NSW Health

As one system

The NSW Health System's Response to COVID-19

Executive Summary

January 2023

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November 2022

Foreword

A message from the Secretary of NSW Health,
Susan Pearce AM

Since the commencement of the COVID-19 pandemic health systems across the world have had to reinvent themselves over and over again, taking on roles and responsibilities that many of us would never have contemplated.

Consequently, given the gravity of the pandemic and its impact, it is imperative that we assess what we have done well, what we could have done better, and how learning from the last few years will help us both in the ongoing response to COVID-19, and preparation for public health emergencies of the future.

In 2022, I commissioned Robyn Kruk AO to conduct this work, and to consider how we implemented an emergency response as a health system, while also ensuring we continued to meet the ongoing healthcare needs of the NSW community.

In doing so, the team spoke to more than 350 stakeholders across the NSW Health system, as well as a wide range of government and external service providers including Primary Health Networks (PHNs), Aboriginal Medical Services (AMSs), Aboriginal Community Controlled Health Services (ACCHSs), unions, medical colleges, peak bodies, aged care service providers, disability service providers, and people with disability.

It was especially important to me that we provided people involved in our COVID-19 response with an opportunity to share their insights and experiences; the strength of our health system has always been our remarkable staff and partner organisations; their ability to adapt and respond to rapidly changing circumstances and our ability to work together every day with a focus on the right thing - the health and wellbeing of our community and each other.

I welcome the debrief report and its recommendations to strengthen NSW Health's emergency preparedness, and to maintain and reinforce existing strengths within NSW Health as we look to the future. Implementation of the recommendations is now under way.

I want to again express the heartfelt appreciation I have for the staff of NSW Health. Without you, regardless of what your role was during this pandemic, none of this would ever have been possible.

Susan Pearce AM
Secretary, NSW Health

A message from the Independent Convenor,
Robyn Kruk AO

COVID-19 has been called a 'one in a hundred-year' pandemic, but evidence suggests that no health system or community will have the luxury of 100 years of downtime. The World Health Organization has declared six public health emergencies of international concern since 2014. There is a rise in the frequency and diversity of outbreaks, with links to climate change, population increase, global migration and the increasing likelihood of spill-overs from animals to humans.

Noting this, the Secretary of NSW Health, Susan Pearce commissioned a Debrief of the NSW Health system's response to COVID-19 for many very sound reasons. There is an increasing recognition that pandemic preparedness needs to be treated as a permanent priority, rather than following the path of those that have adopted a 'panic and forget strategy,' allowing system preparedness to wane.

Secondly, the Secretary acknowledged the importance of providing people involved in the Response with an opportunity to share their insights of what went well, what was challenging, and lessons learnt – to avoid those that are subsequently charged with the responsibility having to bear the brunt of inaction or short memories.

NSW Health is well-equipped and prides itself on its emergency response capability. It is consistently acknowledged that the scale, impact, and duration of the COVID-19 response was unprecedented; so too was the scale of the NSW Health Response and the required broader whole-of-government response. COVID-19 required NSW Health to respond as one system, activating both its public health emergency response and a whole-of-health system response to support contact tracing, testing and vaccination, but also ensuring that the health system continued to meet the ongoing healthcare needs of the NSW community.

The NSW Health COVID-19 Response Debrief (the Debrief) has many key messages, none more important than the criticality of the capacity, capability and health and wellbeing of the clinical and non-clinical workforce; their commitment to a shared purpose and a preparedness to deal with their own fears in high pressure environments, do the hard yards, and produce some outstanding results for their community. At the same time, they were adapting existing emergency systems and health services to deal with COVID-19 related challenges. This complex environment makes it even more important for decision-makers to listen closely to their workforce, with a renewed focus on their preparedness and health and wellbeing. It also reaffirms that its people, supported by good systems as one of the most critical success factors.

The NSW Health Response highlighted the important need to be able to mobilise a timely and effective whole-of-government and whole-of-community response to support the needs of communities that were most adversely impacted. The health and social needs of priority populations and vulnerable people must be considered upfront in planning and responses, and this approach must be hardwired into future systems.

Increasing overall preparedness in health systems, governments and communities is needed, acknowledging the profound and inequitable health, economic, and social impacts that COVID-19 had on communities.

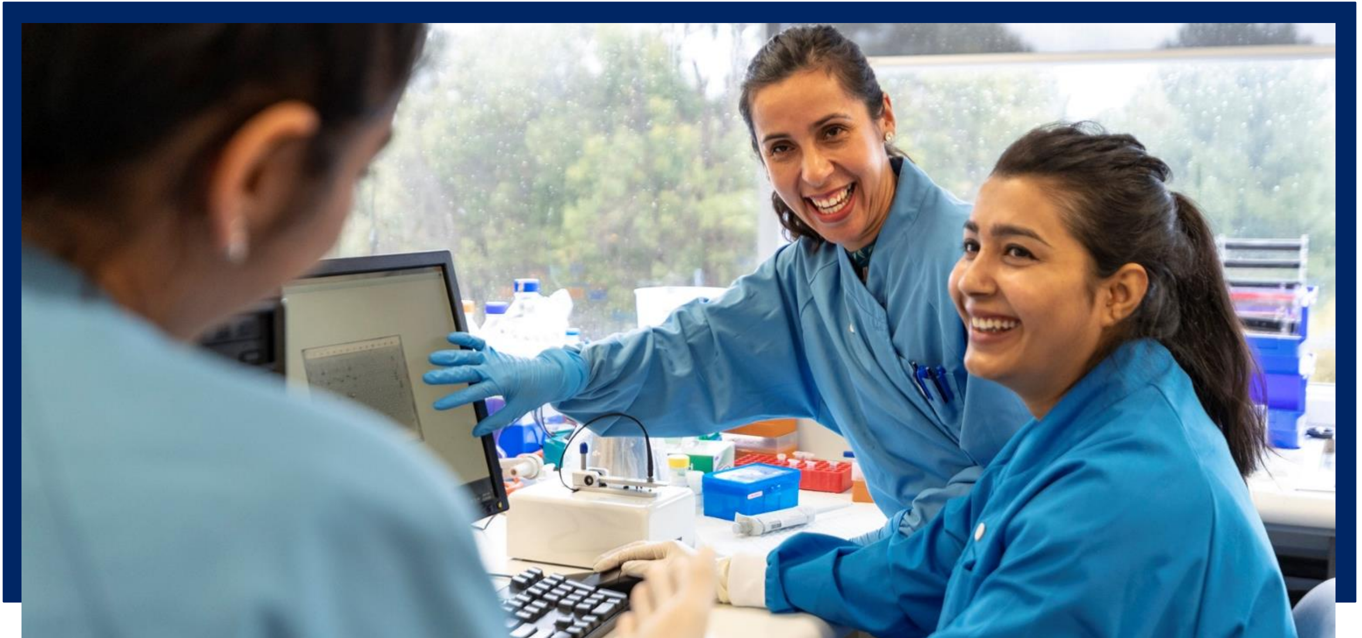
I would like to express my personal appreciation to every person and team that has contributed their insights into the Debrief. I would also like to acknowledge those many people who had previously provided inputs into local debriefs and other ongoing review processes – these also have been invaluable in shaping this report.

