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Health Reform Monitor

Measuring and managing health system performance: An update from New Zealand[☆]

Linda Maree Chalmers^a, Toni Ashton^b, Tim Tenbensen^{b,*}

^a Auckland District Health Board, New Zealand

^b University of Auckland, New Zealand

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ABSTRACT

In July 2016, New Zealand introduced a new approach to measuring and monitoring health system performance. This 'Systems Level Measure Framework' (SLMF) has evolved from the Integrated Performance and Incentive Framework (IPIF) previously reported in this journal. The SLMF is designed to stimulate a 'whole of system' approach that requires inter-organisational collaboration. Local 'Alliances' between government and non-government health sector organisations are responsible for planning and achieving improved health system outcomes such as reducing ambulatory sensitive hospitalisation for young children, and reducing acute hospital bed days. It marks a shift from the previous regime of output and process targets, and from a pay-for-performance approach to primary care. Some elements of the earlier IPIF proposal, such as general practice quality measures, and tiered levels of performance, were not included in the SLM framework. The focus on health system outcomes demonstrates policy commitment to effective integration of health services. However, there remain considerable challenges to successful implementation. An outcomes framework makes it challenging to attribute changes in outcomes to organisational and collaborative strategies. At the local level, the strength and functioning of collaborative relationships between organisations vary considerably. The extent and pace of change may also be constrained by existing funding arrangements in the health system.

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1. Introduction

In recent years, New Zealand policymakers have sought to expand and develop new approaches to performance measurement and management. The proposal for an Integrated Performance and Incentive Framework (IPIF) [1,2] was reported previously in the Health Reform Monitor in 2015 [3]. In this article we update and discuss important changes to the IPIF proposal, and the transition to a new System Level Measures framework (SLMF) which was introduced in 2016.

2. The New Zealand health system

New Zealand has a predominantly (around 80%) publicly funded health care system, primarily from general taxation. Funding is

devolved to 20 District Health Boards (DHBs) who govern, purchase and/or provide health and disability services for their geographically defined populations. DHBs own and operate secondary and tertiary hospitals and purchase community services from private providers. DHBs fund primary care through Primary Health Organisations (PHOs) which contract general practice and other non-government providers to provide services. From around 2009, DHBs and PHOs began to form district alliances (DAs) to enable improved system integration [4].

3. Policy background

Measuring and improving health system performance is a challenge facing many countries. In New Zealand, performance measurement and management has been a notable part of the health system since the mid-1990s [5]. Since 2007, performance management has focussed primarily on quantified targets as a policy tool. At this time ten national health targets were introduced for public, mental and oral health services and for ambulatory sensitive hospital admission rates [6]. This regime was replaced in 2009 by the introduction of six headline national health targets for both primary and secondary care [7]. Additional health targets for primary

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* Corresponding author at: Health Systems, School of Population Health, University of Auckland, Private Bag 92019, Auckland 1142, New Zealand.

E-mail address: t.tenbensen@auckland.ac.nz (T. Tenbensen).

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Table 1
Comparison of Integrated Performance and Incentive Framework (IPIF) and System Level Measure Framework (SLMF).

