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Caring for children and adolescents with eating disorders in the current COVID-19 pandemic: A Singapore perspective

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Abstract:

Our public pediatric tertiary hospital in Singapore has been a part of a robust public heath response to COVID-19 that has been calibrated in a timely manner to the evolving international situation. As of mid-March, Singapore remains in a containment mode with enhanced surveillance and limited community spread. Within this context, our service for pediatric eating disorder care has had to make significant adaptations to our models of service delivery as well as respond to the changing psychosocial needs of our patients. Given infection control requirements, we have instituted modular staffing for our inpatient and outpatient settings, necessitating task shifting and an increased use of technology for communication. Due to reduced outpatient capacity and the need to minimize non-urgent trips to the hospital, we have implemented telemedicine and have leveraged on partnerships with school counselors and other community partners. "Coronaphobia" has influenced our patients' willingness to attend visits and worsened existing health anxiety for some. Responsiveness to families' and patients' health and financial concerns has been essential. As COVID-19 impacts more countries, our institution's experience can provide insight into challenges and possible adaptations to providing ongoing care for eating disorder patients in this environment.

Implications & Contribution:

A pediatric eating disorder program's efforts to adapt its service delivery under Singapore's COVID-19 containment regime offers practical and effective models for other clinical delivery systems.

Since the initial cases of coronavirus 19 (COVID-19) in Wuhan, China, the situation evolved rapidly with WHO declaring COVID-19 a Public Health Emergency of International Concern on 31rst January 2020. Learning from the experience of SARS, Singapore promptly established a multi-ministerial task force, co-chaired by the Minister of Health, that included representatives from the Ministries of Home Affairs, Social and Family, Transport, Education, Manpower, Trade and Industry, Communication and Information, Environment and Water Resources, and the labor movement, to coordinate a whole of government response and protect public health[1]. Singapore's response to the COVID-19 outbreak has been well documented to date[2]. Some of the core dimensions are outlined below. Strong disease surveillance systems have been utilized to identify potential cases and extensive contact tracing has enabled the identification of close contacts of confirmed COVID-19 cases. The government has strictly enforced quarantine and containment measures, in addition to border controls, to contain COVID-19. Testing capacity was rapidly increased with free testing for suspected cases. To reduce potential barriers of seeking treatment, the Singapore government has adopted financing measures to pay for the direct costs of inpatient healthcare for suspected or confirmed cases of COVID-19 for Singapore residents. Timely and transparent communication of accurate information through various channels has been provided daily to reassure the public and minimize the spread of inaccurate or sensational information.

In our health care organization, this has included the institution of strict infection control procedures, health and temperature monitoring, leave cancellation, and encouragement of social distancing. Modular staffing has been implemented, requiring larger care teams to be divided into distinct smaller teams (commonly inpatient and outpatient) so that in the potential event of a team member's COVID-19 exposure or illness and the subsequent

quarantine of the remainder of the team, the other sub-team can continue to run a particular service. Our disease outbreak response has been calibrated in a timely manner to the evolving international situation and we remain in a containment mode with enhanced surveillance and limited community spread as of mid-March.

Within Singapore, our hospital is designated to provide care for pediatric patients with confirmed and suspected COVID-19. Providing two-thirds of public pediatric care in Singapore, the hospital is a tertiary government hospital with 830 beds including capacity for pediatric intensive care and negative pressure isolation. Since 24th January 2020, our hospital was seeing an average of 30 to 35 suspected cases of COVID-19 per day and this has increased to an average of 50 to 60 suspected cases a day from 10th March 2020. This parallels the global increase in numbers. As of 24th March 2020, there have been seven confirmed pediatric cases in Singapore (ranging from 6 months to 12 years old); all have been treated at our hospital.

Our multidisciplinary eating disorder (ED) service provides inpatient medical stabilization and ongoing outpatient care for children and adolescents, aged 16 years and below. At presentation, our patients range in age from nine to sixteen years old, with a mean age of 13.9 (±1.5) years[3]. Our service sees approximately 80 new patients a year with the majority of patients presenting with restrictive EDs. The service usually receives referrals through primary care providers as well as the emergency department. Acute inpatient care focuses on medical stabilization through nutritional rehabilitation. Approximately 70% of the newly diagnosed patients are admitted for medical stabilization using admission criteria outlined in published international guidelines[4] . The majority (64%) are admitted for

bradycardia. The service also provides continuing outpatient care which is led by a team of Family Based Treatment (FBT)- trained psychologists with regular team case review and input from other specialties as required. In the outpatient setting, there are approximately 480 adolescent physician visits and 960 psychology visits annually.

Recent publications have described modifications in subspecialty services in the setting of the COVID-19 outbreak [5,6]. In this context, aspects of ED care have posed unique challenges- multidisciplinary teams, the service provision of inpatient and outpatient care, and our patients' preexisting mental health concerns. We describe the challenges and adaptations we have made in our services as well as the impact on our patients and their families, providers, and trainees.

Modifications and Impacts:

Inpatient:

In the inpatient setting, modular staffing requirements have meant that one physician, nutritionist, psychologist, and specialty nurse have been rostered to care for inpatients and multidisciplinary meetings have been significantly reduced. This has necessitated increased communication with patients' primary providers who are not rostered for inpatient care through encrypted group texts, emails, and telephone calls. Moreover, the situation has also required significant task shifting within the team, such as nurses and physicians instituting behavioral contracts, which has been traditionally conducted by psychologists. Psychology support has been prioritized for the outpatient settings to provide continuity of care for their existing patients and thus maintain low readmission rates to minimize our

hospital bed utilization. Therefore, routine psychology support for inpatient services has been reduced. Group meal supervision, in a designated room, has also been reverted to individual meal supervision by nurses. During the COVID-19 pandemic, only one parent/caregiver has been allowed to visit the patient and this visitor has been required to undergo screening (temperature, travel, contact history with COVID-19 patient or flu-like symptoms) at the hospital's screening booths before entry.

