Ethical Dialysis Allocation: Balancing the Needs of Chronic and Acute Patients During COVID-19

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Objectives

- Highlight differences between **ethics in "usual times" vs during a pandemic**/public health emergency
- Review **ethical principles** used to allocate scarce resources
- Review the nuances of **age vs life-cycle considerations**
- Review the **proposed provincial framework** for capacity expansion and triage of dialysis during a surge

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In Anticipation of and in Response to Calls to Action…

"Our experience suggests that medical centers must actively consider how to balance the effort to provide KRT care for all comers without compromising the ability to deliver optimal or even adequate KRT to patients with survivable acute and CKD. *We think it is time for medical authorities and ethicists to consider explicitly the possibility that KRT will have to be allocated at this time and in future public health disasters.*"

Goldfarb et al. *Impending Shortages of Kidney Replacement Therapy for COVID-19 Patients*. CJASN April 28, 2020

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Ensuring optimal care for people with kidney diseases during the COVID-19 pandemic

"The global healthcare community and policymakers should anticipate and address the unique needs of different patient groups such as those with kidney failure…"

https://www.theisn.org/images/Statement_ASN_ERA-EDTA_ISN.pdf.

Ethics in the news

FEATURES

The Extraordinary Decisions Facing Italian Doctors

There are now simply too many patients for each one of them to receive adequate care.

MARCH 11, 2020

Yascha Mounk
Contributing writer at *The Atlantic*

BY JANE GERSTER - GLOBAL NEWS

Posted March 30, 2020 4:43 am

Douglas Todd
5 days ago • 11 minute read

And in the Academic Literature

- **NEJM:** *Fair Allocation of Scarce Medical Resources in the Time of COVID-19* – March 23, 2020
- **The Hastings Center:** *Ethical Framework for Health Care Institutions Responding to Novel Coronavirus SARS-CoV-2 (COVID-19)* Guidelines for Institutional Ethics Services Responding to COVID-19 Managing Uncertainty, Safeguarding communities, Guiding Practice – March 16, 2020
- **JAMA:** *A Framework for Rationing Ventilators and Critical Care Beds During the COVID-19 Pandemic* – March 27, 2020
- **BMJ:** *COVID-19 and the moral community: a nursing ethics perspective* – March 25, 2020
- **NEJM:** *Facing COVID-19 in Italy – Ethics, Logistics, and Therapeutics on the Epidemic's Front Line* – March 18, 2020

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“The Watchword is Solidarity, Not Autonomy”

1) To what degree is it justifiable for a state to intervene on privacy and personal liberties of individuals in the name of the greater good of the broader population?

2) If there are inadequate resources to adequately respond to each individual patient’s medical needs, how should resource allocation decisions be made to best serve the greater population?

https://impactethics.ca/2020/03/24/coronavirus-the-watchword-is-solidarity-not-autonomy/

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BC's Ethical Decision Making Framework
Key ethical values and principles

- Respect
- The harm principle
- Fairness
- Least coercive and restrictive means
- Working together
- Reciprocity
- Proportionality
- Flexibility
- Procedural justice
  - Openness and transparency
  - Inclusiveness
  - Accountability
  - reasonableness

https://www2.gov.bc.ca/assets/gov/health/about-bc-s-health-care-system/office-of-the-provincial-health-officer/covid-19/ethics_framework_for_covid_march_28_2020.pdf

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PPE distribution framework

- HCPs providing the most critical services who are at greatest risk will be given the highest prioritization. The highest risk to health care workers will exist where there is the highest possibility for transmission.

- HCPs working in specialist areas (e.g. critical care, specialist acute settings) should be protected with the goal of retaining their specialist knowledge for the good of society.

https://www2.gov.bc.ca/assets/gov/health/about-bc-s-health-care-system/office-of-the-provincial-health-officer/covid-19/ppe_allocation_framework_march_25_2020.pdf

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Triage and Resource Allocation during COVID

"The intersection between ethics and medicine is indisputable and the contribution of an ethical perspective is both relevant and essential.

Healthcare professionals forced to make decisions about resources allocation should not rely solely on their medical background. The burden of choice—the implications of which concern us all—can no longer be put on healthcare professionals' shoulders.

Now more than ever. there has to be a rigorous and adequate implementation of medical ethics in healthcare."

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Mannelli, 2020 https://jme.bmj.com/content/early/2020/04/09/medethics-2020-106227

When Demand Outstrips Supply…

- What does justice mean?
  - Treating everyone equally?
  - Treating everyone equitably?
  - Maximizing overall happiness?
  - Building community solidarity?
  - Respecting individual liberty?

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Ways to make allocation decisions

Treating people equally	• Lottery • First come, first served
Favouring the worst off: prioritization	• Sickest first • Youngest first
Maximizing total benefits (utilitarianism)	• Number of lives saved • Prognosis/ life years saved
Promoting/ rewarding social usefulness	• Instrumental value • Reciprocity

Persad et al., Lancet 2009; 373: 423–31

How do we allocate scarce resources?

