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COVID-19 and Children as an Afterthought: Establishing an Ethical Framework for Pandemic Policy That Includes Children

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Abstract

In response to the SARS outbreak, many regions worldwide began creating ethical frameworks for allocating resources during future pandemics. One notable example is the framework developed by Thompson and colleagues. While this framework provides a robust ethical foundation for decision-making, it does not adequately address the specific experiences and interests of children and youth during a pandemic. The COVID-19 crisis presents an opportunity to re-evaluate this framework through the lens of young people, incorporating insights from contemporary childhood ethics and children's rights scholarship. This paper revisits the Thompson et al. framework and suggests modifications to the ethical principles and processes it presents. Our analysis draws on expertise in clinical ethics and a review of literature concerning the effects of COVID-19 and prior pandemics on the health and well-being of children globally, with a focus on the Canadian context. In developing this work, we engaged stakeholders—following a consultation process similar to that used by Thompson and colleagues—to validate our interpretations. We also introduce a new principle, practicability, which reflects the nuanced balance between what is feasible and what is convenient when making ethically sound decisions affecting young people. Additionally, we examine the strengths and limitations of our approach and highlight directions for further research in childhood studies and child health. Establishing child-inclusive ethical frameworks should be standard practice, ensuring that the potential impacts of pandemics on young people and related policy considerations are proactively addressed before emergencies arise.

Keywords: Ethical framework, COVID-19, Child health, Public health, Pandemic policymaking

Background

The COVID-19 pandemic has had profound and far-reaching effects on populations worldwide. As of the time of writing, Canada alone has recorded over 1,500,000 COVID-19 cases and more than 27,000 deaths [1]. While adults aged 70 and older have experienced the highest transmission-related risks—accounting for roughly 85% of COVID-19 fatalities in Canada [1]—recent studies [2–6] indicate that children and youth (hereafter referred to as young people) are also experiencing significant and multifaceted harms. Although economic and physiological impacts have been prioritized within scientific, public health, and research agendas, the specific consequences of COVID-19 for young people have not received adequate attention or urgency at national and global levels. Furthermore, ethical considerations concerning the pandemic-related experiences of young people and strategies for addressing these concerns remain underexplored [3]. Accordingly, we contend that policymakers and public health authorities have an ethical obligation to more effectively consider young people's concerns in

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pandemic planning and in discussions surrounding COVID-19 and future health emergencies.

In their widely cited 2006 article [7], Thompson and colleagues introduced an ethical framework designed to “guide pandemic planning in hospitals” (p. 2). This work represented the first comprehensive analysis of ethics in pandemic planning, integrating general ethical principles and processes into a structured framework for informing both policy and clinical care [7]. However, as noted by other scholars, including Nicholas *et al.* [8], the Thompson *et al.* framework requires reinterpretation to account for young people’s perspectives and needs if it is to meaningfully inform decisions affecting this population. To date, no such reinterpretation has been undertaken, nor has a fully child-inclusive ethical framework been developed that draws upon contemporary advances in childhood studies and childhood ethics. Despite recognition and calls for such work [8], this gap persists, leaving a significant omission in both pandemic literature and practice.

In this paper, we propose modifications to the existing Thompson *et al.* [7] framework to make it attentive to the experiences and concerns of young people. Our aim is to ensure that young people’s needs are explicitly considered in pandemic policies and planning. This adaptation provides guidance for how policymakers and public health officials can respond ethically to issues uniquely affecting young people. Importantly, our goal is not to challenge the foundational work of Thompson *et al.* but to extend it by layering a young person-centered perspective onto the framework, demonstrating how population-level approaches can and should incorporate young people’s interests.

We begin by summarizing the Thompson *et al.* framework, followed by an outline of childhood ethics and relevant children’s rights literature that inform our analysis. We then revisit the original framework to reframe existing ethical principles and processes, introduce a new child-focused principle, and draw out key implications of these modifications. To illustrate practical application, we provide two examples adapted from our research and clinical practice. Finally, we conclude with recommended next steps and reflections.

Main Text

Learning from the SARS pandemic

Thompson and colleagues developed an ethical framework for future pandemic influenza scenarios, informed by Toronto’s experience during the SARS outbreak, with the aim of “encouraging reflection on important values, discussion, and review of ethical concerns arising from a public health crisis” (7, pg. 4). During the COVID-19 pandemic, this framework has been widely cited in both academic literature [9, 10] and institutional guidance documents [11–13] internationally. The framework comprises five ethical processes and ten ethical values designed to support comprehensive policy planning during a pandemic.

The ethical processes draw upon Daniels and Sabin’s “accountability for reasonableness” model [7, 14, 15], which outlines five core procedures for setting priorities in healthcare. According to Thompson *et al.* [7], these processes are:

1. Accountability
2. Inclusiveness
3. Openness and Transparency
4. Reasonableness
5. Responsiveness

The framework’s ethical values, or principles, provide guidance for pandemic planning decisions. The authors note that ethical dilemmas frequently emerge when values conflict, making it challenging to determine which value should take precedence in particular circumstances [7]. These values build on earlier efforts to prioritize ethical considerations during the 2003 SARS outbreak [16] and were expanded upon in Thompson *et al.*’s framework [7]. The ten values outlined in the framework are:

1. Duty to Provide Care
2. Equity
3. Individual Liberty
4. Privacy
5. Proportionality
6. Protection of the Public from Harm
7. Reciprocity
8. Solidarity
9. Stewardship
10. Trust

The framework underwent review by key stakeholders, including senior administrators at Sunnybrook and Women’s College. Thompson *et al.* recommended that future analyses should include patient and family representatives, which was beyond the scope of their original work [7]. Engaging stakeholders is a critical takeaway from this project, as it enhances the framework's relevance, increases its practical utility, and fosters broader ethical discussions about pandemic planning [7].