The Debrief would also not have been possible without the commitment of time of over 500 people who participated in the debriefing discussions, the support of leaders across the health system, the members of the Process Consultative Group, and teams from key Response partners within the NSW Government, community partners and leaders in key communities, including Aboriginal health, aged care, disability and primary care; and the vital support of its Secretariat, which was led by Ryan Broom and supported by a small team from PwC Australia.

Robyn Kruk AO

Independent Convenor

Executive Summary



Background

The COVID-19 Response (the Response) is a singularly unique event in the history of NSW Health and its operation as a large, integrated public health system. As the first truly global pandemic in over a century, it is essential to understand what went well, what was challenging and why, and identify lessons learnt and improvement opportunities to inform future responses and ensure better preparedness and operation of the NSW Health system. This Debrief process provided the opportunity for the health workforce and key partners to do so.

We were asked to:

- Examine the suitability of the *NSW Human Influenza Pandemic Plan* (NSW HIPP) and *NSW Health Influenza Pandemic Plan – PD 2016_016* (Pandemic Plan) and existing and introduced emergency response structures to the COVID-19 pandemic in New South Wales (NSW) in 2020-2022
- Define the lessons learnt from the pandemic Response stage (including the action stage of the *Australian Health Sector Emergency Response Plan for Novel Coronavirus (COVID-19)* and phases A-C of the *National Plan to transition Australia's COVID Response* (National Plan), inclusive of health system operational and public health response
- Identify system improvements and any required amendments to the *Pandemic Plan* and any associated emergency management plans, structures, and arrangements.

This Debrief is purposefully focused on the NSW Health system's response. While we have not explored budgetary decisions, decisions of the Australian Government and NSW Governments, or the nature of Public Health Orders (PHOs) made through the Response in accord with the Terms of Reference (see *Appendix A*), we have reflected on the responses of partner agencies where the interface with NSW Health was particularly important and impactful. It covers the period of March 2020-March 2022.

This Debrief aligns with, and was informed by, the Centre for Epidemiology and Evidence's *Reflections on the NSW COVID-19 public health response: Acknowledging the successes and learning for the future (2022* (the Public Health Response Debrief Report), which explores in detail the many facets of NSW Health's public health response to COVID-19.

Our process

This Debrief finds its purpose and power in listening to the experiences of hundreds of individuals, NSW Health teams and key partners, then translating them into lessons and actions to better prepare for emergency responses and improve business as usual (BAU) operations.

COVID-19 impacted everyone in NSW Health. We heard deeply personal stories about the impact of COVID-19 on colleagues, families, and communities; honest and frank discussions about what they are proud of, what worked well and what did not; cathartic reflections on extremely difficult experiences; and, to a great extent, overwhelming pride in being part of the Response. People were uniformly open and enthusiastic to help strengthen and shape future responses, and to build on the partnerships that underpinned an *'unprecedented collegiality to [respond to] an unprecedented incident.'*

Through more than 75 consultations and focus sessions, we spoke to more than 350 stakeholders across the NSW Health system. We also spoke with a wide range of government and external service providers, Primary Health Networks (PHNs), Aboriginal Medical Services (AMSs), Aboriginal Community Controlled Health Services (ACCHSs), unions, medical colleges, peak bodies, aged care service providers, disability service providers, and people with disability.

This Debrief was structured over seven domains of interest to guide discussion and reflection:

- Governance and Decision-making
- System Impact
- Communication and Engagement
- Community Impact
- Workforce Impact
- Innovation and Technology
- Data and Information.

As One System reports back to NSW Health across these seven domains, describing key strengths that we heard and key challenges that were consistently identified. It also identifies a wide range of lessons and opportunities for improvement that people, teams, and the system have recognised during the Response.

From these lessons and supplemented by research, submissions and debriefs already conducted by NSW Health teams, external reports, and literature, we make six Recommendations to help NSW Health better prepare for future emergency responses, and five Action Areas for NSW Health (detailed in the end of the Executive Summary) to improve its BAU operations based on the learnings, successful experiences, and innovation during the pandemic.

Setting the scene

On 25 January 2020, three cases of novel coronavirus (nCoV-19) were confirmed in NSW. On 11 February 2020, the World Health Organisation named the disease caused by nCoV19 as COVID-19. On 11 March 2020, the World Health Organization declared COVID-19 to be a pandemic.

Over the following days, months, and past three years, health systems and governments around the world mobilised public health, social and economic responses, the likes of which the world had not seen before, to protect people, communities, economies, and enable health systems to continue to respond to COVID-19 and its impacts.

No health system can claim to have been fully prepared for COVID-19

Emergency plans and supporting first response planning generally have not anticipated sequential and concurrent health and natural disasters at the scale and duration experienced in the last few years. Planning and preparedness have not caught up across all levels of government and community, nor the level of integration achieved to protect and support the differing needs of impacted communities effectively.

