

Transparency in the year of COVID-19 means tracking and publishing performance in the whole health system: progress on the public reporting of acute coronary syndrome data in New Zealand

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As previously reported in this Journal, the Ombudsman has called for greater transparency around data relating to healthcare performance in Aotearoa New Zealand.¹ In his ruling, the Ombudsman noted that “New Zealand lags behind [international] developments” in the “proactive disclosure of performance and outcome information”.

Daily and very public reports from the Ministry of Health of coronavirus cases in New Zealand—their locations, origins, treatments and outcomes—have become our new norm and this transparency has contributed greatly to New Zealand’s collective acceptance of strong government measures to limit community spread. Proactive pursuit of intelligent policies and practices of transparency works. Despite the massive and emergent challenges of COVID-19 and the knock-on effects of our responses, it remains crucial to track performance in the rest of the health system and make that information transparent to New Zealanders in intelligent and evidence-based ways.

Acute coronary syndrome and transparency

Since 2016 the Health Quality & Safety Commission (the Commission) has undertaken work alongside the Ministry of Health (the Ministry) to increase transparency of

healthcare data in New Zealand through a co-design process with consumers and clinicians using existing, robust registry data that clinicians trust, on the premise that data would be circulated internally first to providers to assist in quality improvement work, and then subsequently published in ways the New Zealand public want and can understand. This work began with the All New Zealand Acute Coronary Syndrome Quality Improvement programme (ANZACS-QI).

ANZACS-QI is a clinician-led initiative from the New Zealand National Cardiac Network that was implemented in 2012 with funding from the Ministry. Its primary aim is to support appropriate, evidence-based management for all New Zealand patients with acute coronary syndromes (ACS), congestive heart failure and those who receive cardiac procedures. Governance of the ANZACS-QI programme is by the ANZACS-QI governance group on behalf of the New Zealand branch of the Cardiac Society of Australia and New Zealand (CSANZ) and includes regional clinical, Ministry and consumer representatives.² The detailed ANZACS-QI registry is complemented by parallel analyses of, and individual linkage to, New Zealand’s multiple routine health information datasets. ANZACS-QI has been successfully

implemented in all the 41 public hospitals across New Zealand where acute cardiac patients are admitted. By December 2019 there were 60,471 patient admissions with an ACS and 120,380 coronary angiogram procedures captured in the ANZACS-QI registry: each with a comprehensive and complete dataset. The ANZACS-QI Governance Group uses the ANZACS-QI data to develop and recommend clinical indicators and national performance targets to the Cardiac Network and the Ministry. Performance against these indicators is then reported to district health board (DHB) management and secondary care clinicians, and to the Ministry, via monthly and quarterly reporting. To date, much of this performance data has been reported via peer-reviewed publications³⁻⁷ with no mechanism established until now to routinely report the indicators in a format designed specifically for and accessible to the public.

Co-design workshop findings and transparency of data—internal circulation

Transparency of data within the cardiology community is a key goal for ANZACS-QI. However, as ANZACS-QI reporting matured, the sheer volume and complexity and frequency of the detailed reports generated threatened to overwhelm the DHB clinician and management audiences.

The evidence for the effects of publication of performance data is large and still growing, yet uneven. Early reviews suggested improved performance by individuals in response to publication of data by named individual, though much of this evidence was informed by heavily studied work in New York state around coronary artery bypass surgery.⁸ More recent studies and reviews conclude that there is evidence that public reporting at team, unit or institutional level (as advocated by the Commission's 2016 position paper⁹) generates quality improvement,^{8,10,11} with growing acceptance that the mechanism is via institutional reputation, rather than changes in patient choice of provider in response to publicly available information on provider quality.^{12,13} This latter point is particularly relevant within the context of the New Zealand public health service.

ANZACS-QI clinicians, Commission and Ministry staff engaged with consumers directly in 2017 via the Open Heart transparency co-design workshop.¹⁴ Findings from this workshop spurred support for development and completion of a standardised discharge tool and establishment of a process to publicly share DHB performance data.

In 2017 the ANZACS-QI Governance group partnered with the Commission to develop a dashboard of ACS care quality indicators derived from registry data for DHB clinical and managerial audiences. The initial focus on these groups was for two reasons—establishing comprehension, buy-in, and a sense of the utility of easily graspable graphical displays of variation, and to give those audiences time to understand, engage and begin addressing inappropriate variation ahead of public-facing reporting.

This dashboard is now maintained and updated by ANZACS-QI and has been shared with the Cardiac Network and DHBs since 2018 (Figure 1).

