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Target practice: Are targets more appropriate for some health policy problems than for others, and if so, why?

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Abstract

Over the last decade there has been considerable debate about the merits of targets as a policy instrument – much of it fuelled by reflections on their use in England's National Health Service in the early 2000s. We examine the implementation of two health targets that have been cornerstones of New Zealand health policy since 2009 - immunisation rates for two-year olds, and time to treatment in hospital emergency departments. Our research reveals quite different responses and consequences of the two targets. One has clearly stimulated the positive transformation of a health service and largely solved what had been a persistent policy problem. The other has generated a complex cocktail of positive and negative experiences, behaviours and consequences. In the final part of the paper we examine possible reasons for these divergent stories of 'target practice'. We argue that the specific characteristics of the policy problem and service area matter, and identify three possible lenses for understanding why these experiences differ (i) the nature of the policy problem (ii) the appropriateness of each target; (iii) the implementation context.

Introduction

Over the last decade there has been considerable debate about the merits of targets as a policy instrument – much of it fuelled by reflections on their use in England's National Health Service in the early 2000s (Bevan and Hood 2006b; Mays 2006; Barber 2008). Advocates claim that targets stimulate innovation and system improvement and strengthen accountability. Critics counter that targets generate adverse consequences such as fostering behaviour that 'hits the target but misses the point.'

We examine the implementation of two health targets that have been cornerstones of New Zealand health policy since 2009 - immunisation rates for two-year olds, and time to treatment in hospital emergency departments. Our research reveals quite different responses and consequences of the two targets. One has clearly stimulated the positive transformation of a health service and largely solved what had been a persistent policy problem. The other has generated a complex cocktail of positive and negative experiences, behaviours and consequences.

In the final part of the paper we examine possible reasons for these divergent stories of 'target practice'. We argue that the specific characteristics of the policy problem and service area matter, and identify three possible lenses for understanding why these experiences differ (i) the nature of the policy problem (ii) the appropriateness of each target; (iii) the implementation context.

Debates about targets as policy instruments

Targets, as a high profile example of performance measurement, have long had a place in the policy repertoire of governments (Hood 2006a). In some respects, putting all examples of target-setting into a single category of policy instrument is problematic. Sometimes, governments and government agencies use targets as a way of articulating policy aspirations, without specifying incentives, penalties and consequences of achievement or non-achievement. Such aspirational targets have been commonplace in policy regarding public health in many countries, but, as Busse and Wismar have demonstrated, these are typically not connected to concrete incentives and tangible consequences of achievement or non-achievement (Busse and Wismar 2002).

Much depends, then, on the way in which the information from target performance is used by governments or by other policy actors (Radnor 2008). We are interested in targets in which success and failure is met with rewards and sanctions, rather than those targets that serve a symbolic purpose. Where it is used, it is important to know whether it is used to give account, to steer and control or to learn (van Dooren, Bouckaert et al. 2010: 103).

Targets are a classic hierarchical policy tool – they are a way in which the hierarchical, legal-rational authority of the state can be encoded and embedded in the practice of organisations that deliver publicly-funded services or perform public functions (Hood 2006b; Le Grand 2007). In more recent forms, targets also demonstrate the legacy of shifts in public management thinking over the past thirty years from the aspiration to exert tight control of implementation processes (Hogwood and Gunn 1984) to a stance of 'we (government) set the goals, you (the implementers)

work out the best means of achieving them.' This guiding principle – at the confluence of a New Public Management focus on results, Elmore's ideas of backward mapping (Elmore 1980), and attempts to 'synthesise' top-down and bottom-up approaches to policy implementation (Hill and Hupe 2002)– is a critical feature of contemporary target regimes. As the Foucauldian theorists of governmentality suggest, targets can be understood as a technique, par excellence, of 'control at a distance' (Triantafillou 2013).

Debates about the consequences of targets

Over the past decade, the debate about the value of targets as a policy instrument has intensified, largely fuelled by the prominence of targets as a policy instrument in the early to middle years of Tony Blair's Labour government in the UK (Bevan and Hood 2006a; Bevan and Hood 2006b; Hood 2006a; Mays 2006; Propper, Sutton et al. 2008; Gubb 2009; Kelman and Friedman 2009). The most well-known targets included the 4 hour Accident and Emergency target, and the ambulance response target. These measures in particular acted as something of a lightning rod for the targets debate.