	Integrated Performance and Incentive Framework (partially implemented 2014–15)	System level measures framework (2016 onwards)
Framework	<ul style="list-style-type: none"> Initial focus on primary care performance and integration Alignment of framework with Triple Aims approach Health targets in primary care applied for transition year 2014–2015 Two levels of measurement – system and contributory level Across lifespan approach (healthy start, healthy child, healthy adolescent, healthy adult, healthy ageing) Reporting nationally 	<ul style="list-style-type: none"> Whole of health system performance framework (primary and secondary care) Alignment of framework with Triple Aim approach Two levels of measurement – system and contributory levels Lifespan approach only for child and adolescent health Emphasis on building primary care capacity and capability Reporting nationally (to Ministry of Health) on system level measures, but not contributory measures Local accountability loop for contributory measure selection, reporting & quality improvement
Measures	<p>Proposed performance (system level) measures from July 2015</p> <ol style="list-style-type: none"> Registration with lead maternity carer (LMC) within 12 weeks of conception (new measure healthy start) Enrolment with a PHO within 4 weeks of birth (new measure healthy start) Completion of all scheduled immunisations by age 8 months (one of the pre-existing national health targets, and PHO Performance Programme pay-for-performance measures)) Measures to better manage people aged 65 years or older who are prescribed 11 or more medicines [polypharmacy] (new measure healthy ageing) <p>Measure to improve the proportion of patients with access to online health care e.g. patient portals (new measure).</p> <p>Proposed contributory measures – all under development</p>	<p>System level outcome measures from July 2016 + contributory measures</p> <ol style="list-style-type: none"> Ambulatory sensitive hospitalisation (ASH) rates per 100,000 for 0–4 years <p>Contributory measures examples: Hospital admissions for children aged five years with a primary diagnosis of asthma Percentage of children that are a healthy weight at four years</p> <ol style="list-style-type: none"> Acute hospital bed days per capita <p>Contributory measures examples: Patients admitted, discharged, or transferred from an emergency department within six hours Influenza vaccinations for 65 years and older</p> <ol style="list-style-type: none"> Patient experience of care <p>Contributory measures examples: Patients registered to use general practice portals GP practices using the primary care patient experience survey</p> <ol style="list-style-type: none"> Amenable mortality rates <p>Contributory measures examples: Cardiovascular disease risk assessment Cervical screening</p> <p>System level outcome measures planned from July 2017</p> <ol style="list-style-type: none"> Proportion of babies who live in a smoke-free household at six weeks post-natal (new measure healthy start) Youth access to and utilisation of youth appropriate health services (ie, Teens make good choices about their health and wellbeing) <p>National health targets with financial incentives 2016</p> <p>Better help for smokers to quit Increased immunisation for eight-month olds</p> <p>Contributory measures</p> <p>Menu of possible contributory measures developed by Ministry of Health and Health Quality Safety Commission</p> <ul style="list-style-type: none"> Improvement planning with milestones at local level No 'earned autonomy' District Alliance leadership of SLMF implementation \$23 million (\$16.6 m USD) in financial incentives paid to PHOs: <ul style="list-style-type: none"> ○ 25% capacity and capability payment up front in quarter one 2016/17 ○ 50% capacity and capability payment in quarter two 2016/17 once the Ministry approves the district alliance's improvement plan ○ 25% performance payment in quarter one 2017/18 based on quarter four 2016/17 performance of 3 SLMs and 2 health targets
Incentives & Enablers	<ul style="list-style-type: none"> Structured performance levels recognised including 'earned autonomy' at DHB level Alliance leadership key enabler of IPIF implementation Developing quality improvement capability in primary care Policy evaluation and collaborative learning networks planned \$23million (\$16.6 m USD) in financial incentives from PHO Performance Programme assigned to IPIF achievement for PHOs & general practice 	

care were developed from 2005, and by 2009 there was a range of financially incentivised health targets in place in this sector under the Primary Health Organisation (PHO) Performance Programme [8].

In the 2010s, the IPIF policy was jointly developed by the New Zealand Ministry of Health and sector stakeholders, with implementation of the framework to commence from July 2015 [1,2]. The IPIF was proposed as a more comprehensive approach to performance measurement that would replace the PHO Performance Programme. The goals of the IPIF were to drive improvements in equity, access, safety, quality and efficiency of public health services through improved integration, greater accountability and the development of continuous quality improvement systems and processes.

The proposed IPIF framework consisted of a set of 'system level measures' set nationally plus a number of 'contributory measures'

that would be selected by local health districts. Proposed measures focused on primary care services, and were to be linked to the small pool of financial incentives that had been attached to the PHO Performance Programme (NZ \$23 million per year). However, final decisions about the IPIF and its implementation were put on hold by the Minister of Health in June 2015 [9].

In April 2016, the final shape and content of the new performance management regime was announced, indicating some key changes to the original proposal [10,11]. The Ministry of Health described the changes, highlighted in Table 1, as a transition to a "System Level Measures Framework (SLMF)" [12].

3.1. Measuring outcomes across the health system

The System Level Measures Framework retains the structure of performance measures at two levels: a small number of system

level measures, plus a number of contributory measures which are assumed to contribute to achievement of higher system level measures.

The system level measures introduced in July 2016 were:

- Ambulatory sensitive hospitalisation (ASH) rates per 100,000 for 0–4 years
- Acute hospital bed days per capita
- Patient experience of care
- Amenable mortality rates.