Principles:

- treating people equally
- favouring the worst-off
- maximising total benefits
- promoting and rewarding social usefulness.

Need to incorporate multi-principle approach

Persad, Govind, Alan Wertheimer, and Ezekiel J. Emanuel. "Principles for allocation of scarce medical interventions." *The Lancet* 373.9661 (2009): 423-431.

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Decision Making Process

1. Define the Issue
2. Clarify the Facts as much as possible
3. Identify Stakeholders & their Perspectives
4. Identify and Analyze Principles and Values
5. Identify Alternative Courses of Action in Light of Values
6. Make A Decision
7. Implement the Decision
8. Review and Document the Decision

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BC Renal Dialysis Allocation Framework:
Guiding Ethical Principles

1. Maximizing benefits
2. Treating people fairly
3. Prioritizing the worst off and
4. Procedural Justice

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When further triage is needed…?
Random allocation

First come first served?

- Treats people "equally"
- But
  - Incentivizes early presentation to hospital - resources quickly overwhelmed
  - Disadvantages those who get sick later/ live further

Lottery?

- Treats people "equally"
- Avoids disadvantaging those who
  - live further away
  - have less access to information
  - less able to absorb the cost of "waiting in line"
  - adhere to public health measures and stay healthy longer…
- Does not incentivize early presentation to hospital;
- But: how to operationalize?

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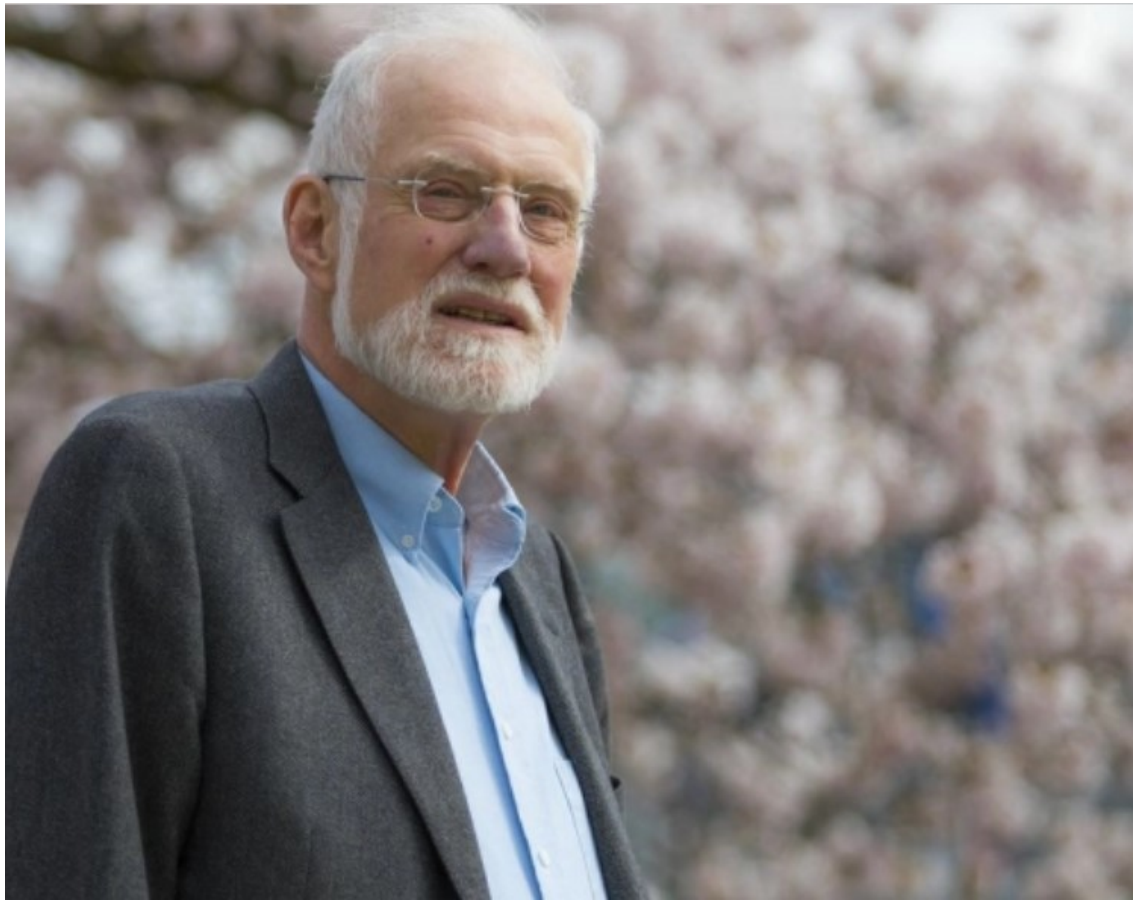
Or…A more equitable approach?

Have you had ‘Fair Innings?’

“It is always a misfortune to die…it is both a misfortune and a tragedy [for life] to be cut off prematurely”

(Harris, as cited by White et al 2020)



https://vancouversun.com/opinion/columnists/did-you-get-a-chance-at-life-and-other-questions-if-ventilators-run-short/

They Decide Who Lives, Who Dies:

Medical Miracle Puts Moral Burden on Small Committee

LIFE, November 9, 1962

Complexities

Dialysis triage: more difficult than ventilator allocation?

