Executive summary

The current SARS-CoV-2 pandemic is an unprecedented situation globally with dramatic impact and increasing numbers of cases and deaths reported in practically ‘real time’. While Australia, and specifically Queensland has an excellent health system, the nature of this disease will have marked consequences across the community, likely to cause high levels of morbidity and mortality stretching many services and resources. To date (1 April 2020), there are 743 confirmed cases in Queensland and 3 individuals have died from COVID-19.

Nationally, the first Australian Health Sector Emergency Response Plan for Novel Coronavirus (the COVID-19 Plan) was published in February and designed to guide the broader Australian health sector response. The strategic objectives include, understanding the nature of the disease in an Australian setting, aim to minimise morbidity and mortality, minimise the burden on and support health systems and inform and engage the public. The plan is supported by whole of Government and the national emergency response plan for communicable diseases and state agencies. While this is the ethical responsibility of government, many ethicists and clinicians have written of the need for a clear ethical framework and an understanding of the decision-making process at a more local and ‘front-line’ position.

It is acknowledged that COVID-19 has the potential to outstretch the capacity of our health system to deliver healthcare in the manner to which we are accustomed. It is anticipated that there will be overwhelming demand upon the system and challenges around provision of and allocation of crucial resources, particularly intensive care beds and ventilators. A transparent, thoughtful and reasoned method is required to make ethically challenging decisions around the allocation of such crucial resources. For a united response across diverse institutions within the broad geographical landscape of Queensland to be reached, shared understandings of the ethical challenges and a jointly composed decision-making framework is vital.

As such, the Executive Directors of Medical Services (EDMS) Forum charged the EDMS from Children’s Health Queensland Hospital and Health Service (CHQ HHS) and the A/EDMS Princess Alexandra Hospital, Metro South Health (MSH) with their respective Clinical Ethics Leads to explore this issue and the challenges ahead. After discussion with members from several clinical networks, Chair of the Clinical Senate and the CEO of Health Consumer’s Queensland and others, it was determined a priority and as such this background discussion paper was developed to aid in discussion and planning of a formalised Ethical Framework.

A facilitated workshop with engaged clinicians, consumers, academics and ethicists and lawyers, was conducted enabling collaborative discussion to develop shared understandings of the ethical challenges and to determine the ‘shape’ of the framework that would be appropriate in the Queensland environment. It was proposed that the ethical framework be based upon Care – to encompass care of patients, the broader community, health care workers and organisational leaders.

Broader rapid consumer consultation was subsequently undertaken by Health Consumers Queensland (HCQ), which facilitated online ‘kitchen table’ discussions with current and
former members of the Consumer Advisory Group and the Queensland Health Consumers Collaborative. Over 70 consumers contributed to the process across the State and included consultation with the following populations and communities: Aboriginal and Torres Strait Islander People (Townsville and Thuringowa Elders), Social Housing, Mental Health and Disability (Brisbane), Older Persons (Brisbane), Families (Gordonvale), Culturally and Linguistically Diverse and those from NESB (Brisbane), Various Age Groups (Noosaville, Brisbane, Charters Towers), Rural and Remote (Roma) and those with Chronic and Complex needs (Ipswich).

A report was prepared by HCQ and there was support for and recognition of the need for the ethical framework and identification of the key values/principles of the provision of equity of care, that is responsive and respectful irrespective of a person’s background and place of living. Care should be compassionate and there is a strong need for openness and honesty in communication, “any organisation speaking (offering advice) should be reactive, not to the virus, but to the people”.

The Queensland Clinical Senate with invited clinicians, specialty networks and consumers from across Queensland, held a further facilitated teleconference to review, discuss and consider several proposals including the proposed ethical framework. This paper provides an overview of the current global status of COVID-19, reviews ethical considerations in pandemics, guiding principles of population health ethics and identifies how ethics can help frame decision making and alleviate staff moral injury/distress when faced with challenging decisions. The framework is underpinned by key values related to CARE and within a community of CARERS dedicated to minimising harm to patients, their families, the community, health care providers and leaders of health organisations.

Acknowledgement

The commitment and significant efforts of the following authors are acknowledged:
Helen Irving MBBS FRACP MBioethics
Jenny Jones PhD – Applied Ethics
Andrew Hallahan MBBS FRACP FRACMA
Andrew Johnson MBBS MHA FRACMA
Kent McDonald MBBS
Introduction

The current global pandemic has the potential to outstretch the capacity of our health system to deliver healthcare in the manner to which we are accustomed. Planning for surge, or the capacity to rapidly absorb additional patients and surge capabilities, the availability of adequate medical supplies and appropriate staff is paramount. However, both become limited with respect to critical care, placing an overwhelming demand on the system. A transparent and thoughtful method is required to make ethically challenging decisions around the allocation of crucial resources, including human.

Learnings from past influenza epidemics and pandemics and current reports and publications from China and Italy with respect to the impact of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the virus which is responsible for the illness COVID-19, highlight the need to examine the ethical issues that arise in planning for and managing such a population health scenario. It also highlights the need to develop an ethical framework to guide decision making. Such a framework recognises that healthcare has both scientific and moral dimensions and identified that health care institutions and health staff would have benefitted from having an ethical framework to guide decision making. To date, reports from Italy have also identified the emotional and moral impacts the current pandemic is having on health professionals and how an ethical framework, particularly when intensive and critical care resources are limited, would be helpful.