Two additional indicators covering smoke-free households and youth access to health services will be added in July 2017. The new system level measures extend both the implementation and impact of the framework from a focus on primary care to measures which require input from both primary and secondary care services. This change gives the framework a far stronger ‘whole of health system’ approach to improving performance.

The SLMF also retains some remnants of IPIF’s focus on life stages, but this is restricted to early childhood and adolescence. ‘Patient experience of care’ was previously being considered in the IPIF for the primary care setting but now also covers secondary care where it has been applied since 2014. ‘Acute hospital bed days per capita’ measures acute demand in secondary care, with significant service delivery implications for both primary and secondary care [12].

As with the IPIF proposal, a library of contributory measures has been developed for each of the new system level measures [13]. The library offers a selection for districts to choose from and ensures clear definitions and data sources. This level of measurement enables districts to respond to local performance priorities and to focus on quality improvement.

The pre-existing regime of national health targets remains in place, intersecting with the revised framework. In 2016–2017 each of the national health targets are contributory measures in the SLMF. The six hour Emergency Department time target, for example, is a possible contributory measure for the acute hospital beds days system level measure [13].

3.2. Simplified incentives

The new framework does not include some important elements of the IPIF proposal, such as the ladder of performance levels, and ‘earned autonomy’ for high performing organisations. Twenty three million dollars (\$16.6 m USD) of ‘at risk’ funding for PHOs remains in place and is tethered to different aspects of the framework. However, only 25% of this pool is linked to the achievement of three system level measures and two of the pre-existing health targets (immunisation and smoking cessation). The remainder (75%) is allocated to support PHO capacity and capability, with this funding dependent on the Ministry’s approval of district alliance plans for SLM implementation. As such, the pay-for-performance pool has been reduced by 75%.

3.3. District level improvement, leadership and accountability

The revised policy focuses on district level improvement planning with an expectation that DAs will be the engine room for governing and leading improvements. Leadership of DAs (Alliance Leadership Teams) generally comprise DHB and primary care representatives (PHOs and general practice) and may also include Māori health providers and other non-government providers [14,15]. Whilst DAs were expected to play an enabling role with the initial IPIF, the Ministry of Health now stipulates a number of specific activities for DAs [16]. Improvement planning, such as setting milestones, identifying specific activities to meet milestones

and applying investment logic are just some of these new requirements. These requirements have been added to the mandatory, formally accountable, elements of DHB annual planning processes. Additionally, Alliance Leadership Teams are required to demonstrate commitment of primary and secondary care leaders to shared responsibility, accountability and engagement with the SLMF.

4. Political and policy context

A range of contextual factors have influenced the changes from IPIF to SLMF. A new Minister of Health was appointed in October 2014 following a general election and the retirement of the previous incumbent of six years [17]. The previous Minister had established a high-profile system of health targets as a means of managing health system performance. These targets were predominantly defined in terms processes and outputs, such as service volumes and waiting times. A new Director General of the Ministry of Health was also appointed in early 2015, after acting in that role for 15 months [18].

The new Minister commissioned a refresh of the New Zealand Health Strategy early in his tenure. First published in 2000, the New Zealand Health Strategy [19] set high level direction for reforming and reorienting the health system toward population health, reduction of inequalities, and a high performance system. The refreshed strategy released in April 2016 continues these aspirations but also introduces a ‘how to’ roadmap, which includes pursuit of a monitoring framework focused on health outcomes and a performance management approach [20,21].

The new Director General commissioned an Independent Capacity and Capability Review [22] and an Independent Review of Health Funding in New Zealand [23], both of which were conducted from March to June 2015. These reviews examined organisational arrangements for the public health system that had been in place since a previous review and subsequent restructuring undertaken in 2009 [24].

The Capacity and Capability Review recommended a revised operating model for the health system so that it can focus more clearly on health outcomes. Similarly, the Independent Review of Health Funding recommended a focus on outcomes of value to consumers, taking a longer term investment approach to funding, and tying funding to planning and outcomes. This review was critical of the health system’s focus on secondary care. In addition to the reviews, in 2015 the new Director General also progressed a complete restructure of the Ministry of Health [25], adding to the flux of contextual change for the policy.

The SLMF is aligned to the five strategic streams identified in the refreshed New Zealand Health Strategy, and to ‘Better Public Services’ – the broader, inter-sectoral framework for public sector performance management [10].

