A year following the Australian and New Zealand consensus statement on Cardiovascular Disease and COVID-19

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CSANZ
Cardiac Society of Australia and New Zealand

A Timeline overview

March 2020

CSANZ implements Rapid review for COVID19 statements

20 March ‘20

CSANZ Board & HOD Whatsapp

20 March ‘20

CSANZ Virtual Board meetings

April to Nov ‘20

ANZ Consensus statement + 10 practice statements on CVD & COVID 19

Nov ‘20

Impact on CV care and patient experience survey

Dec ‘20

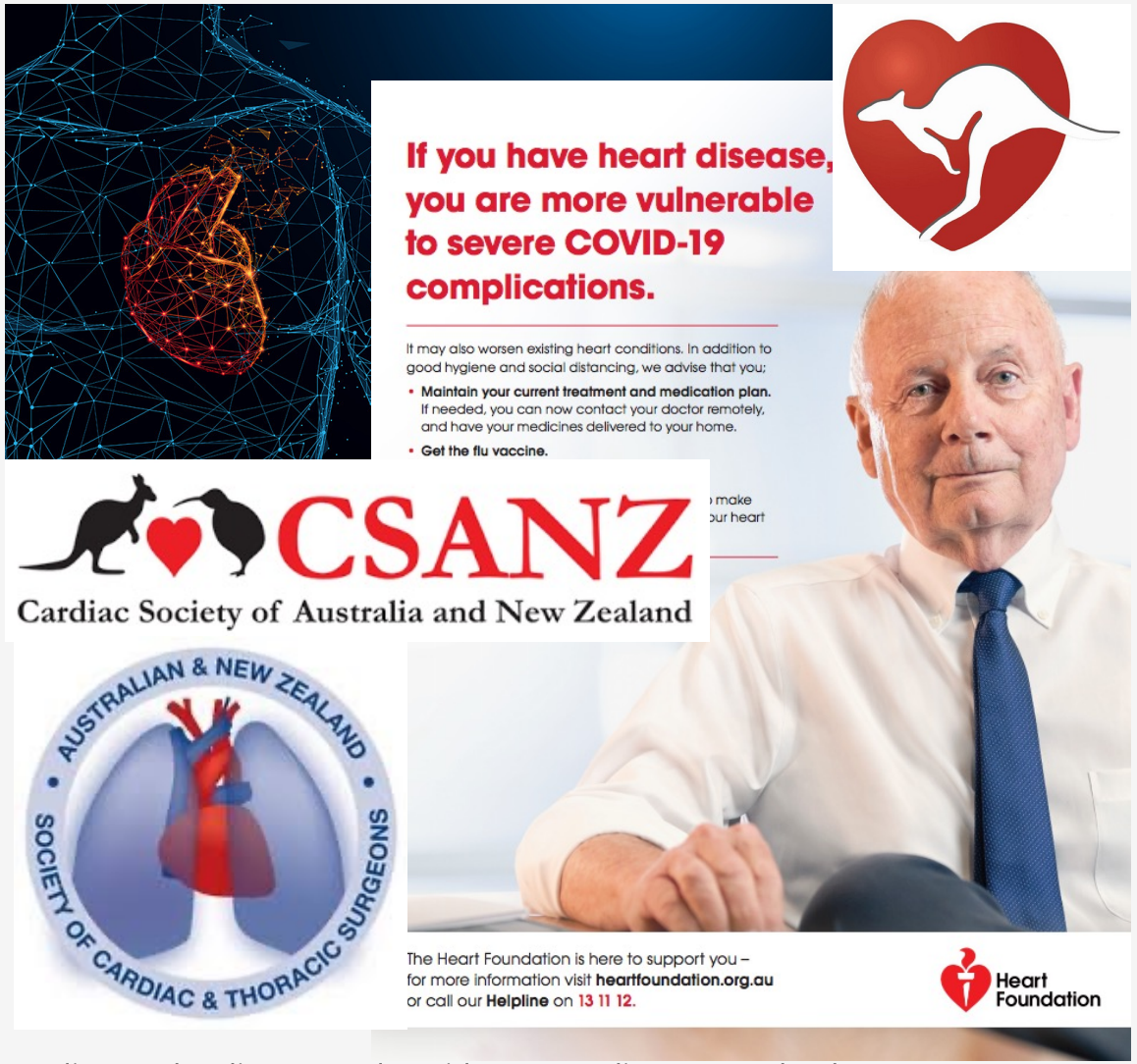
CSANZ 1st virtual ASM

2021

Service innovations here to stay …

Early key messages: CVD and COVID-19 Australian/ New Zealand statement

- Pre-existing CVD increases the morbidity and mortality of COVID-19, and COVID-19 itself causes serious cardiac sequelae.
- CV health providers need to upskill on COVID-19 & CVD
- CV health services need to innovate and reorganise to balance the risks of viral transmission to patients and healthcare workers with the provision of cardiac care



https://www.mja.com.au/journal/2020/cardiovascular-disease-and-covid-19-australiannew-zealand-consensus-statement

ACS and Procedures

ACS and COVID-19

Cardiac enzymes are commonly elevated in COVID-19. Troponin elevation is a prognostic marker, the diagnostic implications are unclear, it may reflect myocarditis or myocardial infarction.