To develop a relevant ethical framework to aid clinical and shared decision-making in the time of pandemic there is a need to have a clear understanding of the nature of the disease, the health and social implications upon a community, as well as knowledge of ethical principles both at individual and population health levels. The aim of this paper is to provide background information, relevant discussion points and ethical framework models that will enable the development of a compassionate and equitable framework, that will be of use across diverse health care settings and areas across Queensland.

Background

The prospect of any pandemic poses daunting global health, societal and economic threats. The World Health Organisation (WHO) has noted that since the 16th century, there have been an average of three pandemics each century leading to significant mortality and morbidity. Influenza pandemics are the most widely described and in the 20th century, the “Hong Kong Flu” A (H3N2) while considered ‘mild’ killed approximately 1 million worldwide for example. Others include the H1N1 pandemic and conditions that have constituted a Public Health Emergence of International Concern (PHEIC) such as polio, Ebola and Zika Virus.

More recently, in 2003, there was an epidemic of severe acute respiratory syndrome (SARS), from which over 8,000 people became unwell and of these 774 died. In 2009, an influenza pandemic had significant global impact as has the Middle East Respiratory Syndrome (MERS) in 2013 and 2015.

Both SARS-CoV and MERS-CoV are members of the coronavirus family. They are responsible for illnesses ranging from common upper respiratory tract infection (URTI)/cold to the more severe respiratory infections such as occurs with SARS-CoV and MERS-CoV.

In late December 2019, a new strain was identified, SARS-CoV-2, initially in Wuhan, Hubei, China and caused COVID-19 (the specific coronavirus illness). A state of Global Health Emergency was declared by the WHO on the 30 January 2020 and the Australian Prime Minister activated an Emergency Response Plan on the 27 February 2020.
A global pandemic was declared by the WHO on the 12 March 2020. As of the 17 April 2020 over 2.15 million cases had been confirmed globally and there had been 143,725 deaths reported, with numbers increasing rapidly. With current availability of social media and the World Wide Web, there is almost real time accessibility to the impact of COVID-19.

The impact of infection has a broad spectrum from mild URTI to severe viral pneumonia, respiratory failure, acute respiratory distress syndrome (ARDS) and death. The Director General of the WHO in February 2020 noted that in approximately 80% of cases, the disease is relatively mild and from which a person will recover, 14% will have severe disease and pneumonia and 5% will have critical disease, respiratory failure and organ failure and 2% will have fatal disease. The Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19), reported in February, of 55,924 laboratory confirmed cases, the median age was 51 years (range 2days-100 years old) with almost 80% of cases occurring in those aged between 30 and 69 years.

Data on those under 18 years of age (February 2020), indicated a relatively low attack rate, of 2.4% of all reported cases. Of those, a very small proportion, 2.4% developed severe disease and 0.2% experienced critical disease. Current reports also suggest that the illness in children is usually less severe, particularly if they do not have co-morbidities. A retrospective analysis was conducted examining hospitalised children in Wuhan, China. Weiyong Liu et al noted that of 366 hospitalised children (<16yrs of age) in January 2020, for respiratory illnesses, SARS-CoV-2 was detected in only 6 patients (1.6%). Only one required admission to PICU and all recovered. However, impact upon families will be significant and further data with respect to paediatrics, especially the more medically and socially vulnerable will be forthcoming.

Reports from Lombardia, Northern Italy equally have few infants and children, without co-morbidities, being admitted and to date no deaths in the young cohort. Information as of 14 March 2020, has no reported cases in paediatric haematology/oncology or Bone Marrow Transplant patients. Previous reports around SARS and MERS, identified that older age was an independent predictor of mortality and a report from Fei Zhou et al, show similar findings.
Age of Coronavirus Deaths

**COVID-19 Fatality Rate by AGE:**

*Death Rate* = (number of deaths / number of cases) = probability of dying if infected by the virus (%).

This probability differs depending on the age group. The percentages shown below do not have to add up to 100%, as they do NOT represent share of deaths by age group. Rather, it represents, for a person in a given age group, the risk of dying if infected with COVID-19.

<table>
<thead>
<tr>
<th>AGE</th>
<th>DEATH RATE confirmed cases</th>
<th>DEATH RATE all cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>80+ years old</td>
<td>21.9%</td>
<td>14.8%</td>
</tr>
<tr>
<td>70-79 years old</td>
<td>8.0%</td>
<td></td>
</tr>
<tr>
<td>60-69 years old</td>
<td>3.6%</td>
<td></td>
</tr>
<tr>
<td>50-59 years old</td>
<td>1.3%</td>
<td></td>
</tr>
<tr>
<td>40-49 years old</td>
<td>0.4%</td>
<td></td>
</tr>
<tr>
<td>30-39 years old</td>
<td>0.2%</td>
<td></td>
</tr>
<tr>
<td>20-29 years old</td>
<td>0.2%</td>
<td></td>
</tr>
<tr>
<td>10-19 years old</td>
<td>0.2%</td>
<td></td>
</tr>
<tr>
<td>0-9 years old</td>
<td>no fatalities</td>
<td></td>
</tr>
</tbody>
</table>

*Death Rate* = (number of deaths / number of cases) = probability of dying if infected by the virus (%).

