



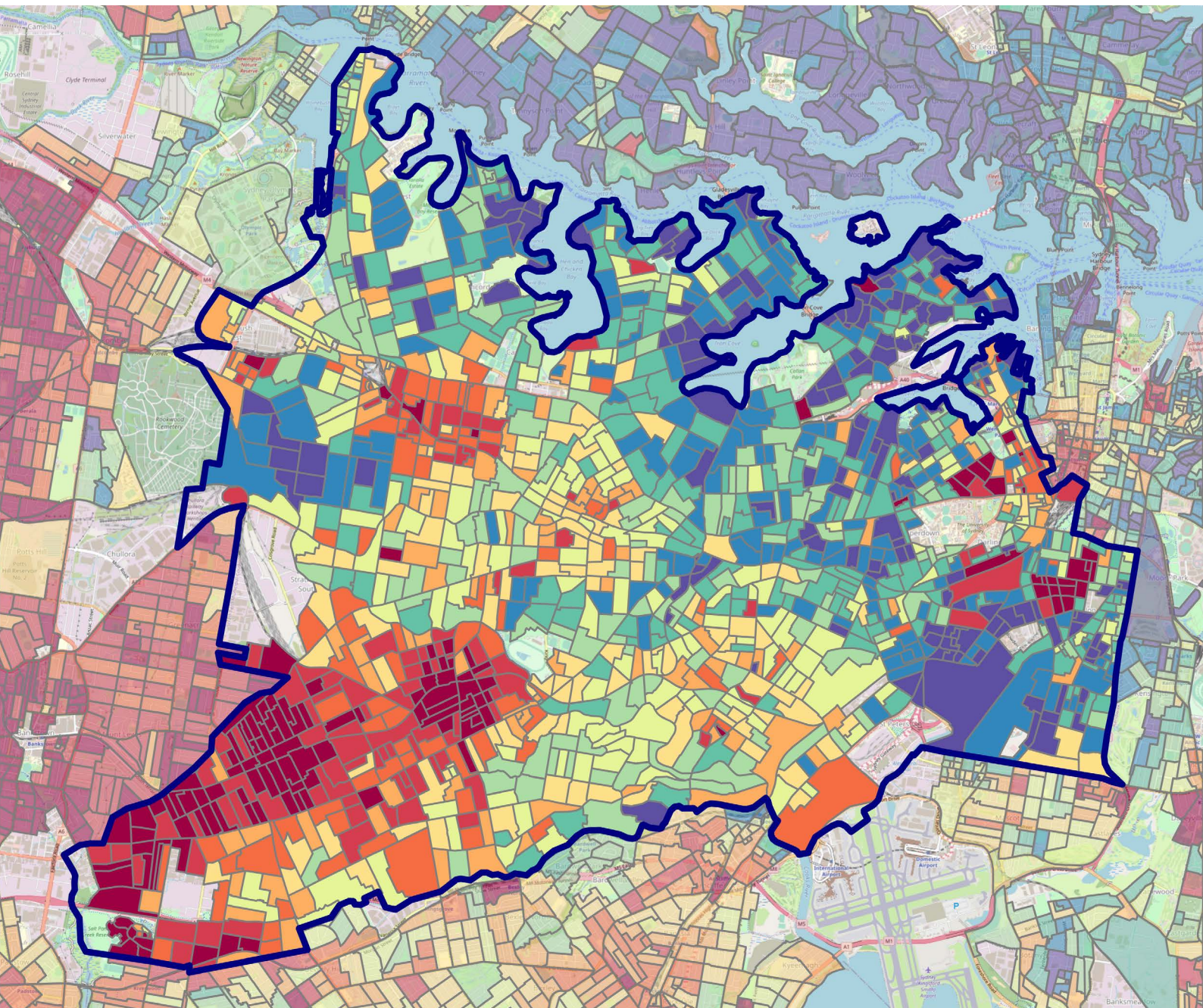
Sydney  
Local Health District



THE UNIVERSITY OF  
SYDNEY

# Public Health Research Analytics and Methods for Evidence (PHRAME) Strategic Plan

2022–2026



## PHRAME contact information

Public Health Research Analytics and Methods for Evidence  
(PHRAME)