To avoid unnecessary coronary angiography during the acute illness, haemodynamically stable patients with COVID-19 and possible MI may be best managed conservatively, with invasive procedures deferred until after COVID-19 recovery.

https://www.csanz.edu.au/wp-content/uploads/2020/03/CSANZ_CONSENSUS_GUIDELINES_FOR_INVASIVE_CARDIOLOGY_SERVICES_DELIVERY_DURING_COVID_PANDEMIC_29-March_2020.pdf

Cardiothoracic surgery and procedures

The Australian government has currently stopped non-urgent surgery

The inherent risk of the untreated cardiovascular condition will need to be weighed against the risk of nosocomial infection during hospitalisation and the implications on ventilator use, bed stay and recovery time.

https://www.csanz.edu.au/wp-content/uploads/2020/03/CSANZ-Heart-Rhythm-Council-COVID19-Consensus-Statement-26th-March-2020.pdf

Cardiac investigations and outpatients

Cardiac investigations

During the COVID-19 pandemic, elective cardiac investigations will need to be prioritised, based on short-term management change versus risk of deferment until the pandemic passes.

Certain cardiac investigations such as transesophageal echo (TOE) and stress testing pose significant viral transmission risk.

https://www.csanz.edu.au/wp-content/uploads/2020/03/CSANZ-Imaging-Council-Position-Statement-on-Echocardiography-Services-During-the-COVID-19-Pandemic.pdf