- 2 competing patient pools
  (acute and chronic)
- Indications for RRT are (more) diverse
- Implications of <u>not</u> dialyzing in AKI vary - complications are different and don't automatically lead to death (urgency is a factor)

Need a framework established in advance of a crisis

Planning ahead :
2 complimentary components + communication

1. Maximize dialysis capacity: Resource optimization
2. Triage: allocate scarce resources
3. Communication: to patients/caregivers

Developed with
Patients
Doctors
Nurses
Ethicists
Administrators

Capacity Expansion: Operations during Surge

Conventional

↓

Contingency

↓

Crisis

Contingency Levels and Recommended Responses

	Description	Contingency Levels and Recommended Responses
Stage 1 **Conventional Operations** **Minor Surge**	All dialysis resources levels are fully intact. The hemodialysis unit is functioning within funded bed capacity and adequate staffing levels.	• Daily assessment of unit census • Prioritize all patients for possible capacity expansion. • Implement Renal COVID Guidelines in unit: Refer to: • http://www.bcrenalagency.ca/resource-gallery/Documents/COVID-19_Guideline_for_Hemodialysis_Programs.pdf • Consider cohorting COVID-19 positive inpatients out of the HD unit when possible. • Cohorting of COVID-19 positive patients within inpatient units NOT in critical care areas should be considered to optimize nursing ratios during off-ward dialysis beyond 1:1. • Consider moving COVID-19 positive dialysis patients to adjacent rooms or multi-bed rooms within COVID-19 units to allow for this.
Stage 2 **Conventional Operations** **Moderate Surge**	All dialysis resources levels remain intact, but there is a possibility that staffing resources may become depleted. The HD unit is functioning within funded bed and staffing capacity.	• Continue with Stage 1 Guidelines. • Continue to keep patients informed of stage level. • Identify potential Community Dialysis Unit (CDU) patients' currently dialyzing in-centre and facilitate transfer where possible. • Identify potential home dialysis patients and fast track training • Review and update Medical Order Scope of Treatment/ Advance Care Planning discussions/conversations to align with patient goals and wishes. • Maximize the use of all CRRT (PRISMA) machines in Critical Care areas. • Determine essential components of HD care and assessment. Consider deferring routine: blood work, transonic, medication reviews. • Determine capacity of nurse to support multiple patients at essential service levels. • Determine interdisciplinary supports available to assist in care. • Consider repatriating HD trained staff from clinic based service areas and how to provide refresher training. • Explore other roles in health care (included and excluded) and determine how they can support direct care.
Stage 3 **Contingency Operations** **Major Surge**	An increase in demand for dialysis services, beyond the normal capacity, yet still maintainable with support from the Health Authority Renal program. Each HD unit remains responsible for determining the most effective approach to manage the increased demand volumes.	• Limit durations to 3 hours when possible, regardless of COVID-19 status. • Extend usual nurse patient ratio in ICU to acceptable and agreed upon staffing that includes ICU/HD RNs and renal technician. Outline strategies for urgent assistance if patient care needs change. • Consider the increasing utilization of PD urgent starts. • Implement Clinical Prioritization for Chronic HD Patients. • Increase nurse to patient ratio in hemodialysis unit and cohort stable patients to maximize ratio in a team-based approach. • Transfer chronic hemodialysis patients to regions with dialysis capacity.
Stage 4 **Crisis Operations** ***Emergency Triage Status***	A significant increase in demand for HD services which impacts care at a regional level. More patients are requiring services than available resources. The system is operating at a crisis surge level and the increase in demands that overwhelms the renal resources of an individual hospital and region.	• Organize provincial response. A coordinated response at the regional network level is required. • At Stage 4, the Emergency Operating Centre (EOC) should be in a position to provide direction to ensure clinical and operational leads are prepared to evoke management strategies to determine alternate service delivery. • Provincial Health Officer and Renal Medical Directors/BC Renal Executive Director to implement optimization framework • Activate DTATT teams to determine resource allocation • Allocation of available dialysis resources determined by the DTATT team.

Emergency Operations Planning: Resources

Staffing is anticipated to be the primary resource limitation

- HD nurses
- Renal techs
- Physicians

Secondary limitations:

- HD machines
- water treatment equipment (limited portable water treatment devices)
- Building/facility infrastructure (plumbing)

Conventional Operations (Stage 1)

- adequate resources available to give all patients the care that they require
- preparation for future shortages must begin
- conservation measures should be put in place immediately

