Remoteness and CVD and Stroke in Australia Workshop: Connecting what's counted and understanding what matters

Date: 15 May 2024
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Location: School of Rural Health, Dubbo

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Acknowledgements

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The ACvA would also like to recognise the support provided by the University of Sydney School of Rural Health and the University of Sydney Cardiovascular Initiative.

We would also like to thank all attendees, in-person and online for their contributions throughout the day and a special thanks to the organising committee members Professor Gemma Figtree, Associate Professor Georgina Luscombe, Dr Lee Nedkoff, Dr Catherine Shang, Dr Meng Hsu and Mr Adam Livori for their significant input and advice that brought the workshop to fruition.

Executive Summary

The "Remoteness and CVD and Stroke in Australia Workshop" held in Dubbo on 15 May 2024 focused on identifying and addressing the unique challenges of cardiovascular disease (CVD) and stroke management in rural and remote regions of Australia. The workshop emphasised the importance of data and clinical quality indicators (CQIs) to identify gaps and improve health outcomes for these communities. The involvement of the local community including health care workers, local government representatives, clinicians, researchers and consumers provided invaluable insights into health access barriers across primary prevention, acute care and secondary prevention of CVD and stroke in the region and the need to collect, report and evaluate the impact of interventions. The group also discussed local solutions that would support turning the dial on CVD outcomes in Western NSW.

A list of attendees can be found in Appendix 1.

Key Messages

- **Prevention:** Effective primary prevention strategies exist but are underutilised, especially in rural and remote areas.
- **Primary Care:** Shortages of General Practitioners (GPs) and reliance on locums undermine continuity of care. Telemedicine alone is not the solution.
- **Acute Care:** Limited specialist availability and facilities necessitate better planning and resource allocation. Telemedicine alone is not the solution.
- **Secondary Prevention:** Post-discharge follow-ups and rehabilitation services are insufficient.
- **Relevant CQIs:** Implementation of standardised CQIs is crucial for improving care and outcomes.
- **Outreach Programs:** Locally driven outreach programs are effective, as they bring care closer to patients and overcome access barriers e.g. Renal care outreach model in Western NSW, Indigenous Cardiac Outreach Program (ICOP) in Northern Queensland.

Recommendations

- Develop mobile community screening and outreach programs.
- Enhance telehealth models to blend virtual and in-person care.
- Invest in local health workers and educational initiatives to improve health literacy.
- Share learnings from locally driven outreach programs and consider scalability.
- Establish a national dashboard for monitoring CVD risk factors and treatment outcomes, ensuring it can capture relevant indicators.

Introduction

Cardiovascular disease (CVD) is a leading cause of death in Australia, with 45,000 fatalities annually[1]. It accounts for 11% of hospitalisations and 9% of healthcare costs. The workshop in Dubbo aimed to address the specific challenges faced in rural and remote areas, where disparities in healthcare access and outcomes are pronounced.

The primary goal of this report is to understand and improve cardiovascular health outcomes in rural and remote regions by exploring data and using clinical quality indicators to identify inequities, gaps, and opportunities for improvement. Importantly, this workshop, held outside of major cities, provided a voice for the local community to share what data matters to them and where they see the greatest need and opportunity for improvement.

The Western NSW Local Health District (WNSWLHD)

Figure 1. The Western NSW Local Health District.

The Western NSW Local Health District (WNSWLHD) spans a vast area of approximately 247,000 km^2 and serves a population of 279,422 as of 2021. In contrast, Metropolitan Sydney covers a much smaller area of around 12,368 km^2 but has a significantly larger population exceeding 5 million people. The WNSWLHD is home to a substantial Aboriginal and Torres Strait Islander population of 30,700, representing 11% of the local population, compared to just 3.6% across New South Wales, including Sydney.

Healthcare infrastructure in WNSWLHD includes three major rural referral hospitals in Orange, Dubbo, and Bathurst, along with 38 in-patient facilities, 25 of which are multi-purpose services. In comparison, Sydney boasts numerous major hospitals and specialised healthcare facilities within close proximity to residents. For example, the travel distance by road from Bourke to Dubbo is approximately 370 km, whereas in Sydney, healthcare facilities are more densely situated, reducing travel times considerably for residents.