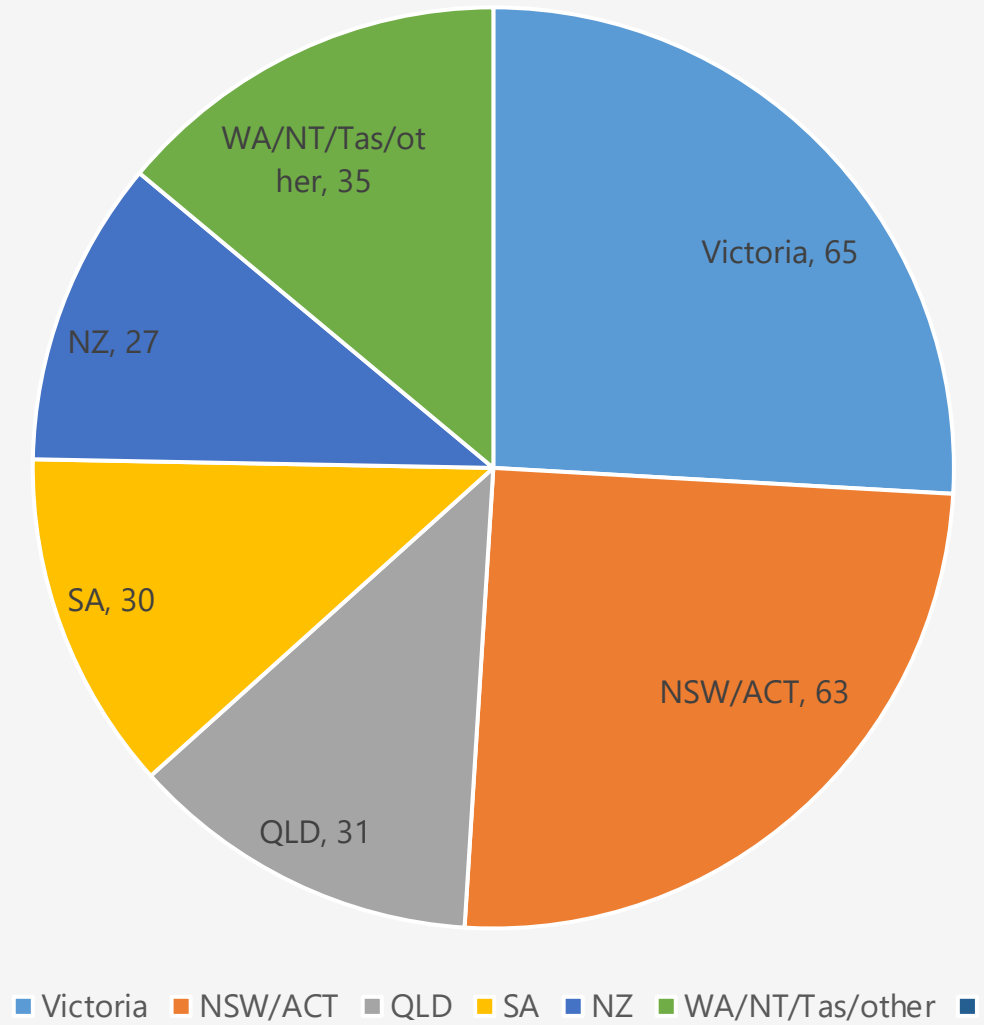
Cardiac outpatients and rehabilitation

Serious consideration should be given to using telehealth for all outpatient consultations and telehealth or digital platforms for cardiac rehabilitation

As the SARS-CoV-2 virus enters cells via binding to ACE2-receptors concern has been raised about treatment with ACE/ARBs, but there is no clinical evidence. ***Given the well-established beneficial effects of ACEI/ARB in patients with hypertension, heart failure and CVD, it is the strong recommendation of the authors and numerous national and international societies that these medications should be continued as indicated***

https://www.csanz.edu.au/wp-content/uploads/2020/03/CSANZ-Heart-Rhythm-Council-COVID19-Consensus-Statement-26th-March-2020.pdf

CSANZ member survey on COVID 19 and impact on CV services



Aim: To examine the impact of the pandemic and social restriction policies on CV services and people with CVD from the perspective of CV health professionals to inform CSANZ about how to support members and their patients.

Conducted in Oct/Nov 2020
Total participants – 251, 50% female

Cardiologists/ Surgeons/ ATs – 48.3%
Nursing – 21.6%
Sonographers – 7.8%
Researchers – 9%

Public hospitals – 67.4%
Private/ Community practice 20.1%

CSANZ Member survey Nov. 2020

Impact on Australian Cardiovascular Services

- 86% of respondents agreed/strongly agreed that the COVID-19 pandemic had adversely impacted the access to services for cardiovascular patients at the height of the pandemic in their region.
- Exercise stress testing was the procedure most respondents perceived as having reduced during the COVID-19 crisis.
- Hospital outpatients was the area where most people (77%) thought that there had been changes of which 50% of respondents were of the view that there had been a decreased ability to deliver care.

