Shifting Duties of Children's Hospitals During the COVID-19 Pandemic

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Public health emergencies may require shifting from conventional to contingency and ultimately to crisis standards of care, which prompts consideration of needs and resources across hospital systems.[1,2] Within conventional care contexts, institutions have their usual resources including supplies, staff, and space and are able to provide a usual standard of care to patients. As institutions anticipate shortages in an emergency, they may enter a contingency state. In this state, the institution begins to plan for shortages, often by finding alternative uses of supplies, staff, and space that are functionally equivalent but still aiming to conserve resources such as rescheduling elective procedures and using alternative but functionally equivalent personal protective equipment. Still, during this state, institutions are able to provide the usual standard of care.

Under crisis standards of care, resources have reached a level of scarcity or circumstances are such that they do not permit normal operations. In this state, institutions may not be able to meet the usual standard of care. Instead, institutions are expected to provide care that is sufficient given available resources and circumstances. How to utilize scarce resources, however, invokes consideration of the ethical duties of institutions. Despite the likelihood of entering crisis standards of care (CSCs) in the current COVID-19 pandemic, limited ethical guidance exists regarding how institutions should relate to each other in a crisis. Relevant moral duties during conventional, contingency, and CSCs include duties of rescue, fidelity, solidarity, and justice. As CSCs develop, these duties require limiting elective procedures and instituting triage in certain circumstances, but how this relates to coordination among hospitals is unclear.

We argue that the primary role of pediatric institutions during the COVID-19 pandemic under CSCs is increasing system capacity by regionalization of pediatric care. Under regionalization of care, children's hospitals that serve as local/regional referral centers would preferentially take *all* pediatric patients in the region, including those who might normally be admitted to a primarily adult hospital, thereby increasing availability of beds and resources at primarily adult facilities. This maximizes the expertise and resources of pediatric institutions and avoids unnecessary harm to all patients by mitigating shortages before any hospital faces conditions in which they need to invoke triage procedures. General hospitals should transfer pediatric patients to pediatric institutions and should consider transfer of patients and/or resources between regional institutions, which helps avoid triage conditions until all accessible resources are in use.

GENERAL DUTIES

Institutions are prominent moral actors with duties to patients extending beyond those of providers.[3]

The *duty to treat* includes two subsidiary duties. First, the *duty of rescue* has a special role in emergencies, requiring providers to intervene with those helpless without assistance.[4-6] For children's hospitals, this means providing care for children in the region who cannot receive needed care elsewhere. Second, the *duty of fidelity* requires promoting patients' good, including giving precedence to patients with established treatment relationships.[7]

Institutions also have a *duty of solidarity*.[8] Institutions must recognize they are bound together to care for the broader community and should work in tandem.[9] Solidarity encompasses the duty of stewardship—responsibly using resources to mitigate shortages; this duty sometimes requires subsuming patient, provider, or institutional needs for overall community benefit.

Finally, institutions have *duties of justice*,[2] to provide fair and equitable care with transparency and trustworthiness. Justice requires that institutions ensure shifting to CSCs does not disfavor already disadvantaged groups.[10]

APPLICATION AND ALTERATION OF DUTIES

Public health emergencies strain health care resources in ways that hinder providing usual standards of care. Public health ethics guide healthcare systems during contingency or CSCs in ethically grounded approaches to mitigate shortages and allocate resources.[1,2] We consider how duties evolve from conventional care to CSCs, with a focus on actions to meet institutional duties under changing circumstances.

Conventional Care

Ordinarily, institutions provide usual standards of care, which follow typical operations. Interactions between institutions and

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providers rely on basic ethical principles, including primacy of patient welfare, autonomy, and social justice. A degree of redundancy allows institutions to meet duties of rescue, fidelity, solidarity, and justice even with increased demand. The duty to treat is primary but requires balancing duties to rescue with fiduciary duties. Thus, if the institution were near capacity and a decision is needed about which patient to accept in transfer, avoiding irreversible harm to a previously unknown patient who could not receive adequate care in the community should take precedence over accepting an established patient who could receive adequate care elsewhere. If neither patient could receive adequate care elsewhere, the patient known to the children's hospital should be accepted, under the duty of fidelity. Fidelity also requires that patients currently admitted continue to receive treatment. Justice requires fair and equitable treatment of patients, without consideration of morally irrelevant features (eg, race or immigration status).

Contingency Care

Contingency care begins when a public health emergency introduces strains on hospital resources.[1,2,11] As long as typical or alternative resources last, adaptations in care have minimal effects on quality, and the duties of rescue, fidelity, and justice mirror conventional care; however, operations begin to shift to recognize greater duties of solidarity. In the COVID-19 pandemic, given their missions to provide specialized care for children, pediatric hospitals can meet their duty to treat by accepting patients who might otherwise receive care elsewhere. Children's hospitals should consider accepting *any* child for which they have capacity to help decompress other systems (eg, liberating beds for more adults at other institutions). Children's hospitals should also continue to preferentially admit children requiring tertiary care (eg, neonates requiring subspecialty surgery), which respects the duty of rescue.