The UK experience in health, and in education, is regarded by many commentators as powerful evidence of the efficacy of targets. In a nutshell, hard targets with tangible consequences of performance and non-performance were used in England, but not in Scotland and Wales. The consequence of this natural experiment was that the problems were successfully addressed in England, but little progress was made in Scotland and Wales were targets were of a more aspirational nature (Mays 2006; Propper, Sutton et al. 2008).

There are other specific advantages that are attributed to targets as a type of performance measurement. Advocates of targets stress the potential for clearer focus and prioritisation on what is deemed important by the executive government. In this sense, targets involve identification of the particular performance measures and indicators that are given the highest priority (Barber 2008).

Another key potential benefit of targets as 'strategic performance management systems' is that they can be catalysts for positive system change and innovation. The theory is that as a consequence of focusing attention on a particular problem, organisations become incentivised to think creatively and innovate. Different parts of an organisation become involved in addressing the problem, leading to potentially more robust solutions because 'ownership' of the target is more widely distributed. Similarly, in inter-organisational contexts, targets can foster communication and inter-connection across organisations. Once again, the idea is that the strategic focus prompts distributed ownership and collective problem-solving (Van Herten and Gunning-Shepers 2000).

Targets, as systems of performance measurement, reporting and monitoring (Radnor 2008), can also improve the intelligence of an organisation of a system and stimulate learning (Micheli and Manzoni 2010; de Bruijn 2011: 147). Target performance information provides organisations and practitioners within them to compare their performance against the target, enabling learning across organisations.

The arguments against targets as a policy instrument are familiar to public management and policy scholars. Most critics are happy to concede that the introduction of high-stakes targets will result in success, defined in the terms of targets themselves. But critics argue that the risks, or downsides of this focused attention are formidable (Radin 2006), and question the idea that targets are an appropriate mechanism for stimulating transformation and improvement of services and systems (Best, Greenhalgh et al. 2012).

The most common criticism is that targets encourage behaviour that ensures that the target is achieved, but leave broader features of the problem space untouched, or worse off. This is encapsulated in the phrase 'hitting the target, missing the point' (Bevan and Hood 2006b). The other general criticism of targets is that they encourage gaming. Gaming behaviour might or might not amount to cheating, but regardless of whether implementers intend to deceive or not, gaming can be considered as behaviour that is oriented to achieving the target, but which does not contribute to, and may even detract from, the quality of service delivery and outcomes.

Essentially, these debates about the consequences of targets require a focus on the responses, experiences and behaviours of those involved in the process of implementing targets. As such, any consideration of the merits targets as a policy instrument must take into account the responses and experiences of practitioners. Our objective is to investigate the ways in which implementers respond to targets, and the positive and negative consequences that arise from these responses. In short, to what extent are the consequences of targets experienced as energising, fostering creativity, teamwork, facilitating buy-in? Conversely, to what extent are the practices of target implementation problematic by generating long-term resistance and/or dysfunctional compliance or gaming behaviour (van Dooren, Bouckaert et al. 2010).

This is not to say that the experience of practitioners should be the only or pre-eminent reference point in evaluating the consequences of targets. We are critical, however, of analyses that dismiss the relevance of 'target experience' on the grounds that because the target was achieved, it was therefore successful as a policy instrument. We also question the value of approaches that take a purely quantitative approach to the question of the existence or otherwise of adverse consequences (Kelman and Friedman 2009).

In their analysis of the English health targets, Bevan and Hood asked:

> *Did (the target system) … produce a real breakthrough in cutting long waiting times – a chronic feature of the pre-targets system for 40 years – and how far did it produce the sort of chronic managerial gaming and problems with production quality that were later said to be endemic in the Soviet system? (Bevan and Hood 2006b: 518)*

Our focus in this paper is more fine-grained. Rather than thinking of a system of targets as an integrated intervention, we ask whether particular applications of targets may be more or less problematic or dysfunctional than others. In doing so, we endeavour to identify which

circumstances and contexts in which target-setting is most applicable, as well as highlighting circumstances in which targets are more likely to have negative consequences.