Significantly, Western NSW (including Bourke and Brewarrina) has four times the incidence of coronary heart disease mortality compared to Northern Sydney, highlighting the health disparities faced by rural and remote communities. These statistics underscore the substantial differences in geographic scale, population density, healthcare infrastructure, and accessibility between the expansive and sparsely populated WNSWLHD and the densely populated metropolitan area of Sydney, illustrating

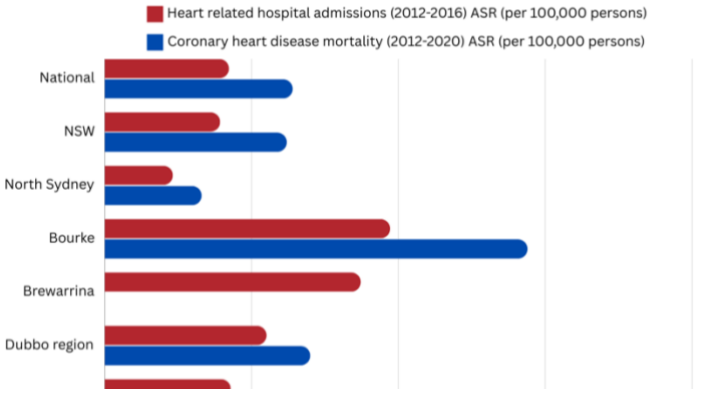

Figure 2. Comparison of heart-related hospital admission rates (2012 – 2016) and coronary heart disease mortality rates (2012 – 2020) across Local Government Areas in NSW. Heart Foundation: https://www.heartfoundation.org.au/bundles/for-professionals/au

[1] Australian Institute of Health and Welfare, *Heart stroke and vascular disease: Australian facts*, updated 17 Jun 2024: https://www.aihw.gov.au/reports/heart-stroke-vascular-diseases/hsvd-facts/contents/about

the challenges of accessing healthcare in rural and remote areas.

Scope

This report covers key areas including:

- **Primary Prevention:** Strategies to prevent the onset of CVD and stroke, including overcoming accessibility blocks and quality of primary healthcare services.
- **Acute Care:** Availability and quality of emergency and specialist care.
- **Secondary Prevention:** Post-discharge care, secondary prevention and rehabilitation.
- **Clinical Quality Indicators:** Metrics to measure and improve care quality, including access.

Primary Prevention

CVD primary prevention is known to be effective however there is poor uptake across the board.

Key issues highlighted in rural and remote WNSW:

- A lack of GPs in rural and remote areas limits proactive CVD primary prevention and risk identification in the community.
- Patients prefer a consistent GP and dislike seeing multiple locum GPs, which often leads to disengagement.
- Locum GPs are paid on a daily rate and have no Medicare incentive to provide treatment/management plans.
- Long waiting times to see a GP (e.g., at least three weeks).
- Permanent staffing is a challenge in rural and remote areas of WNSWLHD. The community, including Indigenous patients, require trust and long-term relationships to be built.
- There is also a large proportion of the community that has no or only transient interactions with a GP. Anecdotal GP Practice insights suggests:
    - 15% of patients have the same risks as those in North Sydney.
    - 35% are aware of their condition and will seek referrals with some encouragement.
    - 35% are unaware and have transient contact with GPs.
    - 15% may be aware or unaware but do not engage with GPs until there is a crisis, such as hospitalisation.
- Financial costs are a barrier even for Close the Gap (CTG) patients, who often find scripts and Webster packs too expensive to fill.
- Tyranny of distance – very expensive (petrol and accommodation) to visit larger towns in the region for necessary health services, leading to many patients not going.
- Telehealth has created problems as some patients prefer to call for scripts and avoid being seen by a GP. Conditions may be underdiagnosed where a patient has no in-person contact with health practitioners.
- Low health literacy in the community
- Limited distribution of workforce across the country.