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Front cover graphic is built on data from the Socio-Economic Indexes for Areas (SEIFA), a product developed by the Australian Bureau of Statistics. Specifically, the Index of Relative Socioeconomic Disadvantage (IRSD) is visualised for 2021 by decile at the Statistical Area Level 1. Background map tiles were sourced from OpenStreetMap data.

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# Acknowledgement of Country

Sydney Local Health District acknowledges that we are living and working on Aboriginal land. We recognise the strength, resilience and capacity of Aboriginal people on this land. We would like to acknowledge all of the traditional owners of the land and pay respect to Aboriginal Elders past and present.

Our District acknowledges *Gadigal*, *Wangal* and *Bediagal* as the three clans within the boundaries of the Sydney Local Health District. There are about 29 clan groups within the Sydney metropolitan area, referred to collectively as the great *Eora Nation*. *Always was and always will be Aboriginal Land*.

We want to build strong systems to have the healthiest Aboriginal community in Australia.

Together under the Sydney Metropolitan Partnership Agreement, including the Aboriginal Medical Service Redfern and in collaboration with the Metropolitan Local Aboriginal Land Council, Sydney Local Health District is committed to achieving equality to improve self-determination and lifestyle choices for our Aboriginal community.

## *Ngurang Dali Mana Burudi* – A Place to Get Better

*Ngurang Dali Mana Burudi* — a place to get better, is a view of our whole community including health services, Aboriginal communities, families, individuals and organisations working in partnership.

### Our story

Sydney Local Health District's Aboriginal Health story was created by the District's Aboriginal Health staff.

The map in the centre represents the boundaries of Sydney Local Health District. The blue lines on the map are the Parramatta River to the north and the Cooks River to the south which are two of the traditional boundaries.

The *Gadigal*, *Wangal* and *Bediagal* are the three clans within the boundaries of Sydney Local Health District. They are three of the twenty-nine clans of the great *Eora Nation*. The centre circle represents a pathway from the meeting place for Aboriginal people to gain better access to healthcare.

### The Goanna or *Wirriga*

One of Australia's largest lizards, the goanna is found in the bush surrounding Sydney.

### The Whale or *Gawura*

From June to October pods of humpback whales migrate along the eastern coastline of Australia to warmer northern waters, stopping off at Watsons Bay the traditional home of the *Gadigal* people.

### The Eel or *Burra*

Short-finned freshwater eels and grey Moray eels were once plentiful in the Parramatta River inland fresh water lagoons.

Source: Sydney Language Dictionary



### Artwork

*Ngurang Dali Mana Burudi* — a place to get better

The map was created by our Aboriginal Health staff telling the story of a cultural pathway for our community to gain better access to healthcare.

Artwork by Aboriginal artist Lee Hampton utilising our story.

# About us

Public Health Research Analytics and Methods for Evidence (PHRAME) is a collaboration between Sydney Local Health District and the University of Sydney.

In 2022, Sydney Local Health District (the District) and the University of Sydney (the University) established PHRAME to embed research-informed epidemiological and data science methods to:

- support production of actionable evidence for decision-makers
- add value to a wide range of health and population data through novel uses
- create opportunities for capacity-building and training
- enable scalable research and collaboration by identifying applications within and outside the District.

The strong relationship between the District and the University, through PHRAME, will be centred on building capacity through the use of traditional epidemiological paradigms, and hypothesis-driven rigour, for data analysis with biostatistics and data science methods.

# Our service

PHRAME has a population-level focus, collaborating across Sydney Local Health District.