In order to investigate this question, we have opted to compare two targets that are part of the same 'target regime' – New Zealand's headline health targets in the period 2009 to 2012. We also seek to bring a wider range of literature and theoretical concepts to the table in attempting to understand the dynamics of target implementation. While much literature on this topic is firmly situated in the public management tradition, our intention is to bring broader concepts from across the policy literature into the explanatory frame. This paper is the first toe in the water in a new approach to this topic –the comparative study of target implementation.

The New Zealand Health Targets

New Zealand's health system is predominantly funded by taxation (approx. 80%). Most hospital services are provided by public sector organisations, whereas the majority of community-based health services are provided by for-profit or non-profit private organisations. The responsibility for the bulk of publicly-funded health services lies with twenty geographically-defined District Health Boards (DHBs). These boards consist of a combination of elected and government-appointed members. DHBs are the providers of public hospital services. In the early 2000s, a parallel reform created a new infrastructure of non-government organisations in primary care known as Primary Health Organisations (PHOs) (Gauld 2008). The DHBs are also responsible for contracting with PHOs and other community-based health services. They are responsible for implementing nationally-determined health policy, and are accountable to the Minister of Health, and the Ministry of Health (Ashton and Tenbensel 2010).

In 2007, the Director General of the Ministry of Health introduced a set of ten health targets with the express purpose of giving the Ministry and the DHBs a sharper strategic focus (Tenbensel 2007). These targets were a mix of health service and public health objectives. In May 2009, six months after a change of government, the incoming National Party health minister announced a reduced and revamped list of six targets, primarily focused on health services. Five of these targets focused on similar areas to the 2007 list (immunisation; elective surgery, cancer waiting times, smoking and diabetes services). A new target for shorter stays in emergency departments was added, having been flagged by the Minister immediately after the 2008 election (Tenbensel 2009b), and five other target areas were dropped.[1]

The Minister of Health gave the targets a significantly higher profile, linking the targets more closely to political and electoral accountability. Consequently, the 2009 health targets served as the cornerstone of the new government's health policy (Ashton and Tenbensel 2012; Gauld 2012).

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[1] The five targets that were dropped were regarding oral health, ambulatory sensitive hospitalisation, mental health, nutrition/physical activity/obesity, and a target relating to the Ministry of Health's proportion of health spending.

Since mid-2009, the performance of each DHB against the six targets has been published quarterly in major daily newspapers in the form of league tables.

Research into the New Zealand targets

In 2010, two related research projects investigating the implementation of two of the six targets were initiated at the University of Auckland. The two targets chosen were the immunisation target and the emergency department target. The actual wording of these targets was as follows:

- 95 percent of two year olds will be fully immunised by July 2012.
- 95 percent of patients will be admitted, discharged, or transferred from an emergency department within six hours (New Zealand Ministry of Health 2011)

At the time of initial introduction of the first immunisation health target in 2007, New Zealand experienced very low rates of immunisation coverage (67%) and large and persistent inequities between immunisation rates Maori (the indigenous people of New Zealand) and Pacific Island children, compared to the overall population. Reoccurring outbreaks of vaccine preventable diseases such as pertussis, measles, mumps and rubella had a significant impact on the health of New Zealand children.

The problem of ED waiting times and overcrowding has been common to English-speaking tax-funded OECD countries including Australia, Canada, New Zealand, United Kingdom. During 2008, emergency medicine specialists, DHB managers and Ministry of Health officials formed a working group to tackle the issue in New Zealand, and raised the prospect of setting a target once appropriate baseline data had been collected (Tenbensel 2009a). After the November election, the incoming minister of health indicated that ED waiting times would be a high policy priority. Undoubtedly, a key inspiration for the idea of an ED targets was the introduction of similar targets in the English NHS, although the Working Group were aware of debate about the merits of the English A & E target.

These two targets show very similar patterns of performance over the period from July 2009 to July 2012. In July 2009, the overall rate of immunisations for two year olds was 77%, indicating some limited traction between 2007 and 2009. After the first quarter (September 2009) of reporting against the new targets, overall performance against the ED target was around 80%. By July 2012 (the initial deadline for both targets), the immunisation rate for two-year olds had reached 93%. Eight DHBs reached 95%, a further four reached 94%. The average percentage of ED patients being seen within six hours was 94%. Twelve DHBs reached the 95% target for that quarter (New Zealand Ministry of Health 2011).