We selected Thompson *et al.*'s framework as our starting point due to its extensive adoption, particularly in institutional policy contexts. Many of its processes and values align with our approach to promoting young people's well-being and the theoretical understanding of childhood underpinning our analysis. While the framework is highly valuable for administrators and public health officials tasked with pandemic resource allocation, it has limitations regarding its consideration of young people's interests. When interpreted through a child-inclusive lens or applied in pediatric contexts, the ethical processes and values may take on new meanings [8]. Furthermore, there are concerns specific to young people that must be addressed in a comprehensive pandemic ethics framework encompassing all population members, which could affect how particular values are applied in situations involving young people. Below, we outline how we have reinterpreted the framework's values through two child-inclusive perspectives and describe additions to the framework that enhance the recognition of young people's interests during a pandemic, drawing on the current, albeit limited, literature.

Interpretive lenses for analysis

Childhood ethics

To shape pandemic standards and decision-making in a way that genuinely reflects young people's concerns and priorities, we draw upon the framework of childhood ethics in combination with the children's rights literature. Childhood ethics encourages reconsideration of concepts informed by advances in childhood studies [17, 18]. These shifts require rethinking how we approach: childhood, social/human sciences research, ethics in research and practice, and interdisciplinary collaboration [17, 19]. Within this approach, children are recognized as active agents possessing rights, capacities, meaningful goals, moral reasoning, and voices that matter in discussions and decisions affecting them [17]. This perspective directly challenges traditional "developmental" views that label children as "immature" or "incapable." In this context, agency is defined following Montreuil and Carnevale [20] as "children's capacity to act deliberately, speak for oneself, and actively reflect on their social worlds, shaping their lives and the lives of others" (p. 510). Children express agency in multiple ways, including through bodily expression, and their actions can influence their social environments. Childhood itself is treated as a social construct, with its meaning evolving across time, cultures, spaces, and individual experiences. Similarly, the concept of childhood agency is not fixed; it adapts over time and according to circumstances, including during a pandemic. While a detailed analysis of children's agency in pandemic conditions falls beyond this paper's scope, it remains an important area for future study.

Central to childhood ethics is a hermeneutic ethical lens, which guides how we understand issues affecting young people, value their perspectives, and interpret their lived experiences. Insights from young people themselves are critical in shaping interpretations and analyses across disciplinary perspectives.

Here, childhood ethics informs a reinterpretation of ethical values and decision-making during pandemics by posing questions such as: how is the agency of young people acknowledged, are children's interests adequately addressed, in what ways might ethical principles fail to consider children's rights and agency, and how can children's interests—as a distinct sub-population—be meaningfully incorporated into collective ethical deliberations?

Children's rights

In addition to childhood ethics, a children's rights perspective strengthens pandemic planning and the allocation of resources. The United Nations Convention on the Rights of the Child (CRC), the most widely ratified international treaty [21], establishes young people's political, civil, cultural, economic, and social rights [22], which are protected under international law [21]. These rights fall into three primary categories: (a) participation rights, (b) protection from abuse, neglect, discrimination, exploitation, and other harms, and (c) provision of support to meet children's basic needs [23, 24]. The CRC is grounded in an "interests" approach, requiring that any action affecting a young person prioritize their 'best interests' [24, 25].

Defining a young person's best interests remains debated. In this analysis, best interests are understood as context-specific rather than universal, sensitive to the social environment in which children live, and shaped through the recognition of children's voices and agency [19].

Applying a child rights lens is crucial because it promotes recognition, particularly among policymakers, parents, and other adults, that children are agents with enforceable rights rather than passive subjects to be managed [26]. It reinforces that children's rights are fundamental human rights rather than acts of charity or pity [27]. Furthermore, this lens complements the ethical framework by rooting reconsidered ethical values in international law that has been formally ratified by almost all countries.

Method

To initiate our critical evaluation of the Thompson *et al.* framework, we conducted a comprehensive review of both existing and emerging pandemic literature to assess what has been documented regarding key ethical considerations for addressing child-related concerns during pandemics. Our search yielded nine published articles and one report. Due to the limited literature on ethical issues specific to children during COVID-19 or within child-centered settings (e.g., pediatric hospitals), we also incorporated studies from prior pandemics, including the SARS and H1N1 outbreaks.

This analysis of the Thompson *et al.* framework therefore draws on these ten sources, in addition to empirical studies, reports, and news items collected for other projects since June 2020, even if they were not explicitly analyzed through an ethical lens. Reflections and adapted case examples were also integrated based on one author's (FAC) experiences working clinically, within community settings, and as an ethicist throughout the COVID-19 pandemic.

In line with Thompson *et al.*'s recommendations [7], stakeholder input was solicited to guide framework adaptations. Contributors included members of a youth advisory council affiliated with the research team, healthcare providers and administrators, academics involved in child-focused research, and parent advisors, totaling 16 participants. One author (FAC) had previously led focused discussions with children's services providers across clinical and community contexts. These discussions highlighted challenges in current pandemic practices, supporting the approaches presented in this paper. It should be noted that pandemic responses and management measures were still active at the time of writing.

Analysis

Our critical review of Thompson *et al.* [7] centered on concerns affecting young people during a pandemic, situating these issues within the frameworks of childhood ethics and children's rights described above. **Tables 1** and **2** provide detailed presentations of the proposed modifications and refinements to the original Thompson *et al.* framework.

Table 1. Ethical Processes

Process	Our Adaptations	Related CRC Articles	Actualizing the Process
Accountability	Systems for monitoring decisions related to pandemics should emphasize children's rights within policy frameworks and evaluate instances where these rights are neglected. These evaluations should be transparently conducted by decision-makers, private organizations, legislative bodies, or other stakeholders, ideally through an impartial third-party review to ensure fairness and neutrality.	Article 3: Best Interests of the Child Article 43–45: These articles explain how governments and international agencies will work to ensure children's rights are protected.	Children's Rights Impact Assessments (CRIAs), a methodical process for assessing the impact of policies and decisions on children's rights, are recommended by the UN Committee on the Rights of the Child. These assessments should also address the needs and rights of specific groups as outlined in other UN conventions, such as the United Nations Convention on the Rights of Persons with Disabilities and the United Nations Declaration on the Rights of Indigenous Persons.
Inclusiveness	Young people must be acknowledged as vital stakeholders by decision-makers and society. While their perspectives are often conveyed through adults, opportunities for direct participation that align with their interests should be developed and implemented during pandemics. These	Article 3: Best Interests of the Child Article 5: Family Guidance as Children Develop Article 12: Respect for Children's	To include young people in pandemic policy decisions, regional and national child and youth advocates should be appointed to review proposed policies. Young people from diverse sociocultural and economic backgrounds should be engaged through compensated roles in advocacy offices, discussions with youth