CSANZ Member survey Nov. 2020

Impact on cardiac health of Australian patients

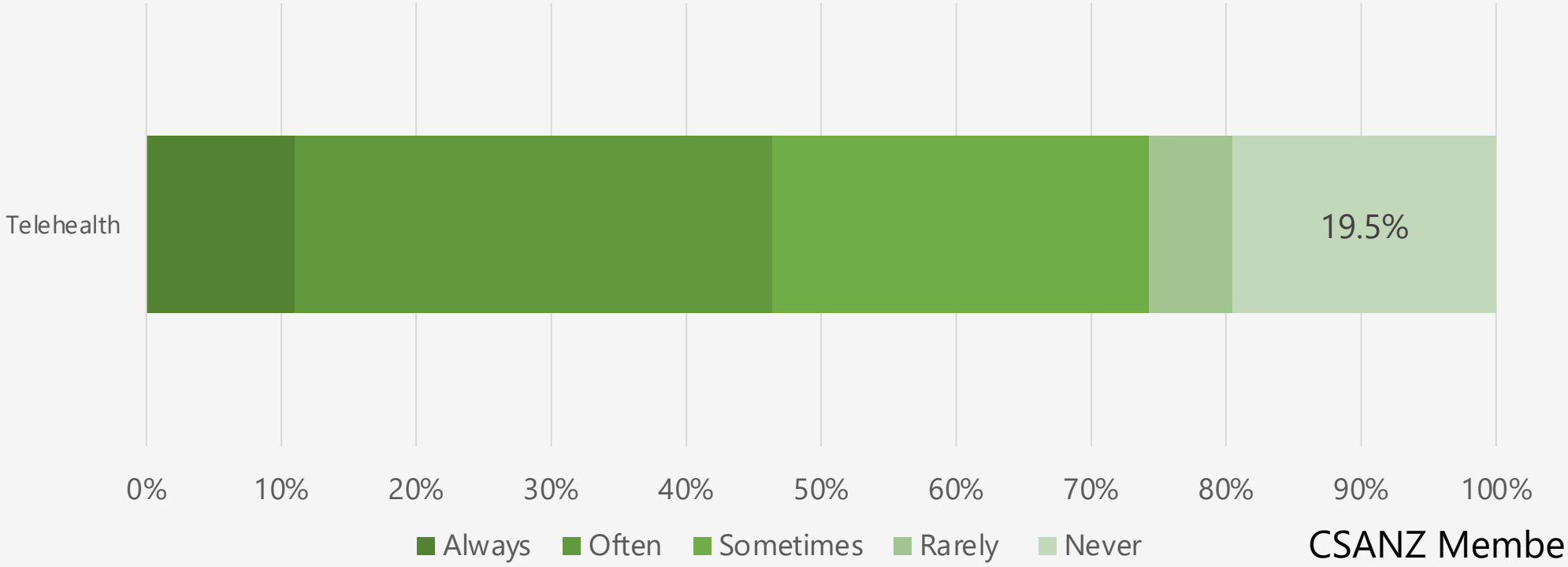
- 53% of respondents felt that there had been a reduction in the presentation of ACS of which 32% thought that the reduction was between 11-50% although 51% were unsure of the reduction

- 92% of respondents thought that there had been adverse health impacts on their patients with CVD, of which 24% rated this as minimal, 55% as some/medium and 13% as substantial

CSANZ Member survey Nov. 2020

Telehealth/ telemedicine in Australia

80% of health professionals reported using telehealth at the time of the survey in Nov 2020



CSANZ Member survey Nov. 2020

COVID-19 & CVD publications from Australia

20 March ‘20

SARS-CoV-2 determined to infect host cells via ACE 2 receptors;
Initial concern about safety of continued ACE inhibitors/ ARBS

Nov ‘20

Collateral damage
Presentation delays

4-fold increase in symptom to door time

41% reduction in heart failure hospitalisations

Dec…now ‘20

Mechanisms underlying CV complications – Cytokine storm, role of MSCs and role of BET-mediated pwys in cardiac dysfx with COVID19

March 2020

Underlying CVD associated with increased risk (5-10 fold mortality)