Our research explores how each health target was implemented across four District Health Boards (DHBs) in New Zealand. Different sets of case study DHBs were chosen for each target, but for each target, the total population of case study districts was more than 25% of the total population of New Zealand. Two rounds of semi-structured interviews with staff and stakeholders involved in implementation were conducted in mid-2011 and mid-2012. The second round of interviews took place around the time of the target deadline (July 2012). In all, 113 interviews were

conducted – 45 for the immunisation target and 68 for the emergency department target.[2] For both targets, there was a range of performance which was reflected in our selection of case study DHBs. Interviews were transcribed and a combination of inductive and deductive (grounded in literature) approaches were taken to the analysis of the transcripts. Our interpretations of positive and negative consequences are informed by the extant literature discussed above, and by interviewees' perceptions of positive and negative features of target implementation.

In the following section we feature draw on our research findings that highlight themes concerning the context of target implementation, the processes, and the consequences of target implementation.

Responding to the immunisation target

Context of target implementation

The immunisation health target required DHBs to take responsibility for improving immunisation coverage within their region. However, almost all immunisation activity in New Zealand occurs within primary care settings and DHBs needed to work with their local PHOs and primary care providers to create change within their local systems and process for immunisation. Improving immunisation coverage therefore required an inter-organisational approach to implementation. One DHB was slow in making progress towards achieving the immunisation target in 2009 and 2010. One interviewee's explanation came down to the issue of 'ownership'.

> *In the beginning the PHOs, everyone really, viewed the target as the DHB's target.*
> *So there was no ownership, they had no ownership over the target at that point,*
> *particularly general practice, they were just like 'who cares' (Manager, DHB 3).*

By contrast, another DHB that achieved the target relatively quickly had established buy-in and ownership across relevant organisations even before May 2009. In this DHB there was a strong sense of ownership of the health target at a DHB level and within primary care providers in their region.

> *I think the practices have really bought into the whole coverage target … when*
> *you get that focus and intensity and emphasis on delivery you get the change*
> *happening, you get the priority, so I do think that within the PHO and practices*
> *it's been more of a serious issue (Medical Officer of Health, DHB 4).*

Process of target Implementation

The Ministry of Health required each DHB to identify an immunisation champion within their organisation who was directly responsible for the health target. This was an essential feature of

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[2] For the immunisation target, 32 interviews were conducted in 2011, and 15 in 2012. All second round interviews were with first round interviewees. For the ED target, 47 interviews took place in 2011 and 21 in 2012. 15 second round interviews were with first round interviewees.

the immunisation health target experience as it strengthened accountability for the health target within the DHBs.

Over time, immunisation champions were identified within local PHOs and primary care providers, creating a hierarchy of accountability across each level of the local health system. This provided a strong vertical network of individuals who were responsible for the health target and could stimulate change within their respective organisations.

> *The emphasis that is placed on it, it makes it important, and people are held accountable for their outcomes for kids really, which is a good thing (Manager, DHB 2)*

All of the key informants stated that the health target focused attention on immunisation coverage and elevated immunisation as a local priority. Our research found that the health target provided the different organisations involved in immunisation activity at the local level with a shared goal to work towards.

> *The fact that there was a target in itself was a really important thing, because without that, without that single minded focus here we wouldn't be able to get that traction behind it and I guess that was at a DHB level, but also at a PHO and practice level (Manager, DHB 1).*

The combination of accountability for the health target and focused attention on immunisation facilitated the development of immunisation networks at the local level.

The immunisation networks created a team of individuals who could work together to develop a local strategy for improving immunisation coverage and then act as a catalyst for change within their own organisations to make the necessary changes to their organisational systems and processes.

> *Relationships are really important; you've got to be working alongside all those who are working with you in the same field (Immunisation coordinator A, DHB 1).*

Consequences of target implementation

When the health target was introduced, there was significant variation in rates of immunisation coverage between DHBs. DHBs who had already identified immunisation as a local priority had an advantage as they had already started to change their local immunisation systems and processes. Over time this variation decreased as DHBs developed similar approaches to improve their immunisation coverage and address the health target.As one of the early success stories for the health target, one particular DHB shared their experience with other DHBs around the country. All of the other case study sites involved in this study talked about DHB 4 and how they had taken ideas that had worked in that DHB and adapted them to suit their own local contexts. For example, all three of the other case study DHBs created immunisation coordinator roles, either at a DHB level or within a number of their local PHOs.