	voices must be actively sought, genuinely valued, and consider intersectional identity factors in engagement strategies. The CRC should be consulted to identify gaps in children's rights, assess the impact of exclusion, and address disparities among different groups of children.	Views Article 13: Sharing Thoughts Freely	advisory councils, and community consultations, with strategies informed by children and youth themselves [38,39,40,41,42].
Openness and Transparency	Decisions must be clearly communicated and accessible to all, including young people, to promote 'health policy literacy.' Transparent processes should allow young people to offer criticism or suggestions, with public bodies required to respond to these perspectives.	Article 3: Best Interests of the Child Article 17: Access to Information	All public information should use plain language to enhance accessibility for young people and their families. Additionally, public forums such as roundtables, think-tanks, or town halls specifically for young people should be established in accessible locations like schools or recreation centers to foster critical dialogue and understanding.
Reasonableness	Qualitative research involving young people and their families should be considered credible evidence for policy decisions. Young people should be recognized as reliable contributors. The scope of evidence must extend to long-term impacts on children, beyond the immediate priorities of pandemic decision-making. While focusing on present concerns is understandable, neglecting future-oriented risks may overlook opportunities to adapt solutions and allocate resources to prevent predictable harm, benefiting both children and society in the long term.	Article 3: Best Interests of the Child Article 12: Respect for Children's Views	To ensure comprehensive evidence consideration, public health and bioethics panels must: (a) adopt a holistic approach to analyzing pandemic-related evidence, incorporating various research and knowledge sources, (b) assign proportional weight to future and indirect harms not tied to viral transmission or public health measures, and (c) include evidence specific to children's impacts when available.
Responsiveness	Ongoing attention to the evolving needs of young people is critical, especially as new evidence highlights harms beyond viral transmission in pandemics like COVID-19. A formal mechanism for parents, caregivers, and young people to provide feedback should be established, tailored to the capabilities of organizations or governments.	Article 3: Best Interests of the Child Article 4: Making Rights Real Article 12: Respect for Children's Views Article 13: Sharing Thoughts Freely Article 42: Everyone Must Know Children's Rights	A formal complaint mechanism for young people and their caregivers could be managed by government departments focused on child welfare, provincial Child and Youth Advocates (e.g., in New Brunswick [43]), or a federal Child and Youth Commissioner. This mechanism should be efficient, accessible (e.g., available after school hours), and include tools to translate concerns from young people and caregivers into policy-oriented solutions, developed in collaboration with young people where possible.

Table 2. Ethical Values/Principles

Value/Principle	Revised Description	Related CRC Article(s)
Duty to Provide Care	Concepts of 'quality' care should be grounded in robust frameworks of best interests and agency, recognizing young people as rights-holders with agency. Care during a pandemic must balance a young person's current and future capacities, as well as their interconnectedness with those around them. This includes supporting the caregivers and communities that sustain them. Additionally, care must extend beyond healthcare to consider the broader impacts of public health policies on sectors	Article 3: Best Interests of the Child Article 6: Life, Survival, and Development Article 9: Keeping Families Together Article 12: Respect for Children's Views Article 13: Sharing Thoughts Freely Article 19: Protection from Violence Article 22: Refugee Children Article 25: Review of a Child's Placement Article 26: Social and Economic Help Article 28: Access to Education Article 30: Minority Culture, Language, and Religion Article 32: Protection

	like education, social services, and child welfare. Collaboration with educators, parents, or other stakeholders to develop context-specific guidelines can enhance care delivery during public health crises. Young people should also have a voice in determining their care needs and how care tools align with public health objectives.	from Harmful Work Article 34: Protection from Sexual Abuse Article 36: Protection from Exploitation
Equity	Pandemic decision-making should account for social determinants of health, incorporating long-term consequences into planning. A thorough analysis of how children's lives and rights—particularly their access to education—are affected by these decisions is essential. Ensuring young people's fundamental right to healthcare access is critical. Certain groups of children, especially marginalized ones, have faced disproportionate burdens during the pandemic, often exacerbating pre-existing inequities. These impacts vary across groups and must be addressed to ensure fairness.	Article 2: No Discrimination Article 3: Best Interests of the Child Article 30: Minority Culture, Language, and Religion
Individual Liberty	Adopting relational models of autonomy and liberty better suits young people, acknowledging the social relationships that shape their lives. Practically, this involves recognizing when restrictions are necessary but insufficient for supporting care access, emphasizing the vital role of parents, caregivers, and families. Interdisciplinary teams should be formed to involve young people in decision-making, using tools like art or surveys to foster dialogue and knowledge exchange.	Article 3: Best Interests of the Child Article 5: Family Guidance as Children Develop
Privacy	Given young people's extensive use of digital platforms, privacy definitions must include protections in online spaces (e.g., Zoom, social media). Relational perspectives on children should inform privacy frameworks, recognizing their ethical interests while acknowledging their embeddedness in sociocultural networks, which complicates confidentiality [56p. e10]. Decision-makers must balance young people's privacy rights with the protective roles of parents or caregivers. For example, while young people may prefer privacy regarding vaccination decisions, a collaborative approach should ensure urgent parental notifications while respecting children's privacy rights.	Article 3: Best Interests of the Child Article 8: Identity Article 16: Protection of Privacy
Proportionality	Young people have experienced disproportionate impacts from COVID-19 due to inadequate attention to their current and future needs, with unintended consequences from precautionary measures. Decision-makers must recognize that children face unique harms compared to adults, some with delayed impacts. Children's rights (e.g., to education, play, and protection) should be safeguarded to the greatest extent possible or restricted minimally. Balancing young people's rights and necessary restrictions ensures their needs are not sidelined.	Article 3: Best Interests of the Child
Protection of the Public from Harm	Historical pandemics have shown long-term impacts on children, and COVID-19 poses similar risks. A 2013 study found that nearly one-third of children in isolation or quarantine developed post-traumatic stress disorder symptoms post-pandemic [64]. Policymakers must weigh the differing harms faced by children versus adults and adapt policies for	Article 3: Best Interests of the Child Article 9: Keeping Families Together Article 19: Protection from Violence Article 20: Children without Families Article 22: Refugee Children Article 25: Review of a Child's Placement Article 27: Food, Clothing, a Safe Home