5. Stakeholder positions

The key designers and sponsors of the SLMF were located within the Ministry of Health. The shift from the primary care-centred approach of IPIF to the ‘whole-of-system’ approach, however, meant that key primary care stakeholders, such as General Practice NZ, and the Royal New Zealand College of General Practitioners, were less influential in the design than they had been with IPIF. However, no stakeholders have publicly criticised the SLMF.

6. Discussion

The changes to the context surrounding the developing performance framework provided an important window of opportunity to take a whole-of-system approach to performance management

in New Zealand. Yet, the transition from IPiF to SLMF also reflects an incremental approach to policy change.

Nevertheless, the changes in 2016 reflect some important developments in the overall approach to performance management in health in New Zealand. Most importantly, it reflects a concerted shift away from pay-for-performance and financial incentives as a means of improving performance. It also represents a further shift towards inter-organisational collaboration in the definition and assessment of performance. There remain some unresolved tensions between this outcome-based approach and the more hierarchical, output and process health targets that were the cornerstone of the previous Minister's approach to performance measurement, and which remain significant drivers of health system activity.

In terms of international approaches to health system performance and improvement, New Zealand's SLMF is noteworthy for two key reasons. Firstly, it constitutes a relatively sophisticated approach that focuses on health outcomes that should be within the strategic, operational and financial reach of health sector organisations if they collaborate successfully. Many regimes of performance management are based on processes and outputs that are largely within the control of single organisations. Examples include the English and New Zealand health targets, and most pay-for-performance instruments including the Quality and Outcomes Framework. Such instruments typically produce a more fragmentary approach to health system improvement [26–28]. Conversely, performance measures focused on broad population health outcomes are influenced by a wide range of social and economic determinants and social sector service delivery that are largely beyond the influence of health sector organisations [29,30]. The designers of the SLMF have attempted to steer a middle course between these extremes.

Secondly, the emphasis on inter-organisational collaboration, rather than financial or reputational sticks and carrots for individual organisations, represents an important 'new frontier' in the practice of health system performance management. No other country, to our knowledge, has attempted to implement such an 'alliance-based' approach to health system improvement at a national level.

We foresee however, that implementation and success of the policy will face a number of challenges, both technical and political. In many cases, it will prove difficult to definitively attribute changes in the headline outcomes to service delivery activity within the system. More specifically, it will be difficult for districts to attribute changes in the headline measures to changes in contributory measures. The causal relationships between contributory and headline measures are largely speculative.

A second challenge is inherent in any regime of performance management when there is scope to choose measures and targeted levels of achievement. Districts might choose contributory measures and target levels that appear easier to achieve [31–33]. Conversely, districts might choose more challenging contributory measures, and be discouraged if these fail to show sufficient improvement over time. Trial and error with measurement could be a frustrating yet necessary experience that fosters apathy or resistance in the sector [34].

A third challenge pertains to inter-organisational relationships, both between central government and districts, and within districts. Some health sector organisations have expressed a worry that the process of getting improvement plans approved and signed-off by the Ministry of Health will produce an overly bureaucratic process which works against inter-organisational collaboration [35]. District Alliances and their leadership teams are not legal structures with the capacity to contract. Most pertinently, these alliances have not yet developed consistently across the country, and only a few to date have been successful in changing patterns of, and approaches to, service delivery [36,37]. This approach to

levering change based on inter-organisational trust will require health sector organisations to share strategies that establish and maintain productive collaboration. Where there are poorly developed and functioning alliances, or more complex organisational and inter-organisational contexts, there is a risk that the entire implementation process may well default to DHBs alone.

A final challenge is that the incentives for organisations and practices to change may be relatively weak in the context of broader policy and funding settings. For example, the overarching system of capitation funding in primary care means that general practices will continue to be funded for services even if they do not show measured improvement against local and system level measures. The redirection of the majority of 'at-risk' funding from pay for performance incentives to PHO capacity and capability may give some PHOs the space they need to better address high-needs populations. However, without broader changes in the funding of health services, these initiatives may not be sufficient to change provider behaviour and models of practice.

7. Conclusions

The System Level Measures Framework certainly has the potential to drive health system improvement. Development of the measures and implementation of the framework are a work in progress. The introduction of this policy provides a significant opportunity for health sector organisations to engage in sophisticated learning about how best to achieve the desired health system outcomes, and to develop more effective processes for inter-organisational collaboration.

Conflict of interest statement

There are no conflicts of interest to declare.

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