Feedback and recommendations:

- Provision of mobile community screening services for CVD similar to the mobile breast cancer screening program and/or opportunistic screening e.g. through heart health kiosks supported by Shane Warne Legacy in Mildura.
- A telehealth hybrid model of care could be a better alternative, involving both virtual and in-person interactions.
- Build capacity empowering local health workers and nurses to support primary prevention.
- Improve health literacy.
- Need to start engaging people when they are young and engage with the education system (health promotion)
- Establish CVD outreach programs that routinely visit these communities.
- On a national level, there is a need for a validated, population-level, dashboard monitoring system essential to monitor CVD risk factors, scores and treatments.
- The current models of care are not useful to rural and remote communities. There is opportunity to leverage technology to reach people anywhere they are.
- Need to listen more to the patient and what they need instead of the doctor telling them what to do and what not to do. There are some excellent, local models across the country where learnings could be shared.

Exemplar: The Indigenous Cardiac Outreach Program (ICOP) (Dr Andrew Goodman)
Cardiac tertiary outreach services for Aboriginal and Torres Strait Islander Peoples are achievable through Indigenous leadership. The Indigenous Cardiac Outreach Program (ICOP) in north-west Queensland exemplifies this, being both Aboriginal and Torres Strait Islander authored and driven.

ICOP is a national leader in providing tertiary cardiac outreach services for Aboriginal and Torres Strait Islander people in rural and remote Queensland. Established in 2007 with nine pilot sites, the program now operates at 34 sites and serves 2,000 patients annually.

Teams visit communities four times a year, building strong relationships and partnerships to ensure culturally relevant care. Their services include:

- Point-of-care chronic cardiac disease management
- Treatment
- Referrals to other health providers
- Support for patients visiting metropolitan hospitals
- Education

Additionally, ICOP invests in Indigenous health workers to build capacity and foster trust and engagement by ensuring Aboriginal and Torres Strait Islander Peoples see themselves represented in the healthcare system.

Acute Care

Current Situation:
Variation in delivery of care in cardiology is reflected in outcomes. In WNSWLHD area, they have the following acute care facilities:

- Three major rural referral hospitals: Orange, Dubbo, Bathurst.
- 38 in-patient facilities, including 25 multi-purpose services. Dubbo covers 25 of the 38 inpatient facilities.

Table 1. Acute care service delivery

Available Service	Orange	Dubbo	Bathurst
Full-time Cardiologists	4	3	1
Part-time Cardiologists		2	
Cardiology Advanced Trainees	2 (accredited)	1 (unaccredited)	1 (unaccredited)
Coronary Care Units	20 beds (mixed)	20 beds (mixed)	4 beds (split with ICU)
Cardiac Catheter Lab	Yes	Yes	No
24/7 Primary PCI service	Yes	'lyse & transfer' to Orange	No
Pacemaker Implantation	Yes (only private)	No	No
Pacemaker Interrogation	Yes	Yes	No
Echocardiography	Yes	Yes (only private)	Yes
CT Coronary Angiogram	Yes	Yes	No
Cardiac MR Imaging	Yes (limited)	No	No

Key issues highlighted in rural and remote WNSW:

- Limited access to specialist care (8-10 weeks wait for public cardiologist appointment in WNSW)
- Need specialists to support GPs in rural and remote areas. Linked care models are needed.
- Need for more Catheter lab facilities.
- Lack of dedicated cardiac units in WNSWLHD limits the types of treatments that can be given to patients e.g. the 'lyse and transfer' protocol to Orange.
- Distance - most patients transported by road ambulance to hospital. Air ambulance is a limited resource and only used when there is no road access.

Table 2. Comparison of distance and time travelled to PCI centres between WNSWLHD and Sydney LHD.

	WNSW LHD	Sydney LHD
Area covered	250,000 km^2	126 km^2
Median time to PCI centre	204 min	45 min
Median distance to PCI centre	131 km (up to 563 km)	6.5 km

- Cardiologist Resources
  Significantly fewer cardiologists per capita in rural areas, making preventative care and follow-up challenging.