	pediatric contexts, with proportionality as a key consideration. Children's rights to protection from harm must be upheld, with specific attention to marginalized communities to mitigate additional harms.	
Reciprocity	Beyond disease transmission, children bear a disproportionate burden to protect public health, affecting their families and communities. Decision-makers must consider these burdens during and after pandemics. Supporting caregivers is essential, as children rely on them to realize their interests. Measures like paid sick leave for parents and youth in essential or low-income jobs can address immediate needs. Proactive strategies to mitigate economic, social, psychological, and physical burdens on children and families are vital, with young people included as partners in these discussions.	Article 3: Best Interests of the Child Article 9: Keeping Families Together Article 12: Respect for Children's Views Article 13: Sharing Thoughts Freely Article 15: Setting Up or Joining Groups Article 18: Responsibility of Parents Article 19: Protection from Violence Article 24: Health, Water, Food, Environment Article 31: Rest, Play, Culture, Arts
Solidarity	Solidarity must be fostered among decision-makers, clinicians, parents, and children. Child refugees and low-income families have faced significant burdens, requiring their experiences to be integrated into decision-making through regional and global solidarity [77]. Children's rights should be treated as binding obligations, not charity [27]. Young people can also contribute to building solidarity within their communities and beyond.	Article 3: Best Interests of the Child Article 12: Respect for Children's Views Article 13: Sharing Thoughts Freely
Stewardship	Stewardship demands careful consideration of young people's unique needs to allocate resources appropriately. Reports highlight reduced hospital visits for children with chronic conditions and delays in diagnoses due to COVID-19 [78]. Institutions must manage resources to support pediatric care while also reserving resources for future societal needs, such as human potential. Conversely, children's institutions may need to share resources to protect the broader society during a pandemic.	Article 3: Best Interests of the Child Article 24: Health, Water, Food, Environment Article 26: Social and Economic Help
Trust	Building trust with young people requires tailored approaches, including clear, youth-focused communication about public health decisions. Identifying representatives within youth groups without marginalizing others is key, followed by shared governance models to ensure young contributors feel valued and heard. Learning from Youth Advisory Councils can enhance these efforts. Like adults, young people have the right to their beliefs, even if they conflict with public health goals, but consistent efforts should provide evidence-based information and address their questions. Trust-building with youth requires behavioral science expertise to ensure responses promote trust [79].	Article 3: Best Interests of the Child Article 12: Respect for Children's Views Article 13: Sharing Thoughts Freely Article 14: Freedom of Thought and Religion Article 17: Access to Information
Practicability	Practicability assesses the feasibility of actions, balancing possibility (can it be done?) and practicality (is it useful?). While young people's needs have often been overlooked in favor of adult concerns or transmission control, allocating resources to meet their interests may be practicable, though challenging due to competing priorities in an adult-centric society. Decision-makers must: 1. Evaluate risks and benefits, setting minimum thresholds to avoid disproportionate harm. 2. Assess	Article 3: Best Interests of the Child

	whether an action is feasible and if all options have been explored. 3. Determine the utility of an action and for whom it is beneficial. Practicability seeks to minimize harm and maximize benefits for young people.	

Ethical processes

To adapt the ethical processes outlined by Thompson *et al.* in a way that more fully acknowledges the multifaceted interests of young people, we began by exploring how these processes could be modified to genuinely reflect young people's perspectives and concerns. The adaptations we propose are summarized in **Table 1**.

With respect to *accountability*, our approach underscores that governments, public health agencies, and health care institutions have a responsibility to all stakeholders—including young people and their families—when making pandemic-related decisions (i.e., ensuring public health measures align with strong ethical principles). This responsibility involves creating multiple channels for young people to contribute their lived experiences and ensuring that their feedback is received and considered respectfully. In contexts where the CRC has been ratified—or where comparable commitments to children's rights exist—accountability also entails examining whether pandemic policies uphold these rights. An accountability framework that centers children's rights further frames young people as competent agents with meaningful and legitimate interests.

From a child-inclusive standpoint, *inclusiveness* requires confronting the ways in which young people have been consistently marginalized in both major and minor policy decisions across most countries, as well as recognizing the varying degrees of exclusion experienced across the child population due to factors such as gender, race, socioeconomic status, disability, and other intersecting identities. As Daniels and Sabin [14] emphasize, decision-making should involve a "broad range of stakeholders—especially consumers affected by the decisions—play the role of fair-minded individuals" to ensure that "all relevant reasons" are considered (p. 63). Excluding young people from these sociocultural and policy contexts not only neglects their interests (or "reasons") but also overlooks their capacities to act as "fair-minded individuals."

As previously noted, the effects of COVID-19 on young people and their rights have largely been neglected in pandemic policies globally [26, 28], particularly their rights to participate and be heard [29]. Lessons from prior pandemics indicate that such exclusions can have negative consequences for young people [30]. While this marginalization may be partly explained by competing priorities and the utilitarian aim of maximizing public health benefits for the majority, sidelining young people's interests can have broader societal repercussions that extend beyond virus containment [31, 32]. During COVID-19, research indicates that young people often felt insufficiently engaged in community-level pandemic processes, expressing a desire to participate as genuine partners in policy development and implementation [33, 34].

To achieve meaningful inclusiveness, policymakers should proactively create opportunities to invite young people into pandemic planning, recognize past exclusions with attention to intersectional aspects of their identities, and design mechanisms for gathering input that reflect young people's interests, rights, and cultural contexts. Such strategies must ensure that children's perspectives are accorded "due weight" as mandated in CRC Article 12 [25], and work toward providing equitable access to decision-makers for all young people.

