

# The Hopkins Centre

Research for Rehabilitation and Resilience

**Bold ideas.  
Better solutions.**

**Presenter:**  
Dr Ryan Bell  
The Hopkins Centre

A joint initiative of



Metro South Health



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# System and service disruption

## Challenges & opportunities

**Bold ideas. Better solutions.**



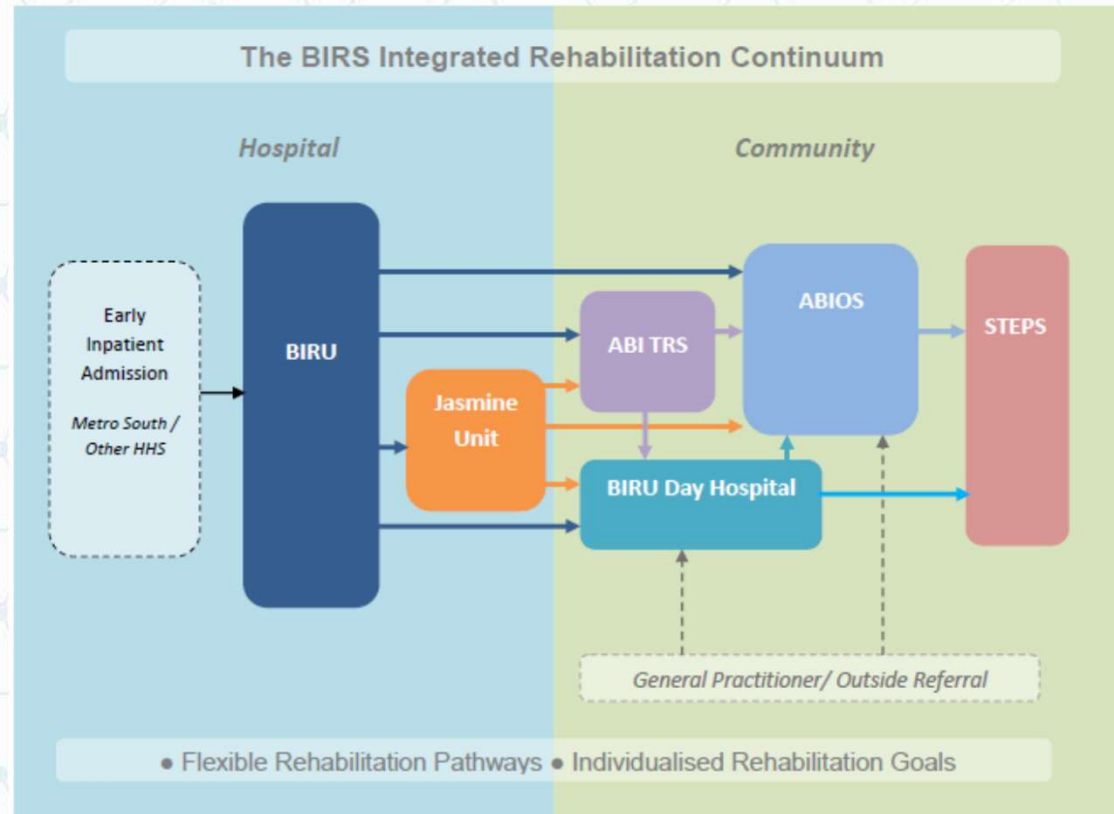
Metro South Health



A joint initiative of the  
Division of Rehabilitation, Metro South Health and  
Menzies Health Institute Queensland, Griffith University.

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***Vision:** To empower people with Acquired Brain Injury to participate in life*

# Person & family centred approach

- Support & adjustment
- Education
- Goal planning
- Therapy sessions
- Service transitions
- Discharge planning
- Education




# Access

- Rehabilitation services - inpatient beds, gyms, clinics
- Early rehabilitation intervention
- Border restrictions
- Hospital & health care avoidance - impact on chronic disease
- Social distancing impact



# Support networks

- Formal & informal
- NDIS responsiveness 
- Demand on community rehabilitation services
  - Case management
- Self management skills programs
- Peer support



**S** KILLS **T** O **E** NABLE **P** EOPLE & COMMUNITIE **S**

# Frontline services

- Service delivery
- Staff wellbeing
- Planning
- Research
- Professional development
- Student education





*The true creator  
is necessity, who  
is the mother of  
our invention*





# Necessity – COVID-19

- 40 million cases
- Multi organ dysfunction
  - Respiratory
  - Cardiac
  - Renal
  - Neurological
- Mild COVID-19 illness → major sequelae
- Indirect effects

## An Invader's Impact

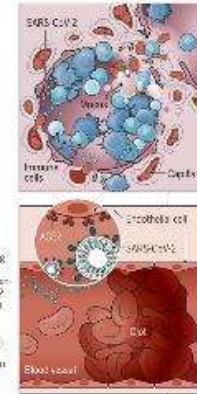
In so many cases, SARS-CoV-2 finds its way into the lungs and can cause pneumonia there. But the virus or the body's response to it can hit many other organs. Scientists are, at the beginning, trying to understand the scope and nature of that harm.

### 1 Lungs

A coronavirus that enters the cells crowding an inflated blood vessel or air sac. When the wall cracks down, the capillary is broken, oxygen spirals out, and coughing and wheezing becomes labored.

### 2 Heart and blood vessels

The virus that enters the body is circulating in the blood vessels. In some cases, it is causing blood clots, which can lead to heart disease. Infection can also promote blood clots, heart attacks, and strokes.