Feedback and recommendations:

- Access to care is difficult (distance). Need funding to support transport.
- Due to large geographical area, there is a need for more cardiac outreach clinics using multidisciplinary models.
- Improved planning and resources across NSW to fund and run 24/7 PCI centres in strategic locations.
- Models of care to maintain viable and safe volume for designated 24/7 PCI centres.
- Improved transport resourcing to NSW Ambulance.
- Equitable distribution of cardiology registrars for volume of inpatient work in NSW.
- Recruitment of Cardiologists and GPs to rural areas to provide sufficient numbers per capita.

Exemplar: Renal outreach model (Dr Colin McClintock)

Figure 3. The renal outreach model sites.

- Provides time and continuity and connection with people, place and country.
- Established sites that limit the distance that people need to travel to have in-person appointments (150km max.)
- Sites chosen on access for Aboriginal and Torres Strait Islander Peoples and those in very remote areas.
- This outreach model has reduced acute care hospitalisation by 50% (reduced bed occupancies for renal patients) delivering improved health outcomes and cost savings for the health system.

How to scale this "outreach" model?

- Undertake a demand and needs analysis of access to specialist care.
- Undertake workforce appraisal of what is required e.g. multi-disciplinary and multi-speciality teams.
- Need to secure funding.

"*We may not have the workforce tomorrow, but we will have acceptance for what is needed in the region to deliver best care…*" Dr Colin McClintock (Renal physician, Dubbo)

Secondary Prevention

Key issues highlighted in rural and remote WNSW - A Bourke perspective

- No cardiac rehabilitation in Bourke
- Exercise physiologists visit Brewarrina.
- Priorities for metropolitan areas may not be a priority for rural or remote areas
    - Remote patients need more assistance with navigating the health system.
- No one at the other end to read, or act on the discharge summary.
- Follow up appointments post discharge are often not adhered to if patient does not live close by, e.g. Dubbo is 4-5 hr drive away and this can be overwhelming and costly so often there is no follow-up.

Other relevant points to consider:

- GP shortages/changes – patients often don't have a GP, as only seen by locums. The short-term GPs are not around long enough to build trust and engagement.
- Waiting lists for cardiology outpatient appointments (1-2 yrs to get a cardiologist appointment)
- Distances to travel – often distance is prohibitive for post-event check-ups.
- Complex cultural issues.
- Low health literacy.
- Incompatible patient record systems between hospitals and primary care.
- Often discharge summaries are not completed.
- Proportion of patients reaching treatment targets is unknown.
- Smoking rates still very high.

Recommendations:

- There is a large proportion of the public that never truly engage with the health system until there is a major event. We need to work on ways to engage them earlier and work on prevention and building trust in the health system.
- More nurse practitioners combined with more telehealth services to check patients are compliant with taking medicines.
- Need to ensure discharge summaries are completed and are acted on when the patient returns home.

Harmonised outcomes and CQIs to improve CVD prevention, care and outcomes

Measuring, reporting, and monitoring of Cardiovascular Quality Indicators is important to optimise quality of care and outcomes for patients.

- Vital in identifying the evidence-practice gaps.
- Can inform policy making and resource allocation.
- Known to improve patient outcomes.
- Serve as a mechanism for stimulating the delivery of evidence-based medicine:
    - Benchmarking health care providers
    - Accountability
    - Pay for performance programs.