Openness and transparency are fundamental for enabling the public and affected stakeholders to understand how decisions are reached, what those decisions entail, and to invite critical discussion. As Daniels [15] and Thompson *et al.* [7] suggest, in pandemic contexts, openness and transparency particularly involve clearly communicating the reasons behind decisions—that is, the evidence, principles, and values that "all can eventually agree is relevant" [15, p. 1301]. This must be distinguished from revealing one's intentions, which could theoretically be self-interested or personal; honesty about such intentions does not render them ethically sound, even if reasons are provided.

Even when decision-making processes are made public, they often remain inaccessible to many young people, especially those who are very young, have diverse cognitive abilities, live in varying socioeconomic conditions, or have differing levels of interest in engaging with information [35]. From a childhood ethics and children's rights perspective, information intended for public review should be "translated" into formats that all young people can use, including those with communication, cognitive, or social differences that may affect comprehension. This is critical given evidence that some young people have reported confusion or uncertainty regarding pandemic decisions [30, 33], and parents or caregivers have found navigating these discussions challenging [36]. To genuinely facilitate critical dialogue, information must be presented in ways that enhance young people's understanding.

Rethinking *reasonableness* through the lenses of childhood ethics and children's rights entails redefining what qualifies as relevant, robust, or reliable information for guiding consensus and decision-making. This includes recognizing young people as knowledgeable contributors and experts on issues affecting their own lives. Inclusive processes for generating and evaluating information must be incorporated into pandemic policy planning to ensure diverse sociocultural perspectives are represented. Additionally, the scope of considered information must extend beyond immediate effects, as young people often experience the long-term consequences of pandemic policies, sometimes more extensively than adults. For example, delays in pediatric care can lead to lifelong health challenges for children with pre-existing conditions or newly diagnosed complex health concerns [37]. Limiting accountability and knowledge to certain adults risks perpetuating the view that young people are incapable or unreasonable, while overlooking their potential to make meaningful contributions.

Finally, the concept of *responsiveness* should align with the adaptations proposed for other ethical processes by consistently attending to the interests of young people alongside those of adults. As new information emerges or circumstances change—such as rising vaccination rates or reduced transmission—policymakers should be ready to adjust priorities to address long-term consequences of urgent pandemic policies, including impacts from school closures or social isolation. Achieving this vision of responsiveness requires implementing strategies that enable young people to voice their concerns and ensure that public agencies or organizations act on this feedback to uphold their expressed interests and address their concerns.

Ethical values

Although existing criteria aim to ensure that pandemic policy processes are ethically robust, the application of ethical values should also actively guide how these processes are structured and carried out. In the following section, we revisit the ethical values outlined by Thompson and colleagues [7] through the perspectives of childhood ethics and children's rights, with further elaboration provided in **Table 2**. Additionally, we propose the inclusion of a new value, practicability, to strengthen this framework.

When reconsidering the ethical value of the duty to provide care from the standpoint of young people, it is crucial to define what constitutes "good care" during a pandemic in relation to children. Central to this understanding are the concepts of best interests, agency, and capacity, as emphasized in childhood ethics [19] and childhood studies [44]. Recognizing young people as full human beings is essential, alongside appreciating the relational nature of childhood, which necessitates attention not only to children's interests but also to those of parents and caregivers, even when the primary focus is on the child. Furthermore, restricting the notion of care to medical or health settings during a public health crisis neglects the multiple environments—such as schools, community organizations, and recreational spaces—that collectively influence children's well-being [45] and the associated rights that demand policymakers consider these contexts [25].

Equity is another ethical value that warrants re-examination. While Thompson *et al.*'s [7] definition remains ethically sound and should be maintained, it should be expanded to explicitly integrate children's rights, ensuring that equity encompasses fair consideration of young people as holders of human rights. In evaluating the immediate effects of pandemic policies on children's rights and capacities, long-term consequences must also be considered. For example, the abrupt closure of schools in Ontario, Canada, during the early phase of the COVID-19 pandemic had immediate negative effects on children's mental health and social skills, as well as foreseeable long-term economic implications [46]. Children from marginalized groups—including Indigenous, Black, racialized, socially disadvantaged children, those with disabilities or pre-existing health conditions, immigrant children, and refugee children—experienced heightened vulnerabilities during the pandemic [28, 47–50]. For instance, children from lower socioeconomic backgrounds often struggled to access devices necessary for online learning. These impacts extend beyond the individual child, affecting families as well [51]. Despite existing normative protections [25], the rights of many young people were insufficiently considered. Ethical pandemic frameworks, therefore, must be sensitive to these disparities and actively safeguard young people from discrimination, both during and beyond public health emergencies.

The ethical value of *individual liberty* requires careful adjustment when viewed through childhood ethics and children's rights. Relational models of liberty and autonomy [52, 53], which recognize the importance of social contexts and relationships, are particularly relevant for children. While young people should have opportunities to participate in decisions affecting their lives and to act in their own best interests, these capacities are exercised within social relationships that shape their experiences. In pandemic scenarios, a balance must be struck between protecting public health and supporting the interests of children and their proxies. It may be necessary to temporarily restrict opportunities for individual choice to manage collective risk, while still striving to respect and promote children's capacities and well-being.

Adapting Thompson *et al.*'s definitions of *privacy* requires broadening our understanding to consider how digital health technologies may specifically threaten the privacy rights of young people [54], particularly given the rapid technological advances over the past twenty years and the increasing online presence of children and adolescents [55]. For example, when children decide whether to download and use a COVID-19 exposure tracking app on their devices, their choices must be weighed in light of their rights, their parents' responsibilities, and their best interests. Similarly, in discussions about vaccine passports—a central aspect of pandemic management—it is essential to frame the conversation around privacy concerns for both adults and young people. Applying a childhood ethics lens highlights that while young people hold their own ethical interests, their relational nature makes privacy considerations vis-à-vis parents or caregivers inherently complex [56]. Privacy issues also extend to vaccination decisions, as legal scholars and media reports have emphasized that in certain jurisdictions, young people may have the legal capacity to consent to vaccination without parental approval [57], a consideration that existed even before the COVID-19 pandemic [58]. Ultimately, safeguarding young people's privacy should be proportional to the risk–benefit context specific to each individual [56].