Capacity Expansion Priority Categories

	Patient characteristics
Category 1	**Stable, suitable for reduced frequency HD** (weight gain and potassium (**K**) (okay) Interdialytic Weight Gain (IDWG) <4 %, Serum K<5 and dialysate K>2
Category 2	**May be suitable for shorter duration HD runs** (weight gain okay but higher potassium) IDWG <4%, Serum K >5 OR dialysate K ≤2
Category 3	**Intermediate– Physician discretion to be used for reduced duration HD** Dialysate K ≤2 OR Serum K ≥5 AND/OR IDWG ~4% or 4kg AND/OR recent admission for volume overload
Category 4	**Unsuitable for short or less frequent HD** IDWG >4% or >4Kg AND Serum K>5 or Dialysate K≤2
Category 5	**Case by case assessment: Use physician discretion when deciding on dialysis frequency/duration** Patients who started HD within the last 1 month (new patients are often hemodynamically unstable and require frequent dialysis to stabilize) Patients on 4x-5x/week HD but have suitable potassium or IDWGs

Conventional Operations (Stage 2)

- Continue to keep patients informed of stage level.
- Identify and transfer chronic patients from In-Centre to CDU where possible
- Identify and fast track potential home dialysis patients
- Review and update Advance Care Planning / Resuscitation Orders
- Maximize CRRT (PRISMA) machines in Critical Care areas
- Consider deferring routine monitoring: blood work, transonic, medication reviews.
- Determine nursing capacity of nurse for nurse-patient ratio changes
- Identify interdisciplinary supports available to assist in care.
- Consider repatriating HD-trained staff from clinics and how to provide refresher training

Contingency Operations (Stage 3)

- Increase demand for dialysis services, above the normal capacity
- Possible staff shortages
- Each HD unit remains responsible for determining the most effective approach to manage the increased demand volumes.

Interventions:

- Limit HD to 3 hours when possible, regardless of COVID-19 status.
- Extend usual nurse patient ratio in ICU (consider ICU+HD RNs + renal technician triad- how to get assistance if patient care needs change)
- Consider increasing the utilization of PD urgent starts.
- Implement Clinical Prioritization for Chronic HD Patients.
- Increase nurse to patient ratio in HD unit and cohort stable patients to maximize ratio in a team-based approach.
- Transfer chronic hemodialysis patients to regions with dialysis capacity.

Communication: open and transparent

- Proactive communication with patients and families that the system is operating under enormous constraint

- Standardized communication highlighting key issues has been developed for distribution (and translated)
  - Reasons for withholding or changing schedules
  - Consensus of the team about processes for implementing change
  - Ethical principles foundational
  - Commitment of care team to safety and care

- Regular and ongoing communication critical

Triage: Crisis Operations (Stage 4)

- Insufficient resources
- Escalating morbidity and mortality
- Must be mindful of moral distress

Stage 4: Crisis Operations (declared by Public Health Officer)

BC Renal Executive Director will alert the Health Authority Renal Program (HARP) Medical Directors to activate their Dialysis Tripartite Allocation Triage Teams (DTATTs)

DTATT members:

1. Regional medical director
2. Non bedside nephrologist
3. Ethicist (or non-physician HCP)
    - If no one qualified is available, the health authority may consult clinical ethicists from other BC health authorities as required.

- Determine priority according to a vetted strategy that is ethical and transparent

Models developed to help

- Multidisciplinary team including ethics
- Patient voices present throughout

- Vetting with renal programs

- Transparent process for addressing the complexity of decision making for dialysis resources:
  - 2 dimensions
  - 2 populations

Multidimensional Triage

Matrix of:

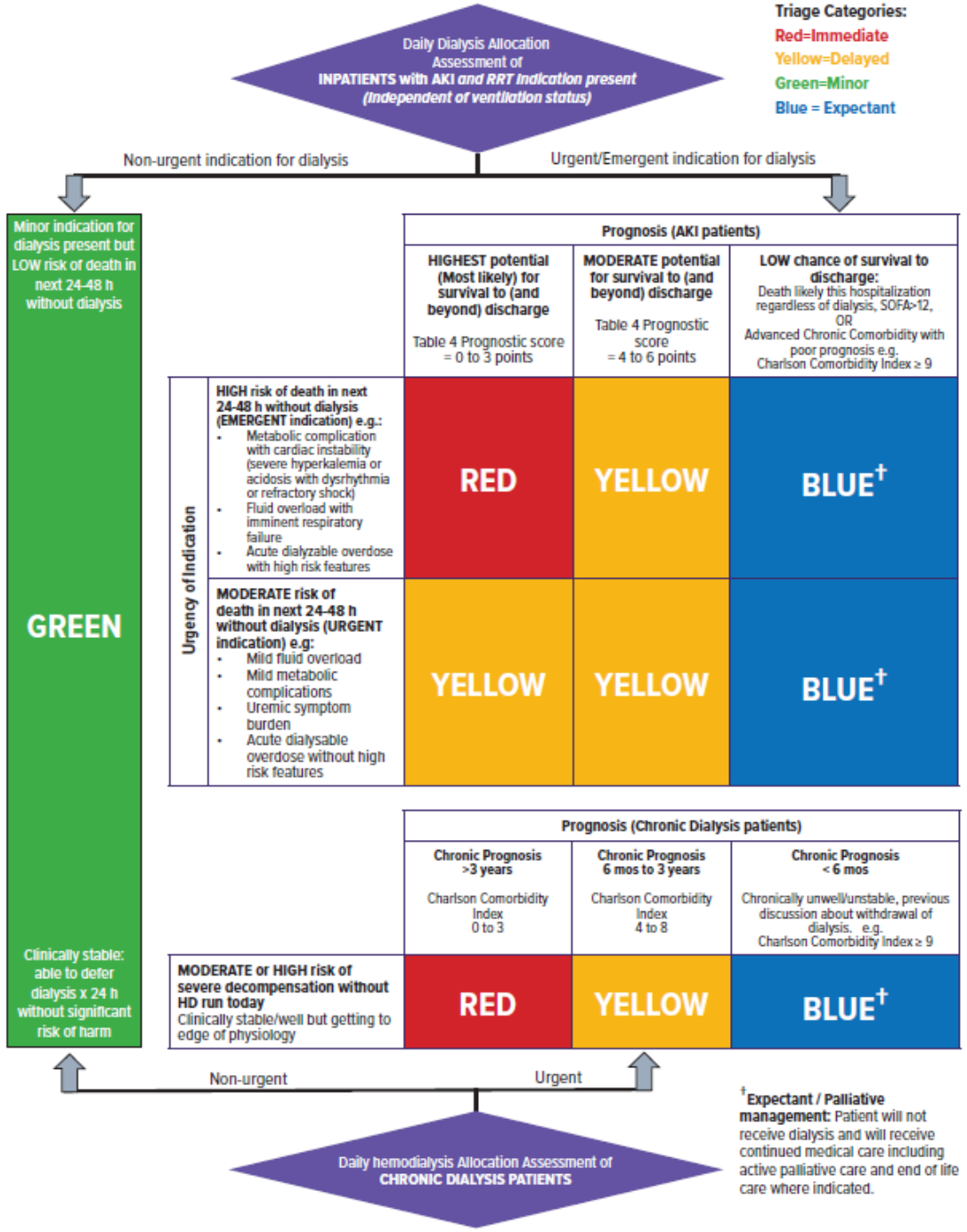
2 allocation concepts

- urgency of the need
- overall prognosis

Applied to 2 different populations

- AKI
- Chronic dialysis

Red = Immediate (highest priority)
Yellow = Delayed (next highest priority)
Green = Minor (can be safely deferred)
Blue = Expectant (worst prognosis)



Estimate* prognosis in 2 dimensions, give priority to the lower total score:

1. survival to discharge (SOFA)
2. longer term prognosis (CCI)

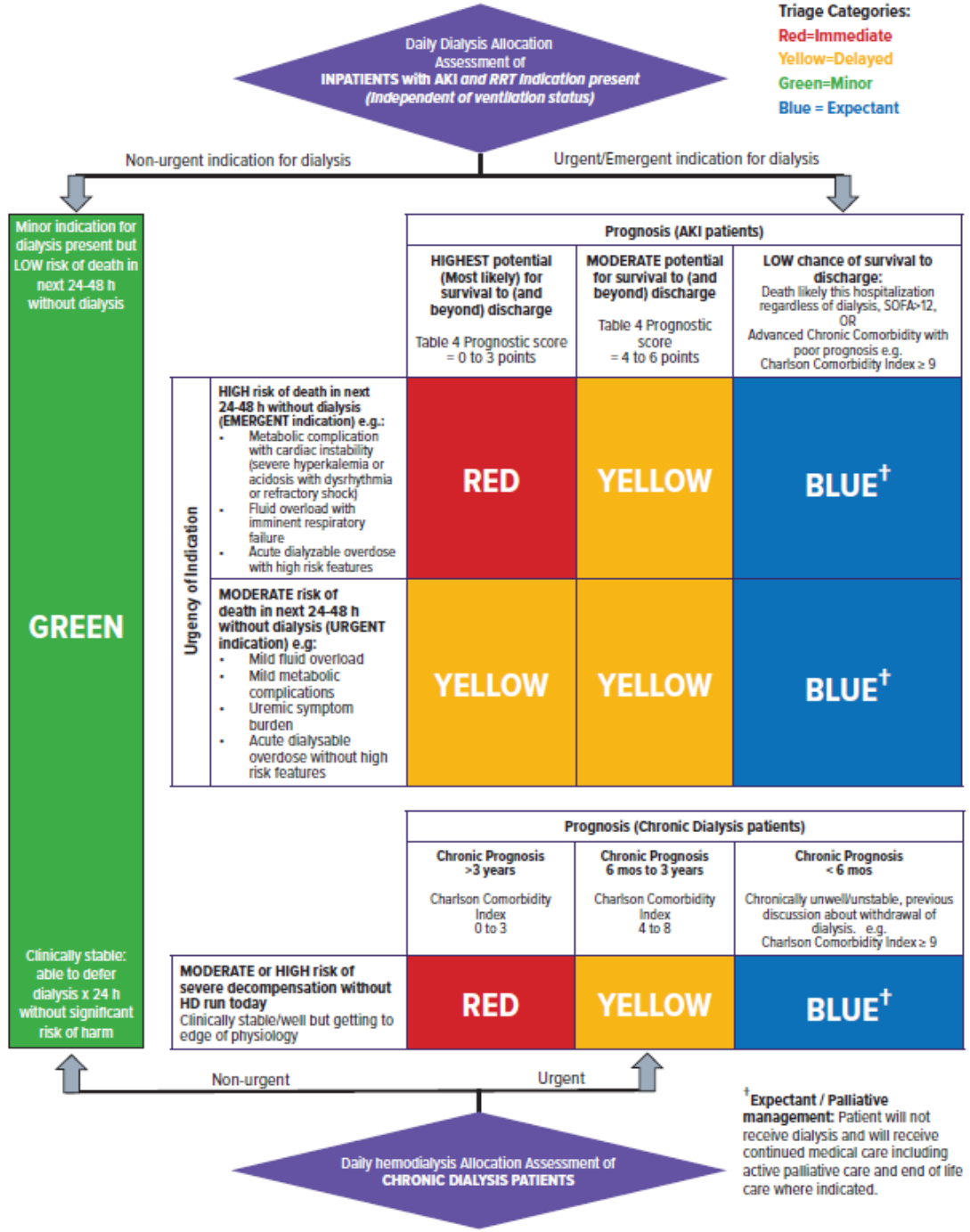
Tools:

* Validated
* Objective
* Usable/Practical

Proposed Prognostic Prioritization

Specification	0 points	1 points	2 points	3 points	4 points Patients in this column for would already be triaged to Blue group for poor prognosis as noted in Algorithm 1
Predicted short term survival (Sequential Organ Failure Assessment (SOFA) score)	Not acutely ill – e.g. chronic HD outpatient	SOFA < 6 e.g. inpatient	SOFA 6-9 e.g. ICU patient	SOFA 10-12 e.g. ICU patient	SOFA >12 e.g. ICU patient
Predicted near term survival (Charlson Comorbidity Index)	Charlson Comorbidity Index 0, 1 or 2 Points	Charlson Comorbidity Index 3 or 4 Points	Charlson Comorbidity Index 5 or 6 Points	Charlson Comorbidity Index 7 to 9 Points	Severe comorbidities with death expected within 6 months e.g. Charlson Comorbidity Index ≥ 9

- Patients are individually scored and ranked. Lower scores receive priority for RRT that day according to capacity that day
- **The Sequential Organ Failure Assessment (SOFA) score** is a mortality prediction score that is based on the degree of dysfunction of six organ systems and can be used to determine level of organ dysfunction and mortality risk in ICU patients. See https://qxmd.com/calculate/calculator_268/sequential-organ-failure-assessment-sofa
- **Charlson Comorbidity Index** is a mortality prediction score based on the presence of 17 specific comorbities as well as age, which has been validated in multiple studies involving kidney failure https://www.mdcalc.com/charlson-comorbidity-index-cci


Daily Dialysis Allocation Assessment of INPATIENTS with AKI and RRT indication present (Independent of ventilation status)
Triage Categories:
Red=Immediate
Yellow=Delayed
Green=Minor
Blue = Expectant
Non-urgent indication for dialysis
Urgent/Emergent indication for dialysis
Minor indication for dialysis present but LOW risk of death in next 24-48 h without dialysis
GREEN
Clinically stable: able to defer dialysis x 24 h without significant risk of harm
Prognosis (AKI patients)
HIGHEST potential (Most likely) for survival to (and beyond) discharge
Table 4 Prognostic score = 0 to 3 points
MODERATE potential for survival to (and beyond) discharge
Table 4 Prognostic score = 4 to 6 points
LOW chance of survival to discharge:
Death likely this hospitalization regardless of dialysis, SOFA>12, OR
Advanced Chronic Comorbidity with poor prognosis e.g. Charlson Comorbidity Index ≥ 9
Urgency of Indication
HIGH risk of death in next 24-48 h without dialysis (EMERGENT indication) e.g.:
Metabolic complication with cardiac instability (severe hyperkalemia or acidosis with dysrhythmia or refractory shock)
Fluid overload with imminent respiratory failure
Acute dialyzable overdose with high risk features
RED
YELLOW
BLUE†
MODERATE risk of death in next 24-48 h without dialysis (URGENT indication) e.g:
Mild fluid overload
Mild metabolic complications
Uremic symptom burden
Acute dialysable overdose without high risk features
YELLOW
YELLOW
BLUE†
Prognosis (Chronic Dialysis patients)
Chronic Prognosis >3 years
Charlson Comorbidity Index 0 to 3
Chronic Prognosis 6 mos to 3 years
Charlson Comorbidity Index 4 to 8
Chronic Prognosis < 6 mos
Chronically unwell/unstable, previous discussion about withdrawal of dialysis. e.g. Charlson Comorbidity Index ≥ 9
MODERATE or HIGH risk of severe decompensation without HD run today
Clinically stable/well but getting to edge of physiology
RED
YELLOW
BLUE†
Non-urgent
Urgent
Daily hemodialysis Allocation Assessment of CHRONIC DIALYSIS PATIENTS
†Expectant / Palliative management: Patient will not receive dialysis and will receive continued medical care including active palliative care and end of life care where indicated.