Exemplar: Queensland primary prevention initiative (Professor Kim Greaves)

QLD Preventing Heart Attacks and Strokes Events (PHASES) project:

- Validated, population-level, dashboard monitoring system to monitor CVD risk factors, scores and treatments that will allow:
    - Understanding of CVD risk and treatment shortfalls
    - Implementation or care proportionate to need
    - Feedback on what works and what doesn't

    - Use this information to feedback on what interventions work and those that don't to support rapid implementation of those that work.
- Linkage to outcomes (primary care data linked to CVD outcomes (mortality)).
- Test new risk calculator – the new calculator was developed in New Zealand and adapted for Australia.
    - Develop contemporary calculator for Australia.
- In Qld by next year, all PHNs will use a single desktop health software (PrimarySense) for extraction of primary care data and analytics.
- The PHASES project is a partnership between Queensland Health and 7 PHNs
    - Codesigned with validated dashboard to monitor CVD preventive care
    - Digital and other interventions to improve CVD preventive care
    - Linkage to hospital administrative data (CERNER) and outcomes
- Use this approach to develop a blue-print to upscale on a national level.

Exemplar: Acute Care CQIs – A Dubbo perspective (Dr Tilak Sirisena)

Types of Quality Indicators (as per European Cardiac Society)

Structural QIs	**Process QIs**	**Outcome QIs**
Physical facilities	Adherence to guidelines and recommended therapy	Mortality
Human Resources e.g specialists and GPs	Quality care delivery	Adverse events
Specialist Centres	Timeliness of care	Readmission rates
Service Accessibility	Interpersonal interaction	Quality of Life
Protocols and Guidelines		PROMs

Suggestions for Local Health District (LHD) and Dubbo Hospital QIs that can be measured are below.

Suggested Quality Indicators	**Suggestions on what to measure**
Structural QIs	
Outreach specialist clinics	The average waiting time to see a specialist
Increase availability of GPs	Average waiting time to see a GP
Strengthen Virtual Care Service	Number of GP/Specialist per person
Process QIs	
Adherence to guidelines and recommended therapy	Door to balloon time Total ischemia time may be a better indicator
Quality care delivery	
Timeliness of care	Average waiting time: • To attend a specialist clinic • To have a coronary angiogram or DC cardioversion • To be transferred to a tertiary care hospital for a cardiac procedure
Interpersonal interaction	
Outcome QIs - Unit or Program	
Coronary Care Unit	Mortality Readmission rates Length of stay Medication errors PROMs
Catheterisation Laboratory	Mortality Complications Medication errors

	Waiting times
ACS	Door to balloon time Waiting time for angiography Waiting time for transfer to a tertiary care hospital Adherence to GDM Discharge summary provided Waiting time for follow-up appointment Referral to cardiac rehabilitation
Heart Failure	Time to do an Echocardiography. Adherence to GDM HF discharge summary provided Referral to heart failure clinic

Exemplar: Secondary Prevention and Cardiac Rehabilitation (Professor Julie Redfern)

The QUEL study aims to use data to improve assessments and management of chronic diseases through establishing benchmarks and monitoring performance indicator measurements to reach targets through workshops, monthly reporting and support from PHN coordinators.

The QUEL study used the following performance indicators.

1. Number of clients that are coded with a diagnosis of CHD
2. Percentage clients with CHD with LDL measured in past 12 months
3. Percentage clients with CHD meeting LDL target
4. Percentage clients with CHD with BP recorded in past 12 months
5. Percentage clients with CHD meeting BP target
6. Percentage clients with CHD whose smoking status has been recorded
7. Percentage clients with CHD recorded as a current smoker
8. Percentage clients with CHD prescribed anti-platelet agent in past 12 months
9. Percentage clients with CHD prescribed statin in past 12 months
10. Percentage clients with CHD prescribed an ACE inhibitor or ARB
11. Percentage clients with CHD with MBS Items 721/732 claimed in past 12 months
12. Percentage clients with CHD with influenza vaccination recorded in the previous 12 months.