The percentages do not have to add up to 100%, as they do NOT represent share of deaths by age group.

Further publications from Italy, have reported the clinical course, intensive care requirements and mortality risk factors for adults. Based upon previous pandemics of influenza and current data, the burden on critical care services will be influenced by severity and transmissibility of the disease, but from data and modelling to date, will be extreme. Modelling of disease in Italy, and that ~10% of patients will have ARDS, has indicated that the total number of ICU beds will be approximately 4000 of the 5200 ICU beds in total.11

Planning for the capacity to triage, rapidly assess and review patients and determine care is critical in any busy health system. In ‘routine’ clinical practice the organising principle for ventilator distribution, ICU admission and indeed most therapeutic procedures and interventions, including medicines, is optimising benefit and minimising harm. This becomes even more critical with the current coronavirus pandemic when there will be competing priorities for resource allocation, including staffing, beds – including ICU beds and ventilators, consumables and medicines. The Australian Government, Department of Health, has developed the “Australian Health Sector Emergency Response Plan for Novel Coronavirus (COVID-19)” and published February 2020.2

This plan is designed to guide the Australian health sector response and is based upon the Australian Health Management Plan for Pandemic Influenza (AHMPPI) In Queensland, the Statewide Intensive Care Clinical Network (SICCN), developed the draft Critical Care Resource Allocation in Queensland in COVID-19 (pending release), and finalised an ICU Admission Guideline in Queensland COVID-19 Pandemic.12 Similarly, other networks have developed resources for clinicians and consumers in response to the current pandemic, such as the Statewide Maternity and Neonatal Clinical Network.13

Figure 1. [https://www.worldometers.info/coronavirus/coronavirus-age-sex-demographics/](https://www.worldometers.info/coronavirus/coronavirus-age-sex-demographics/)
Additionally, other key documents are also appearing including, The Australian and New Zealand Intensive Care Society (ANZCIS) COVID-19 Guidelines,14 Guiding principles for complex decision making during Pandemic COVID-1915, and Guidelines for Institutional Ethics Services Responding to COVID-19 from the Hastings Centre (March 16, 2020)16 and a rapid policy briefing from the Nuffield Council on Bioethics17 and Critical Care guidelines from the National Institute for Health and Care Excellence (NICE).18 These, with the highly crucial palliative care and advance care planning teams and clinicians will also inform the development of an Ethical Framework to aid clinicians in decision-making.

Ethical considerations

Clinical ethics/public health ethics

While, bioethics is understood as a broad umbrella for all the moral and ethical issues related to science and medicine, Clinical Ethics relates to moral and ethics issues arising directly in the context of patient care, and generally with focus being on an individual patient or patient group. When considering a disaster or pandemic situation, however, there is a transition from individual patient focused care/ based largely on autonomy to one of utility/utilitarian model which in general aims for the greatest good for the greatest number with the available resources.

The ethical approach when in a pandemic is much broader than this as the health system must respond to the needs of affected individuals, while balancing harms and benefits of an intervention or plan, the broader society and, very importantly, the health care providers.3 There is a presupposition that healthcare has both a scientific and moral dimension, and there are ethical values, principles and norms, as well as individual interests and preferences to consider. It is inevitable that ethical tensions, competing priorities will arise and ethical issues permeate virtually every aspect of pandemic and disaster response.

![Figure 2 Understanding Tensions in a Pandemic](image-url)

While much has been written around responses to pandemics and disasters, and ethical tensions that arise when faced with limited resources, there are limited publications focusing on providing guidance to decision-makers when in pandemics and in pandemic planning.19 It is hoped that any guidance will aid the clinician, such that, “no one...
practitioner should feel alone or isolated in making the ‘agonising decisions’ demanded of her/him over coming months”, as the decisions live long into future lives.

**Ethical framework and values guiding decision-making**

The Australian Health Protection Principal Committee (AHPCC) developed an ethical framework to assist health sector responses and includes:

*Equity*, ensuring care in an equitable manner, while recognising needs, cultural and religious values and especially the vulnerable and disadvantaged populations (and in QLD particularly those in rural and remote communities, aged, Aboriginal and Torres Strait Islanders, poor, homeless, those with disabilities/cognitively impaired, those for whom English is not their first language for example. There should be rejection of the idea that any one individual is intrinsically more worthy of care than another.

*Individual liberty*, ensuring the rights of an individual are respected – bearing in mind that restrictions, isolation for example will be mandated within a community

*Privacy and confidentiality of individuals*, - although in some extraordinary conditions, components may be over-ridden in the interest of community

*Proportionality* - measures taken must be proportional to the threat

*Protection of the public* - Protection of entire population remains the primary focus

*Provision of Care* – while also recognising that treatments may differ, but that care is universal

*Reciprocity* – ensuring that health care workers (for example) are appropriately cared for

*Stewardship* – that leaders arrive at decisions based upon current best available evidence and with good faith

*Trust* – that decisions/leaders communicate in a timely, transparent manner to the public and those within the health system.

On the 16 March 2020, Berlinger et al, The Hastings Centre, published a framework for health care institutions and ethics services around “managing uncertainty, safeguarding communities and guiding practice”. This document eloquently outlines three ethical duties of health care leaders in response to the current COVID-19 situation. These fit well within the above values of stewardship, trust and reciprocity.