Distributive Justice in further triage

If need for tiebreaker within triage categories (e.g. yellow)

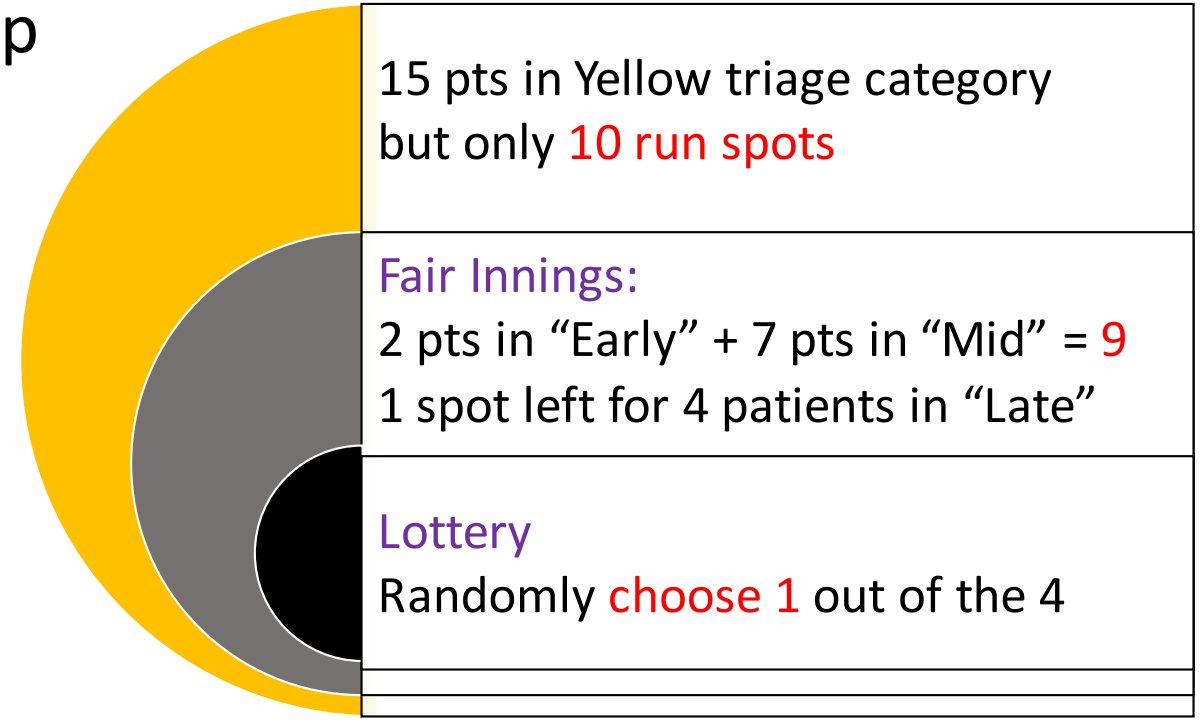
Equitable treatment → Fair-innings principle

Priority to the earlier life stage

No age priority <u>within</u> a life cycle group

If still need for tiebreaker:

Equal treatment → Random lottery



Simulation: A very bad day at Penticton Regional Hospital

12 chronic HD and 9 AKI = 21 PATIENTS, 14 slots available
6 patients In ICU
40 yr no comorbidities with COVID, ventilated, develops oliguric ARF
50 yr old with COVID, no comorbidities (smoker) ventilated, anuric renal failure with K 7.0/HC03 15, fluid positive, MSOF
70 yr old, min comorbidities, with septic shock and MODS, oliguric ARF with modest metabolic complications
75 yr old DM/CAD with CHF/large MI (EF 30% and ARF, fluid overload headed towards resp failure with K 7, Bicarb 15, INR 1.5
65 yr old with COVID rheumatoid arthritis, frailty, not for ventilation, oliguric ARF
30 year old Healthy, car accident, rhabdo, renal contusion, K=8:
3 patients admitted to the ward with ARF
75 yr with CAD, DM and ARF from contrast nephropathy post cath, metabolics preserved, minimal volume overload/symptoms
80 yr with recovered urosepsis, no comorbidities, non-oliguric ATN but no complications
50 yr old with DM, CKD and recovered COVID infection but ARF on HD, last ran 3 days ago, getting to edge of physiology, K 6.0
12 HD patients all getting to the edge of their physiology
85 yo on HD x 4 years, frail with dementia, talking about withdrawing from HD for the last few mos
55 yo with DMI, started HD 6 mos ago, Left BKA
30 year old with PCKD on HD x 1 yr waiting for transplant
75 yo with COPD, nephrectomies for cancer (cured) stable on HD
75 with Diabetes, on HD x 5 years, usually ok
25 yo with lupus, waiting for deceased donor, on HD x 4 years
45 yo with heroin addiction, on HD x 3 years, intermittent hospitalizations
70 yo with advanced cardiomyopathy, recurrent admissions for CHF, on HD x 3 years
80 yo with hypertensive nephropathy, hx colon ca (presumed cure), on HD x 2 years
80 yo with ANCA vasculitis, on HD x 6 mos
35 yo with IgA on HD x 2 years
40 yo on HD x 7 years, hx meth use, stable on HD