Cardiovascular complications

An entity of COVID19

April to Nov ‘20

ANZ Consensus statement endorsed by CSANZ, ANZSCTS, National Heart Foundation, HBPRCA + 10 practice statements

Nov ‘20

OHCA delays in EMS initiation, Dec in public access defibrillation/ first response and survival to discharge

Dec 2020

Fast-track processes and paper retractions

Mills… Hudson Cell 2021 Apr 15;184(8):2167-2182.e22.
Ellison-Hughes GM Fron CV Med 2020
Dhakal HLC 2020 29(7)
Arnold HLC 2020 29(7)
Ball Resuscitation 2020 156; 157-63
HLC 2020; 29(12): 1737-40

AUS-COVID study – under review

Led by Dr R Bhindi & Dr K Bhatia

Aim: To describe the incidence of cardiac complications in patients admitted with COVID19 in Australia

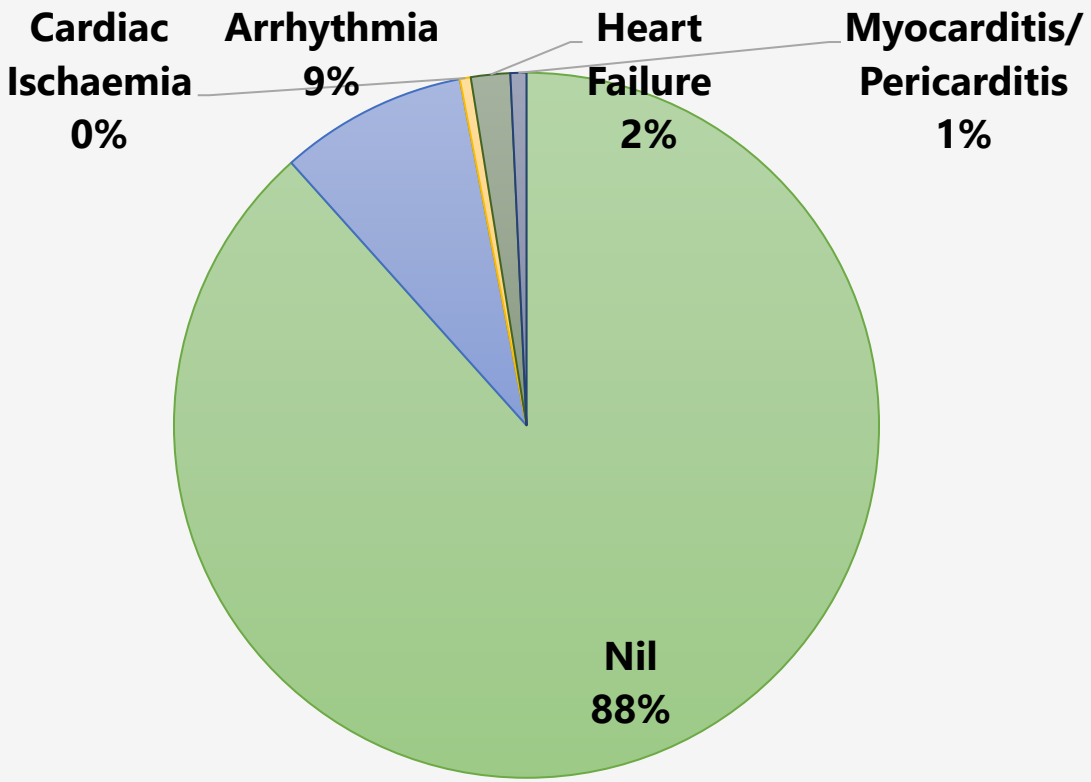
Design: Registry of consecutive patients admitted to 21 Australian hospitals with SARS-CoV-2 infection

Outcome: Incidence of cardiac complications

Unpublished results: Despite in-hospital mortality of 14.3%, low incidence of clinical cardiac complications (e.g. <2% new heart failure, <5% cardiac arrhythmia, <1% myocarditis/ pericarditis)

