical examinations and continued in-person assessments of clinical progress were reassuring for patients and families	Although essential, the triage and screening process fatigued some patients prior to their clinical appointments
Free medication delivery service	To prevent potential transmission of infection through safe distancing measures	Reduced crowding and waiting time in pharmacy for patients who require urgent collection of medication  Patients and families appreciated this convenient service	The free medication delivery service may be considered as a long-term alternative and actively encouraged to reduce waiting time in the pharmacy

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admissions, the small teams had to conserve parenteral medication such as opioids (fentanyl and morphine) and sedatives (midazolam). Fortunately, sublingual and oral preparations for anxiety and agitation, and fentanyl patches or oral morphine for pain control provided reasonable alternatives.<sup>6</sup>

### ICU for COVID-19 Patients

Senior NCCS DSPC physicians and residents were also redeployed to the ICU and isolation wards to provide medical care for COVID-19 patients. The team instituted a clear SPC referral criteria, a basic COVID-19 symptom control guide and a 24-hour telephone consult service to provide timely palliative care support. Online COVID-19 crisis response communication toolkits, SPC toolkits with voice annotated presentations and e-books were also further developed.<sup>7</sup>

The DSPC team was also involved in setting up an ethics framework for the allocation of healthcare resources to improve quality, transparency, accountability and consistency of decision-making. They further served as integral members of an ethics and triage team which was established in preparation for a surge in demand for limited ICU beds.<sup>8</sup>

Having the DSPC team embedded within the ICU not only proved successful in the early identification and provision of appropriate symptom control and psychosocial care to patients and families, but also helped assuage psychosocial, ethical and moral concerns amongst HCPs. Indeed, these paved the way for the establishment of a new SPC-ICU consult service and a recognised referral system.

### Outpatient Service

To enhance social distancing and attenuate risks of infection, senior specialist nurses (NCs) supported by palliative physicians carried out telephone consults for pre-existing SPC patients. The NCs vetted clinical appointments, deferring non-urgent visits where possible and referring poorly patients to home hospice services. A free medication delivery service was also provided and a triage and screening system was set up outside the NCCS building. Outpatient services thus saw a marked 40% reduction in clinic visits.

The telehealth consults provided by the NC-led team greatly streamlined the delivery of care and influenced the commencement of physician-led

teleconferencing. The NCs also notably felt empowered in their new role. However, some observed difficulties in building rapport with patients and noted that reviews were less comprehensive due to time spent addressing logistical issues and anxiety about COVID-19. As such, weekly DSPC MDMs involving all NCs, senior physicians and pharmacists were scheduled to better support the NCs in their provision of effective and targeted care.

### Lessons Learnt

Whilst this adversity has given rise to major changes to SPC services at NCCS and SGH, many lessons have been gleaned in our endeavour to reduce disruptions to our best practices. For one, the quick acclimatisation to and uptake of e-platforms proved vital for the efficacious coordination of care. Their novel use was necessary to facilitate timely information dissemination, continued MDMs and consultations with patients and families. In addition, the importance of upskilling our HCPs rang clear in the face of manpower redeployment and safe distancing measures enforced.

The forging of close interdisciplinary ties between palliative care physicians, residents, nurses and primary teams in the ICU not only enhanced workflow and care delivery processes but also allowed for crucial inter-collegial support. It was pivotal to recognise that the precarious COVID-19 climate posed heightened risks to their personal safety and brought on increased workloads in unfamiliar settings, with challenging decision-making often required of them. To ameliorate distress and fatigue, it was important to offer opportunities for reflection, advice and reprieve through increased access to in-house MSWs and the scheduling of regular team meetings. Instituting clear yet responsive guidelines and protocols was also acknowledged as paramount in alleviating doubts and confusion as HCPs swiftly adjusted to their changing environment.

Through this experience, we have adapted our practice for the safety of all around us and, in so doing, built a sense of camaraderie we had rarely seen before. We hope that our experiences may provide insight to present and future healthcare practices. Indeed even as the crisis abates, it is clear that many of our innovations inspired by this novel pandemic may be here to stay for the betterment of our patients and healthcare professionals alike.

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