PHRAME has a population-level focus, collaborating across Sydney Local Health District (the District) and harnessing diverse data types to generate 'actionable evidence', which can be implemented by the District within its scope of responsibility, and may include policy or clinical practice.

Embedding PHRAME in the District and the University of Sydney (the University) serves two key purposes:

- support the growth of a two-way pipeline of students and staff working on District projects, informed by cutting-edge and established research methods
- be a mechanism for pursuing promising and scalable ideas and concepts through existing national and international research networks.

The amount of data on the determinants of health, service utilisation and health outcomes in the District will continue to grow exponentially. PHRAME will identify and use such data to create meaningful information for District end-users. It will build capacity and promote understanding of what data exists, its strengths and limitations, and the most appropriate analysis methods.

# Our history

The Public Health Observatory was established in 2014 by Sydney Local Health District.

In 2014, Sydney Local Health District (the District) established the Public Health Observatory (the Observatory) to provide accessible, timely and relevant information to the clinicians, managers and the community about the distribution of disease, injury, health, risk behaviours and social determinants of health in the District.

The Observatory supported current best practice and undertook reviews of the available evidence and health data. It provided this to stakeholders across the continuum of health to maximise population health and health outcomes. It was based within the Public Health Unit, but its function was separate to the health protection function of the unit.

The Observatory's key strategic directions have been reviewed, to further invigorate its activities and broaden the scope of practice. This review process was motivated by the establishment of a new partnership with the University of Sydney, School of Public Health, in late 2021. This review directly informed the establishment of PHRAME in 2022.



