

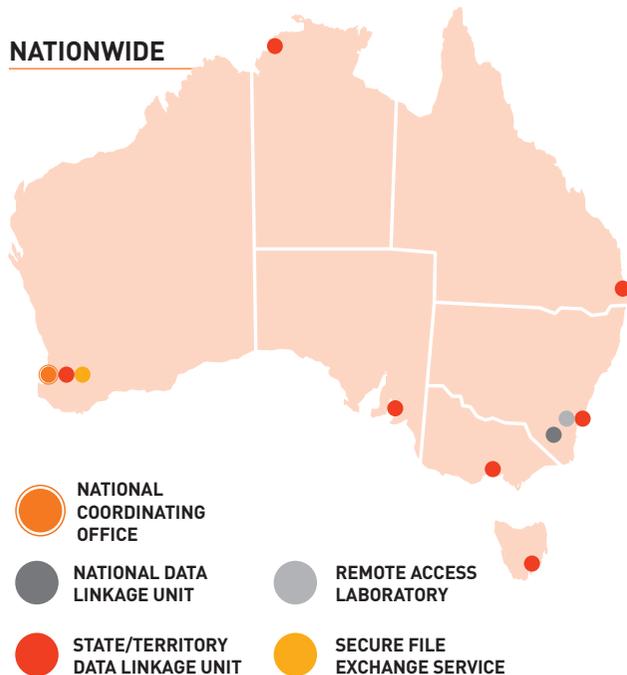
## THE PHRN AT A GLANCE

The PHRN is a nationwide data linkage network capable of securely and safely linking and integrating data from a wide range of sources.

The PHRN enables population research of national relevance which results in improved policy making and service delivery. We use global best practice in maximising the benefits to the Australian community whilst preserving individual privacy.

The PHRN supports six state/territory data linkage units, one national data linkage unit and a secure data laboratory. PHRN also provides a number of national eResearch tools and services to assist researchers to access linked data efficiently and securely.

### NATIONWIDE



**PHRN** Population Health Research Network

### NCRIS

National Research Infrastructure for Australia  
An Australian Government Initiative

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PHRN is an initiative of the Australian Government being conducted as part of the National Collaborative Research Infrastructure Strategy.



**PHRN** Population Health Research Network

BETTER DATA  
BETTER HEALTH



## COLORECTAL CANCER<sup>1</sup>

### CHALLENGE

Colorectal cancer is the second most common cancer and a leading cause of cancer death in Australia.

This study investigated whether patients with colorectal cancer in South Australia (SA) were receiving the treatments recommended in the Australian and international guidelines.

### HOW DID THE PHRN INFRASTRUCTURE HELP?

State and territory cancer registries keep a record of all cancers that occur in Australia. They do not routinely collect information about cancer stage at diagnosis or cancer treatments. However this data is available from other sources.

The SA data linkage unit (SANT DataLink) linked the SA Cancer Registry with SA hospital and radiotherapy data collections to obtain the data.

### OUTCOME

The study found that 83% of colon and 56% of rectal cancer patients received recommended treatment as stipulated in the guidelines. Rectal cancer patients, those with later stage disease, older patients, and those with severe or multiple co-morbidities were less likely to receive recommended treatment. The reasons for reduced compliance with guidelines in these groups should now be investigated.

<sup>1</sup>Beckmann KR et al, J Eval Clin Pract 2014; 20(4): 467-77



## PARACETAMOL OVERDOSE<sup>1</sup>

### CHALLENGE

Paracetamol is the most frequently used analgesic in Australia which is available without prescription. The most common cause of acute liver failure in Australia is due to paracetamol overdoses. As a result, this heavily impacts the health service.

The aim of this study was to show that support for mental health initiatives and improving general awareness could reduce the burden of these overdoses.

### HOW DID THE PHRN INFRASTRUCTURE HELP?

The Centre for Victorian Data Linkage (CVDL) linked hospital data with death data for the research team to analyse. Using the linked data, researchers were able to analyse 14,662 hospital admissions recorded between 2000 and 2007 – averaging 2,095 cases per year.

### OUTCOME

The study found that women and 15-19 year olds are the most likely to suffer a paracetamol overdose. Only 1.1% of cases were fatal, equating to 26 deaths directly attributable to paracetamol overdose across the seven year time frame. The analysis found that 15% of overdoses were accidental and potentially preventable. The research suggests that improving general awareness, combined with additional support for mental health initiatives, could reduce a sizable part of what currently poses a large healthcare burden.

<sup>1</sup>Sood S et al, Journal of gastroenterology and hepatology. 2013;28(8):1356-60



## HEART SURGERY<sup>1</sup>

### CHALLENGE

Australia's population is ageing and there are increasing numbers of elderly patients with heart disease. Heart surgery in elderly patients is considered high risk. This is because elderly patients are more likely to suffer from a number of illnesses.

In the past octogenarians with a form of heart disease called aortic stenosis were considered too high risk for heart surgery. These patients were treated with medical therapies but the outcomes were poor.

The aim of this study was to evaluate short and long term outcomes of aortic valve replacement in patients with aortic stenosis aged over 80 years.

### HOW DID THE PHRN INFRASTRUCTURE HELP?

The Australian Institute of Health and Welfare linked the hospital clinical data of elderly patients who had undergone aortic valve replacements with the National Death Index.

### OUTCOME

The study found that surgical aortic valve replacement resulted in excellent short and long term outcomes. The rate of major adverse events was extremely low. The long-term survival was 95.6% at 6 months, 87.6% at 1 year and 58.4% at 3 years.

<sup>1</sup>Harris RS et al. Heart Lung Circ 2013; 22(8): 618-26