The duty of solidarity supports strategic sharing and stewarding of resources, including personal protective equipment, ventilators, and staff. Strategies might include postponing elective procedures, repurposing facilities, or limiting staff entering isolation rooms; such alterations to standard care require careful discussions with providers to anticipate negative consequences, ensure safe practices, and plan for reassessment.

The duty of rescue requires maintaining ability to care for patients who cannot receive adequate care elsewhere. Institutions can meet this duty by reserving a small number of intensive care and general beds to care for patients needing emergent specialty care.

Crisis Standards of Care

Under CSCs, resources are insufficient to maintain usual standards of care *and* mitigation attempts no longer suffice. Scarcity demands greater duties of solidarity, reducing attention to some individuals to promote the community good. To meet duties of solidarity, institutions should prepare for triage after exhausting efforts to preserve system resources.

During a pandemic such as COVID-19 that primarily affects adults, pediatric resources should be consolidated by transferring children to regional pediatric facilities. Without transfer, children who present to primarily adult facilities, where resources are more strained given the higher burden of disease in adults, may otherwise be subject to triaging of scarce resources at the adult facility. But, no child should have care determined by any hospital's triage system if *any* pediatric bed is available within a region, and if pediatric resources are regionalized, children will be less likely to face triage at primarily adult facilities unless the entire system has reached capacity. In addition to regionalization, children's hospitals may also face requests to accept adult patients or share equipment and/or staff with adult facilities; when these actions do not compromise the capacity of the pediatric institution to provide care to children, institutions should consider them.[12] However, pediatric institutions can best meet the duty of solidarity by expanding regional capacity through freeing up resources in general hospitals, including beds, ventilators, and staffing usable for adults, preventing all hospitals from needing to triage. If triage is necessary because the entire system has reached capacity, triage should also take place at children's hospitals, in respect of solidarity, to optimize this community resource.

Under CSCs, significant practice variation in triage policies may occur. Regional institutions may individually employ triage policies during crisis standards of care and deny critical care resources to some individuals who might receive them in noncrisis times, when there isn't such scarcity. Minimizing denials across a region requires collaboration between centers to ensure solidarity. Processes should be fair and equitable. Justice entails ensuring consistency in allocation criteria, with differences prioritizing those least well off. Triage teams in a region should use consistent, aligned processes so that similarly situated patients have equitable access to resources and care across centers. However, triaging pediatric and adult patients together could disadvantage children (eg, priority given to health workers); moreover, illness severity measures for infants/children differ from those applicable to adults, which makes equivalent scoring for allocation challenging.[13] Some resources are specific to pediatric or adult care. Therefore, it may be necessary to separate pediatric and adult allocation processes.

Triage criteria must not discriminate based on morally irrelevant criteria, such as sex, race/ethnicity, or disability.[1] Institutions using "objective" scoring systems for morbidity and mortality should acknowledge that these systems could disadvantage marginalized populations with higher rates of chronic conditions resulting from systemic inequities.

A commitment to justice mandates that no patient should be triaged if the required resources (eg, ventilators) are available at a regional hospital and transfer is feasible. Transfer should occur across all regional hospitals, not just partners within hospital networks. Facilitating transfers requires institutions to engage in close communication. If no centralized external system exists, a group of individuals with knowledge of inpatient resources—but without direct care duties—should provide coordination.

Because CSCs are so different from conventional standards, institutions should collect data on regionalization and triage

protocols. Recognition of inequitable outcomes may necessitate changing scoring criteria or reveal disproportionate burdens on vulnerable populations.

To maintain public trust and promote justice, institutions must be transparent regarding triage policies and procedures for CSCs. These should be available for public review, revised with public input, and readily available once finalized.

POTENTIAL BARRIERS TO IMPLEMENTATION

Despite the ethical justification for regional coordination of care and resources, there are multiple barriers to implementation. Providers and families may hesitate to disturb continuity of care at medical homes. Organizations may have financial disincentives to transfer long-term patients to new institutions. Openness with patients and families regarding the temporary nature of transfers and plans to return to their usual care may help. Granting temporary privileges at recipient institutions for providers to continue seeing their patients may lessen discontinuity. Solidarity in public health emergencies requires all institutions to compromise their own interests to some degree.

Similarly, barriers in achieving consistency across institutional triage policies may arise. Allocation strategies embody multiple values, for example, regarding quality of life or contributions of essential workers. Resolution of these value differences may prove difficult.

CONCLUSION

In the current COVID-19 pandemic, an ethical approach to CSCs necessitates coordination to align available resources at the regional, rather than institutional, level to avoid triage at individual institutions. Pediatric regionalization of care is the first step in freeing up system capacity for adults. Solidarity rises in importance, but must be balanced by duties of rescue, fidelity, and justice so that pediatric institutions continue to care for children with urgent needs requiring pediatric expertise.

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