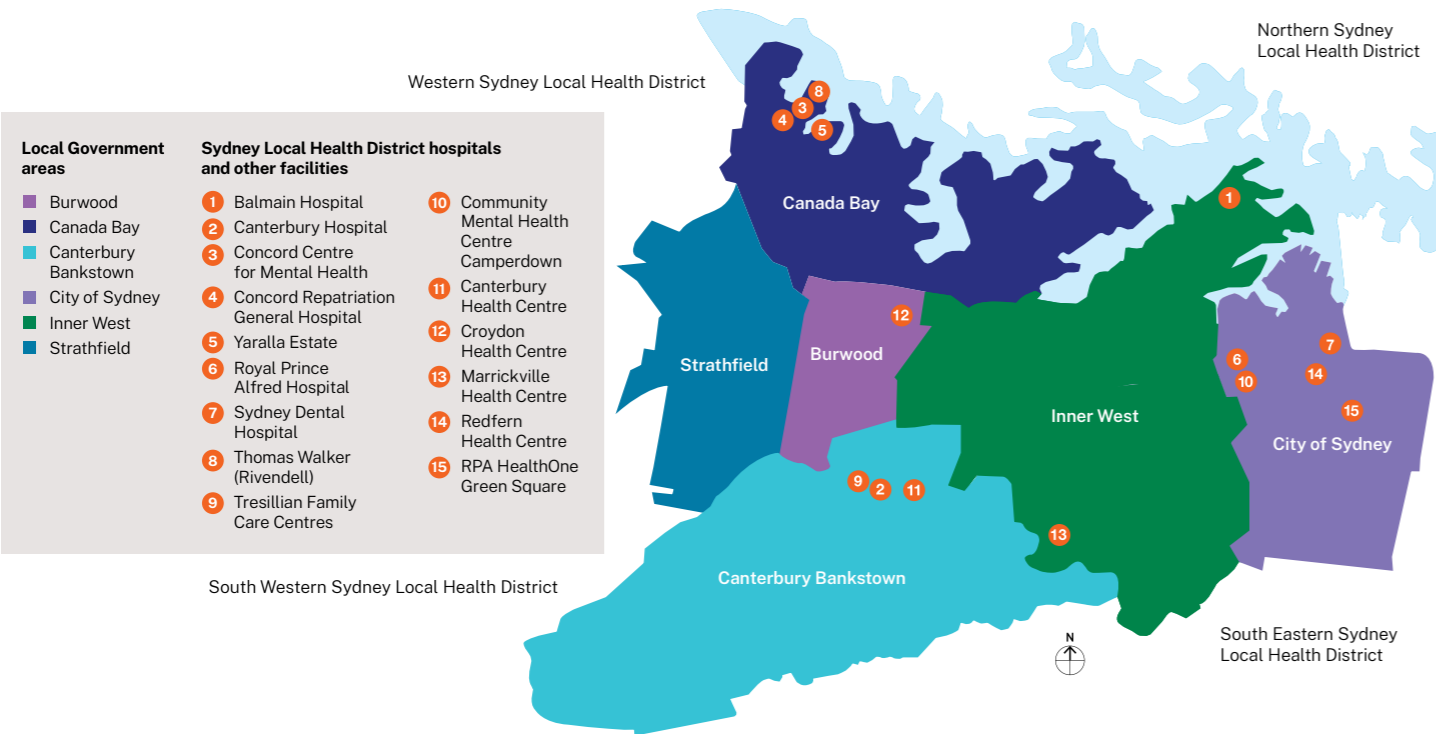
# Our context

Sydney Local Health District (the District) covers a diverse and densely populated region that includes the local government areas of Ashfield, Burwood, Canada Bay, Inner West Council and Strathfield, the Canterbury part of Canterbury-Bankstown and the western and southern parts of the City of Sydney.

The District provides health services to over 700,000 people. This includes approximately 8,500 births each year and population growth more rapid than in the rest of NSW, expected to reach over 900,000 by 2036<sup>1</sup>, with the fastest growth among those aged 65 and older.

Fewer people are living in separate houses and more people are living in apartments, particularly apartments in blocks of four or more storeys. A higher proportion of District dwellings are social housing compared to NSW as a whole. Around 5% of District residents reported a need for assistance with core activities and around 10% provided unpaid assistance to a person with a disability<sup>2</sup>.

Figure 1. Sydney Local Health District boundaries and surrounding Districts



<sup>1</sup> DPIE 2019 Common Planning Assumptions (CPA) population projections by statistical Local areas, Local Government Areas and Local Health Districts

<sup>2</sup> A demographic and social profile of Sydney Local Health District, Sydney Local Health District Public Health Observatory 2018

PHRAME is a new partnership between the University of Sydney and Sydney Local Health District, based in the District Public Health Unit.

The District includes principal referral hospitals Royal Prince Alfred Hospital and Concord Repatriation General Hospital, a major metropolitan hospital at Canterbury, an aged care and rehabilitation specialist hospital at Balmain, and the tertiary oral health facility Sydney Dental Hospital. The District has comprehensive community-based health services providing high quality and safe care close to home, with services ranging across child and family health, community nursing, oral health, mental health, aged care, chronic care, drug and alcohol services, sexual health, population health, health promotion, Aboriginal health and multicultural health. Services are linked with primary care providers, including the local primary healthcare network, and the Central and Eastern Sydney Primary Health Network.

Overall, residents have comparatively good health, however, there are marked gradients in the determinants of health, health outcomes, and healthcare utilisation within the District, often over small geographic areas. Routine and administrative data are a key resource for identifying such inequities, and translating these findings into effective policy and planning requires consideration of these nuances to ensure their validity. PHRAME's data activities will assist the clinicians and services of the District to respond optimally to the needs of these diverse communities.

The Public Health Unit (PHU) reports to the Chief Executive of the District and has a direct link to the Director, Health Protection NSW. The PHU provides health protection programs for the District population, including communicable diseases, immunisation, environmental health and emergency management. Working with partners, the PHU fulfils statutory health protection requirements, responds to emerging threats and champions innovative research and policy to improve the health of the community.

