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Using Australia's National Data Linkage Demonstration Project (NDLDP) to improve cardiac care: Towards a national, whole-of-population linked data resource for evidence-informed health policy

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Introduction

In Australia, the Commonwealth, State and Territory governments are each responsible for specific aspects of health care. Historically, cross-jurisdictional health data have not been linked routinely, resulting in significant blind spots in our understanding of the interplay between hospital and primary care, a major impediment to evidence-informed health policy.

Objectives and Approach

In December 2016, the Australian Health Ministers' Advisory Council approved the NDLDP, to establish the value of national linked data to inform health planning and policy. The Australian Institute of Health and Welfare (AIHW) linked five years of hospital, emergency department, pharmaceutical dispensing, medical services claims and mortality data for Australia's two most populous states (New South Wales and Victoria). The Victorian Agency for Health Innovation (VAHI) is leading the 'Delivering better cardiac outcomes: Primary, specialist and hospital care' project to demonstrate the value of the collection in identifying evidence-practice gaps and driving change in cardiac care.

Results

The NDLDP combined data for over 10 million individuals with over 7 billion records of health transactions, utilising a new strategy for confidentialising dates to protect patient privacy. The NDLDP is governed by a Steering Committee; the AIHW is the data custodian approving outputs from analyses within a secure host environment. VAHI established a Project Steering Committee to oversee roll-out, governance and capacity building of the approved cardiac project.

The VAHI project was instigated by evidence that best-practice pharmacological treatments for cardiac care are underutilised in Australia, but with no quantification of the

population-level extent of this gap. The project quantified significant variations and underuse of post-discharge pharmacological care for patients admitted to hospital with key cardiac conditions, including atrial fibrillation and acute myocardial infarction.

Conclusion/Implications

This collaboration between government, clinical networks and academic researchers demonstrated this novel data linkage can enable evaluation of patient care pathways across both hospital and community-based services. These linked data resources provide essential information to investigate variation in care in Australia and improve care integration in cardiac care and beyond.