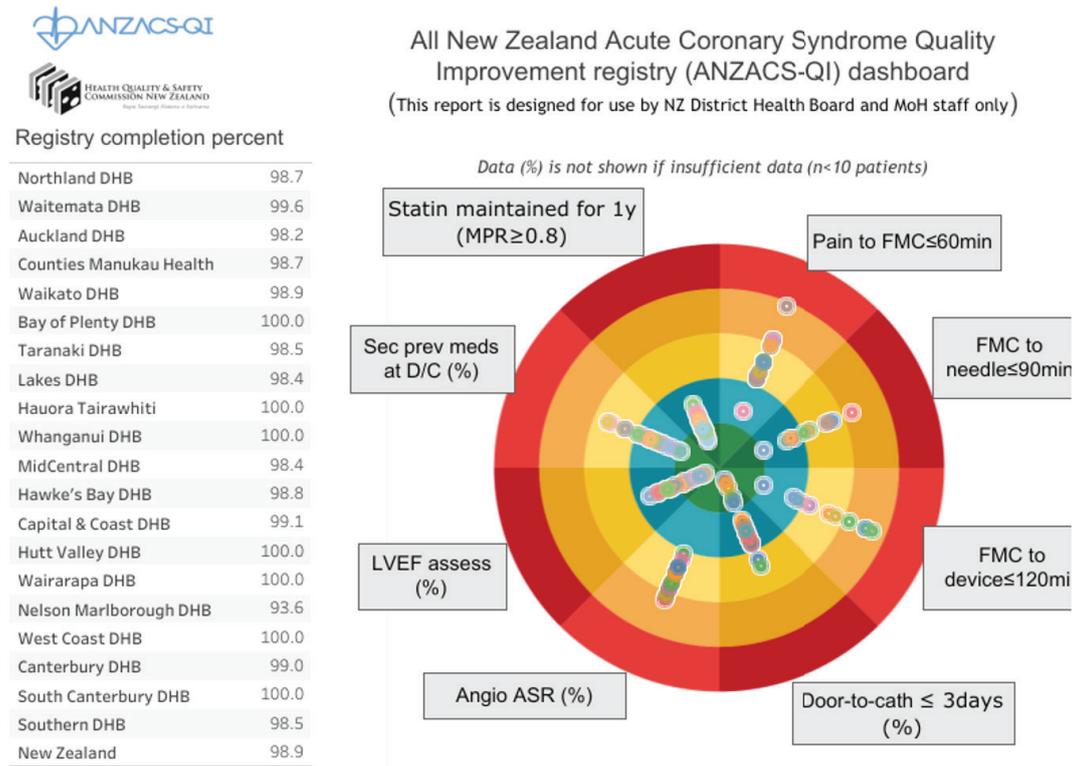
Transparency of data—public presentation how and where?

How to present consumer-facing data?

In general, consumers have low comprehension of measures of quality in healthcare or in some cases that there is indeed variation in quality of care.¹⁵⁻¹⁷ Thinkers in patient activation and educational theory posit a need for a graspable organising framework to aid understanding of granular data points of performance.^{18,19} The Italian performance evaluation system (PES), for example, uses stove charts, presenting performance indicators from a patient perspective, ie, as pathways, rather than siloes.²⁰

The stove presents five bands of performance horizontally, divided into phases of the care pathway with indicators clustered in each phase (see Figure 2). This view “allows users to focus on strengths and weaknesses characterising the healthcare service delivery in the different pathway phases”.²¹ Performance of the regional unit is presented as a dot higher or lower on the “stave”—dark green being best performance, red being worst. In this example from the Italian PES work on quality of

Figure 1: Static image of interactive ACS indicator dashboard for clinical and managerial use.



maternity care, the indicators progress from left to right with a cluster of antenatal care indicators on the left, progressing into perinatal care, and then into postpartum care.

Nuti and colleagues tested the comprehensibility of stave charts versus dartboard and

radar visualisations (see Figure 3), finding stave charts rated highest for perceived understanding (ie, “the graph was clear”) and objective understanding (ie, most correct identifications of best performance) (n=903 health professionals).²²

Figure 2: Five-band stave graphs showing the multidimensional performance evaluation measurement of the maternal care pathway of a Tuscany local health unit, from the Italian PES.