The University of Sydney, Sydney School of Public Health, is Australia's first and leading public health institution. Founded in 1930, it has been tackling the greatest health challenges facing Australia and the world. Today, it has more than 300 staff and 1000 students who strive to make a positive social impact on their community. The School of Public Health is one of seven schools in the Faculty of Medicine and Health, which has a budget of approximately \$620 million and a total student enrolment of approximately 13,500, including 1,920 research students, 6,055 postgraduate coursework students and 5,600 undergraduate students.

# Policy and planning alignment

The *PHRAME Strategic Plan 2022-2026* (the Plan) aligns with the *NSW Health Future Health Strategy 2022-2032*. It ensures staff have support to access and analyse data to inform planning across the District by:

- aligning future service planning and models of care to the needs of our population
- ensuring data supports keeping people well and healthy at a clinical level
- engaging and supporting staff to unlock work practices of the future
- ensure health data and information is high quality, integrated, accessible and utilised
- driving value-based health care that is backed with evidence

The Plan aligns with the core principles of equity, integrity and quality, as articulated in the *Sydney Local Health District Strategic Plan 2018-2023*<sup>3</sup> and *Sydney Local Health District Research Strategic Plan 2018-2023*<sup>4</sup>. These principles provide the foundation for all current and future activities of PHRAME.

The Plan is also consistent with the strategic objectives of the District's *Public Health Strategic Plan 2019-2024*<sup>5</sup> and *Population Health Strategic Plan 2019-2024*<sup>6</sup> providing opportunities for the understanding and analysis of population health data, to be used for research purposes and to solve operational public health and population challenges.

PHRAME will complement the objectives of the Health Equity Research and Development Unit (HERDU) by facilitating quantitative analysis that will allow the timely identification of inequalities in the distribution of health and other social resources within the District.

The Plan aligns with the vision of the University of Sydney, School of Public Health, for a global community in which everyone's needs for good health and wellbeing are met. As the leading public health research institution in Australia for almost a century, its research program aims to challenge the status quo and advances rigorous methods to improve health, wellbeing and fairness in Australia and overseas by:

- improving health outcomes, wellbeing and society
- supporting decision making, policy and practice through evidence and advocacy
- employing rigorous and innovative methods
- integrating equity, ethics and sustainability



<sup>3</sup> <https://www.slhd.nsw.gov.au/pdfs/slhd-strategic-plan-2018-2023.pdf>

<sup>4</sup> <https://www.slhd.nsw.gov.au/pdfs/slhd-research-strategic-plan-2018-2023.pdf>

<sup>5</sup> [https://www.slhd.nsw.gov.au/pdfs/Strategic\\_Plan\\_19-24\\_PublicHealth.pdf](https://www.slhd.nsw.gov.au/pdfs/Strategic_Plan_19-24_PublicHealth.pdf)

<sup>6</sup> [https://www.slhd.nsw.gov.au/pdfs/Strategic\\_Plan\\_19-24\\_PopulationHealth.pdf](https://www.slhd.nsw.gov.au/pdfs/Strategic_Plan_19-24_PopulationHealth.pdf)

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# Overview

PHRAME will provide accurate, timely and robust information, through the application of rigorous analytical methods.

The *PHRAME Strategic Plan 2022-2026* (the Plan) outlines how the developing PHRAME partnership will conduct data analyses to support decision-makers across the District. PHRAME will provide accurate, timely and robust information, through the application of rigorous analytical methods. PHRAME will also establish new collaborations locally and internationally. This will further catalyse the continued growth of activities within PHRAME.