(Ref: Redfern *et al* BMC Family Practice. 2020)

Cardiac Rehabilitation Performance Indicators

- Ten quality indicators for cardiac rehabilitation have been developed to support healthcare providers to:
  - Identify barriers and enablers to increase referral
  - Improve delivery processes
  - Improve patient outcomes and
  - Inform best practice and alternative models of care
- Data dictionary and data collection spreadsheet available via the Australian Cardiovascular Health and Rehabilitation Association (ACRA) and National Heart Foundation of Australia (NHFA).
- https://www.heartlungcirc.org/article/S1443-9506(18)31857-2/abstract
- https://www.acra.net.au/wp-content/uploads/2021/06/National-Cardiac-Rehabilitation-Quality-Indicators-Data-Dictionary_June-2021.pdf

Data, Data Dashboards and CQIs

There is a wealth of clinical data within the health system that can be used to support clinical care and quality improvements. However, this data is often difficult to access and extract and often stored across multiple platforms and IT systems. There is an opportunity to leverage this clinical data to identify evidence-practice gaps and other areas of inequity. One approach is to provide simplified visualisation of standardised outcomes and quality indicators using 'near-real time' dashboards.

Exemplar: Victorian Cardiovascular Dashboard – Quality and Safety Indicators (Mr Ryan Hon)

The Victorian cardiovascular dashboard was a key priority identified through a multi-stakeholder planning forum.

The dashboard aims to provide:

- One stop tool – to monitor safety and quality metrics in a timely manner
- Timely Data – to identify opportunities for improvement projects
- Benchmarking – against State and peer hospitals
- Risk adjustment modelling – to account for patient case mix to allow for fair comparison between peer hospitals.
- Demographic analysis – age, sex, Aboriginal status, socioeconomic status

The CV Dashboard has now been implemented across the State with planned updates.

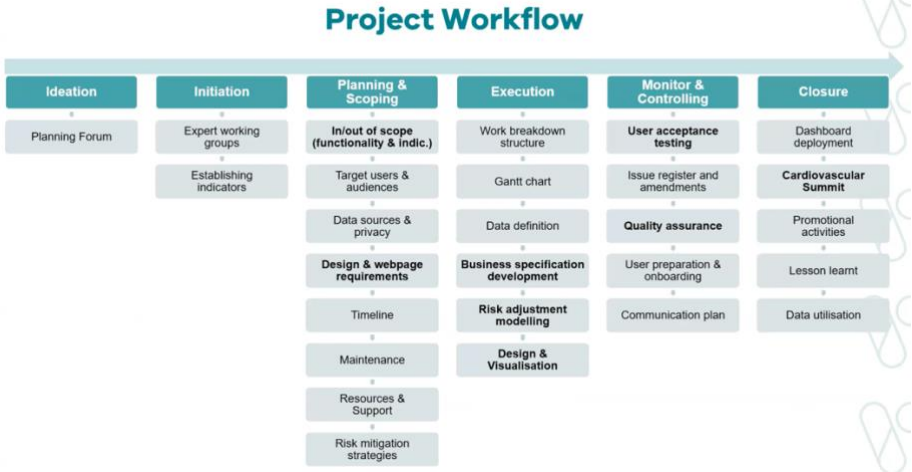

Figure 4. Project Workflow to develop the Victorian CV Dashboard. Highlighted in bold are the time consuming and costly steps.

Exemplar: NSW Dashboard - Measurement of Outcomes and Clinical Quality Indicators (Dr Steve Vernon)

Currently in NSW they have a dashboard as available via the HealthStats NSW website (https://www.healthstats.nsw.gov.au/).

Interactive Dashboard (not CVD-specific)

- Explore by condition
- Explore by procedures
- Stratify by:
  - Location (LHD, LGA, PHN, Major Cities, Inner regional, Outer regional and remote)
  - Socioeconomic status
  - Sex/gender
  - Age group