Outpatient:

Our outpatient clinics, both adolescent medicine as well as psychology sessions, have been reduced by approximately 50% due to shifts in manpower and clinical space required to support the response to COVID-19 and to minimize non-urgent visits to the hospital. For physician clinics, we have maintained appointments for patients who are currently in FBT Phase 1 and new patients referred for suspected eating disorders. For our psychology service, more urgent cases have been prioritized to receive ongoing service provision. For physician and psychology services, visits have been spaced for patients with stable weights.

Psychologists have been providing increased support and ongoing engagement to patients and families via telephone consult. Telehealth has been instituted for physicians and psychologists to manage carefully selected cases. Literature has described the use of telehealth to provide mental health support in the setting of the COVID-19 outbreak in China and has previously been used successfully for family-based therapy in the United States [6–10]. Considerations for telemedicine in our patients are summarized in Table 1.

Patients and families:

The COVID-19 outbreak has affected our patients. Some patients and families have been unwilling to attend needed outpatient clinics or been reluctant for admission due to concerns of COVID-19 in spite of our clearly segregated areas allocated for these "clean" consults and care. For our patients with underlying anxiety, especially those with health anxieties and contamination fears that are commonly seen in eating disorders, we have found that the situation regarding COVID-19 has fueled a worsening of their health-related fears and phobias[11]. While the provision of evidence-based information about COVID-19 on mainstream media and social media plays an important role in managing "coronaphobia", more research is urgently needed to understand the psychosocial fall-out from COVID-19 and evidence-based approaches to manage these issues[12,13].

Community:

Our Ministry of Education has increased precautionary measures in schools so that classes have continued[14]. This has been beneficial for our patients. Firstly, classes have provided structure and the continued academic support to students has helped to allay their anxieties. Secondly, school counsellors and community social workers have been partnering closely with our psychologists to support our patients' physical and mental health, especially for patients that have been unable or unwilling to attend appointments. For one patient with relapsed anorexia nervosa, a school counsellor stepped up to provide meal supervision, closer weight monitoring, and supportive counselling due to limited outpatient psychology services.

Financial:

Despite Singapore government's extensive economic support measures, the current and potential financial impacts from COVID-19 also weigh heavily on caregivers, affecting the

well-being of our patients[15]. For example, one parent who works in a service sector which has been negatively impacted by the COVID-19 outbreak, has significantly increased his working hours to compensate for reduced earnings. This has affected meal supervision and consequently, the weight gain for his daughter with anorexia nervosa. Team social workers have provided both financial assistance and supportive counseling for such parents with worsening financial stresses in the context of the COVID 19 outbreak.

Training:

As a teaching hospital, the management of EDs is an integral part of the Adolescent Health curriculum for all residents. Due to modular staffing requirements, our residents currently are caring only for patients in an inpatient setting and are not able to join outpatient clinics, a mainstay of their clinical experience. To ensure continued learning, we have provided increased didactic teaching to the residents in a small group setting. For those residents who have been re-assigned to the separate teams caring for patients at risk of COVID- 19 infection, we have included them in teaching through use of web-based conferencing. We have also curated journal articles on eating disorders for trainees for their self-reading and also encourage our residents to do case-based discussions with faculty on the eating disorder cases that they have seen to consolidate their learning. We have also instituted an adapted adolescent medicine self-reflection learning tool that residents complete with our faculty[16].

Healthcare professionals:

Finally, the increased stress of health professionals must be acknowledged. Even for staff not caring for COVID-19 patients, contributing factors include the increased infection control procedures including Personal Protection Equipment, changing protocols and roles, and stigmatization of health care workers. In Singapore, the public and government have been widely supportive of health care workers and our institution has increased mental wellness support including the establishment of help lines for emotional support. In addition, as many patients have required increased mental health support, it is important that staff are also engaging in self-care. On a multidisciplinary team, we have found open conversation and flexibility to be critical as various specialties have different experiences with infectious disease risk and infection control protocols.

Discussion:

In conclusion, we have found task-shifting, teamwork, awareness of the mental health impact, and increased use of technology to be critical in continuing to provide ongoing care to our patients with eating disorders and their families in the context of COVID-19 and Singapore's public health response. We need to constantly evaluate changing needs of our patients and their families in this rapidly evolving situation. A strong foundation in interprofessional education and collaboration empowers team members to adapt and sustain quality care to all our patients despite the challenges in a time of crisis[17]. As COVID-19 impacts more countries, our institution's experience can provide some insight into challenges to providing ongoing care for eating disorder patients in this environment.

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Table 1

Considerations for the use of telemedicine in patients with ED in the outpatient setting

Factors	**Consideration**
Patient/ Family	Willing to use telemedicine
	Weight stable or good consistent progress
	Parent willing to weigh patient
	No safety concerns
	No concerns of medical stability such as bradycardia or hypotension
Healthcare provider	Develop patient eligibility criteria for telemedicine
	Undergo training in telemedicine
Institution	Confidential and secure telemedicine platform
	Clarify financial charges for telemedicine
	Develop patient consent form for telemedicine
	Ensure technology requirements met for telemedicine (ie camera, microphones, monitors, high-speed Internet, adequate anti-virus)
	Provide a private space for telemedicine

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The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Lists of Abbreviations:

ED- Eating disorder; FBT- family based therapy