The three duties are:

1. Duty to Plan – managing uncertainty
2. Duty to Safeguard – supporting workers and protecting vulnerable populations

It is beyond the scope of this document to expand upon the ethics of government and policy positions on individual liberty, home quarantine, restriction of movement and travel. Apart from recognising that while in our society we value the right to freedom, in a pandemic situation the right of an individual must be balanced with the greater right of the wider community. Similarly, although individuals have the right to privacy, the state can over-ride this if it would help protect the public from serious harm, as has occurred previously with individuals with HIV, knowingly infecting others. Proportionality requires that private information be released “only if there are no less intrusive means to protect the public health”; In such times, extraordinary changes in legislation, government policy at national and international levels can happen expeditiously to ensure security and safety of their citizens.
The more pressing ethical concerns for clinicians currently relate to the provision of care across the community, ensuring staff are supported and that there is open and transparent communication and strong trusted leadership. Understanding the clinical characteristics of the current SARS-CoV-2/COVID-19 illness to date indicates that while most affected individuals will have a mild form of illness there will be great impact upon the community, with many unable to work because of illness or caring for others. Those with more severe disease will require medical care including hospitalisation and be considered for intensive care and ventilation where there will be a strain upon capacity.

Lessons from SARS in Canada led to Alberta’s ethical framework3, with key underpinning principle, “Equal concern and respect” (work initially undertaken by the Toronto Group – Stand Up By Thee22). Such that ‘everyone matters, everyone matters equally’ – but recognising that this does not mean everyone has the same treatment. The interests of everyone are important as is that of the community and minimising harm from the pandemic and/or treatment is of central concern. Alberta Health have also developed ethical decision-making tools designed to have a systematic process for exploring in what way principles are reflected in a difficult and contextual decision, that may be of assistance to clinicians and managers.

Thompson et al, 19 have more clearly outlined a description of values, similarly to the AHPCCC, that can guide decision-making with examples that most clinicians will relate to. The framework developed is based upon the ‘accountability for reasonableness’ model developed by Daniels and Sabin.23 This model applies a deliberative approach, with reference to a health care setting. The ethical process specifically incorporating the following; accountability, inclusiveness, openness and transparency, reasonableness and responsiveness. Working through the values, alongside good clinical practice, to guide decisions, and underpinned by the ethical processes described will aid in some of the more complex ethical decisions required in the current pandemic. These may include; visiting restrictions, isolation policies, communication, prioritisation of testing, human resources allocation and staffing, targeting and prioritising specific populations for intervention and intensive care unit and bed allocation and mechanical ventilation.19

Provision of care with limited resources

Several papers recently outline caring for critically ill persons during pandemics, offering suggestions around decision making with respect to allocation of mechanical ventilators and ICU beds, when there are competing priorities for beds and ventilators. Paramount is to, where possible, seek information from the patient and/or family/substitute decision maker around the patient’s preferences for care, goals of any intervention and whether the person has an advance health directive (AHD), advance care plan (ACP) or similar.

Extent of the pandemic and findings from China, Italy and the USA have clearly highlighted a need for a robust decision-making process around access to ICU beds and ventilators. The Queensland SICCN has highlighted this consideration and need for a consistent framework across sites that is scientifically valid, transparent and based upon sound ethical principles, and importantly not ‘overly complex’.

Principles align with the NSW guidelines and emphasise collaborative clinical care. Of paramount importance is the acknowledgement that all clinicians are likely to be under significant pressure around the provision of care to patients, in addition to caring for themselves, family and broader community. It has been recommended, as have other national and international bodies, that most decisions relating to allocation of critical care resources, should be made by a collaborative process that does not involve those that will be directly caring for the patient in critical care units. This involves a system as described by Daugherty Biddison et al, 2014 24 and 2019 25, the Ethics Committee of the CDC, and The Hastings Centre, 2007, Tabery and Mackett 26, among others or similar. Daugherty
Biddison et al., 24 considered Five Essential Domains – 1) triage and allocation, 2) ethical concerns of patients and families 3) ethical responsibilities of health care providers 4) conduct of research 5) international concerns/considerations. There is also an obligation to provide ethical guidance for the benefit of patients/families and health care workers. Planning can also minimise the impact on the critical care worker of making life-altering decisions around care without the opportunity or time to consult others or fully consider the ethical consequences of various decisions.

Even though there is limited evidence, Daugherty Biddison et al assert that triage systems are ethically preferable to those based upon clinical judgement alone. A triage system seems more appropriate than the ‘first come’ ‘first served’ model, or one based upon a 'lifecycle' principle, or the utilitarian approach of ‘saving’ the maximum numbers of lives. The latter does not necessarily consider, quality of life or life years saved or indeed quality adjusted life years (QALYS) or disability-adjusted life years (DALYS). Other principles that have been used to allocate scarce resources previously have related to ‘social worth’, which we argue should be rejected.

Role of triage systems

In 2019, Daugherty Biddison et al.,25 published a framework based upon a scoring system, which considers two ethical considerations as noted to be of greatest importance from 324 participants from Maryland in a community engagement process. The 1) likelihood of short-term survival (with the support of the scarce resource of ICU) and 2) the likelihood of long-term survival (based upon the presence of comorbid conditions). Scoring (1-4) for short term and 0-3 for long term are assigned for each and added to a total. With respect to whether a patient will benefit from intensive care (IC), survival is perhaps the most basic measure.