Dialysis Allocation Framework Algorithm Simulation

		Concept 1: Prognosis										Concept 2: Urgency	Triage category		Tie Breaking	
		SOFA components https://qxmd.com/calculate/calculator_268/sequential-organ-failure-assessment-sofa														
Patient No.	12 chronic HD and 9 AKI = 21 PATIENTS, 14 slots available	resp	cns	cv	liver	coag	kidney	SOFA Score	Short term prognosis points from SOFA score	CCI total	Long term prognosis points from CCI score	Total points from Proposed Secondary Prioritization Criteria table	Urgency (High, Mod, Low)	Triage category (G=green B=blue, R=red,		Tie break Life cycle group (1,2,3,4)	* Persistent tie = patients who need to be allocated by lottery
																1=<40y, 2=41y-60y, 3=61y-75y, 4=>75y	
	6 patients in ICU																
1	40 yr no comorbidities with COVID, ventilated, develops oliguric ARF							0				0					
2	50 yr old with COVID, no comorbidities (smoker) ventilated, anuric renal failure with K 7.0/HC03 15, fluid positive, other organs also affected.							0				0					
3	70 yr old, min comorbidities, with septic shock and MODS, oliguric ARF with modest metabolic complications							0				0					
4	75 yr old DM/CAD with CHF/large MI (EF 30% and ARF, fluid overload headed towards resp failure with K 7, Bicarb 15, INR 1.5							0				0					
5	65 yr old with COVID rheumatoid arthritis, frailty, not for ventilation, oliguric ARF							0				0					
6	Healthy 30 year old with car accident, rhabdo, renal contusion, K=8:							0				0					
	3 patients admitted to the ward with ARF																
7	75 yr with CAD, DM and ARF from contrast nephropathy post cath, metabolics preserved, minimal volume overload/symptoms							0				0					
8	80 yr with recovered urosepsis, no comorbidities, non-oliguric ATN but no complications							0				0					
9	50 yr old with DM, CKD and recovered COVID infection but ARF on HD, last ran 3 days ago, getting to edge of physiology, K 6.0							0				0					

	12 HD patients all getting to the edge of their physiology	CCI points https://www.mdcalc.com/charlson-comorbidity-index-cci	CCI score		
10	85 yo on HD x 4 years, frail with dementia, talking about withdrawing from HD for the last few mos				
11	55 yo with DMI, started HD 6 mos ago, Left BKA				
12	30 year old with PCKD on HD x 1 yr waiting for transplant				
13	75 yo with COPD, nephrectomies for cancer (cured) stable on HD				
14	75 with Diabetes, on HD x 5 years, usually ok				
15	25 yo with lupus, waiting for deceased donor, on HD x 4 years				
16	45 yo with heroin addiction, on HD x 3 years, intermittent hospitalizations				
17	70 yo with advanced cardiomyopathy, recurrent admissions for CHF, on HD x 3 years				
18	80 yo with hypertensive nephropathy, hx colon ca (presumed cure), on HD x 2 years				
19	80 yo with ANCA vasculitis, on HD x 6 mos				
20	35 yo with IgA on HD x 2 years				
21	40 yo on HD x 7 years, hx meth use, stable on HD				

	Triage Category totals	Life cycle categories	Life cycle group count	cumulative total by life cycle group
# Green	0	<40 years	0	0
# Blue	0	41-60 years	0	0
# Red	0	61-75 years	0	0
# Yellow	0	>75 years	0	0
Total number of patients triaged to get HD today - if exceeds 14, go to LIFE CYCLE	0			IF total of available spots is exceeded within a category, use random (lottery) allocation for

Potential concerns about the approach

Simulation:

- Model sensitivity: Charlson Comorbidity Index *may miss patients with a poor prognosis* in absence of specific diagnoses (eg frailty)
- Workload to use algorithm (CCI, SOFA calculations and table scores)

Other:

- Life Cycle as a tie-breaker: Raises potential Canadian Charter issues re lower priority for older people
- Legal problems concerning withholding and withdrawing life support

  Rasouli case, Health Care Consent Act (but non-pandemic/Hippocratic context)

  Further BC legal opinion underway

Conclusions

- Public Health ethics during an emergency differ from “usual times”
- Plan for capacity expansion to meet supply-demand mismatch during surge
- Regular, transparent communication to chronic dialysis patients is crucial to reduce patient fear/anxiety and builds trust/confidence
- In a Crisis dialysis triage considerations are complex (even more than for ventilators)
- The proposed 2 dimensional algorithm can operationalize procedural justice, utility and distributive justice to make “good” decisions under worst circumstances
- “Good decisions” can help mitigate our moral distress