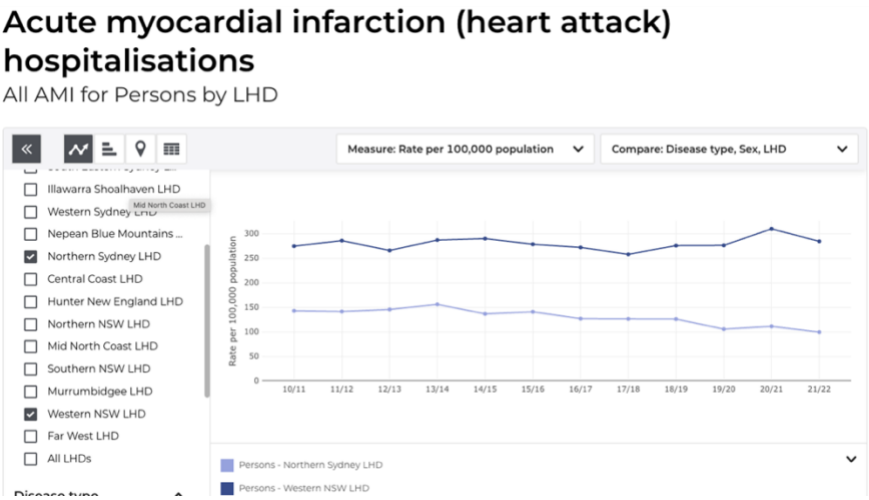

Figure 5. Snapshot of the HealthStat NSW dashboard.

Data sources for this Dashboard are:

- NSW Combined Admitted Patient Epidemiology Data (CAPED) and ABS population estimates (SAPHaRI).
  - Centre for Epidemiology and Evidence, NSW Ministry of Health.
  - NSW CAPED records all inpatient separations (e.g. discharges, transfers and deaths) from all public, private, psychiatric and repatriation hospitals in NSW, as well as Public multi-purpose services, private day procedure centres and public nursing.
- Populations for rate calculations are from ABS estimated resident populations based on the 2021 Census, with projections from NSW Department of Planning and Environment. Except Aboriginal population estimates that are based on the 2016 Census with projections from the NSW Department of Planning and Environment.

What's needed

- Contemporary timely data – so can identify issues, implement interventions, track progress and evaluate change.
- Outcome data reflecting clinical quality indicators.

SPEED Extract is an exemplar project that aims to bring near real-time eMR extraction from North Shore LHD/Central Coast LHD

- Cast the net broad to capture all ACS patients
- Captured patient journey's, including hospital transfers
- Captured the "Acute Coronary Syndromes Clinical Care Standard" Quality Indicators
  - E.g. Proportion of patients with ST-segment-elevation myocardial infarction (STEMI) treated with percutaneous coronary intervention (PCI) within 90 minutes of first clinical contact.
- Interactive Dashboard
  - Comparison between presentation modes, hospital, age groups etc
- Captured patient characteristics including comorbidities and cardiovascular risk factors
  - In-hospital and discharge management including procedures and pharmacotherapy

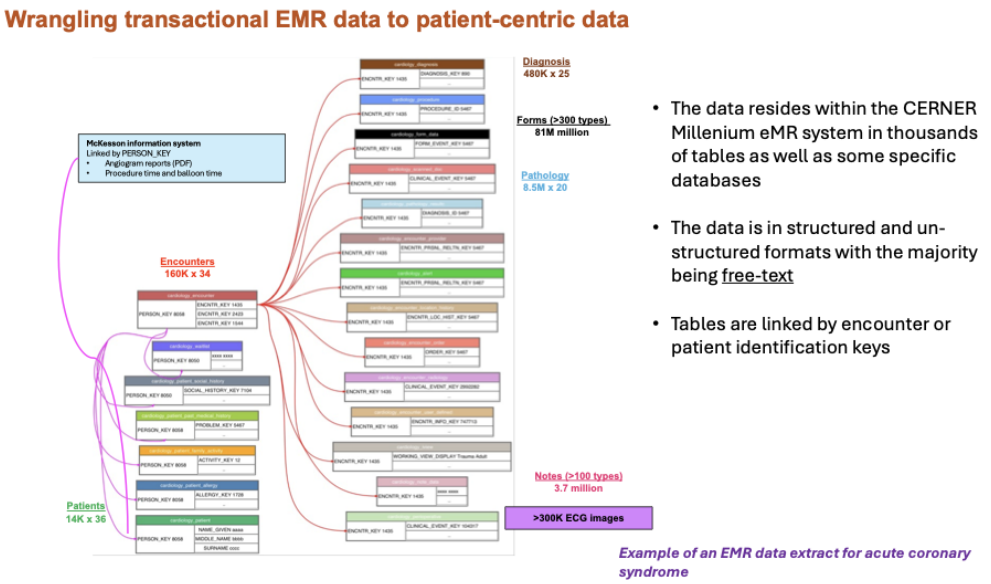

Figure 6. Example of an eMR data extract for acute coronary syndrome that illustrates the complex structure of clinical data in eMR systems. It highlights the issue of data being linked through different linkage keys for different encounters with the health system, which is also then stored in different databases and platforms across the system.