Thompson et al.'s concept of *proportionality* emphasizes employing the least restrictive measures when limiting individual liberties [7]. However, because young people are often regarded as less capable and are granted fewer freedoms than adults, there is a pre-existing imbalance when weighing individual rights against population-level restrictions. Evidence demonstrates that during the pandemic, young people have disproportionately experienced burdens—including long-term harms and infringements on their rights—without sufficient remediation or mitigation [3, 59]. Therefore, when applying proportionality through childhood ethics and children's rights frameworks, it is necessary to accord the liberties and rights of children the same weight as those of adults. Measures restricting children's rights should be limited to what is strictly necessary to achieve a fair balance of opportunities and constraints across all population groups. Moreover, proportionality functions as a meta-value, influencing and shaping the interpretation of other ethical values, and this must be recognized for the framework to function effectively.

Thompson *et al.* [7] posit the *protection of the public from harm* as a central ethical value. When viewed through a child-inclusive lens, it becomes necessary to clarify what is meant by "public," explicitly encompassing all young people rather than only those most vulnerable to viral transmission, illness, or death. Similarly, the concept of "harm" must be scrutinized. While some have suggested that children faced lower risks during the COVID-19 pandemic—due to lower infection rates and milder illness compared with adults—recent research from the current pandemic [2, 3, 60] and prior pandemics [61–64] demonstrates that young people experience significant adverse effects, particularly in terms of mental health and long-COVID risks [65]. Children have a right to protection from these pandemic-related harms, yet during COVID-19, these rights were not consistently prioritized, particularly in resource-limited settings [28]. Therefore, a child-centered interpretation of this value must account not only for transmission-related harms—which remain important to mitigate—but also for the broad spectrum of immediate and long-term impacts that disproportionately affect young people.

From a child-inclusive perspective, the concept of *reciprocity* similarly requires reconsideration of what constitutes disproportionate harm. If assessed solely by viral transmission outcomes, young people may appear to have experienced less harm during the early pandemic waves, aside from children with underlying health conditions or those affected by rising infection rates due to variants like Delta. However, a broader view reveals that young people have endured disproportionate burdens from pandemic policies, including irreversible consequences that vary by group or individual [4]. Decision-makers should recognize the relational dimensions of childhood, acknowledging the resilience children and adolescents have had to exhibit for the sake of their families, peers, and communities while managing significant personal burdens. Policies should proactively anticipate these challenges rather than respond reactively [66], ensuring mechanisms are in place to alleviate the disproportionate impacts on young people during and after the pandemic.

Applying *solidarity* through the lens of childhood ethics and children's rights necessitates transparent, accessible communication not only between nations, governments, and institutions but also with the public—including parents, caregivers, educators, healthcare providers, and young people themselves. Evidence suggests that such open dialogue was often lacking for young people [33], despite its critical role in supporting their well-being during the pandemic [67, 68]. Solidarity must also account for the varied impacts experienced by different groups of children and youth, recognizing how these disparities affect their rights and daily lives [69]. Involving children and adolescents as consultants in strategy development can help ensure that initiatives fostering solidarity and effective communication are inclusive and responsive to their perspectives.

A child-inclusive understanding of *stewardship* emphasizes "integrated, rather than siloed, resource allocation" [70] managed by public health authorities and the state. This entails sustained investment in the care of young people—particularly those with underlying conditions—while enabling pediatric institutions to share resources with adult-focused facilities experiencing higher hospitalization rates [71]. In practical terms, this could involve decisions around ventilator allocation among infants, children, and adults, taking into account risk of death, potential quality of life, and clinical needs, as was considered at Montreal Children's Hospital and the Hospital for Sick Children in Toronto. Similarly, prioritizing COVID-19 vaccinations for adults before children reflects a need for careful resource management, including allocation of personnel, research funding, and other critical supports. Stewardship also encompasses safeguarding resources with long-term significance, such as access to high-quality education or economic investments, and implementing strategies to protect young people from delayed harms. A genuinely population-based approach promotes shared resources, coordinated and overseen by the state across healthcare settings, sectors, and facilities, ensuring equitable protection and support for all.

Fostering *trust* with young people requires explicitly acknowledging their rights, signaling that authorities recognize them as individuals whose interests deserve protection. Given that children frequently experience age-related biases shaped by societal priorities, approaches informed by advances in "cultural safety" [72] are necessary to address power imbalances between adults or service providers and young people. Traditional communication methods—such as press briefings, news releases, and reports—may be insufficient to engage young people as meaningful stakeholders. Alternative strategies are needed to secure their engagement with evidence-informed public health measures, and these efforts should extend beyond the pandemic to establish trust over time. Building trust also demands consistent, intentional efforts to suspend preconceptions about the decisions or actions of individuals or communities, allowing for authentic dialogue. This is particularly critical in clinical contexts, where trust in professional relationships develops differently than in everyday social interactions [73]. Experienced Child and Youth Advisory Councils or Committees can offer guidance on effective strategies to foster trust in the context of pandemic policy development. Trust is also closely linked to vaccination efforts, as establishing public confidence is now central to discussions regarding childhood vaccines [74]. Given the frequent absence of trusted spokespeople for young people, deliberate efforts to cultivate public trust are essential. In these contexts, trust is complex and may involve reconciling acceptance across multiple parties, including parents and caregivers [74].

Practicability is a new ethical value introduced based on our examination of pandemic impacts on young people in both the literature and clinical ethics consultations. This value concerns the feasibility of an action, considering whether it is achievable and/or practical. An action deemed practicable is one that can be carried out, even if it presents challenges. Practicability is crucial for implementing proportionality and, in effect, for operationalizing the optimization of all other ethical values within the framework. For instance, decision-makers who prioritize maximal restrictions to prevent viral transmission may inadvertently create ethical tensions by valuing immediate biological harms over other significant impacts, such as social or long-term biological harms.

