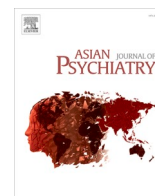




Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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## Letter to the Editor



## Supporting individuals with Autism Spectrum Disorder in medical settings during COVID-19

The novel Coronavirus, COVID-19, became a pandemic situation globally in a short span of time. While we are becoming attuned to the effects of the pandemic on mental health and wellbeing of the general population (Ghebreyesus, 2020), the impact on vulnerable populations such as special needs individuals, as well as their caregivers is currently unknown. It is imperative that the needs of the vulnerable groups not be neglected (Tandon, 2020). As mask-wearing and staying at home directives become the new norm, drastic changes in routines exacerbated by the fluidity of the situation make it challenging for individuals with special needs, particularly those with Autism Spectrum Disorder (ASD) and Intellectual Disability (ID), to cope (Den Houting, 2020). They not only have had to adjust to the loss of their regular routines, but also have had to adapt to changes in societal rules, and reduction of access to the outdoors. In addition, some individuals may be unable to maintain personal hygiene or adhere to safe-distancing measures and mask-wearing, especially for those with sensory stimulatory needs or aversions (Hazen et al., 2014). They are also vulnerable to anxiety, which can be further exacerbated when they are unable to comprehend events happening around them (Hollocks et al., 2019; Van Steensel et al., 2011). Issues with communication, difficulties in coping with changes and tolerating sensory inputs can also result in distress during testing or treatment when they are suspected or diagnosed to have COVID-19. In particular, the problem can be magnified when they have to undergo procedures, such as X-rays, nasopharyngeal swabs and venepunctures, which can be overwhelming and distressing. Furthermore, managing an individual with special needs with suspected or confirmed COVID-19 infection can be a compounded challenge for frontline healthcare workers who may not be familiar or attuned to the needs of the special needs population.

While resources to support children and adolescents in understanding and coping with the pandemic have been widely developed<sup>1</sup>, there are limited targeted resources for individuals with special needs (Narzi, 2020; Wang et al., 2020; Yarmkaya and Esentürk, 2020). We developed a 'Special Care Kit' (MOH, 2020) with the aim of supporting individuals with special needs (including their caregivers) and frontline healthcare workers in medical settings, when such individuals are suspected of, or diagnosed with COVID-19. The contents of the care kit have been designed with a focus on visuals, structure and simplicity. This will allow flexibility for use with a variety of populations, including individuals with special needs such as ASD, neuro-typical young children,

individuals with ID across different ages, as well as individuals with communication barriers (i.e. deaf-mute). Visual information by means of pictorial boards, social stories and animated videos are incorporated to illustrate and explain COVID-19 testing processes in a step-by-step format. These include testing procedures such as nasopharyngeal swabs, blood tests and X-rays; and scenarios to expect, such as encountering healthcare workers in Personal Protective Equipment (PPE). Instructions to alleviate and manage anxiety, such as breathing and relaxation exercises, are also included. An animated video clip of the whole process was also produced to enhance engagement and improve clarity (Fig. 1).

In addition, explanatory information for the medical team regarding the use of the resources and simple strategies to support the care of the person with special needs are also provided. Personalisable/ replicable templates in the form of information sheets about the individual with special needs further allow for customization to the unique profiles of each individual. An example of a visual schedule is shown in Fig. 2.

The physical copies of the resources and materials were disseminated and implemented at frontline settings, from the General Practitioner (GP) clinics, ambulances, and emergency services to treatment facilities. Soft copies are also made available via online platforms<sup>2</sup>.

The materials were made to be adaptable and applicable for situations beyond the current COVID-19 pandemic, and generalisable for use with different populations such as individuals with communication barriers (i.e. children with language delays or individuals who may not be fluent in or comprehend the English language). With the Special Care Kit, frontline healthcare services will be better prepared and have some basic resources to support individuals with special needs who require medical services, whether during infectious disease outbreaks in the future, or in other medical scenarios. The materials are easily accessible and free for use on the online platforms. We hope these materials can also benefit the international community, especially populations with limited resources, and also improve access and preparedness of frontline healthcare services to support special needs individuals. Continual dialogue about the experience of the pandemic situation from the perspectives of the special needs community, especially about areas requiring support, and understanding of existing resilience will be important, so that we can be better prepared and respond in the future.

<sup>1</sup> Examples of COVID-19 resources for children and caregivers: a) <https://www.superherome.sg/covid19>; b) <https://www.nuh.com.sg/our-services/Specialties/Paediatrics/pages/covid-19-resources-for-parents-and-caregivers.aspx>

<sup>2</sup> <https://www.moh.gov.sg/covid-19/resources>.



Fig. 1. Still of animated video.

## Visual Schedule For Nose Swab Test

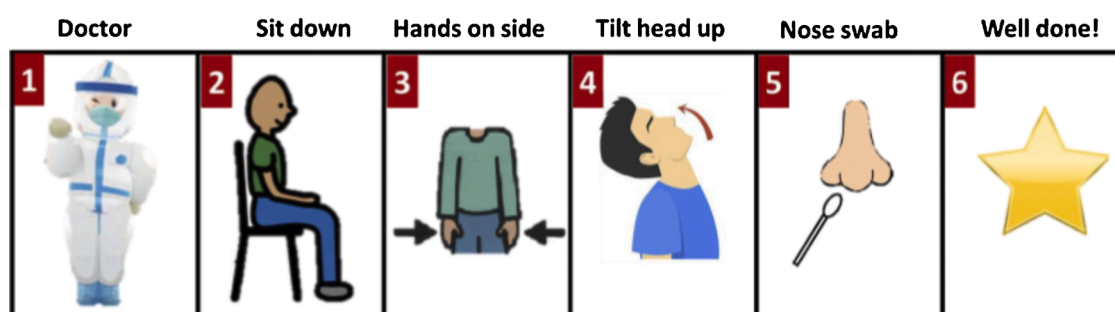


Fig. 2. Visual schedule for nasopharyngeal swab testing in the Special Care Kit.

### Contributors' statement

Dr. Sung and Dr. Goh conceptualized and drafted the initial manuscript.

Dr. Lim, Ms Foo, Dr. Ong, Dr. Aishworiya, Ms Nair, Dr. Kang and Dr. Agarwal reviewed and edited different components of the manuscript.

All authors approved the final manuscript as submitted and agree to be accountable for all aspects of the work.

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### Declaration of Competing Interest

The authors have no financial relationships relevant to this article or conflicts of interest to disclose

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