Despite this, NSW Health was relatively well-positioned to respond. This was a result of long-term and ongoing investment in data and information communication technology (ICT) infrastructure, analytics, and connectivity, devolved operational

structures that retained the ability to respond and deploy resources across the health system, and sustained investment in local public health expertise and capacity. This was complemented by significant internal capability and capacity in pathology, Aboriginal health, quality and safety, governance, infrastructure planning, workforce training and development, procurement and logistics in the Pillar organisations and Shared Services agencies, the strong operational and local knowledge of the Local Health Districts (LHDs), and the expertise of the Specialty Health Networks (SHNs) and NSW Ambulance.

NSW Health could not have done what it did without the unrelenting efforts, unprecedented collegiality, and flexibility of its staff. Nor could it have done so without strong relationships with the broader health sector and key government, community, and non-government partners. We consistently heard that it is committed, hard-working and passionate people, prepared to go the extra mile, supported by good coordination and communication structures that make the difference in emergencies. NSW Health had to evolve and adapt existing emergency response processes to fit the unique challenges of COVID-19, highlighting the need to upgrade the existing emergency planning instruments and broader system preparedness.

A growing, innovative health system, but one which was facing a range of challenges

Health systems around the world are facing common challenges, including NSW Health – growing system demand, workforce challenges and limited capability to extend reach for emergencies while meeting BAU needs. Demand for healthcare has been rapidly growing across metropolitan and regional NSW for many years. This growing demand has led to sustained investment in new and expanded hospitals across NSW, new models of care that are digitally enabled, and a progressive shift in focus on delivering care that supports personalised and value-based outcomes.

Workforce pressure has also been growing; new and expanded facilities need new staff, rural and regional LHDs face challenges attracting and retaining staff, and the demographic mix of the workforce is shifting. Coupled with broader social change and economic shifts in housing, education and international workforce mobility, NSW Health shares the same issues in attracting and retaining skilled staff that all health systems in the world face.

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As one system

NSW Health's balanced model of system devolution provided the processes, relationships, networks, and systems with which to respond to COVID-19 ***as one system***, enabled by an experienced, highly skilled, flexible, and committed workforce.

COVID-19 presented itself following a period of sequential and compounding natural disasters and emergency responses involving NSW Health, particularly in regional, rural, and remote parts of NSW. Drought, bushfires, and floods impacted the resilience of communities and all first response workers and stoked a challenging mix of health and social challenges in many NSW communities. But these rolling responses also established many deep and consequential relationships between LHDs and other response agencies (including NSW Police), local government, Non-Government Organisations (NGOs), ACCHSs and other community leaders.

While there is no single metric that tells us how successful the Response was, or a benchmark regarding an appropriate level of preparedness, reports and review have highlighted the comparative metrics at the national and state level. This will continue to be the subject of ongoing research, given the broader social, economic and educational impacts. As cited by Shergold et al (2022), Australia achieved one of the highest vaccination rates in the developed world, but these results were accompanied by a range of social restrictions that, before 2020, may have been considered improbable. However, the NSW Response has been highly recognised on many counts, some of which are identified here:

NSW in numbers

To 31 March 2022:

- The first Australian state to reach over 90% double dose vaccination
- 94% double dose coverage by the end of 2021, above the 90% target and ahead of schedule
- Over 5 million COVID-19 vaccine doses delivered by NSW Health hubs and clinics
- Over 29 million COVID-19 tests performed in NSW
- The only Australian state not to experience any stock outages for PPE or other medical devices during the pandemic
- Over 2.4 million COVID-19 test results delivered by SMS, saving 423,000 hours in calls
- Over 209,634 people cared for in the community
- 2,102 lives lost to 30 March 2022 (CovidbaseAU 2022).

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NSW Health's emergency management responsibilities changed throughout the Response
NSW Health started briefing the system about nCoV-19 in January 2020, and NSW's emergency management arrangements were activated in March 2020 to respond, linking in with a range of national and state decision-making, policy, and operational responses (see Figures 1 and 2).

In line with these arrangements, as combat agency for a pandemic, NSW's response was initially controlled by NSW Health, and led by the Public Health Emergency Operations Centre (PHEOC). As COVID-19 escalated, from 29 March 2020 to December 2021 control and coordination of NSW's Response was led by the State Emergency Operations Controller (SEOCON) within NSW Police, with NSW Health remaining responsible for leading the health response, coordinating the public health and operational components across the health system (see *Appendix B* for the emergency management response structures assembled by Health).

As COVID-19 escalated, NSW Health activated a whole-of-health system emergency response. At the end of March 2020, the State Health Emergency Operations Centre (SHEOC) was established at a scale not seen before. Established under the *New South Wales Health Services Functional Area Supporting Plan* (NSW HEALTHPLAN), SHEOC's role was to support PHEOC and coordinate the broader health system operational response. The COVID-19 Critical Intelligence Unit (CIU) and COVID-19 Project Management Office (PMO) soon bolstered central decision-making with data insights, system-wide intelligence, and strategic decision support. The COVID-19 Clinical Council (Clinical Council) and Communities of Practice (CoPs) provided well-organised clinical engagement and input into decisions and provided clinicians from across the system a valuable opportunity to connect, share experiences, and collaborate.

Existing emergency management plans, including the *Pandemic Plan*, provide high-level guidance for governance and the functions of NSW Health organisations in an emergency response. But there was no up-to-date playbook to assist in navigating governance complexities centrally and locally. Between national and state emergency management plans and the broader partner agency relationships that needed to be activated centrally and locally, there were many gaps in how to most effectively leverage existing government services and financial supports to meet the significant health, social and economic impacts associated with a prolonged and high-impact pandemic incident. There was a non-uniform understanding across the health system of emergency responses in general and what each NSW Health organisation understood their role to be. Many were unfamiliar with the *Pandemic Plan* or related emergency management procedures and their impacts on BAU.

All stakeholders expressed the need for more detail about governance, roles, and responsibilities in the *Pandemic Plan* and how to translate this locally. Many reflected on the benefits of acting earlier and highlighted the benefits of more distinct escalation and trigger points, and more scope for local tailoring of responses within well-defined central strategic objectives.