A truly proportional approach to pandemic ethics requires that all pandemic-related effects be considered, with solutions favoring the minimization of harms as defined *by those affected*. Measures should ensure that minimum risk thresholds are maintained across all meaningful harms or risks. Determining these thresholds for risks affecting children would require consultation with the communities in question. Early evidence [3, 75] suggests that such thresholds might include: avoiding sustained, irreconcilable psychological or emotional distress due to physical distancing measures; preventing separation between children and their parents or caregivers to safeguard children's rights to parental representation, decision-making, and ongoing consent to care; and ensuring that no child experiences irreparable or disproportionately borne setbacks in academic, learning, or language development. These thresholds rely on the availability of feasible (even if inconvenient) interventions that protect children from harm while also reasonably minimizing viral transmission risks.

To achieve a "just" and proportionate balance of risks and benefits, all potential measures must be evaluated to optimize outcomes for those affected, ensuring that no minimum risk threshold is breached—even in contexts where resource allocation, such as in clinical settings, already operates near these thresholds prior to a pandemic. Considering "all measures" encompasses actions that may be cumbersome, costly, or logistically challenging. Some interventions may be outright "impossible" (e.g., immediately vaccinating an entire population with a fully effective vaccine upon the emergence of a new virus), while others may be "impractical" (e.g., closing all essential food and drug stores for two weeks to fully enforce community lockdowns). Practicability, therefore, occupies a space between what is possible—actions achievable regardless of effort or cost—and what is practical—actions feasible within reasonable effort or resource constraints. It denotes actions that are "do-able," though they may involve significant or extraordinary inconvenience.

For instance, in certain cases, parents were restricted from visiting their disabled children in long-term care facilities for several weeks or months [76]. While this measure could reduce viral transmission, it disproportionately undermined essential child interests, particularly parental access and parental representation in decision-making. Several children's hospitals demonstrated that it was practicable to safely balance infection control with parental presence by limiting access to one parent at a time, controlling their movements within the hospital, and providing staff or volunteer guidance on proper protective equipment usage. In this context, the action was achievable while maintaining both safety and essential child interests.

Discussion

This paper offers new insights on how a child-inclusive perspective can be integrated into existing ethical frameworks, thereby expanding the scope of decision-making tools and perspectives. From developing this adapted framework, several overarching reflections have emerged. Our team's engagement throughout the COVID-19 pandemic highlighted the temporal dimension that shapes decision-making, determining which impacts are prioritized. While immediate physiological and economic effects have dominated policy agendas since March 2020—and continue to do so as COVID-19 transmission is perceived as a reduced societal threat—the consequences most affecting the majority of young people tend to be future-oriented. These include disrupted education, delayed medical procedures, mental health challenges, socialization interruptions, and long-term economic impacts from reduced employment opportunities. Some effects may become biologically embedded, with consequences emerging decades later [80].

Although controlling viral spread and limiting infection remain crucial, the overwhelming focus on immediate outcomes risks perpetuating long-term disadvantages for young people. This emphasis on short-term impacts is not unique to pandemics but reflects a systemic issue affecting youth. Recognizing this temporal inequity during COVID-19 underscores the need for future research and targeted action. Consequently, the adapted framework emphasizes a forward-looking approach, prioritizing pre-emptive strategies to anticipate and mitigate the threats young people may face, rather than reacting only once negative impacts are inevitable.

Another key insight from this framework is the essential importance of engaging young people as genuine contributors in pandemic policy discussions, much as decision-makers consult experts in other fields. Failing to involve young people risks producing policies that do not adequately address their unique needs and experiences. Meaningful engagement requires creating spaces that are accessible and open for young people to share their perspectives, and it also necessitates that decision-makers actively listen to their voices and lived experiences. Young people are experts in articulating their own experiences and the impacts they face; therefore, incorporating their insights into a collective model for pandemic policy responses is both reasonable and necessary. It is also important to recognize that interpretations of what constitutes a child's best interests may vary depending on the respondent—be it the child themselves, parents, or other caregivers—highlighting the need to balance multiple perspectives in policy development. The importance of significant child and youth participation in research has been emphasized in other forums [81], and scholars and community leaders have highlighted the value of including young people in various decision-making settings [30, 34, 82]. Initiatives like the "#CovidUnder19: Children's Rights During Coronavirus: Children's Views and Experiences" project [83] have provided platforms to center, amplify, and listen to young people's voices. Nonetheless, sustained national efforts are needed to ensure that young people's perspectives are consistently incorporated into policy discussions, beyond pandemic contexts.

As reflected throughout the framework, well-being extends beyond immediate health outcomes to encompass the broader range of experiences a person has while living in society. Consequently, ethical frameworks applied in pandemics must account for social determinants of health, which play a critical role in the overall well-being of individuals and communities. The "Health in All Policies" approach emphasizes the need for systematic evaluation of the health and healthcare implications of all public policies, with the aim of improving population health, promoting health equity, and optimizing the context in which health systems operate [84, p. 6]. Because health outcomes extend beyond the healthcare sector, decisions made in other domains can profoundly affect overall societal well-being. Many adaptations in this framework highlight the importance of sectors outside of traditional health care and demonstrate how a child-inclusive ethical framework can account for these broader influences on young people's well-being during a pandemic. Importantly, while childhood ethics and children's rights lenses are inherently child-inclusive, our adapted approach presents a more collectivist perspective, positioning young people as fully integrated members of the broader community rather than as external actors. This approach may require certain concessions from young people and child-focused organizations to support broader public health objectives, while simultaneously ensuring that young people's own interests and rights are respected and supported. Practically, this entails prioritizing the least restrictive measures possible, recognizing that restrictions may apply to both adults and children alike.

Actualizing this re-envisioned framework in practice

The following two examples illustrate how our child-inclusive adaptation of Thompson *et al.*'s framework can be applied in real-world scenarios. The first example aligns closely with the original intention of the Thompson *et al.* framework, which is primarily oriented toward healthcare resource allocation [7].