Standardised tools such as the Sequential Organ Failure Assessment (SOFA) score or for paediatrics the Paediatric Logistic Organ Dysfunction 2 (PELOD-2) scores, are used to predict mortality over the short term. Prospects for long term survival, can also be determined based upon a scoring method based upon associated co-morbidities. This is outlined in Table 1 below.25

---

**Table 1** Proposed Strategy for Ventilator Allocation in Epidemics of Novel Respiratory Pathogens

<table>
<thead>
<tr>
<th>Principle</th>
<th>Specification</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propensity for short-term survival</td>
<td>Adults (SOFA) or pediatrics (PELOD-2)</td>
<td>SOFA score ≤ 8</td>
<td>SOFA score 9-11</td>
<td>SOFA score 12-14</td>
<td>SOFA score &gt; 14</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PELD - 2 ≤ 12</td>
<td>PELD - 2 12-13</td>
<td>PELD - 2 14-16</td>
<td>PELD - 2 &gt; 17</td>
</tr>
<tr>
<td>Propensity for long-term survival</td>
<td>Propensity for long-term survival (assessment of comorbid conditions)</td>
<td>Age 0-49 y</td>
<td>Age 50-69 y</td>
<td>Age 70-84 y</td>
<td>Age &gt; 85 y</td>
</tr>
<tr>
<td>Secondary considerations</td>
<td>Severe comorbid conditions; death likely within 1 y</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>Lifecycle considerations</td>
<td>Prioritize those who have the least chance to live through life’s stages (age)</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
</tbody>
</table>

Examples of severe comorbid conditions associated with mortality ≤ 1 year are listed. This list is meant as a guideline and is not exhaustive. Patients meeting the criteria of ≤ 1 year predicted survival based on what of the listed or other similar conditions should be assigned a score of 3. NMMH = New York West Association.
1. Nona-class IV heart failure.
2. Advanced lung disease with FVC < 35% predicted, total lung capacity < 60% predicted, or baseline peak < 55 mm Hg.
3. Primary pulmonary hypertension with WHO class 10 or IV heart failure.
4. Chronic liver disease with Child-Pugh score ≥ 7.
5. Severe trauma.
6. Advanced unreatable neurovascular disease.
7. Metabolic malignant disease or high-grade primary brain tumors.

Ideally, discussions and decisions around whether a person will be admitted to a critical or intensive care unit, will be determined in the Emergency Department or ward, if the patient is already admitted. Open conversations about patient’s preferences and goals of care are most important and documented. While there is no ideal method, reports from many agencies support assessments by those not directly providing clinical care to the patient.
They should ideally be made by experienced clinicians who are separate from the ‘frontline care’ but do require an understanding of the current availability of and institutional capabilities. Open communication with the patient/family and treating team and, between clinical teams in determining approaches to care is vital.

While tools such as SOFA are not universally accepted or used in daily practice easily, they may represent an additional clinical aid to assist decision making. In situations where there is difficulty, an additional criterion could be added – ‘life-cycle consideration’. Feedback from the community, identified this consideration as appropriate in complex occasions. Such that, when equivalent scores occur priority be given to children and adults <50, adults who have not yet ‘lived a full life’, 50-69 years and followed by those older.

Pregnancy is also considered in this model, as the patient is both the pregnant person and the foetus. The authors consider the safety of both and have not delved into the ethical conundrum of personhood of the foetus. Instead, they suggest pregnant patients will be assigned a priority scored based upon the same framework as others. Obviously there needs to be close involvement and care from obstetricians and neonatologists, but at triage the pregnant person with a healthy foetus will be given a ‘credit’ score.

The ‘life-cycle’ principle is also described by the Ethics Subcommittee, Ventilator Document Workgroup for CDC. While the life-cycle principle grants each individual equal opportunity to live through phases of life, there is relative priority to younger individuals. Also understood by arguments of a ‘fair innings’ and ethical justification that this principle enables opportunity for younger individuals to live through ‘life’s stages. The clinician’s duty of care, however remains and is fundamental to all health care and by nature includes the relief of suffering. To this end, ANZICS, have a ‘Statement on care and decision-making at the end of life for the critically ill’, which outline ten principles for end of life care in IC. Referral to palliative care services for optimal symptom management should be considered.

The ‘life-cycle’ principle, however, can be subjective, and age alone should not be a determinant. With input from consumers and geriatric medicine specialists, identification of frailty is most important to identify vulnerable older patients who are at greater risk of adverse health outcomes, particularly death. The Clinical Frailty Scale (CFS), developed by Kenneth Rockwood, Dalhousie University, is a validated tool for screening older persons and is predictive of adverse outcomes, as seen below, Figure 3.

The CFS has been endorsed as the agreed standard frailty screening tool across Queensland and is an ideal tool to utilise when assessing patients for treatment levels.
Advance care planning

Where ever possible, discussion around patient’s preference and determination whether the patient has an AHD or ACP, should occur, ideally prior to hospitalisation and understood by the family/carers and clinical teams. One of the particularly useful comments around the prospects for determining long-term survival, related to co-morbidities, are the co-morbidities ‘so serious that they are expected to live no more than 12 months even with successful ICU treatment’. Looking at this from another perspective is the question not infrequently used in palliative care which is – “would you be surprised if the person were to die in the next year” (from the underlying condition prior to COVID-19).