There were many coordination challenges as the Response progressed, particularly across government, and particularly in the period leading up to the rise of the Delta variant. In many areas, Health 'filled the gaps' in key social and welfare supports in the absence of an agreed whole-of-government deployment of responsibilities. At the same time, there were reports of highly integrated local responses between government, councils, and communities to ensure families and children were cared for. Despite these challenges, at a system level, NSW government partner agencies were collaborative, supportive and responsive in supporting NSW Health's Response. The strength of many existing relationships between Health and other agencies and community partners both centrally and locally helped overcome much uncertainty.

While all reflected on the importance of these relationships, it was acknowledged that these needed to be supported by more formalised and enduring emergency structures in plans to provide for a more consistent and sustainable response to communities.

An ever-expanding role
NSW Health's role expanded considerably over time, arising from the deliberations of National Cabinet and other NSW Government decisions. This progressively increased the scope of SHEOC's responsibilities, and the whole system continuously

adapted in this rapidly changing environment to deliver sophisticated, integrated responses as needed, with many exceptional results. Some highlights include:

- Executing a hotel quarantine system for international travellers in just 48 hours, protecting the NSW community while ensuring Sydney remained Australia's principal international gateway, recording only 8 transmissions between April 2020 and September 2021 and enabling over 152,000 people to return safely to NSW
- Establishing Special Health Accommodation across NSW for a range of at-risk people, recording no transmission events
- Scaling up virtual and community care models to support people in quarantine, other supported accommodation, and then later in their own homes, providing safe, high-quality healthcare to thousands of people, while retaining public hospital capacity for those who needed it most
- Developing and rolling out innovative SMS test results for COVID-19 Polymerase Chain Reaction (PCR) tests, putting information in the hands of consumers more quickly and efficiently, saving staff time along the way
- Establishing vaccine hubs across NSW that delivered more than 5 million COVID19 vaccines in a safe, professional, calm environment
- Amplifying the Patient Flow Portal (PFP) to be a rich, intuitive, and practical data portal for clinicians, hospitals, and the system to make better decisions to improve the coordination and integration of care
- Establishing the CIU to consolidate local and global literature, data, and evidence to provide objectives insights to decision-makers
- Developing surge capacity in the health system, including intensive care unit (ICU) capacity, assisted in managing demand across the system with the support of the Ambulance Service's assessment of ramping options and scenario planning
- Working with government and community partners to enhance whole-of-government communications to deliver consistent messaging, coordinate supports for Aboriginal communities, assess community sentiment, and using data to develop behaviourally focussed engagement plans to support impact of PHOs
- Progressively strengthening the planning and engagement to support Culturally and Linguistically Diverse (CALD) communities at both the central and local level through whole-of-government coordination.

Delta changed everything

Between 2020 and June 2021, NSW Health and partner agencies responded to the initial variants of COVID-19, managed an unprecedented border closure with Victoria, and dealt quickly and effectively with localised outbreaks that required postcode-based restrictions on mobility in the eastern suburbs and northern parts of Sydney, and regional NSW.

Prior to June 2021, NSW Health was, by default, 'filling the gaps' in many social and welfare services in some parts of the state – services that normally sit outside of Health's portfolio. Though Health rose to the challenge, this placed significant additional and unsustainable pressure on the system at a time when resources were already stretched. It created additional uncertainty in the absence of clear accountability for some functional areas across government and led to significant divergence of responses to these challenges across NSW, depending on local needs, resources, and relationships.

Led by Health and NSW Police, developing and executing the *Delta MicroStrategy* from July 2021 was consistently acknowledged as a 'game changer' in genuinely engaging and coordinating a whole-of-government response, and in involving and supporting priority and vulnerable populations in locked-down communities, and groups impacted by other restrictions, including state border closures. The importance of Health being able to leverage key data, expertise and other welfare and social supports from across government and community was consistently identified as a critical success factor to embed in future emergency management responses.

An earlier focus on people and communities most impacted and most in need

The Response evolved significantly over time to respond to changing advice, changing resources, changing priorities, and changing information. The most significant shift, however, was the change to respond more directly to Aboriginal communities and other priority groups, and people and communities most impacted, at risk, or in need; elderly, people with disability, new migrants, CALD communities, vulnerable people in lock down, and those most impacted by public health restrictions. Coordination and communication at the whole-of-government level and with the community strengthened to respond to the challenges associated with the Delta variant.

While the approaches adopted were different across NSW, there was agreement that future responses for these people and communities need to happen earlier and be shaped with them to meet their needs. Community leaders and other key local government and community groups were not as closely involved in governance or decision-making at a local level as they would have liked, and as early as they should have been to shape key responses and monitor their effectiveness.

It is essential to include key leaders for these communities or their representatives in decision-making early at the outset, and to leverage the interconnected social networks community leaders have in developing and implementing culturally-appropriate supports and services. We heard that relationships with community leaders, including Aboriginal elders and religious figures, were often very strong, but these relationships were not formalised on an organisational level in emergency planning, making activation in an emergency more difficult and potentially less impactful.

From a sprint to a marathon to a daily endurance run

While first established as an emergency response, the Response ultimately morphed from a sprint into an ultramarathon. The ability of individuals, teams and leaders to continue to respond was negatively impacted over time, due to limited capacity to deploy surge workforces (especially in regional NSW), delegate ongoing health responsibilities, fatigue, limited scope to change emergency response governance and processes, and an admirable (yet unsustainable) 'whatever it takes' mindset. This reaffirmed the need to better shape the emergency planning measures to contemplate prolonged, high-impact incidents and strengthen the focus on both tactical and strategic workforce issues in both a pandemic response but equally important as part of BAU.

The efforts of all NSW Health staff - clinical and non-clinical - must be acknowledged, whether in direct emergency roles or impacted by the redeployment of staff to areas of immediate need or meeting the ongoing health needs of the community. Their combined contribution to the Response was widely acknowledged by all interviewed; it was exceptional.

Transforming care delivered in the community

Tough decisions were made throughout the Response regarding suspension of day-to-day and some face-to-face services, including health promotion and other preventive health programs, elective surgery, and other health services including mental health and dental care. In many situations, multidisciplinary clinical teams worked with community partners to ensure access to services continued, with virtual care and other technology solutions used to make it happen. Many of these are identified in the report and warrant retention for system-wide application.