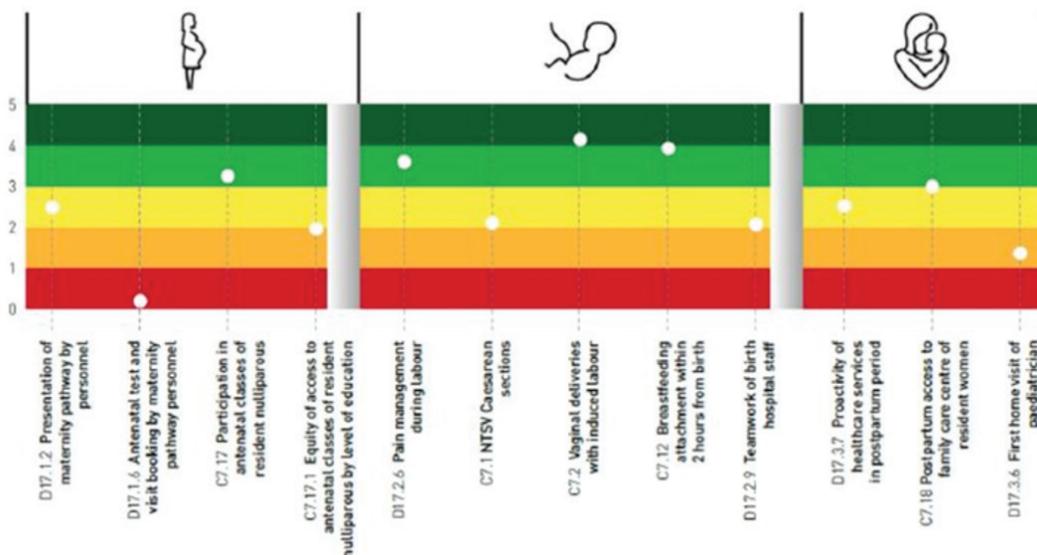
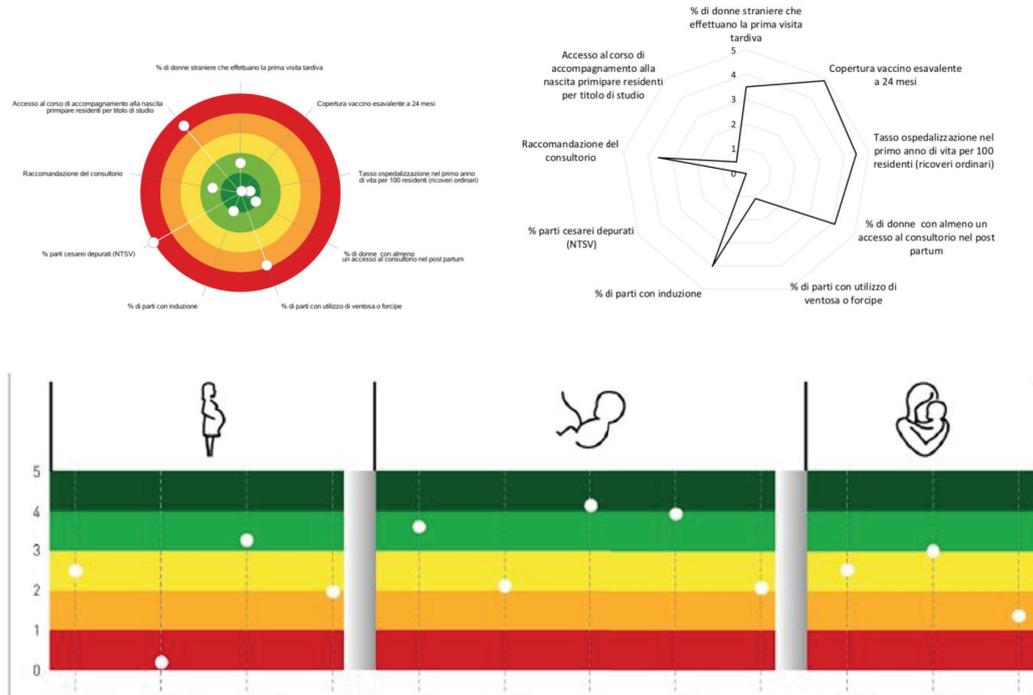