The role of palliative care clinicians is crucial and referral to palliative care services or symptom management teams should be readily available and provided to ensure optimal care for patients who have severe, life limiting disease. The Care at End of Life Project, Department of Health, Queensland, has developed a directory of resources to assist clinicians and consumers to deliver high quality care during the COVID-19 pandemic.

Withholding and/or withdrawal of treatment - ethical and legal considerations

From the ethical perspective there is no difference between the withholding or withdrawal of life sustaining measures, and the prolongation of life ‘at all costs’ is neither ethically appropriate nor beneficial and leads to harm. Health providers are under no legal or ethical obligation to offer or provide futile medical treatment. The ethical principle underpinning this is to cause no harm, with treatment that is of no benefit. Documents from Queensland Health provide guidance with respect to this and will be required to be clearly articulated in the Framework.
The Queensland Ethical Framework to Guide Clinical Decision Making in the COVID-19 Pandemic

With review of current data from the impact of COVID-19 internationally, collaborative discussion and partnership between clinicians and consumers to understand the social, community and health sectors and needs across Queensland, the framework outlined below has been developed and endorsed by the Queensland Clinical Senate Executive.

The Framework is built upon the philosophy of care, within a community of CARERS. It encompasses the values of Compassionate care for everyone, Advocacy for the most vulnerable, Respect and Reasonableness of resource distribution. In addition, Care must be Equitable, even when treatments differ and there is shared Solidarity.

The values underpinning, as depicted in Figure 3., enable open communication and trust between consumers and clinicians to enable shared decision-making in the context of resource constraints.

Underpinning Values

Figure 4. Underpinning values and philosophy of care, with a community of carers dedicated to minimising harm for all

While the emergency and intensive care networks develop specific pathways, with respect to managing demand and resource rationing in intensive care, there has been agreement to the use of an evidence based objective assessment – the Threshold Test – to assess the risk of death, with and without treatment, in the current context. The threshold test will contribute to an equitable triage process and assist in identifying patients most likely to benefit from critical care treatments AND provide rationale for excluding those who, in the current context, are less likely to survive and enjoy a reasonable quality of life. The palliative care question often used, “would you be surprised if the person were to die in the next year” from the underlying condition, is another useful rationale for excluding patients from intubation, ventilation, given the low likelihood of benefit and exacerbation of harm.

Considerations include:

- Patient and family/decision-maker preferences (AHD/ACPs)
• Fairness and Equity of access to care – each person is assessed on their individual health characteristics and consider specific vulnerable populations and geographic location; recognising and addressing potential implicit (unconscious) biases
• Current and future institutional capacity to provide treatment
• Projected length of proposed treatment
• Impact on health and management of other patients – application of the threshold triage system will apply to all persons who may require critical care
• Impact on health care providers – there is a duty to care for and ensure safety of all health care providers

General principles for triage involve collaborative decision making and a transparent and respectful allocation of resources. The approach for all patients and health professionals must be consistent and equitable. Availability of family and patient counselling and supportive care is inherent. As the current pandemic progresses, national and international health sectors have rapidly developed guidelines, recommendations of care and discussion papers. Those reviewed include the COVID-19 rapid guidelines: critical care in adults from the NICE\textsuperscript{18}, the NHS and Figure 4 outlines an example of ‘standardised evidence-based decision-making guide’ developed by the Australasian College for Emergency Medicine (ACEM)\textsuperscript{36}.

Figure 15. Example of a standardised evidence-based decision-making guide

![Triage Diagram]

Figure 5. Considered Triage Process
This practical process considers the following carefully:

- Ensure safe care of patient and staff
- Ensure all patients receive basic comfort care e.g. analgesia, fluids, O2 as indicated
- Understand patient preferences, ascertain if patient has AHD, ACP e.g.
- “threshold test” – assess prognosis for short and likely long-term survival
- Seek triage consultation – independent panel/persons not involved with direct clinical care
- Ensure open communication with patient/family re decisions and directions of treatment
- Ensure that there is always provision of compassionate CARE.

The appendices, references and links illustrate possible trajectories/patient flow from the community, irrespective of where their home may be, including residential aged care facilities, and rural/regional and remote areas, for example. The ACEM COVID-19 Clinical Guidelines clearly articulates recommendations and pathways to treatment centres.

Early assessment and triage will determine the care pathway, and patients with critical illness there may be a trigger for an ICU referral and discussion/ and opinion, medical admission or palliative care referral. When patients who have been admitted develop progressive disease, based upon their preferences and ACP preferences, may be considered for ICU or palliative care support. Optimising symptom management and use of the Care Plan for the Dying Person resource will support clinicians and families in provision of quality care.

**Summary**

The SARS-CoV-2 pandemic is an unprecedented situation globally. In the world of ‘news now’ we are witnessing the extreme impact, with daily to hourly updates on case notification and numbers of deaths. Similarly, we are bombarded with images of deserted streets globally, empty shelves in supermarkets, emergency departments, fatigued and distressed health workers, overcrowded intensive care units and chapels of coffins, and distressed relatives of the most vulnerable.