New strategies and workforce roles were established that integrated care between the hospital and the community based on clinical advice developed through Communities of Practice (CoPs). Clinical engagement throughout the Response was collegiate and truly interdisciplinary.

Maximum flexibility was provided to enable the most effective use of scarce existing clinical and professional staff, upskill and onboard a 'surge workforce', and train an extended workforce from beyond the NSW Health '*family*'. This reaffirmed the non-contested proposition that NSW Health's staff are its most valuable resource. The agility, resourcefulness and collaboration of the workforce was apparent throughout the system, especially striking in regional NSW, where existing capacity challenges further impacted their ability to respond.

'Never have we been more engaged with the vulnerable people in our community'

The Response shone a new light on communities, and the relationship they have with their local health services. Most communities have a strong connection with and sense of ownership of their local health service, whether Royal Prince Alfred Hospital in central Sydney, or the Multipurpose Service in Bourke.

This sentiment was shared repeatedly across the system, both as a strength and a driver for improvement. Many people discussed their significant knowledge gap in the scale and scope of vulnerable people in their community, and the pressure they faced to arrange the supports and services needed both in the pandemic and otherwise. Others raised the cultural and professional challenges faced in meeting the needs of the vulnerable, particularly in areas of high cultural and language diversity, expressing concerns about the inclusiveness of existing services and the importance of diversity in the future health

workforce. Inequity in access to services was often exacerbated during the pandemic, highlighting the importance of change in this area.

A collaborative network of public health experts

A well-resourced, locally-informed, and centrally-coordinated public health network was a critical element of the Response. NSW's hub and spoke public health network was a fundamental enabler of local and system-wide responses, with the *Public Health Response Debrief Report* highlighting it as being the *'backbone'* of the Response. The effectiveness and responsiveness of the public health network is the result of sustained investment in public health expertise and capacity centrally and locally over many years and was a distinct advantage for NSW as compared to other response approaches in Australia and internationally.

An innovative leader in public pathology services

NSW Health Pathology was a clear leader in innovation and information systems, rapidly developing testing capability and capacity to respond to system and community needs. NSW Health Pathology's expertise and capacity to adapt was a distinct advantage for the Response, recognised by numerous awards and nominations.

An exceptional workforce

The flexibility, dedication, and preparedness of the workforce to go over-and-above the call of duty for extended periods of time saw the system through periods of intense pressure. Individuals were far more adaptable than systems and structures, such as pre-existing industrial arrangements, and worked around the changes required to create a flexible team to address the changing demands of the Response.

The Response called for unprecedented levels of collegiality and interdisciplinary cooperation, and this was reported as consistently displayed. In long-term evolving incidents, tactical and strategic workforce planning, supported by integrated data and analytics, is critical. The constantly evolving context of the Response and successive waves made workforce surge planning very challenging, centrally and locally. There is a point at which surge workforce models and contingency plans hit their limit; there are simply no more suitable staff available to respond. In times like these, planning and data becomes even more important, and NSW Health worked hard to overcome existing issues with data integration to do this to ensure the system continued to operate. It was acknowledged that better workforce data, and types of workforce flexibility enabled by the pandemic, particularly new roles, deserve close exploration to potentially build into practice across the system.

Transparent, credible leaders

The Response pivoted on the strength of new and existing relationships across the system led by transparent, credible leaders within agencies, between agencies, into communities, and with the workforce and NGO sector. Often, these relationships are reported to have masked and overcame unclear governance, uncertain roles and responsibilities, and a lack of coordination across service interfaces.

Sophisticated data analytics to inform decisions

Access to reliable data at a central and local level was essential. NSW Health's Patient Flow Portal was a critical strategic investment in data visualisation to support strategic decisions. Data sharing between NSW Health and partner agencies underpinned service innovation and communication and engagement strategies that better served the community. The importance of accessing and sharing key data throughout the Response and in BAU was uncontested. The decision to enable smoother data exchange across government through a Public Health Order was applauded and led to significant improvements in informing and operationalising decisions.

Elements of the Response were hindered by a lack of agreement to share data between levels of government and with key community partners. NSW Health must consider what the next decade should look like from a data culture and governance perspective. This needs to be done to ensure the benefits that data collaboration within Health, between levels of government, and with partner agencies has delivered during the Response can continue and expand to support key health priorities.

A whole-of-health, system-wide approach to communication and engagement

The communication challenges presented by this emergency response were vast; advice changed daily as new evidence and information came to light globally and domestically, making it increasingly challenging to make communication timely.

People, communities, schools, and workplaces were asked to rapidly respond and make decisions based on complex public health and risk-based information for the first time, in the midst of personal crisis, uncertainty and fear. Public expectations of government communication and information changed; timeliness and transparency became a public expectation, and it was usually met.

Timely and transparent information delivered by credible health leaders was critical in supporting the workforce during intense uncertainty. The importance of ongoing communication to workforce wellbeing cannot be underestimated.

Different communication tools and channels were required for different purposes to speak to the numerous stakeholder groups and provide credible information quickly. NSW Health invested huge effort into effectively managing ambiguity and volatility of changing evidence, differing public health approaches, conflicting expert views, redirection of policy and procedures, and relentless media scrutiny.

As the Response matured, these efforts became more streamlined and targeted, with processes and structures established to produce fit for purpose products. NSW Health's multimedia approach shaped with the advice of Aboriginal health expertise within the Ministry and government and community partners progressively strengthened the reach and impact of communication and engagement over time. Tailoring communications for communities most impacted and in need must be prioritised in future incidents. The role of key agencies and partners such as Aboriginal peak bodies, the Department of Customer Service (DCS) and Multicultural NSW needs to be incorporated into future emergency planning and responses.

