

# SUPPORTING A STATE-WIDE RESPONSE TO COVID-19

## An Australian Advanced Health Research Translation Centre Perspective

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# AN OVERVIEW OF SPHERE

- An Australian Government National Health and Medical Research Council accredited Advanced Health Research and Translation Centre
- Established in 2015 and accredited in 2017
- More than 2870 members across 14 partner organisations with over 180 external relationships
- Seed investment of \$4.4M in over 150 projects since 2017 has allowed our members to leverage >\$114.5M in external funding to date
- 40 clinical trials completed or ongoing and over 180 publications
- Activity spanning T1 to T5 (basic science through to public health)
- Focus throughout on implementation, reducing the lag from discovery to practice

# OUR PARTNERS



# SPHERE CLINICAL ACADEMIC GROUPS & STRATEGIC PLATFORMS



# TREATMENT & VACCINES IN THE BROADER AUSTRALIAN CONTEXT

- Six registered vaccine trials nationally – primarily phase 1
- Variety of phase 1-3 trials of therapeutics/interventions currently registered and recruiting
- Time-limited exemptions, expedited assessments and expedited recall pathways introduced
- Government announcement of contracts for >130M doses of four leading vaccine candidates subject to successful trials and regulatory approvals
- Australian COVID-19 Vaccination Policy announced last week, setting out key principles:
  - Distribution to priority groups followed by wider release,
  - Free to citizens, residents and most visa-holders,
  - Not mandatory but strongly encouraged
  - Exploring options for data capture for surveillance purposes
  - Australian Government central oversight with state and territory-specific roles

# COVID-19 IN THE NEW SOUTH WALES CONTEXT

- New South Wales – Australian's most populous state 8,157,735
- 4,325 cases (many in hotel quarantine), 55 deaths, over 3.3M tests carried out
- NSW faced most serious first-wave outbreak nationally early on
- Substantial testing and contact tracing infrastructure, waste-water testing, public health communications, hotel quarantine rapidly established
- Hospital and primary care system readily able to respond, increasing critical care bed capacity, deferring non-essential treatment and surgery and transitioning to telehealth for most services
- Low case count and low need for acute, in-hospital care (<7% of cases) have made clinical research challenging, particularly trials and vaccine research.

# ENABLING A CLINICAL RESEARCH RESPONSE ACROSS NSW

## MAPPING ASSETS, ENGAGING GOVERNMENT, MOBILISING RESEARCHER EFFORT

- Rapid compilation of a state-wide inventory of research assets and expertise:
  - Bayesian, adaptive and early phase trials
  - Epidemiology/public health
  - Novel therapeutics and diagnostics development
  - Disease and resource utilisation modelling
  - Clinical networks
  - Ethics, governance and specialty project approving entities
- Engagement in/support for NSW Government advisory committees
  - Vaccine advisory group
  - Therapeutics and Research Advisory Group
  - Critical Intelligence Unit

# THE CLINICAL RESEARCH RESPONSE ACROSS SPHERE

## MICROBIOLOGY, VACCINES, TREATMENTS, DIAGNOSTICS AND CLINICAL SAFETY

- Pre-clinical and early phase studies of various COVID treatment approaches, including ACE inhibition, convalescent plasma, hyperimmune-globulin, monoclonal antibodies, as well as support for vaccine development and trials
- Symptom management, including non-invasive ventilation and integrated approaches to assessing and managing breathlessness
- Clinical safety, including clinical practice guidelines regarding aerosol generating procedures
- Novel diagnostics, including non-invasive techniques
- Full genome sequencing, including to support contact tracing, and microbiology to assess host response to infection and therapeutics

