



# REGIONALIZATION OF PEDIATRIC CARE

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## ABSTRACT

The COVID-19 pandemic has resulted in overcapacity community hospitals around Ontario.<sup>1</sup> However, pediatric hospitals have experienced a reduced number of visits.<sup>2</sup> To address the challenge of overcapacity, three proposed approaches are identified: resource redeployment to adult centres and long-term care facilities, redirecting pediatric patients from community hospitals to pediatric hospitals, and reducing the number of non-urgent surgeries in pediatric hospitals in order to admit more non-COVID adults.<sup>3</sup> The ethical considerations of each approach were evaluated according to the values of accessibility, equitable access to care, and solidarity, in order to make an informed recommendation for how to proceed. It was concluded that the regionalization of pediatric care would be a suitable approach: redirection of all pediatric patients in an Ontario region to the nearest pediatric hospital. This commentary reflects the values and innovative thinking of a group of undergraduate students from McMaster University.

## INTRODUCTION

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## COMMENTARY: ETHICAL CONSIDERATIONS

### I. Resource Redeployment to Adult Centres and Long-term Care Sites

The pandemic has caused a steady increase in demand for frontline workers in adult centres, especially in long-term care sites, to account for more patients and afflicted workers.<sup>3</sup> To manage this deficit, pediatric healthcare workers could be redeployed to adult settings.<sup>3</sup> Redeployment requires additional training to adjust pediatric workers to a new patient population quickly and effectively. Providing accessible and equitable treatment may appear as caring first for patients between 18-25 years old, as this is closest to pediatric workers' typical patient age.<sup>4</sup>

What might be the consequences of an understaffed children's hospital? In the event of an outbreak in the new setting, workers could be on leave for an extended period. Pediatric hospitals could be understaffed for longer than just the anticipated redeployment period, impacting the availability of pediatric care.<sup>4</sup> As such, measures should be taken to ensure adequate PPE available for incoming workers to reduce unnecessary risk of exposure.<sup>4</sup>

Ultimately, healthcare workers have a duty to work unless there is significant risk of harm, and have a responsibility to care for the population as a whole.<sup>3</sup> In fact, redeployment measures have already been implemented, though these ethical considerations should be kept in mind as the pandemic continues and beyond.<sup>3</sup>

### II. Redirect Pediatric Patients from Community Hospitals to Pediatric Hospitals

Throughout the pandemic, pediatric hospitals have consistently been under maximum capacity, in no small part due to greater protection from colds and influenza season due to personal protective equipment (PPE) measures, as well as the lessened susceptibility of children to COVID-19 than adults.<sup>2</sup> Therefore, it is plausible that pediatric patients that would typically seek care from community-based hospitals be redirected to pediatric hospitals.

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This redirection is currently being practiced in hard-hit COVID-19 areas such as Toronto, ON, where pediatric patients from Etobicoke General, Brampton Civic, St Joseph's Health Centre and Humber River hospitals are transferred to The Hospital for Sick Children.[5] Implementing regionalization of pediatric care allows medical resources and staffing to be optimized by maintaining physicians' scope of practice.[6] This proposal mitigates potential harm due to limited expertise and resources that pediatric medical professionals can provide to adult hospitals and patients, such as in the case of staff redeployment.[6]

It is important to consider the accessibility of these pediatric resources for all communities across the region to which implementation of this strategy occurs. Pediatric hospitals are fewer in number than community hospitals and are normally not present in rural areas.[7] Barriers to accessing pediatric hospitals may include transportation, geographic distribution, food and housing insecurity, as well as cultural differences.[8] Regardless, the ability to regionalize pediatric care must be implemented in a way that also ensures seeking care from other non-pediatric facilities remains accessible.

### III. Essential Procedures – Key Differences between Adult and Pediatric Populations

During the pandemic, a plethora of non-essential procedures were cancelled, irrespective of age and population, to free up resources for the adult population at high risk for COVID-19 complications.[9]

The ethical implications of these unilateral choices to cancel non-essential procedures are not immediately obvious.

However, the pediatric population has different needs than does the adult population. Often, children's hospitals are the only places where children can access specialized care, and protecting that need is important even during a pandemic.<sup>10</sup> For example, children with disabilities are disproportionately affected by delays in non-essential procedures during COVID-19, which could impact the procedure's efficacy and subsequent rehabilitation.<sup>[11-12]</sup> A non-urgent or non-essential procedure for an adult may indeed have a greater impact on a child, whose surgeries are rarely elective or non-essential.<sup>[11,13]</sup> However, delayed adult procedures can lead to increased patient mortality, such as cancer screening, thus demonstrating the difficulty in assessing equitable access to healthcare.<sup>[14]</sup>

## RECOMMENDATION

Each region has its own needs and any of the proposed solutions could be impactful. Combining the best aspects of each solution while mitigating risk could produce a more effective way to handle overcapacity hospitals, termed regionalization of pediatric care.