Recurrent challenges emerged as the Response progressed

The Response was not perfect, and challenges emerged and were progressively dealt with throughout. While detailed further in the report, a range of persistent challenges arose throughout the Debrief and warrant particular attention in the review of future emergency planning, including:

- Establishing an authorising environment with clearer roles, responsibilities, and accountability in Health and between key state and national partner response agencies
- Improving emergency preparedness across the system, and reducing reliance on a small number of core individuals with key areas of expertise
- Supporting workforce sustainability during surge situations, to reduce the reliance on NSW Health's existing workforce, particularly in rural and regional LHDs
- Updating current pandemic and emergency response plans and governance structures with greater specificity and flexibility to manage prolonged incidents with whole-of-government impacts
- Integrating NSW Health's Response with the broader NSW Government response earlier to mobilise support more quickly from partner agencies with central coordination
- Including Aboriginal perspectives and voices into central, regional, and local governance, planning and response structures earlier to inform culturally appropriate responses
- Improving the timeliness of the engagement and response to vulnerable and priority communities, including people with a disability, elderly and CALD communities
- Streamlining how public health advice can be translated, communicated, operationalised and more transparent within Health and the broader community
- Making it simpler to access and share timely, accurate, consistent information and data to guide decision-making, within Health, between partner agencies, and between governments, particularly for priority communities.

This report consolidates what we heard through the Debrief and presents Recommendations for NSW Health to enhance its emergency preparedness, alongside Action Areas to maintain and reinforce existing strengths within the system to optimise BAU performance and patient outcomes.

Six Recommendations to strengthen NSW Health's emergency preparedness

Six interdependent Recommendations are put forward to strengthen NSW Health's emergency preparedness. These Recommendations were directly informed by the experiences of the health workforce and key partners across the NSW health system, broader government, and the community. Each Recommendation includes specific priorities to guide the review of NSW Health's own emergency management plans, and to inform NSW Health's position within the broader NSW Government emergency management environment. They are:

1. **Make governance and decision-making structures clearer, inclusive, and more widely understood**
2. **Strengthen coordination, communication, engagement, and collaboration**
3. **Enhance the speed, transparency, accuracy, and practicality of data and information sharing**
4. **Prioritise the needs of vulnerable people and communities most at risk, impacted and in need from day one**
5. **Put communities at the centre of emergency governance, planning, preparedness, and response**
6. **Recognise, develop and sustain workforce health, wellbeing, capability and agility.**

Five Action Areas to prepare NSW Health for challenges to come

Five Action Areas are put forward to maintain and reinforce existing strengths within NSW Health to enhance performance and outcomes across the system. Lessons learnt through the Response are discussed under domains throughout the report, recognising and celebrating system strengths and opportunities for improvement. These five Action Areas bring together the lessons that had particularly strong consensus and support, with the potential to improve systems and models of care in both emergencies and BAU.

Each Action Area includes reference to the relevant domain in the report where the actions are highlighted. They are:

A. **Build on the strengths of the NSW Health operating model *(Governance and Decision-making)***
B. **Continue investing in integrated data and analytics infrastructure and capability to support decisions *(Data and Information / Innovation and Technology)***
C. **Harness the passion of clinicians and communities to inform further system transformation *(System Impact / Communication and Engagement)***
D. **Support the health and wellbeing of the workforce and expand its impact for communities *(Workforce Impact)***
E. **Continue to empower new models of care that reflect and meet community needs and expectations *(Community Impact).***

Looking forward

COVID-19 is not gone. The Response is not over. Various accountability processes are underway and will follow this Debrief. More findings will be made, and more lessons learnt. These should recognise that any emergency response is highly reliant on people being prepared to go above and beyond their normal roles, take risks and explore different ways of doing things under often extreme pressures, to support colleagues and the urgent needs of communities. This Debrief gives those involved the chance to help shape future emergency responses.

There is little uncertainty that there will be further and potentially more frequent incidents like COVID-19 in the future. While the Debrief has focussed on NSW Health's Response, it is undeniable that an effective pandemic response is highly dependent on coordination between and within all levels of government in partnership with the community.

The Report needs to be considered in tandem with the Public Health Response Debrief Report with the intention, wherever possible, to align the reflections and consultative processes. Particular focus has been given to ensuring that the experiences of both key public health leaders and operational leaders were brought together to guide the necessary changes to the *Pandemic Plan* and other emergency response measures.

Recommendations (in detail)

1. Make governance and decision-making structures clearer, inclusive, and more widely understood	
1.1	***Establish a well-defined and communicated central governance structure*** for pandemic and high-impact prolonged incidents that require activation of public health (PHEOC) and operational responses (SHEOC) and broader whole-of-government responses (SEOCON), that supports collaborative decision-making and the timely leveraging of whole-of-government community supports. This should highlight key operational roles of LHDs.
1.2	***Formalise Aboriginal representation on central and local pandemic emergency governance structures*** to embed a true partnership approach with Aboriginal stakeholders in planning, decision-making processes, and emergency responses. (Link Rec 5;1 embedding early engagement with key community partners)
1.3	***Clearly define what command and control means in the devolved system*** during emergency responses; who does what, when, why, and how. Ensure strong linkage between central and local health structures, including key state, local government and community partners.
1.4	***Embed proven structures like the COVID-19 PMO, CIU, Clinical Council and CoPs and Risk Escalation Panel within pandemic emergency management plans*** to enhance strategic issue tracking, risk assessment, clinical and workforce input and prioritisation and escalation across existing NSW Health governance structures.
1.5	***Continue current reforms to enhance system preparedness for prolonged and concurrent health and other emergencies***. This includes the functions of the State Preparedness and Response Unit and organisation and activation of Health Service Functional Area Coordinators (HSFACs) across NSW Health to provide clarity of responsibilities, including aeromedical, in different types of emergency responses.
1.6	***Further develop and integrate clear emergency procurement mechanisms***, supply chain management, and disruption mitigation plans in Business Continuity and Disaster Recovery planning processes.
1.7	***Update the Pandemic Plan and related emergency management and other policies to reflect the recommendations of this Debrief and related inquiries***, including bushfire and flood inquiries. A summary of recommended changes is included in *Appendix C*.