Lessons learnt

- Data is difficult to access and extract from eMRs.
- Data is stored in different places and linked by different keys
- Requires broad buy-in including clinicians, executives, NSW Health, local ICT, eHealth
- Multiple IT systems e.g. CERNER (Firstnet/Powerchart), ERIC, pathology, cardiology investigations, radiology and data resides in multiple silos

Way Forward for HealthStats NSW

- Co-ordinated approach across NSW/LHDs
  - Build into the statewide single patient record (EPIC)
- Feedback to cardiology departments, division of medicine, emergency departments, executive
  - Identify areas for improvement
  - Devise interventions and track progress
- Other case uses
  - E.g. SPEED-Extract dashboard is currently used by NSLHD Heart Failure Service and Stroke Service
  - Strength in semi-structured approach

Next Steps

To effectively use the feedback from the workshop, the intent is to present findings at the National Cardiovascular Health Leaders Research Forum (CV HLRF). The CV HLRF is a meeting of senior health leadership across all jurisdictions and is a key government engagement platform facilitated by the ACvA that meets biannually.

ACvA plans to hold targeted consultations with each jurisdiction and to gather input from government stakeholders nationwide. The collected information will be analysed and will contribute towards a joint white paper on harmonised clinical quality indicators for CVD and stroke that will be shared with national and regional governments, healthcare organisations, and the public. Additionally, we will explore options to establish a system to monitor and evaluate the implementation of these recommendations to ensure continuous improvement in rural and remote healthcare services.

Appendix 1

Name	Organisation
Adam Livori	Grampians Health, Monash University
Alison Beauchamp	Monash University
Allyson Essex	Department of Health and Aged Care
Andrew Goodman	CSIRO
Anthony Jaworski	NHMRC Clinical Trial Centre
Catherine Shang	Australian Cardiovascular Alliance
Cathy Barnett	University of Sydney
Clara Chow	University of Sydney
Colin McClintock	Dubbo Health Service, Western NSW LHD
Derek Chew	Monash University
Gemma Figtree	University of Sydney
Georgina Luscombe	University of Sydney
Heidi Dietz	AIHW
Janet Bray	Monash University
Julie Morrison	Australian Stroke Clinical Registry
Julie Redfern	University of Sydney
Kath McMaster	Orange Health Service, Western NSW LHD
Kim Greaves	University of Sunshine Coast
Kiran Bam	Monash University
Lauren Arthurson	Echuca Regional Health
Lee Nedkoff	University of Western Australia
Mark Arnold	Western NSW LHD
Mark Tattersall	Ochre Medical Centre Bourke
Melissa Doohan	Doohan Cardiology
Meng Hsu	Australian Cardiovascular Alliance
Michelle Baird	Dubbo Health Service, Western NSW LHD
Michelle Cunich	University of Sydney
Ollie Mulcock	Western NSW LHD
Ray Mahoney	CSIRO
Rob Grenfell	Grampians Health
Ruth Arnold	Orange Health Service, Western NSW LHD
Ryan Hon	Safer Care Victoria
Sally Davis	Bourke Shire Council
Sandra Taylor	Dubbo Health Service, Western NSW LHD
Shamson James	Dubbo Health Service, Western NSW LHD
Sharon Kay	University of Sydney
Steve Vernon	Royal North Shore Hospital/University of Sydney
Susanne Hand	Bourke Primary and Community Health
Tilak Sirisena	Dubbo Health Service, Western NSW LHD
Yash Baqat	PenCS