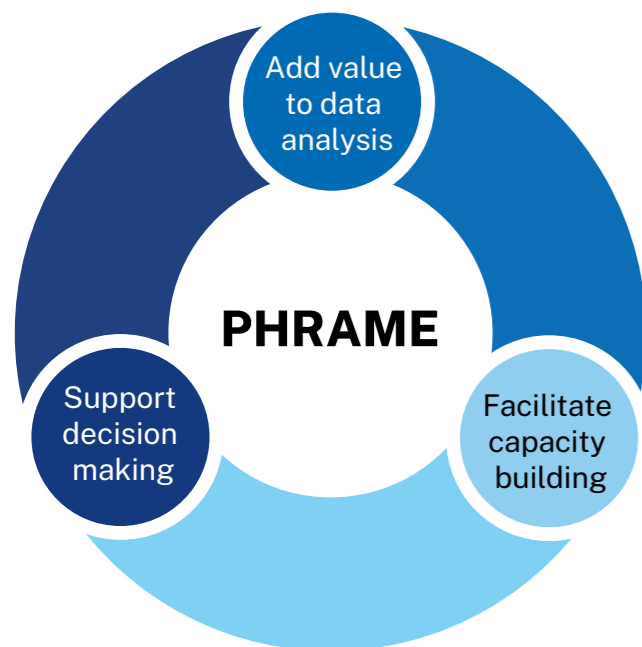
## Our vision

PHRAME will be an exemplar of excellence as a partnership with the University of Sydney, supporting the District strategic vision of excellence in health, and healthcare for all. This will be achieved by:

- producing actionable evidence to inform decision making across the District
- applying research-honed methods and analytics to address real-world questions.

PHRAME will be an exemplar of excellence as a partnership with the University of Sydney, supporting the District strategic vision of excellence in health, and healthcare for all

# Key strategic directions



## Add value

PHRAME will add value to a wide range of health data through novel uses, by focusing on these activities:

- identify and maintain 'high-value' clinical and population data suitable for multiple downstream applications
- proactively identify and assess areas of need in the Sydney Local Health District (the District) amenable to health analytics, guided by District strategic priorities and cross-team consultation
- grow the profile of health data analytics in the District and provide mentorship and support across services

## Support decision-making

PHRAME will deliver high-quality evidence to support decision-making in the District:

- develop a flexible analytical platform of District-specific quantitative disease burden intelligence, including tracking and visualisation of changes over time
- embed greater granularity in mapping and identification of inequity in health indicators, including determinants, utilisation and/or outcomes
- provide expert advice and guidance to District services related to data analytics to support the enhancement of future District research analytical integration

## Facilitate capacity-building

PHRAME will facilitate capacity building and collaboration in public health data analytics for research and non-research applications, through these activities:

- support District staff and students at the University of Sydney (the University) to expand their skills by developing District-centric research projects
- develop bespoke teaching activities and training for the District that align with developments in the field and University curricula
- leverage broad clinical and population health data and expertise across the District and the University by forming a virtual collaboration network
- Drive engagement and collaboration within, and across, local health districts and state, national and international levels

# PHRAME in practice

A defining aspect of PHRAME's vision is to use research methods to pursue 'actionable evidence'.

## Supporting collaboration

PHRAME will use its unique position, within the District and the University's Sydney School of Public Health, and its content knowledge to bring a research-informed rigour to its work. PHRAME will use its visibility across both District and University operations to identify collaborative opportunities in PHRAME's areas of activity.

## Supporting staff and developing partnerships

PHRAME will support District staff who seek to build and maintain their skills, and enable them to identify opportunities for greater uptake in their day-to-day work. It will identify research foci and areas of need, and work across District organisational units to develop strategies for identifying how and where it can add value. For example, this could involve supporting clinicians and managers to articulate and refine questions for consistency with the data available.

## Supporting decisions

A defining aspect of PHRAME's vision is to use research methods to pursue 'actionable evidence', a general term acknowledging that research evidence, in isolation, is rarely useful. Actionable evidence is that which can be implemented by the District, or other organisation, within its scope of responsibility.

## Case study

A clinician wants to know the impact of COVID-19 on childhood immunisation rates within Sydney Local Health District (segmented by Local Government Area).

They hypothesised the immunisation rates have decreased, and needs to know if the District should review service delivery to support more childhood Immunisations 'catch up' activities in clinics.