Direct cardiac consequences

Cardiac complications in patients hospitalized with COVID-19



CAPACITY-COVID international patient registry
79 centres, 13 countries

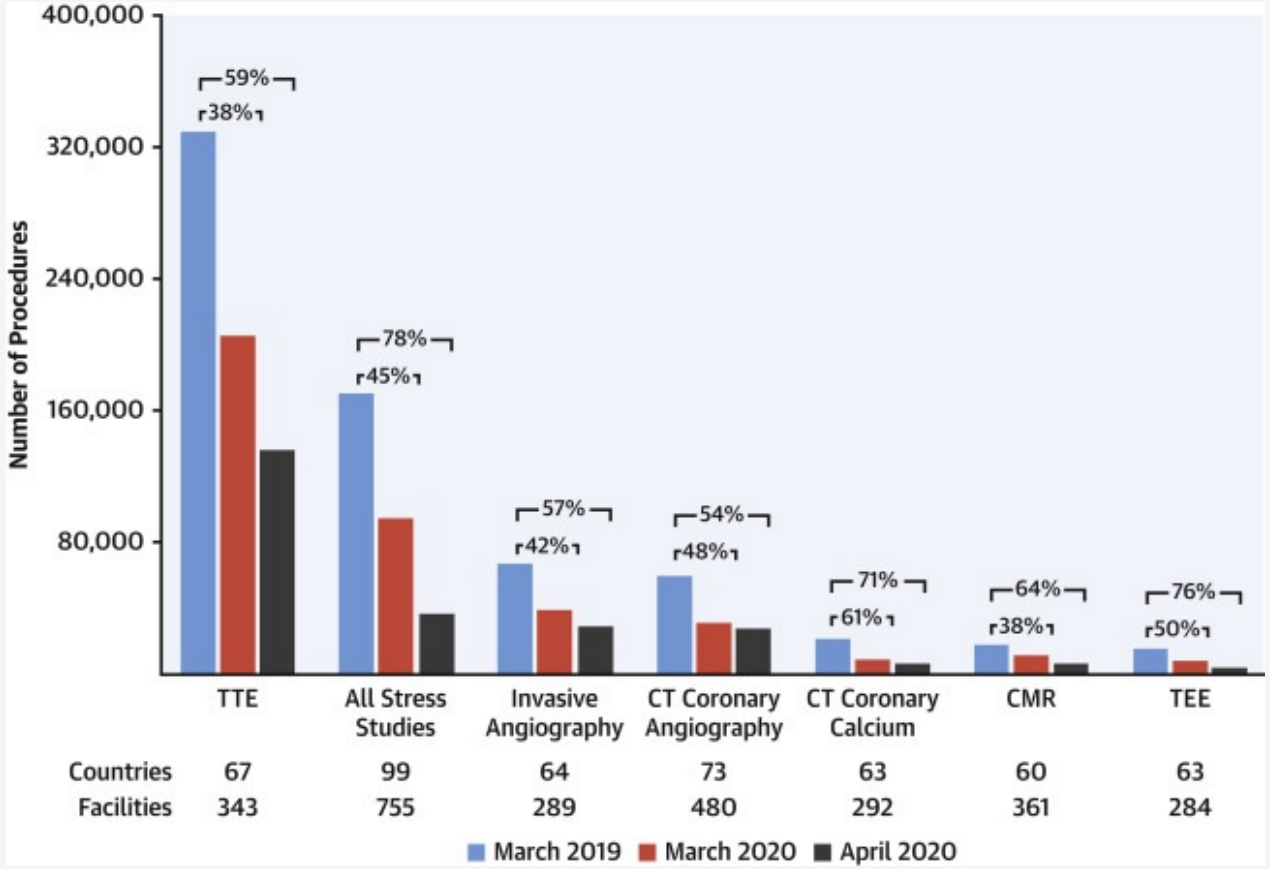
Total 3011 participants,
Median age 67 (IQR 55-76), Men 61.7%
Pre-existing CVD 31.0%

Death 19.8% (0.5% cardiac)