1. Access to limited healthcare resources

During pandemics, demand for critical, limited-supply resources—such as ICU beds and mechanical ventilators—may exceed available capacities, even when all possible mobilization measures have been implemented. This raises important questions regarding the relative prioritization of children versus adults, particularly given that children generally experience lower rates of severe illness compared to adults during the COVID-19 pandemic.

- When planning local or regional public health measures, how should children be prioritized relative to adults, especially considering children with varying illnesses or disabilities?

An ethically guided response, using the adapted child-inclusive Thompson *et al.* framework, recognizes the proportionally lower infection risk for many children while emphasizing that children's rights must be accorded the same importance as adult autonomy. Stewardship requires that resources be shared across populations whenever feasible. In the context above, children overall have experienced lower hospitalization and mortality rates from COVID-19 compared to adults, suggesting that some pediatric resources can ethically be allocated to adults.

However, there are important exceptions. Children with disabilities or underlying health conditions face higher relative risks and must be prioritized accordingly. Ethical decision-making must ensure that these vulnerable young people are not overlooked and that their pre-existing healthcare needs are adequately met, protecting their right to care and preventing disproportionate harm. Transparency with healthcare providers and families, as well as responsiveness to the diverse needs, interests, and risks of different populations, is essential throughout this process. Consultation with young people, including those with disabilities, is critical to understanding their perspectives and concerns in these scenarios.

The second example reflects the broader approach emphasized in this paper, which challenges the notion that resource management is limited to the medical sphere. Instead, attention must also be given to investing in social supports, education, community resources, and parental involvement, as these elements collectively influence the health and overall well-being of young people.

2. Lockdown impacts

The COVID-19 pandemic has demonstrated that lockdowns can be highly effective in curbing viral transmission within communities, yet they can also result in significant—and sometimes seemingly irreversible—social and mental health harms for young people. For instance, children and youth, particularly those from low-income households, have experienced substantial social impacts due to school closures and face heightened challenges in accessing mental health services and community programs.

- When designing local, regional, or national public health measures for pandemic management, how should social and mental health impacts be weighed relative to the biological consequences of viral transmission?

Addressing this scenario ethically, guided by the adapted child-inclusive framework, requires expanding the definition of harm to include a broader range of risks, as outlined under the "protection of the public from harm" principle. While mitigating transmission-related risks remains critical, it is equally important to acknowledge and address the more severe effects that disproportionately affect many young people—such as social and educational disruptions—through dedicated resources. A balanced, proportionate, and ethically sound approach entails evaluating the full spectrum of impacts on young people, especially given that transmission-related harms often appear to be comparatively minimal for this population.

Key questions include: what specific risks are children and youth encountering, and how should these be weighed when the timing and nature of impacts vary? Conceptualizing these investments as part of an expanded "duty to provide care," alongside a reinterpreted notion of stewardship, enables mitigation strategies to extend beyond the healthcare sector. Without such an approach, young people risk experiencing disproportionate short- and long-term harms, undermining the principle of reciprocity in pandemic responses. Principles of accountability, inclusiveness, transparency, and reasonableness are all inherently supported when social impacts are addressed deliberately.

Although some may argue that these resource allocations are impractical given finite national resources, stakeholders are encouraged to evaluate their feasibility within the broader context of budgetary flexibility and resource reallocation. Incorporating young people's lived experiences is essential, because exposing them to risks that exceed minimal thresholds constitutes a profound ethical concern, and such decisions remain subject to scrutiny under ethical review.

Challenges and limitations

The process of expanding this framework encountered several challenges and limitations that merit acknowledgment. First, unlike Thompson and colleagues [7], who completed their work retrospectively, our adaptation was developed during an ongoing pandemic. While this allowed us to draw on contemporary reflections and cases that remain highly relevant, it also means that evidence on pandemic impacts is still emerging and lessons continue to evolve. Consequently, future research should engage in retrospective evaluation to assess the insights, lessons, and practical utility of this framework.

Second, this work challenges prevailing societal norms by advocating for children to have an equitable presence in policy discussions and the opportunity to participate meaningfully, be heard, and have their rights recognized. However, our work is situated within dominant discourses that frequently undermine children's capacities and deprioritize their rights, making efforts to advance change feel daunting. Despite this, we recognize that incremental progress is meaningful, and this framework represents an initial step in the right direction. Third, our adaptation addresses gaps identified by Thompson *et al.* [7] through the engagement of youth and other key stakeholders, including some parents, to gather feedback on core framework elements. In this effort, we consulted a single non-specialized youth advisory group to provide broad perspectives on young people's experiences. We acknowledge that involving a small number of youth presents limitations. Future work should expand engagement to include more children and youth as both stakeholders and research participants, exploring how the framework aligns with the care they received and the policies that affected their lives during the pandemic. Ideally, this could involve qualitative research utilizing participatory-action methodologies.

Finally, context and environment significantly influence the interpretation of ethical principles and the application of a childhood ethics lens. We encourage readers to consider how this framework may need adaptation to specific settings. This approach aligns with the epistemological orientation of social constructivism underpinning this work and the recognition, as noted earlier, that there are no universal experiences of childhood.

Conclusion

In this paper, we have re-envisioned the ethical processes and principles proposed by Thompson and colleagues [7] through a "young person focus," informed by children's rights literature and a childhood ethics framework. We emphasized that ethical frameworks for pandemic decision-making should account for impacts on all dimensions of a person's well-being, not solely health sector outcomes, to ensure sound ethical guidance. Child-inclusive considerations should become standard practice, enabling implications to be anticipated well before emergencies arise.

Consistent with Thompson *et al.*'s observation that "values are not static" [7], we acknowledge that pandemic circumstances can change rapidly and that the framework's implementation may differ across settings. Therefore, ongoing evaluation and context-specific revision are necessary to maintain the framework's relevance and effectiveness. It is also important to recognize that no pandemic framework can eliminate difficult decisions; policymakers will still face challenging choices regarding resource allocation. Our hope is that this child-inclusive framework serves as a foundation to guide such decisions—whether in response to ongoing COVID-19 concerns or future public health emergencies that affect young people's rights, interests, and well-being—and to foster discussion that meaningfully includes the perspectives of young people.

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