### 3 Brain

Some COVID-19 patients have strokes, seizures, confusion, and brain inflammation. Doctors are trying to understand what is directly caused by the virus.

### 4 Eyes

Conjunctivitis, inflammation of the membrane that lines the front of the eye and inner eyelid, is more common in the severe cases.

### 5 Nose

Some patients lose their sense of smell. Scientists speculate that this may have to do with coronavirus attacking olfactory cells.

### 6 Liver

Up to a third of hospitalized patients have elevated liver enzymes and a sluggish liver. An immune reaction to the virus could also play a role in the liver injury, or raising the suspicion.

### 7 Kidneys

Kidney damage occurs in our severe cases and makes them more likely to die. Many patients are given dialysis, or kidney failure may be part of whole-body events like plummeting blood pressure.

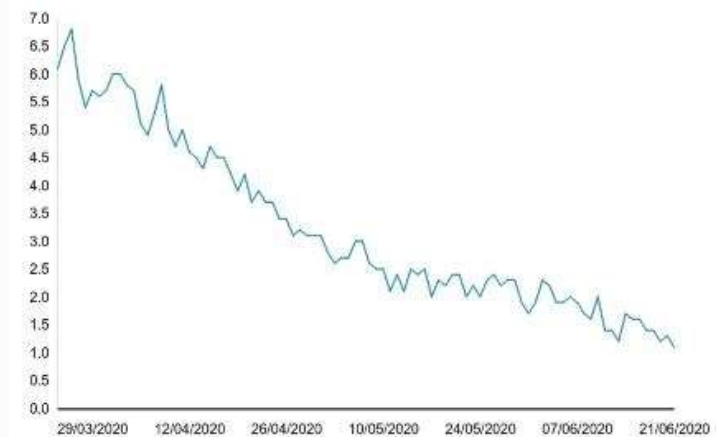
### 8 Intestines

Recent reports and biopsy data suggest the virus can infect the digestive tract, which is why some patients have diarrhea. Some 20% or more of patients have diarrhea.

## Covid death rate in hospitals

% of total hospitalised coronavirus patient population dying per day

— Covid deaths as a proportion of patients



Sources: University of Oxford Centre for Evidence-Based Medicine



# Technology

- An effective treatment, not a panacea
- Selection of clinical services to be delivered by telehealth
- Teamwork within & across rehabilitation services

- Access
  - Patients
  - Clinicians

- Reduced FTA



# Rehabilitation delivery & design opportunities

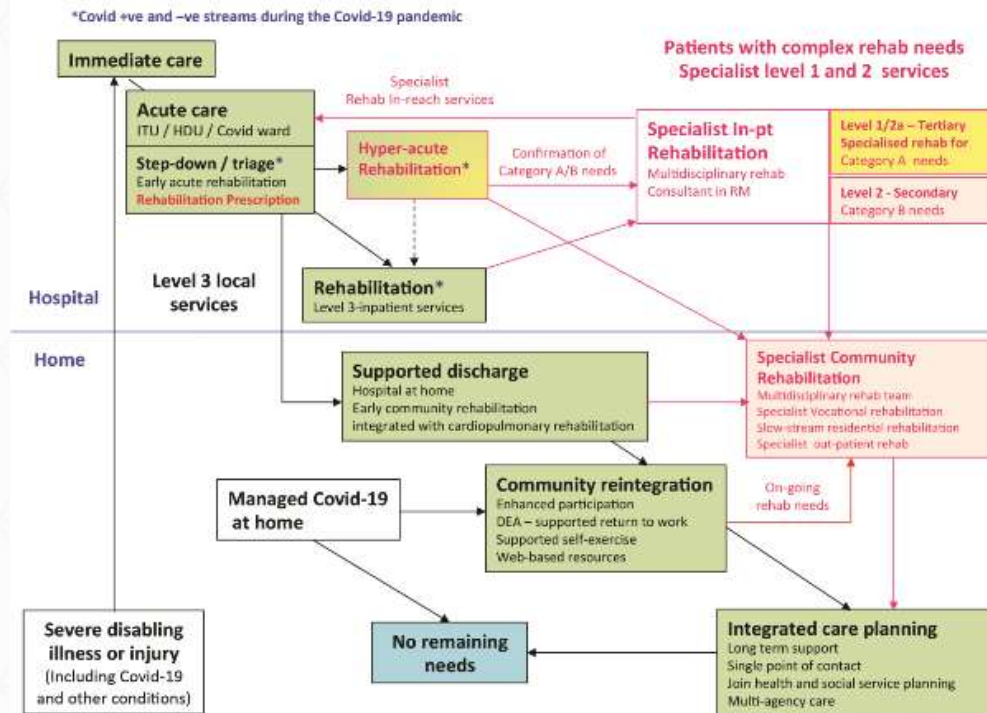
- Flexible models
- Multi → Inter → Trans disciplinary shift
- Improved responsiveness
- Earlier coordinated intervention
- Focus on transitions





# Opportunities

- Learning from colleagues
- Preparation
- Growing evidence base



## The Virtual Neurologic Exam: Instructional Videos and Guidance for the COVID-19 Era

Mariam Al Hussaini<sup>a</sup>, Monica Maher<sup>a</sup>, David Chan, Jonathan A. Miceli, Jennifer D. Jain, Houman Khosravani, Aaron Izenberg, Charles D. Kassardjian<sup>b</sup>, Sara B. Mitchell<sup>b</sup>

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