Linschoten et al European Heart Journal 2020; 9(8): 817-23

Unintended consequences

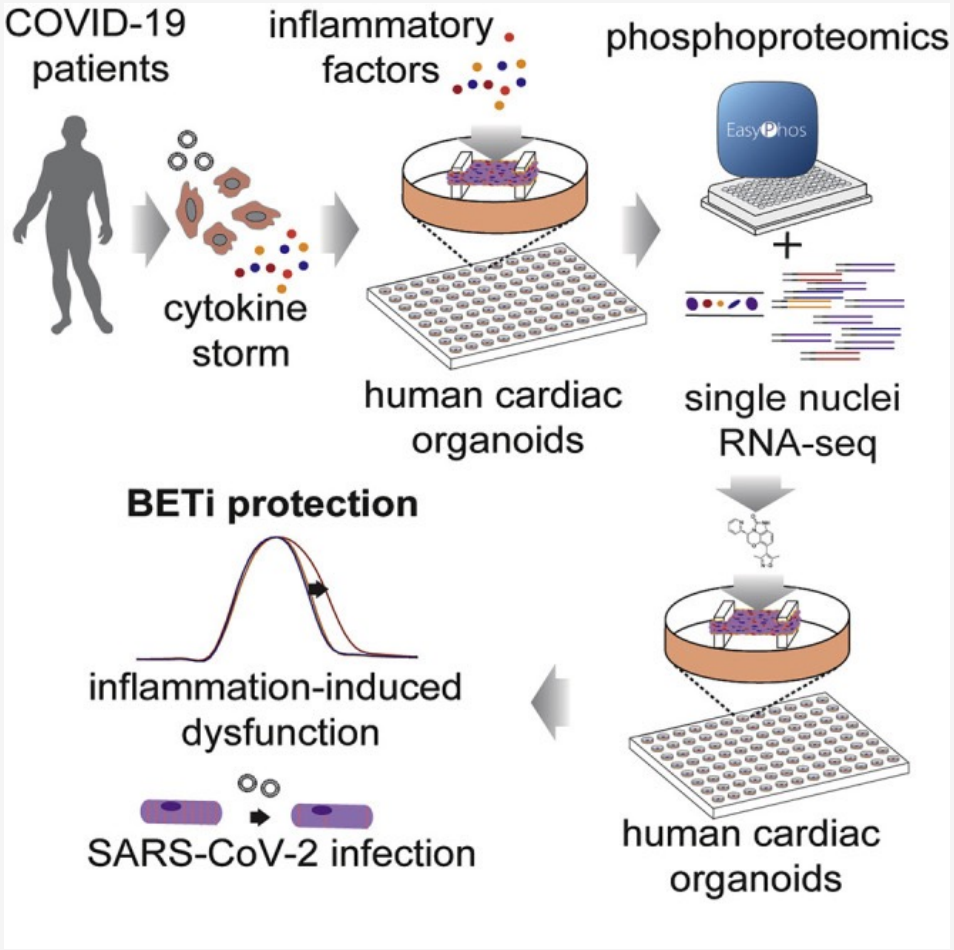
Cardiovascular procedure volume changes internationally



Worldwide survey assessing alterations in cardiovascular procedure volume and safety practices resulting from COVID-19
Surveys from 909 centres in 108 countries

Einstein AJ et al JACC :2021 77(2) 173-85

Mechanisms of cardiac dysfunction due to COVID 19



"BETi, including the Food and Drug Administration (FDA) breakthrough designated drug, apabetalone, are promising candidates to prevent COVID-19 mediated cardiac damage."

Mills… Hudson Cell 2021 Apr 15;184(8):2167-2182.e22.

Reflections

It's been pleasing to both see and partake in the collaboration and partnership of the cardiovascular community towards COVID-19, consistent with the overall Australian COVID19 response

As a CV community the unintended impacts both positive and negative and longer-term impacts, as well as new research with respect to treatments may unfold in 2021

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Improving cardiovascular practice and promoting the prevention and control of cardiovascular disease

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