2. Strengthen coordination, communication, engagement, and collaboration	
2.1	***Formalise and strengthen coordination and communication structures*** and processes between SHEOC, PHEOC and SEOCON to enhance the operationalisation of PHOs across the health system and broader community. This would be greatly assisted by earlier engagement in the development and ongoing review of PHOs and greater transparency on the nature of the public health advice to maximise impact and compliance.
2.2	***Ensure Health's governance and response systems and structures are clearly communicated and understood*** by partner agencies to support responsiveness and collaborative problem-solving. This would be assisted by embedding whole-of-system/government/community scenario planning and training. Planning needs to consider emergency responses across the broader health ecosystem and include clarity about roles/expectations on non-government providers.
2.3	***Ensure the system and public understand how an emergency response may change health service delivery*** models and priorities, access needs and public communications. Specific strategies will be required to reach and involve priority and vulnerable populations in shaping responses and ongoing review.

2.4	***Develop an integrated approach to communications across the Aboriginal community-controlled sector and NSW Government (led by NSW Health)*** to better engage Aboriginal people as well as health services through timely sharing of accurate and culturally appropriate information and data , informed and shaped by community needs and preferences
2.5	***Ensure that rural and regional LHDs are resourced and supported in emergency responses***. This ensures the specific challenges faced by regional LHDs and facilities in planning and responding to emergencies are recognised and considered in decision-making, including capacity, capability, and access to clinical care. Supports may include formalised partnerships with metropolitan LHDs as occurred in recent bushfires; specific escalation pathways, customised engagement forums to share system intelligence; opportunities to share and bundle community care supports to maximise access and resources; and identifying lead LHDs with the capability/capacity to shape operational responses and minimise duplication.
3. Enhance the speed, transparency, accuracy and practicality of data and information sharing	
3.1	***Review data governance structures and systems to eliminate data and information flow barriers*** within, into and out of Health in an emergency response to ensure it is timely, available and usable. Overall preparedness would be enhanced by ongoing data sharing with partner agencies, including access to key Australian Government health and social data. Pre-agreed data sharing in emergency management responses needs to be prioritised in the interim.
3.2	***Facilitate sharing of granular data with key government and community partners*** in planning and delivering services to all priority and vulnerable communities, given the potential health benefits. Prioritise hard-to-reach communities, noting the particular challenges relating to people with disability.
3.3	***Work with the Aboriginal community and communities most at risk, impacted and in need to consider how best to collect and use data during a pandemic emergency response,*** *including ensuring all data systems used in a pandemic are designed to be equitable and meet population needs. This should be done in consultation with communities, peak bodies, partner agencies, service providers and data custodians to inform and enable responsive, locally informed emergency responses, while respecting privacy.*
3.4	***Establish stronger, dedicated scenario and forward planning capability*** across the health system as part of system performance priorities.
4. Prioritise the needs of people and communities most at risk, impacted and in need from day one	
4.1	***Prioritise people and communities most at risk, impacted and in need with bespoke engagement, communication and service delivery approaches shaped by lived experience*** from the beginning of any emergency response (for example, in language radio broadcasts, leveraging trusted community leaders, religious leaders, and other trusted community voices) supported by the expertise of DCS.
4.2	***Ensure public health policy and advice considers and responds to carer-supported models of care for vulnerable people in public hospitals and other care settings***, including the parent/carer/family-supported models of care for children in public hospitals, carers/family supports for aged care and high need individuals in acute settings, acknowledging the impact on health outcomes and the workforce if these models are disrupted.
4.3	***Establish agreements with key partners to ensure the broader socio-economic needs of children and families are consistently addressed by the most appropriate service provider, government or otherwise***, in an emergency response. Key groups include, but are not limited to, children in out-of-home care, foster care, and those experiencing mental ill health, homelessness, or are at risk of domestic or family violence.

5. Put communities at the centre of emergency governance, planning, preparedness and response

5.1 ***Include key primary care and local government and community partners, on central and local emergency management governance structures***, including but not limited to General Practice, community pharmacy, Primary Health Networks (PHNs), aged care and disability care representatives, and multicultural community representatives.

5.2 ***Consider NSW Health's role in supporting other parts of the health ecosystem to prepare and respond to public health emergencies*** with appropriate joint planning, formal partnerships and ongoing dialogue and relationships on a national, state and local level. This should include, but not be limited to, aged care providers, disability care providers, primary care providers and key peak and professional bodies.

5.3 ***Ensure redeployments and other operational decisions consider the specific challenges faced by rural and regional LHDs***, including capacity, capability, and access to clinical care, and the impact of these challenges on their ability to effectively plan and respond to emergencies.

5.4 ***Ensure future pandemic responses anticipate the need for, plan for, and maintain capability to rapidly establish at-home testing and vaccination programs*** in partnership with primary care providers, particularly General Practitioners (GPs) and community pharmacists.

5.5 ***Ensure the roles and responsibilities of partner agencies and NGOs in supporting vulnerable people during an emergency response are clear and agreed*** across government, including clear escalation pathways and coordination mechanisms. This is especially important for accommodation and social supports for homeless individuals, transitions from the justice system, transport and broader welfare supports.

6. Recognise, develop, and sustain workforce health, wellbeing, capability, and agility

6.1 ***Identify and integrate key workforce data with other NSW Health data systems*** and records across patient safety, patient flow, system performance, procurement, warehousing, stock management and other relevant domains to support tactical and strategic decisions locally and centrally.

6.2 ***Prioritise the rapid central determination and distribution of consistent workforce safety guidance*** and related emergency provisions, without scope for local interpretation or amendment, during an emergency response.

6.3 ***Closely consider the appropriateness of current industrial instruments and training supports in supporting flexibility and agility in emergency responses*****,** including how they may better enable the rapid deployment of staff and enhance existing capacity and support fairness and equity of conditions for health staff in emergency responses.

6.4 ***Consider how the system can best measure, access and consider evidence to protect its workforce***, including the risks and benefits of measures like furloughing and surveillance testing during an emergency response to inform ongoing workforce practices.

6.5 ***Prioritise consultation and planning to make NSW Health's emergency resourcing and surge workforce model more sustainable****,* from a *'family and friends'* model to one that is more suitable for long-term incidents and responsive to workforce pressures, trends and opportunities. This would be assisted by maintaining capability for rapid onboarding and training.

