Improving Diagnostic Safety & Quality in Healthcare

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Tags: Article | Medical Practitioner | Dental Practitioner | Risk Education | Professionalism & Ethics

Australia's health system is known to perform well compared to other OECD countries[1]. However, a significant proportion of hospital admissions are associated with an adverse event[2] which negatively impacts patients both personally and financially.

In the financial year 2017–18, the Australian Commission on Safety and Quality in Health Care estimated that hospital-acquired complications (HACs) costed the public sector $4.1 billion, representing 8.9% of total hospital expenditure[3]. Reduction in the rate of adverse events and unwarranted variation – potentially produces productivity savings, over and above benefits to patients.

Promoting appropriate care

The role of the Australian Commission on Safety and Quality in Health Care:

- To lead and coordinates national improvements in the safety and quality of health care.
- **Explore variation:** one of the key roles of the Commission is to promote appropriate care, with variation in health care a focus for several of its activities.
- **Identify & address unwarranted variation:** at a national level, the Australian Atlas of Healthcare Variation is a tool for exploring variation, and then identifying where that variation is unwarranted. A Clinical Care Standard, may then be developed for national implementation to address that variation, with the development of standards for clinical care being another key role for the Commission.
- The Commission works in partnership with the Australian Government, state and territory governments and the private sector to achieve a safe and high-quality, sustainable health system. In doing so, the Commission also works closely with patients, carers, clinicians, managers, policymakers, and healthcare organisations.

Australian atlas of healthcare variation

Developed as a as a tool aimed at leading improvements in clinical decision-making and the allocation of medical services across Australian states and territories.

How is variation measured in the Atlas?

- Healthcare use is mapped by residence of patient (not by where the care was provided)
- Location of residence mapped at Statistical Area Level 3 (SA3)
  - These are standard geographical regions used by the Australian Bureau of Statistics. SA3s generally have populations of between 30,000 and 130,000.
- Data are age- and sex-standardised per 100,000 population.
  - To remove the effect of differences in population age structure when comparing crude rates for different geographic areas.
- Data sources used:
  - National Hospital Morbidity Database (NHMD)
  - National Perinatal Data Collection (NPDC)
- Data analysis and extraction performed by the Australian Institute of Health and Welfare (AIHW)

Improving diagnosis

As reported in medical literature, some form of diagnostic error occurs in up to one in seven clinical encounters, and most are preventable[4].

Most common causes

- Delayed, or missed diagnosis

- Failure to effectively communicate that diagnosis

Why do diagnostic errors occur?

- Easy to unconsciously shift into intuitive /fast thinking
- Fatigue - 30% decrease in cognition at end of a night shift
- Cognitive overload
- Task interruption
- Sick, depressed, angry
- Experts still miss things – red flags / pattern recognition aren't perfect
- JMOs don't have well developed red flag system
- Junior staff need to be taught to be in slow thinking lane most of the time

Diagnostic safety

- Accurately identifying the explanation (or diagnosis) of the patient's problem,
- Providing this explanation in a timely manner, and
- Effectively communicating the explanation.

Diagnostic efficiency

- Diagnostic performance can be defined not only by but also by efficiency (e.g., minimizing resource expenditure and limiting the patient's exposure to risk)
- Measurement of diagnostic performance should consider the broader context of value-based care, including quality, risks, and costs, rather than focus simply on achieving the correct diagnosis in the shortest time.

Diagnostic quality

- Target specific diagnoses with bodies of work aligned with significant identified issues – e.g. from Atlas, NSQHSS, HACS, preventable admissions work etc
- Potential examples include:
  - Healthcare Associated Infections: Urinary tract infections
  - Comprehensive Care: Diagnosing dying in COPD /CCF
  - Recognising and Responding to Acute Deterioration: VTE, Sepsis
  - Blood Management: Diagnosis of anaemia (linked with appropriate management)

What issues should you consider monitoring?

- Tests not checked
- Medical defence claims
- Morbidity & mortality review processes
- Institutional peer review processes
- Selective chart review of high-risk cohorts
- E-trigger enhanced chart review
- Random chart review
- Review of incident reports
- Review of autopsy reports

Key advise to minimise diagnostic errors

- Revisit your thinking / decision-making when you are aware that your cognition may be compromised.
  - Run it past a colleague
  - Review it later when in a better space
- Take time to review at specific patient journey checkpoints:
  - Things aren't going as planned
  - The patient is deteriorating
  - The expected response to treatment is not achieved
  - At handover between teams and discharge from care
  - The patient or carer is expressing concern over the diagnosis

Useful resources

- Take 2 - Think, Do framework
- The Red Team / Blue Team Challenge
- Society to Improve Diagnosis in Medicine (SIDM)
  - ANZA-SIDM
  - AusDEM Conference Dates: April 28th – 29th 2022
- Agency for Healthcare Research and Quality (AHRQ)
- Institute of Medicine Report - National Academies Press
- NSW Clinical Excellence Commission (CEC)

MIPS Resources

- On Demand webinars
- MIPS Support Centre

Relevant recorded webinars

- Diagnostic Error in Medicine
- Diagnostics: Improvements in healthcare
- Diagnostics: A team sport
- COVID-19 – Diagnosis and pathology

Relevant articles

- Diagnostic errors in medicine
- Diagnostics - A Team Sport
- How to avoid diagnostic errors in the ED
- Good health records support a good defence

If you missed the webinar, watch it here

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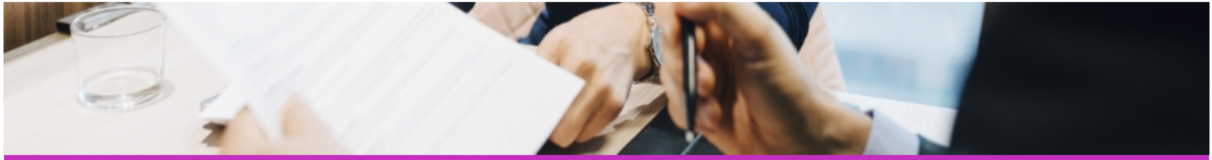

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