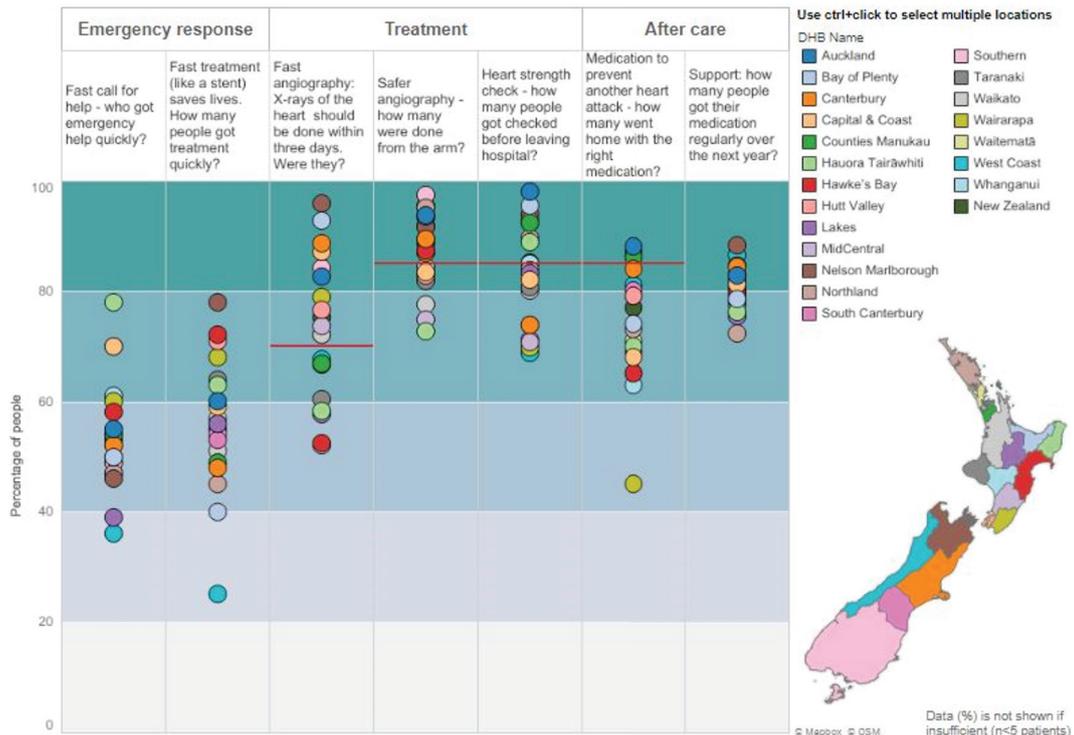
Figure 3: Five-band stave graphs showing the multidimensional performance evaluation measurement of the maternal care pathway of a Tuscany local health unit, from the Italian PES.



ANZACS-QI's initial set of internally circulated acute coronary syndrome indicators have now been adapted to a consumer-facing version for publication using the stave visualisation, showing the patient journey from admission to hospital care to discharge and medication adherence post-discharge. Users can click on their

region on the map of New Zealand to the right to show their own DHB's latest performance, and control-click to show comparative performance against other DHBs and the New Zealand national average (see Figure 4) and, indeed, national targets for performance.

Figure 4: Dashboard of ACS care quality indicators—consumer-facing version.



Where to put consumer-facing data?

When considering the most appropriate forum for presentation of this data for the public, the Ministry, Commission and ANZACS-QI governance again sought the views of consumers. Consumer consultation unanimously showed the Heart Foundation was a trusted source of information on heart health in New Zealand.

The Heart Foundation has a unique role in shining a light and helping the sector. A partnership with the Heart Foundation to provide public access to an interactive consumer-facing version of the dashboard of care quality indicators was proposed and agreed. These indicators are updated at six-month intervals, and the set can be expanded upon as new, more granular indicators are validated, pass through internal circulation processes, and prepared for publication. Access to the dashboard via the Heart Foundation website was made available on 7 July 2020. It can be accessed here: <http://www.heartfoundation.org.nz/your-heart>.

What the new dashboard presently shows—variation, reasons for this and opportunities

The dashboard is a checklist for DHB performance across the different phases of ACS management, from initial symptoms to one year post-discharge. At each phase patients are cared for by a different, albeit overlapping, team of clinicians. All the indicators are “process” measures supported by compelling international clinical trial evidence that optimal performance is associated with improved clinical outcomes.^{3–7,23,24} On the dashboard red lines

indicate national targets where these are in place. The national targets are not always 100%. This is because some patients require delayed or different treatment, depending on their needs, so reaching 100% is not in fact optimal performance. Generally a level of over 80% would be considered appropriate. Any performance below this is likely to be an opportunity for that DHB to improve care and outcomes for their patients and there is currently wide variation between DHBs on most indicators.

The reasons for variation, and therefore the solutions, are indicator specific. For example, the time taken to deliver acute reperfusion treatment with fibrinolysis or percutaneous coronary intervention for ST-segment elevation myocardial infarction is dependent on a seamless process by the ambulance, emergency departments and acute cardiac interventional teams. In contrast, for DHB hospitals without on-site coronary angiography the time taken to arrange and achieve transport to an intervention-capable centre is an important reason for variation in the three-day target. Reducing these delays is therefore an important target for quality improvement for those DHBs.

Conclusion

The sector faces continued rapid and unpredictable change in the coming months and indeed years. The national response to COVID-19 has shown us the New Zealand public responds well to positive and proactive policies of transparency. We face challenges across our system and it is crucial that we track performance, act on that information and make it available to those whom we serve.

Competing interests:

Nil.

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