Five Action Areas (in detail)

A. Build on the strengths of the NSW Health operating model *(Governance and Decision-making)*	
1	***Continue to invest in system emergency response capability and capacity*** by regularly training current and emerging leaders and reflecting emergency preparedness in Service Agreements and capability frameworks.
2	***Continue to leverage the deep operational expertise of LHDs in developing and implementing emergency responses***, and closely consider how to best use the individual strengths of different LHDs in system-wide responses to minimise duplication, enhance speed, increase access and ensure consistency of responses.
3	***Investigate the merits of centralising procurement and logistics of the top 100 critical consumables across the system*** to mitigate supply chain risks in an uncertain global context, including Personal Protective Equipment (PPE).
4	***Continue to embed close relationships between HealthShare NSW, eHealth NSW, NSW Health Pathology and Health Infrastructure NSW and their commercial partners*** to maintain procurement expertise and preferred access to hardware, equipment and other critical consumables.

B. Continue investing in integrated data and analytics infrastructure and capability to support decisions *(Data and Information / Innovation and Technology)*	
1	***Review data governance structures and systems to eliminate data and information flow barriers across NSW Health*** to ensure it is timely, useful and available to inform decisions.
2	***Work with the Australian Government to establish faster and more practical data sharing agreements*** to support strategic decision-making, including trigger clauses in legislation if appropriate.
3	***In close consultation with Aboriginal leaders and communities, consider how the system should improve the way it collects and uses data to support services for Aboriginal people***. This could include sharing data more openly and easily with healthcare providers to better inform, plan and coordinate delivery of services.
4	***In close consultation with communities, consider how to better collect and use key data within and between governments that supports better services for priority groups and vulnerable communities***, including but not limited to the elderly, people with disability, new migrants, CALD communities, and other important vulnerable populations, noting the benefits of the PHO in facilitating this sharing in NSW.
5	***Continue to enhance the Patient Flow Portal as the central NSW Health system management dashboard*** to support more integrated care across key service interfaces. This could potentially provide greater insights and awareness of needs for Aboriginal communities, and better coordination of care for priority communities, including CALD communities and people living with disability in the community.
6	***Build the NSW Health workforce's long term capacity and capability to better use, integrate, and respond to data and information*** to inform decisions. This capacity, capability and community should be widespread across NSW Health and across clinical and non-clinical roles.
7	***Integrate NSW Health data systems and records across workforce, patient safety, patient flow, procurement, warehousing, stock management domains*** to support tactical and strategic decisions locally and centrally.

C. Harness the passion of clinicians and communities to inform further system transformation *(System Impact)*	
1	***Consider how to best use the collective and individual expertise and reach of the CoPs to inform strategic system decisions, planning and responses*** to public health or other challenges. The success of CoPs was strongly linked to a shared purpose, with many members highlighting the potentially shared and mobilising issues relating to workforce challenges and the need for significant innovation.
2	***Better recognise the important role of carers and visitors in the safety and quality of care for vulnerable people in public hospitals***, including children, elderly and people with disability, and the need for flexibility and compassion in applying any future restrictions.
3	***Embed the use of social media and other bespoke communication models into everyday public health communication practices*** to better connect with Aboriginal communities, CALD communities, vulnerable communities and young people. Ensure that these models embed collaborative development processes to identify relevant priorities.
4	***Strengthen relationships with key government and non-government partners at a central and local level,*** including but not limited to the DCS, NSW Department of Education, Multicultural NSW, and Aboriginal Affairs NSW. Roles of these agencies be incorporated into future emergency plans to provide data and inform messaging.
5	***Maintain and build on the successful allied health led, assertive outreach multidisciplinary teams designed through the Response*** to support vulnerable populations and improve health outcomes.

D. Support the health and wellbeing of the workforce and expand its impact for communities *(Workforce Impact)*	
1	***Integrate workforce data, including human resource, rostering, learning and development and capability management, to inform tactical and strategic workforce planning***, rostering, capability development of staff and emergency responses.
2	***With the workforce, develop new approaches to understand and managing wellbeing*** in high pressure situations to support retention and attract new staff and acknowledging the impact it has on staff and their families, the different challenges faced by staff in regional NSW, and the unique needs and constraints of clinical and non-clinical staff. Priority be given to embedding wellbeing considerations in both pandemic responses and BAU.
3	***Expand the number and scope of practice of the Aboriginal Health workforce across NSW*** to make the most of their trusted relationships and expertise in caring for their communities.
4	***Closely consider how new roles introduced during the Response can support ongoing workforce flexibility and capability***, including the benefits of streamlined recruitment practices and working arrangements to maintain the ability to surge the NSW Health workforce at short notice.
5	***Consider how best to harness the leadership experience gained by individuals and teams during the Response*** for individual and corporate benefit, through leadership pipeline strategies, targeted capability development programs or other initiatives.
6	***Review the resourcing model for public health units in regional LHDs*** to ensure capacity is available to address the needs of priority and vulnerable communities in emergency responses and key BAU activities.

7	***With professional bodies and educational stakeholders, consolidate the benefits gained from moving professional training programs to virtual or hybrid delivery models***, including increased access and equity of experience for people in regional NSW.
E. Continue to empower new models of care that reflect and meet community needs and expectations *(Community Impact)*	
1	***Build on the strong relationships built centrally and locally*** with local government, aged care providers, GPs, community health providers, community leaders, peak bodies and other partners to further embed LHDs and clinical facilities into the life of their communities.
2	***Debrief with border Governments, including Queensland, South Australia, Victoria, and the Australian Capital Territory on the operation of border closures*** and their impact of individuals, families, communities and the health workforce.
3	***Ensure consistent safety and quality governance systems are in place to support the accelerated uptake of virtual care,*** aligning with national frameworks or processes as appropriate, including services delivered by government and non-government providers.
4	***Consider how to sustainably support access to enabling technology and connectivity in disadvantaged communities*** where virtual care has the potential to enhance access and quality of services.
5	***Continue to embed social determinants of health into service design and delivery***, resource allocation, program evaluation and research.
6	***Increase the consistent and widespread familiarity and skill of the workforce in Aboriginal health,*** including developing policy and programs in partnership with Aboriginal communities and leaders.
7	***Continue to support and evaluate local innovation in delivering clinical care in the community*** to better understand the impacts on patient outcomes and system operations, with a particular focus on multidisciplinary outreach models.

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