The role of ICT in Australia's reforms in Health system payment and provider performance monitoring.

There have been a series of major reforms that have consolidated the attainment of universal healthcare care provision in Australia. All have centrally developed and improved ICT mechanisms for improving accountability for healthcare efficiency and quality. The three key milestone reforms were:

1.Medibank/Medicare programs – Deeble – Whitlam – 1968
https://trove.nla.gov.au/work/6890369?q&versionId=44723738

2.CASEMIX and DRGs. Concern by media and statistical analysts in the 1980s for disproportionate growth in costs and utilisation of health services with little systematic evidence for efficiency and effectiveness led to public demand for better accountability. This was taken up in the 1980s and 90s as a priority by public sector management. This general direction for stronger accountability was re-enforced by increasing evidence of extreme variability in utilisation patterns and equity of service provision. Media attention and public concern was also aroused by increased reporting of cases of behaviours of some providers and healthcare users in cost shifting, overuse and oversupply of high cost and more profitable services.
Casemix Development program – Blewett – Hawke/Keating Government – 1989 Australian Healthcare Agreements 2003-2008 – public hospital funding negotiations
https://www.health.qld.gov.au/__data/assets/pdf_file/0033/438909/renegotahca_2003_08.pdf
All of the above issues have also been examined by benchmarking Australian data with peer systems internationally in economic forum studies such as WHO observatory participation and OECD studies.

3. Further concerns about variability between hospitals and jurisdictions led to an agreement in 2008 to implement a uniform National Casemix payment system. This was commenced in 2011. It included the formation of an Independent Hospital Pricing Authority and a framework for pricing all hospital care products. https://www.ihpa.gov.au
National Healthcare Agreements – 2011 - 26 March 2008 COAG – July 2011 NHA executed – 2017 revised – public hospital joint funding based on Activity Based Funding – Independent pricing of activity – ICT driven activity measurement – patient centred measurement.
https://www.publichospitalfunding.gov.au/national-health-reform/agreement
http://www.federalfinancialrelations.gov.au/content/npa/health/national-partnership/past/activity-based-funding-all-states-NP.pdf

OVERALL, THESE REFORMS through successive phases have delivered programs that have strengthened and consolidated systematic data collection. They have also improved the frameworks for analysis of healthcare utilisation patterns and outcomes across multiple sectors. About 70% of Australian healthcare is delivered or directly purchased from providers by the public sector. This together with the strong regulatory role demanded of Government by the Australian community to ensure the performance of the private sector have resulted in a reliable and systematic monitoring ability of healthcare activity.

ICT STANDARDS
There has been a strong investment in ICT Standards and healthcare information systems development to support these reforms both by program funding and voluntary effort by

those involved. Organisations that have been set up to make and maintain standards and system design include:-

- Standards Australia technical groups – IT14 – HL7 (Australian Health Informatics Standards)
  https://www.hisa.org.au
- HISA (Health Informatics Society of Australia)
  https://www.hisa.org.au
- NEHTA (National eHealth Transition Authority)
  https://en.wikipedia.org/wiki/National_Electronic_Health_Transition_Authority
- ADHA (Australian Digital Health Agency)
  https://www.digitalhealth.gov.au

STATISTICAL DATA MANAGEMENT, analysis and reporting programs and protocols have been developed and maintained by a number of organisational elements including:-
The Australian Institute Health Welfare (AIHW) and Australian Bureau of Statistics (ABS) analysis. Their publication requirements have been a key driver the establishment of data coding, recording and consistent metadata publication mechanisms. For example:-
http://meteor.aihw.gov.au/content/index.phtml/itemId/268110
https://www.aihw.gov.au/reports/hospitals/ahs-2015-16-admitted-patient-care/contents/table-of-contents
There have been several key National Health Activity and Costs Monitoring programs and professional interest groups that have taken leadership roles. These include:-
Health Information Managers Association of Australia, National Health Statistical Advisory Committee and the WHO collaborating centre.
These organisations have been major contributors to the development and refinement of statistical standards and clinical coding metadata repositories.
http://www.himaa2.org.au

The Australian Government Department of Health maintained the CASEMIX DEVELOPMENT PROGRAM until the formation of the Independent Hospital Pricing Authority in 2012.
State Governments also played a major role in the flow of Activity data and Cost data from the public and private hospital systems to the National Hospital data collections.
They were also responsible for initiating and developing the implementation of DRG-based payment systems until the implementation of the national casemix-funding regime in 2013.
https://www.researchgate.net/publication/225093041_Casemix_development_and_implementation_in_Australia

STATE AND HOSPITAL NETWORK LEVEL DATAWAREHOUSING INITIATIVES have had a very experimental and controversial role. However, all jurisdictions have achieved major milestones of data management and reporting capabilities.

INTEROPERABLE PATIENT RECORDS have been particularly challenging as they have been in all countries e.g. HEALTH SMART – VICTORIA.
https://spectrum.ieee.org/riskfactor/computing/it/troubled-healthsmart-system-finally-cancelled-in-victoria-australia-

The most recent development in this space is a new phase in implementing a national eHealth program:

MyHealthRecord

Aug 4, 2017 - The strategy outlines seven "strategic priorities" for digital health in **Australia**, including the shift to a default electronic My Health Record for every **Australian** by next year. The **ADHA** said 5 million Australians have already been set up with an e-health record. The federal government allocated $374.2 million ...

Shift to opt-out e-health records officially endorsed.

https://www.itnews.com.au/news/australias-new-digital-health-strategy-has-been-approved-470161

STATISTICAL DATA LINKAGE PROGRAMS – STATE AND NATIONAL LEVELS

NATIONAL HOSPITAL COST DATA COLLECTION NHCDC

Healthcare in Australia, as in many countries, has been fragmented by constitutional and machinery of government silos and inter-program barriers. This has led to a series of initiatives aimed at providing better care co-ordination or integration – eg Co-ordinated care programs of the 1980s // GP managed care programs for chronic diseases 1990s // Admission avoidance programs 2000s // Care homes ACOs 2010s. Each of these program configurations has been associated with one or more funding or payment mechanisms with identified positive and negative effects.