Lessons from previous situations, such as SARS, influenza outbreaks and pandemics has highlighted that ethical frameworks to guide and inform decision making in such extreme circumstances, assist clinicians and organisations, by applying values to science, and can mitigate moral injury and distress in health care workers.

Ethical frameworks/scaffolding are not intended to replace clinical/organisational decision making but to inform. In addition, a considered framework enables reflection upon values, principles of care, encourages discussion and review of ethical concerns/considerations and improves accountability/transparency of decision making and care more broadly. While many ethical values guide decision making, stewardship and trust/trustworthiness, and equity are paramount. Open, transparent and accountable leadership supports and strengthens the ability of health carers to work collaboratively in the provision of care and enables reciprocity by ensuring the safety of health care workers (professionally, emotionally and physically).

The above framework was developed after wide consultation, review and discussion in two (2) combined clinical and consumer workshops, input from representative consumer advisory groups across Queensland. The collaborative consultation between consumers, clinicians and policy advisors recognises the value of open and transparent shared decision-making, which identifies not just individual patient needs that arise during a pandemic but those of the entire community including all care givers.
References

1. Johns Hopkins University, Coronavirus Resource Centre https://coronavirus.jhu.edu/map.html
6. Ventilator Document Workgroup, Ethics Subcommittee, Centres for Disease Control (CDC), Ethical considerations for Decision Making Regarding Allocation of Mechanical Ventilators during a Severe Influenza Pandemic or Other Public Health Emergency, July 1, 2011.
13. COVID-19 Guidance for Maternity Services - Version 1, 2020 (Guidance will be revised as information and evidence evolves) A/Professor R Kimble (Authorising Authority)
20. Torda A, Ethical Issues in pandemic planning. MJA, 2006;185: S73-S76
24. Biddison LD et al, Ethical Considerations: Care of the critically ill and injured during pandemics and disasters: CHEST Consensus Statement. CHEST,2014; 146(S): e1455S-e155S
25. Biddison LD et al, Too many Patients...A Framework to guide statewide allocation of scarce mechanical ventilation during disasters. CHEST, 2019;155(4): 848-854
32. Queensland Health, A multidisciplinary guide to identify those who may benefit from advance care planning (ACP Quick Guide) [ACP Clinical Guidelines](https://www.health.qld.gov.au/__data/assets/pdf_file/0033/688263/acp-guidance.pdf)
33. Queensland Government, Consent to provide health care to adults and Consent to withhold and/or withdraw life-sustaining measures for adults (acute emergency)

Other useful links:


Guideline for ethical prescribing for self and others in the COVID-19 Pandemic

Principles of ethical prescribing for self and others in the COVID-19 Pandemic


[https://www.realtalktraining.co.uk/covid19-evidence-based-advice-difficult-conversations](https://www.realtalktraining.co.uk/covid19-evidence-based-advice-difficult-conversations)

<table>
<thead>
<tr>
<th>Version</th>
<th>Author</th>
<th>Date</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>Queensland Clinical Senate and as noted above</td>
<td>17 April 2020</td>
<td>Finalised initial version</td>
</tr>
</tbody>
</table>
Ethical Framework to Guide Clinical Decision Making Based upon the Underpinning Values of CARE and CARING
APPENDIX 2

Possible pathways and assessment and re-assessment points

DECISION GUIDE FOR PATIENTS PRESENTING WITH COVID-19

Assessment of risk to staff and other patients of treatment options
- Acute illness severity (eg. SOFA)
- Pre-morbid frailty (eg. Clinical Frailty Scale)
- Likelihood of success treatment options
- Refer to documented patient choices:
  - Advance Health Directive (AHD)
  - Advance Care Plan (ACP)
  - Statement of Choices
  - Any expressed preferences for care
  - Substitute health decision maker

**Assess risk of mortality:**
- Early onset severe disease
- High illness severity

Patient presents with COVID

ED assessment

Not critically unwell

Patient receives

Patient recovers

Patient Discharged

Critically unwell

Senior Medical Review

Discussion on Advance HealthCare Planning

Consider ICU Admission: Guide line and tier response. Determine treatment pathway

For ICU admission

• Supportive care including critical care interventions
• Manage symptoms
• Psychological support to patient, care partner, relatives

Not for ICU admission

• Supportive care
• Manage symptoms
• End of life care if required
• Psychological support to patient, care partner and relatives
• Ward or palliative care admission depending on prognosis

Ward

Patient does not respond to treatment

Care Plan for dying person

Ward — virtual or to facility

Patient becomes critically unwell

Consider ICU Admission: Guideline and tier response. Determine treatment pathway

For ICU admission

• Supportive care including critical care interventions
• Manage symptoms
• Psychological support to patient, care partner, relatives

Discusssion on Advance HealthCare Planning

Senior Medical Review

Understand patient/family/care partner preferences

Ward

Patient responds to treatment

Patient Discharged
ICU COVID-19 Tier 2 Pandemic Admission Guideline

Intensive Care Units provide a consultative service for the provision of critical care support. These consultative services will continue to operate in the event of a pandemic.