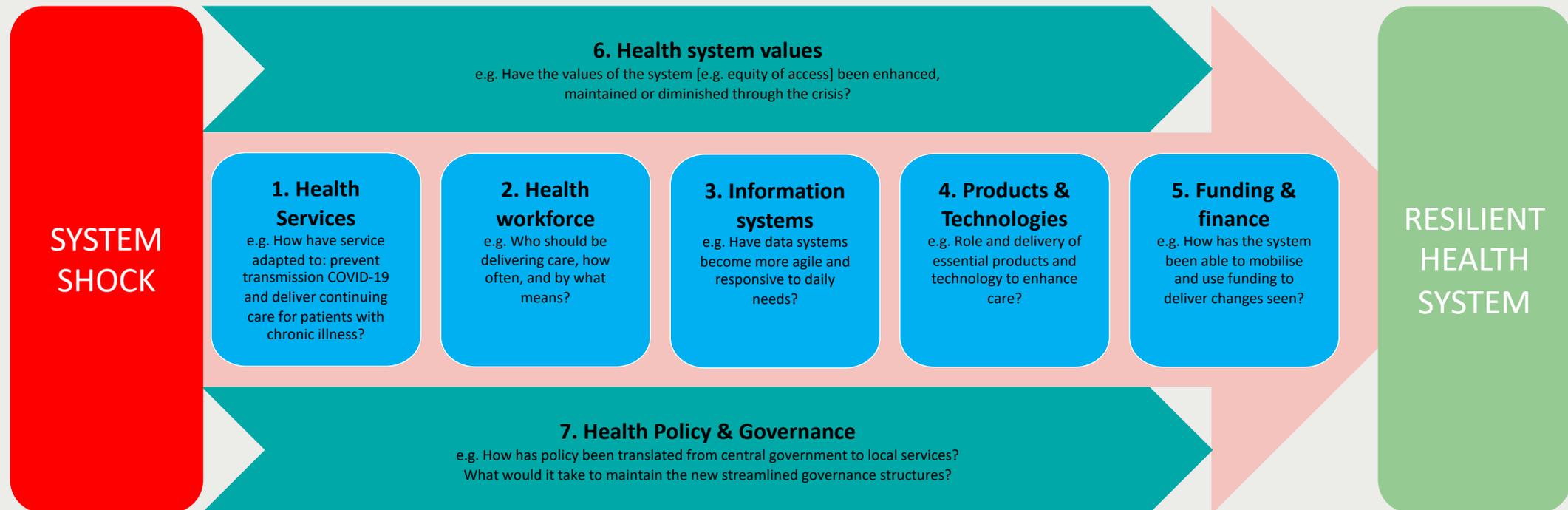
# RECOGNISING THE CRITICALITY OF THE HEALTH SYSTEM RESPONSE

## ENSURING THE HEALTH SYSTEM HAS THE CAPACITY TO TREAT

- Early advocacy for the NSW Government to focus on Health System Research to support adaptation to and recovery from COVID
- Agency for Clinical Innovation Research Intelligence Group
- Research Priority Setting Roundtable explored questions related to:
  - Health system response to pandemic
  - Patient and community experience
  - Medical technologies, products and information systems
  - Health workforce
  - Health policy, governance, finance and whole of government response
- Cross-centre project development to address critical health service research questions

# RECOGNISING THE CRITICALITY OF THE HEALTH SYSTEM RESPONSE

## ADDRESSING KEY HEALTH SYSTEM RESEARCH QUESTIONS



Lingam 2020, *Resilient healthcare across the life course* (adapted from Hanefeld 2018, *Towards an understanding of resilience' Health system blocks and examples of use*)  
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# STRATEGIC SUPPORT FOR OUR PARTNERS

- Ensuring our Clinical Academic Groups continue to meet and communicate, are well supported and can engage effectively with funders to articulate the need to redirect existing project resources or establish new funding streams to address COVID
- Constant flow of critical information to senior leaders via our governing council
- Ongoing engagement with the research directors of our health service delivery partners
- Led a collaborative prioritisation and grant review process across the NSW University sector
- Supporting engagement with our implementation science platform
- Supporting collaborations between clinical and academic stakeholders
- Frontiers Technology CAG and Health Hatchery innovation platform *COVID-19 and Beyond* project to identify clinical needs and fundable innovations provided with seek investment

# CRITICAL LEARNINGS AND ONGOING WORK

- The sector has strongly supported investment of resources and capacity in both COVID-specific and non-COVID impacts on the NSW health system and population
- Local clinical and health services research environment very much changed – potentially forever
  - Stronger and more responsive relationships between evidence and policy
  - More collaboration/consultation between government, clinicians, academics and funders
  - Recognition that implementation is a critical consideration at all stages
- An integrated response and cross-disciplinary clinical academic groups have been essential to meeting local needs in response to COVID
- Continuing to engage with NSW Government regarding vaccines, treatment and health service research and supporting development of a health services research COP
- Ongoing support for COVID-focused clinical and health service across and beyond SPHERE

# THANK YOU

Please feel free to contact us

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