

Ethical Framework for the Allocation of Personal Protective Equipment (during COVID-19)

Background

This ethical framework is intended to guide institutional resource allocation decisions for Personal Protective Equipment (PPE) during the COVID-19 public health emergency. In a guidance document issued Feb. 27, 2020, the [WHO recommends rational use of PPE](#) for treating patients with confirmed or suspected COVID-19. Relevant PPE includes gloves, medical masks, goggles or face shields, gowns, and respirators. The WHO has indicated that the current global stockpile of masks and respirators is insufficient and shortages in gowns and goggles is also anticipated.

The WHO has issued three overarching recommendations for use of PPE:

- 1) minimize the need for PPE; and
- 2) ensure PPE use is rationalized and appropriate; and
- 3) coordinate PPE supply chain mechanisms.

The WHO recommendations have been integrated into this framework. This ethical framework is a living document and will require review and updating as the COVID-19 situation evolves and new evidence emerges. This framework is advisory and was developed to support key decision-makers at the institutional level regarding the distribution of available PPE supply and potential modification to health services to conserve PPE. Although this framework is tailored for the acute care setting, ideally there should be consistency between and among healthcare institutions across the continuum of care to foster a consistent approach, and as a result, promote the ethical principles of justice and fairness. This framework may be adapted to address a broader health system perspective.

This ethical framework is adapted from the [Ethical Framework for Resource Allocation during the Drug Supply Shortage](#), which was drafted by an Ethics Working Group convened by the University of Toronto Joint Centre for Bioethics in 2012 and endorsed by the Ontario Ministry of Health. The Allocation of PPE Ethical Framework is comprised of:

- a. Allocation principles that are articulated in three stages;
- b. Fair process principles; and
- c. Guiding values.

Balancing allocation principles and making decisions about PPE allocation should occur according to fair process principles and generally aim to promote seven guiding values. The guiding value of reciprocity has been added to the six principles originally articulated in the Drug Supply Shortage framework. The guiding values are beneficence, equity, reciprocity, solidarity, stewardship, trust, and utility. In addition to the allocation principles and guiding values, fair process principles, such as the Accountability for Reasonableness (A4R) Ethical Framework should help inform how decisions are made. The five fair process principles comprising A4R include relevance, publicity, revision, enforcement, and empowerment.

The following seven guiding values appear in alphabetical order and are not rank-ordered.

Table 1.Guiding Values

Value	Definition
Beneficence	Promoting highest quality of safe and effective care within resource constraints by: <ul style="list-style-type: none">a. Ensuring standard of care and best Infection Prevention & Control (IPAC) practices whenever possibleb. Training healthcare providers to select the proper PPE, how to safely don, doff, and dispose of PPE after usec. Committing to use best available data/evidence to inform PPE allocation decision-makingd. Using alternative PPE where evidence suggests similar or similarly adequate efficacye. Informing and educating healthcare providers about risks and benefits of alternate PPE including risk mitigation strategiesf. Enabling delivery of care in the most appropriate setting, e.g. negative pressure rooms or decontamination areas to help mitigate risk of exposure
Equity	Promote just/fair access to PPE by: <ul style="list-style-type: none">a. Using allocation processes for distribution of PPE that do not arbitrarily disadvantage any healthcare provider (including both regulated and unregulated providers)b. Not discriminating between healthcare providers based on factors not relevant to their professional situation (e.g., social status)c. Treating similar cases similarly and treating dissimilar cases in a manner that reflects the differences.
Reciprocity	To support healthcare providers that may be or are exposed to COVID-19 in the course of their employment, mitigate potential harms/burdens this may cause to the individual by: <ul style="list-style-type: none">a. Describing the steps healthcare providers should take to reduce exposure or spread to others, including family membersb. Working with Occupational Health & Safety to clarify requirements and implications for fitness to workc. Ensure that healthcare providers exposed to COVID-19 are aware of all known ways to reduce symptoms and complications associated with COVID-19d. Prioritizing healthcare providers most at risk of COVID-19 exposure in the course of their employment for future vaccines or treatments that may be developed or become availablee. If hospital visitation is suspended, support use of technology for patients and staff that are isolated from families to safely communicate
Solidarity	To build, preserve and strengthen interprofessional and intra-institutional collaboration is the responsibility of all leaders and decision-makers through: <ul style="list-style-type: none">a. Embracing a shared commitment to the well-being of patients and healthcare providers regardless of care setting (i.e. all sites and more broadly across the continuum of care)

- b. Establishing, encouraging, and enabling open lines of communication and coordination
- c. Sharing and redistributing PPE within the healthcare institution
- d. Supporting allocation decisions that are consistent with ethical framework
- e. Recognizing importance of collaboration with health system partners beyond the acute care setting
- f. Recognizing some healthcare providers may feel a strong duty to care for patients despite inadequate PPE but this individual decision may have overriding negative consequences, e.g. resources if the healthcare provider becomes ill

Stewardship

Use available PPE carefully and responsibly by:

- a. Ensuring PPE utilization is consistent with best available evidence
- b. Avoiding stockpiling for personal use
- c. Postponing elective procedures/treatments that require use of PPE that are in limited supply
- d. Prioritizing access to scarce PPE based on risk of exposure and pathogen transmission dynamics
- e. Monitoring PPE utilization and distribution to facilitate course corrections as needed
- f. If deemed acceptable for IPAC practices, extend life of PPE through extended PPE use (e.g. use same respirator while caring for multiple patients with the same diagnosis without removing PPE)

Trust

Foster and maintain public, patient, and health care provider confidence in PPE distribution system by:

- a. Communicating in a clear and timely fashion, including expectations around accepting or refusing work assignments
- b. Making decisions in an open, inclusive and transparent way with clearly defined decision-making authority and accountability
- c. Being transparent and providing a rationale about what criteria are informing PPE allocation decisions
- d. Collating short and long-term lessons learned

Utility

While balancing the other principles, maximize the greatest possible good for the greatest possible number of individuals by:

- a. Promote administrative control measures that minimize direct patient care to essential encounters
- b. Distributing PPE in short supply to healthcare providers administering direct patient care
- c. Distributing PPE in short supply to healthcare providers with the highest risk of exposure (e.g. providing direct care and aerosol-generating procedures) and pathogen transmission dynamics
- d. Sharing PPE within the healthcare institution
- e. Where feasible, sourcing additional PPE supply
- f. Identifying healthcare providers that may be at increased risk for the more serious (health-related) impacts of COVID-19 if they were to become infected and potentially redeploy to lower risk areas.