Under regionalization of care, children's hospitals would preferentially take all pediatric patients in the region, including less-urgent cases as well as those who might normally be admitted to primarily adult facilities. This effort maximizes the expertise and resources in pediatric facilities. Some resources are specific to pediatric care and pediatric healthcare specialists may not have the necessary training to effectively provide care to adults. Furthermore, by keeping adults and children separate, the possibility of triaging due to strained resources in primarily adult facilities is limited, which could otherwise disadvantage children if priority is given to essential workers.<sup>[11,13]</sup> Though this solution has barriers to implementation and has not been validated in other populations, it has the potential to change the way in which healthcare institutions interact with each other and patient populations.

1. Old Foes and New Threats - Ontario's Readiness for Infectious Diseases - 2012 Annual Report of the Chief Medical Officer of Health of Ontario to the Legislative Assembly of Ontario - Dr. Arlene King, Chief Medical Officer of Health - Ministry Reports - Publications - Public Information - MOHLTC [Internet]. Government of Ontario, Ministry of Health and Long-Term Care. [cited 2021 Feb 3]. Available from: [http://www.health.gov.on.ca/en/public/publications/premiers\\_council/report.aspx](http://www.health.gov.on.ca/en/public/publications/premiers_council/report.aspx)
2. Mitchell D. Coronavirus: Still 'not a lot of people' in Hamilton pediatric hospital amid pandemic [Internet]. Global News, 2020 [2020 July 10; cited 2021 Feb 3]. Available from: <https://globalnews.ca/news/7157311/coronavirus-hamilton-pediatric-hospital/>
3. COVID-19 pandemic guidance for the healthcare sector: Resource Management. Government of Canada, 2021. [22 April 2020; accessed 03 February 2021]. Available from <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/health-professionals/covid-19-pandemic-guidance-health-care-sector.html#a4>.
4. Lavalent NT, Basak RB, Dell ML, Elster N, Geis G, Macaulay RC, et al. Professional Obligations of Clinicians and Institutions in Pediatric Care Settings during a Public Health Crisis: A Review. *J Pediatr*. 2020;224:10-15. doi:10.1016/j.jpeds.2020.06.054
5. Wilson K. Some GTA hospitals redirecting children to SickKids to make room for COVID-19 patients [Internet]. CTV News, 2021 [2021 Jan 7; cited 2021 Feb 3]. Available from: <https://toronto.ctvnews.ca/some-gta-hospitals-redirecting-children-to-sickkids-to-make-room-for-covid-19-patients-1.5257738>
6. Paquette ET, Derrington S, Fry JT, Michelson K, Patel A, Shah S, et al. Shifting duties of children's hospitals during the COVID-19 pandemic. *J Hosp Med*. 2020;15(10):631-3.
7. Caring for Kids: Find a Hospital. Canadian Paediatric Society, 2021. [2020 April; cited 2021 July 23]. Available from: [https://www.caringforkids.cps.ca/resources/find\\_a\\_hospital](https://www.caringforkids.cps.ca/resources/find_a_hospital)
8. Shi Q, Castillo F, Viswanathan K, Kupferman F, MacDermid JC. Facilitators and barriers to access to pediatric medical services in a community hospital. *J Prim Care Community Health*. 2020;11:2150132720904518. doi: 10.1177/2150132720904518
9. Skarsgard ED. Prioritizing specialized children's surgery in Canada during the COVID-19 pandemic. *CMAJ*. 202; 192(41): E1212-3.
10. McIntosh J, Areste ME, Brierley J, Giugni C, McGreevy KS, Cambra FJ, et al. Safeguarding children's right to health in hospital during COVID-19. *Lancet Child Adolesc Health*. 2020; 4(11): 800-802. doi:10.1016/S2352-4642(20)30300-X
11. Cacioppo M, Bouvier S, Bailly R, Houx L, Lempereur M, Mensah-Gourmel J, et al. Emerging health challenges for children with physical disabilities and their parents during the COVID-19 pandemic, the ECHO French survey. *Ann Phys Rehabil Med*. 2020. doi: 10.1016/j.rehab.2020.08.001
12. Pelley L. 700 families waiting for children's health services at Toronto hospital as pandemic backlog grows [Internet]. CBC News, 2020. [2020 Dec 6; cited 2021 Feb 01]. Available from: <https://www.cbc.ca/news/canada/toronto/health-toronto-kids-autism-covid19-1.5831380>
13. Johns Hopkins Medicine. Pediatric surgery during COVID-19 pandemic, what you need to know. *Johns Hopkins Medicine*, 2021. [n.d.; cited 2021 Feb 01]. Available from: <https://www.hopkinsmedicine.org/coronavirus/pediatric-surgery.html>
14. Boyle T. COVID-19 has put routine cancer screening for many in Ontario on hold [Internet]. *The Star*, 2021. [2020 May 5; cited 2021 July 23]. Available from: <https://www.thestar.com/news/canada/2020/05/05/covid-19-has-put-routine-cancer-screening-for-many-in-ontario-on-hold.html>