During a pandemic, ICU admission thresholds will need to be adjusted in accordance with sound ethical principles\(^1\) and apply to patients with or without COVID-19. ICU referrals will be reviewed by Senior ICU medical staff taking into consideration the burden of ICU treatment to the individual patient, patient comorbidities, patient preferences, probability of patient response to intervention and available resources.

Senior Intensive Care clinicians will be available 24/7 (by telehealth if required) to discuss cases and support decision making throughout Queensland.

Due to the likelihood of poor outcome, patients meeting one or more of the criteria listed below must be reviewed in person by the consultant of the treating team prior to ICU referral. A decision regarding ICU admission will be made with one or more intensivists working in consultation with the referring team.

- **Premorbid Clinical Frailty Scale** ≥ 6\(^*\) and **Age** ≥ 75
- **Prolonged cardiac arrest** > 40 mins irrespective of cause with ongoing cardiovascular collapse and/or poor neurological progress
- **Severe chronic cognitive and physical impairment with limited chance of return to baseline function**
- **Severe and irreversible neurologic event or deterioration**
- **Advanced untreatable or progressive neuromuscular disease**
- **Advanced metastatic malignant disease**
- **Palliative surgery**
- **Advanced and irreversible immunocompromise with poor prognosis**
• Admission for the purpose of organ donation or palliation
• Pre-morbid end-stage organ failure with at least one of the following:

**Cardiac**

• NYHA class IV heart failure or
• Housebound and/or with significantly restricted ADL

**Respiratory**

• Oxygen dependent or
• Housebound and/or with significantly restricted ADL

**Liver**

• Child–Pugh C or
• Concurrent chronic renal failure and/or hepatorenal-syndrome or
• Housebound and/or with significantly restricted ADL

**Renal**

• Long term RRT, age > 65 and Clinical Frailty Scale ≥ 6 \(^2\) or
• Housebound and/or with significantly restricted ADL

---

**In the event of uncertainty or concern:**

At least 2 Intensivists or Acute Care Clinicians will review the case and provide a final opinion based on:

- Assessment of acute reversibility
- Co-morbidities and Frailty

Usual escalation processes occur including referral to Office of Public Guardian if required.

---


The original documents - Critical Care Resource Allocation in Queensland in COVID-19 Pandemic and ICU COVID-19 Tier 2 Pandemic Admission Guideline were developed by:

The Statewide Intensive Care Clinical Network
Dr James Winearls, Consultant Intensivist, Gold Coast University Hospital
AProf Marc Ziegonski, Chair, Statewide Intensive Care Clinical Network
Dr Melanie Jansen, Consultant Paediatric Intensivist, Westmead Children’s Hospital
Dr Andrew Semark, Director Intensive Care Unit, Gold Coast University Hospital
Dr Andrew Johnson, Director Medical Services, Princess Alexandra Hospital
Dr Chris Joyce, Director Intensive Care, Princess Alexandra Hospital
Dr Shane Townsend, Director Intensive Care, Royal Brisbane and Women’s Hospital
Prof Bala Venkatesh, Director Intensive Care, Wesley Hospital
AProf Brent Richards, Director of Innovation, Gold Coast University Hospital
Dr Siva Senthuran, Consultant Intensivist, Townsville Hospital
AProf David Austin, Director Intensive Care, Rockhampton Hospital
Dr Anni Paasilaiti, Director Intensive Care, Mackay Hospital
Dr Alexandra Markwell, Chair, Queensland Clinical Senate
The Queensland Clinical Senate

Information about version 1.0
- Developed and endorsed by consumers and clinicians 27 March 2020. The following groups were invited to participate in this meeting and subsequent provision of feedback:
  - Queensland Clinical Senate
  - Statewide Clinical Networks
  - Hospital and Health Services
  - Executive Directors of Medical Services
  - Executive Directors of Nursing and Midwifery
  - Executive Directors of Allied Health
  - Department of Health
    - Chief Nursing and Midwifery Officer
    - Chief Allied Health Officer
    - Chief Dental Officer
    - Aboriginal and Torres Strait Islander Health Branch
    - Patient Safety and Quality Improvement Service
    - Prevention Division
    - Retrieval Services Queensland
  - Health Consumers
    - Health consumer representatives
    - Health Consumers Queensland
    - Council on the Ageing Queensland (COTAQ)
    - Health Issues Centre (Victoria)
    - Health Care Consumers Association (ACT)
  - State Health Emergency Coordination Centre (SHECC)
  - Palliative Care, including:
    - Palliative Care Queensland
  - Aged care services, including:
    - Bolton Clarke
  - Aboriginal and Torres Strait Islander Healthcare Organisations
Endorsed by the Queensland Health Pandemic Health Response Implementation Advisory Group 02 April 2020

Revised to facilitate release of Tier 2 Admission Guideline in isolation; reviewed by PHRIAG 16 April 2020

Further work is being undertaken to progress Tier 3 and higher pandemic response admission processes.

<table>
<thead>
<tr>
<th>Version</th>
<th>Author</th>
<th>Date</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>Queensland Clinical Senate</td>
<td>2 April 2020</td>
<td>Endorsed by PHRIAG</td>
</tr>
<tr>
<td>1.1</td>
<td>Queensland Clinical Senate</td>
<td>17 April 2020</td>
<td>Limited to discussion of Tier 2 only</td>
</tr>
</tbody>
</table>