### How PHRAME helped

PHRAME accessed quarterly reports via the Australian Immunisation Register and cleaned, aggregated and graphically compared the data by age and Local Government Area over time.

### Outcome

The data identified a small decrease in childhood immunisations during the height of the response to COVID-19. However, most immunisations were caught up as restrictions in NSW eased.

### Implication

Based on PHRAME's analysis and presentation, the clinician recommended the District make no changes to service delivery at that time.



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# Key outputs

The objectives underpinning this Plan will produce diverse outputs. These include, but are not limited to:

- internal reports, briefings, and presentations to internal and external audiences
- new collaborations
- training events
- formal lectures
- peer-reviewed journal publications
- maps
- databases, code and workflows.

Reports focussed on Sydney Local Health District (the District) will be produced each year, with the content of these reports aligning to one or more of the PHRAME objectives. It is anticipated that the large majority of these reports will be initiated by PHRAME through the governance processes detailed in the Appendix, while allowing scope for ad hoc reports in response to unplanned, high-priority issues for the District.

The objectives may also be evidenced via capacity-building and support of District staff and Public Health Unit (for example, registrar projects, committee service, formal and informal training).

The governance and monitoring groups for PHRAME are detailed in the Appendix.

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# Our future

PHRAME, in partnership with the University of Sydney (the University), will build on the foundation established by Sydney Local Health District (the District) Public Health Observatory, by developing best practices for quantitative data analysis and intuitive data platforms (such as tools for visualising and sharing results).

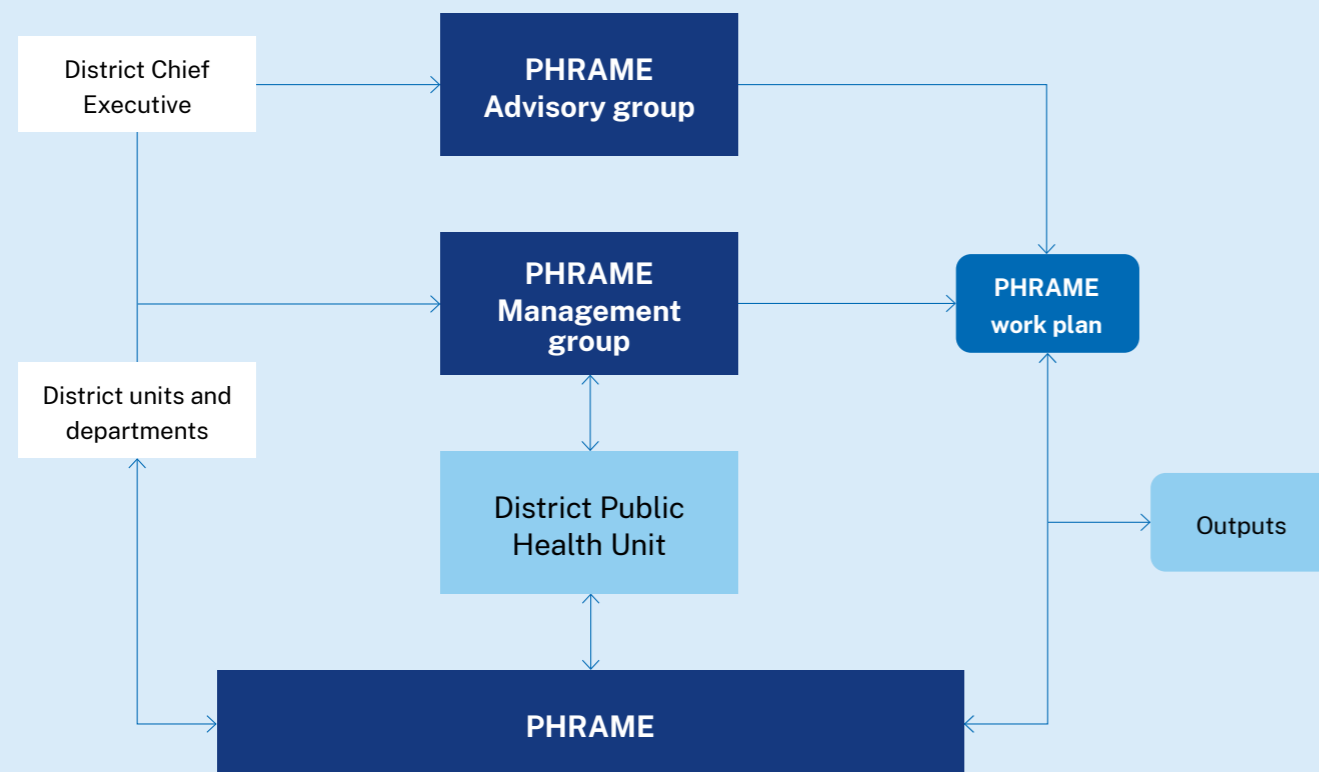
As the profile and visibility of PHRAME is elevated across the District, the future requirements of the potential growth of the need for data, personnel and computing resources need to be considered. For example, this may include:

- external funding through competitive sources (such as Medical Research Future Fund, National Health and Medical Research Council and Australian Research Council) targeting funding amenable to the unique integration of District and University research in PHRAME
- internal funding, including business cases and other internal funding mechanisms, after demonstrating utility, to justify to increased funding.

# Appendix

## Governance and monitoring

The diagram below shows the institutional context for PHRAME, and relationship between proposed governance groups, the operational workplan and outputs.



Governance and monitoring structure for Public Health research Analytics and Methods for Evidence (PHRAME), a 2022 collaboration between Sydney Local Health District (District) and the University of Sydney.

## Management group

The PHRAME **management group** will serve as the main mechanism to regularly track progress towards objectives, and as a conduit between relevant activities at the University of Sydney (the University) and Sydney Local Health District (the District).

This group will meet three to four times per year, or as needed, with the following members:

- Chief Executive, Sydney Local Health District
- Clinical Director, Public Health Unit, Sydney Local Health District
- Acting General Manager, Public Health, Sydney Local Health District
- Head of School, Sydney School of Public Health, The University of Sydney

## Advisory group

The PHRAME **advisory group**, with a mix of roles and skills relevant to PHRAME's objectives, will contribute to the technical and operational scope of the work. The intent of the advisory group is to provide strategic advice on the directions of PHRAME and processes to leverage resources, where possible. The advisory group members and composition will be reviewed as needed. The inaugural advisory group will include the following 11 members:

- **Co-chair** Chief Executive (or delegate), Sydney Local Health District
- **Co-chair** Clinical Director, Public Health, Sydney Local Health District
- Executive Director, Clinical Services Integration and Population Health, Sydney Local Health District
- Director, Strategy, Architecture, Innovation and Research, Sydney Local Health District
- General Manager, Population Health, Sydney Local Health District
- Acting General Manager, Public Health, Sydney Local Health District
- Manager, Community Participation, Sydney Local Health District
- Clinical Director, Respiratory Medicine and Critical Care, Sydney Local Health District
- Clinical Director, Women's Health, Neonatology and Paediatrics, Sydney Local Health District
- Professor of Epidemiology and Occupational Medicine, Faculty of Medicine and Health, The University of Sydney
- Professor of Public Health and Pain Medicine, Faculty of Medicine and Health, The University of Sydney

## Workplan

A PHRAME **workplan** with specific activities, projects, deliverables and timelines will be mapped against the key strategic directions and objectives in the *PHRAME Strategic Plan 2022 to 2026*. This will be summarised as an annual report each year, detailing PHRAME's activities, outputs and achievements. The management group has oversight of the workplan. It is intended that both the management and advisory groups will have opportunities to inform the workplan, in different capacities.



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