Allocation Principles:

The following allocation principles apply generally across all types of PPE. They provide a foundation to inform discussion and decision-making at the relevant governance level.

Stage 1. Implement strategies to preserve standard of care and best IPAC practices to the extent possible within available PPE supply

When there is risk of PPE shortage,

- 1a. Conserve existing supply of PPE using strategies such as:
 - x Developing an inventory of available PPE and review at frequent intervals
 - x Reviewing PPE usage practices in light of best available evidence
 - x Reducing wastage of PPE (e.g., where evidence does not support use or is weak)
 - x Minimize need for PPE by using alternatives to face-to-face care such as telemedicine or consultation across physical barriers for appropriate interactions
 - x Using alternative PPE where evidence suggests adequately similar efficacy to the PPE in short supply
 - x Prohibit or limit hospital visitation (to reduce or eliminate visitors use of PPE)
 - x Limit access to PPE to only those providing direct patient care to COVID-19 (or other diseases that require PPE)
 - x Cancelling non-urgent or elective procedures that require use of PPE
 - x Utilize expired PPE for training purposes and consider if safe to use for direct care
 - x Delaying new enrollment in research studies using PPE in short supply
- 1b. Access new supply of PPE by:
 - x Collaborating with partners and governments to identify and procure alternative sources

And if these strategies are insufficient...

- 1c. Postpone or reduce procedures/treatments that require the use of PPE in short supply that are not related to COVID-19.

Stage 2. Apply Primary Allocation Principles based on risk of exposure and risk of harm if infected:

When Stage 1 strategies are insufficient to meet the need for PPE in short supply, give priority access in rank order to:

- 2a. Healthcare providers who are at highest risk for exposure to (or risk of harm from) COVID-19 (or other diseases that require PPE) that are providing direct care to patients.

2b. Healthcare providers who are at moderate risk for exposure to (or risk of harm from) COVID-19 (or other diseases that require PPE) that are providing direct care to patients.

2c. Healthcare providers who are at lowest risk for exposure to (or risk of harm from) COVID-19 (or other diseases that require PPE) that are providing direct care to patients.

Meanwhile...

- x Continue with Stage 1 strategies, *and*
- x Reassess healthcare provider's risk of exposure on an ongoing basis to identify any changes in level of priority.

Stage 3. Apply Secondary Allocation Principles to Ensure Fair Access to PPE

When decisions must be made between healthcare providers within a level of priority as described in Stage 2, prioritize healthcare providers using a fair and unbiased procedure that does not discriminate between healthcare providers based on factors not relevant to their risk of exposure (e.g., race, social value, sex, age) or risk of harm if infected such as:

- x First come, first served (where queuing is feasible with regular clinical practice), or
- x Other procedure that is developed and sanctioned by affected stakeholders (e.g., random selection). A lottery system would mean that only some healthcare providers get PPE and only those healthcare providers would be able to provide care.

Meanwhile...

- x Continue with Stage 1 strategies, *and*
- x Reassess healthcare providers' risk of exposure on an ongoing basis to identify any changes in level of priority.

Ethical Frameworks for Resource Allocation Decision-Making:

YODA, A4R and Centre for Clinical Ethics (CCE) Ethical Framework for Pandemic Decision-Making (worksheet)

The **YODA** principle-based ethical decision-making framework is the Lakeridge Health institutional framework and has 4 main steps (**Y**ou **O**bserve **D**eliberate **A**ct) with 9 sub-steps to work through dilemmas. The **A4R** framework has also been adopted by LH as a tool used in conjunction with YODA to help shape ethically defensible processes for resource allocation decision-making. It outlines 4 fair process principles that help ensure the process is fair and perceived as such: Transparency; Relevance; Revision; Leadership. Lastly, the **CCE Ethical Framework for Pandemic Decision-Making** is a worksheet that gives practical guidance in an easy-to-use format for pre-deliberation, deliberation and reflection phases of a process.

When considering implementing these frameworks, every effort should be made to promote fairness in decision-making. Fairness can be promoted by ensuring that this process aligns with Lakeridge Health's frameworks for organizational decision-making. Further details on YODA A4R and the CCE Ethical Framework for Pandemic Decision-Making are available on the ethics pages of [The WAVE \(on the intranet\)](#).

Appendix I:

Areas Requiring Further Consideration:

- x Redistributing PPE among health system partners
- x IPAC guidelines/direction on PPE minimum standards, PPE substitutions, or alternations to standard usage such as PPE extended use or reuse
- x Expectations around reporting to work or self-quarantine if a family member living in the same residence is positive for COVID-19
- x Legal context if emergency measures are invoked at various levels of government
- x Healthcare providers ability to refuse “unsafe” work or assignments
- x Access to PPE in community and unique challenges of allocation in community setting
- x If healthcare providers have contracted COVID-19 and since recovered, what is the risk of re-infection?
- x If PPE supply gets to zero, can healthcare providers independently decide to provide care without PPE (i.e. assume risk)?