Children and COVID-19

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Abstract
Pediatric population is vulnerable to this infection. In this review, we conducted extensive research mainly by using the database. We used Medical Subject Headings (MeSH) and associated keywords to engage in an extensive search focusing on COVID-19 in the pediatric population. We discovered that most of the studies were from China, and some of them were in the Chinese language. However, English translations of many of the studies were available. For accessing the relevant statistical data, we relied on the World Health Organization (WHO) resources and the official website of the Ontario Government (ontario.ca). Most of the studies showed that the virus has affected the pediatric population. However, we found some differences among these studies regarding the severity of symptoms in children affected by COVID-19. While a few studies stated that the virus has presented with milder symptoms in the pediatric population, some studies have presented data of children who have suffered life-threatening complications due to COVID-19. Although the data is limited, we have been able to conclude from the studies we reviewed that COVID-19 does indeed affect children the same way as any other age group. Moreover, children can act as carriers of the virus and can endanger the lives of other individuals. Besides, neonates and infants can easily acquire the infection from family members without having any exposure to the outside world. Hence, utmost care should be taken while handling this population. More trials and studies should be conducted to analyze the impact of early diagnosis of infection in children and its management.

Keywords: Children, COVID-19, corona virus

Introduction
Emerging evidence from China, Europe, and the USA has shown a consistently higher risk of severe COVID-19 in older individuals and those with underlying health conditions. Severe disease is defined by WHO as “a patient with severe acute respiratory illness (fever and at least one sign/symptom of respiratory disease, e.g., cough, shortness of breath; AND requiring hospitalization)”. In a recent report from the USA, underlying conditions were reported in 71% (732/1037) of individuals admitted to hospital with COVID-19 and in 94% (173/184) of deaths.

WHO, along with public health agencies in countries such as the UK and the USA, have issued guidelines on who is considered to be at increased risk of severe COVID-19. 34,396,222 confirmed cases of COVID-19, including 1,024,675 deaths, India prevalence rate 6,547,413 and death rate-101,812 reported to WHO [1].

This includes individuals with cardiovascular disease, chronic kidney disease, diabetes, chronic respiratory disease, and a range of other chronic conditions. Such conditions increase the risk of needing hospital-based treatment such as oxygen supplementation. A large proportion of the additional health-care burden of COVID-19 epidemics is likely to result from infection of those with underlying conditions.

Prevention of COVID-19 in children

- **Wash hands:** Wash your hands with soap and water for 20 seconds, and encourage your child to do the same. If soap and water are not available, use hand sanitizer that contains at least 60% alcohol. Teach your child to cover all surfaces of their hands with hand sanitizer and rub their hands together until they feel dry.
- **Wear a mask:** Make sure everyone in your household wears a mask (if 2 years of age or older) when in public and when around people who don’t live in your household. Ensure your child wears their masks correctly and safely.
- **Avoid close contact:** Make sure your child and everyone else in your household keep at least 6 feet away from other people who don’t live with them and people who are sick (such as coughing and sneezing).
- **Cover coughs and sneezes:** When coughing or sneezing, cover your mouth and nose
with a tissue, throw your tissue in closest garbage can, and wash your hands.

- Encourage your child and all household members to do the same.
- Social service workers should rethink case management approaches – evaluation, risk identification, support and follow up through regular phone or other virtual contact.
- Establish procedures for online and telephonic screening of referrals, assessment of necessity and suitability of care placement, authorization of placement and monitoring. Connect parents/caregivers and children known to be at risk with others – online platforms, WhatsApp discussion groups and other phone and virtual means can greatly reduce isolation.
- Referral options including mental health and psychosocial support and online resources should be revised. Strengthen capacities of Hot lines and child helplines, for children, families and care facilities to report any case of abuse or neglect. Virtual recruitment strategies should be explored (i.e., radio, online or TV) particularly targeting previously approved foster families who might not be currently engaged in the care system.
- Family connections and contact should be facilitated remotely. Every effort needs to be made to ensure modes of communication are accessible to children and caregivers with disabilities.
- New modes of engaging in education, recreational activities, maintaining health and fitness, achieving life skills and vocational goals, and receiving services in the event of restrictions or lockdowns. Ensure safeguarding procedures are updated [2].

Protection of street children

- Provide shelter to street children
- Provide food, water, sanitizer to children
- Providing facemask, proper shelter
- Provide nutritious food to children [3]

Protection of school children

- Provide a safe space to support children dealing with the impacts of COVID-19 on their lives and address emerging issues such as social stigma and discrimination.
- Put mechanisms in place for students who require more specialized support as a result of the pandemic or due to preexisting conditions.
- Create a sense of normalcy and routine in the classroom to help children deal with the uncertainties surrounding them.
- If possible, caregivers should maintain schoolwork, study or other routine activities that do not endanger children or go against health authorities. They can also help create new routines at home, including through learning, playing and relaxing [4].

Finding of the study indicated that the two confirmed children only presented with mild respiratory or gastrointestinal symptoms. Both of them had normal chest CT images. After general and symptomatic treatments, both children recovered quickly. Both families had travel histories to Hubei Province [5]. After reviewing 159 published articles, 5 articles which was related to prevention in children were finally selected. Avoiding from high-risk communities and do social distancing is very effective in protecting children and infants from the disease. Personal hygiene, especially hand hygiene and eliminating potential environmental infections during an epidemic is very important points in protecting children and infants from COVID-19 [6] describe the clinical and laboratory characteristics of hospitalized children who met criteria for the pediatric inflammatory multisystem syndrome temporally associated with severe acute respiratory syndrome corona virus 2 (SARS-CoV-2) (PIMS-TS) and compare these characteristics with other pediatric inflammatory disorders. SARS-CoV-2 polymerase chain reaction tests were positive in 15 of 58 patients (26%) and SARS-CoV-2 IgG test results were positive in 40 of 46 (87%). In total, 45 of 58 patients (78%) had evidence of current or prior SARS-CoV-2 infection. All children presented with fever and nonspecific symptoms, including vomiting (26/58 [45%]), abdominal pain (31/58 [53%]), and diarrhea (30/58 [52%]). Rash was present in 30 of 58 (52%), and conjunctival injection in 26 of 58 (45%) cases [7].

References

4. UNICEF and WHO issue guidance to protect children and support safe school operations.