In other DHBs, individuals within inter-organisational networks that were formed in response to the target were able to develop strong working relationships with each other and this created a team approach to addressing the health target.

> *We've all developed a very close relationship, it's taken three years. Some work more closer than others, some are more team players than others. But in the main, each one respects the other and we're working well together (Immunisation coordinator B, DHB 1).*

The health target network improved relationships between the DHB and the local PHOs, as well as between the PHOs themselves. It created a regular meeting that focused on addressing local challenges and sharing best practice between the different organisations involved. It also created a sense of one team working together to address the health target within the Bay of Plenty. This was a significant change in terms of the relationships between these organisations and a key factor in the DHBs ability to create change within their local systems and processes for immunisation.

> *I do have a sense with relationships in general with the PHOs that there is a much better relationship PHO to PHO and also PHO to DHB, because it was very strained, it was, so I think that has bought some cohesiveness through our bi-monthly meetings (Manager, DHB 3).*

Implementation of the health target required DHBs to work with PHOs and primary care providers to refine and improve their local systems and processes for immunisation. Many of these changes occurred within primary care providers who deliver the majority of immunisation services within the New Zealand health system. But changes were also made at the DHB and PHO levels, in areas such as contracting, information systems, vaccinator training, and opportunistic immunisation within hospitals as well as providing ongoing support for primary care nurses.

> *A lot of it is what's been happening in the practice, that's probably been the biggest change. The practices are as I said taking more, doing more opportunistic immunisations, they've got different ways of recalling, perhaps they're recalling by text rather than calling or by letter. They perhaps manage their, they've got different systems like DocotrInfo which can manage their overdue list. There is probably more pressure coming from the PHO themselves to focus them, there's more reviewing of declines and looking at whether declines are actual declines or they shouldn't really be put as declines (Outreach provider, DHB 1).*

The experience of target implementation did take some toll on staff, however. The intense pressure to achieve the health target, particularly during the final stages, had an impact on individuals involved in the implementation process and their organisations. The period after July 2012 saw a decrease in immunisation coverage across many of the DHBs as they struggled to deal with target fatigue.

> With the improved systems in place, I suppose, for me, I feel less driven and I feel a
> bit like I've lost momentum too (Immunisation coordinator A, DHB 1).

Responding to the Emergency Department target

Context of target implementation

The themes of context for this study are centred on the social world of the hospital and the various layers of social relations, boundaries and tensions which characterize it. A very critical theme identified by our research was the tension that exists between medical specialties. Emergency medicine is a nascent specialty with substantial development in its domain of practice and authority over the last 10-15 years – it is development that is challenging to other medical specialty domains, and the targets introduction intensified extant tensions between medical specialties.

Another very pertinent theme of the hospital context is the division of labour in medicine. Decision making and authority regarding the patients progress through the acute care system is largely controlled by medical consultants or senior medical officers, particularly those of the inpatient specialties. The targets introduction brought with it strategy and responses that challenged this authority and the norms of consultant behaviour and assignment of work in the medical hierarchy.

Findings from our research show that resistance to the target was a notable response of frontline staff in the hospital. In particular medical staff in the inpatient setting were most resistant, and to a lesser extent ward nursing staff. We also identified some resistance to the target from emergency department staff but this was far less common than resistance from their counterparts in the wider hospital. Some of this resistance was based on the perception that there was no problem, or that it was not their problem to address.

> Well the surgeons still don't think that six hour rule applies to them you know
> (ED Charge Nurse, DHB 8)

Tensions between clinicians and managers (which of course pre-existed the target) also feature in our findings with the process of implementation heightening tensions and bringing opportunity for conflict or collaboration.

Processes of target implementation

In tandem with the theme of resistance, implementing the target also prompted the need for buy-in, which is a theme that signals support for and commitment to the target or strategies aimed at achieving it. Associated with buy-in were two other political activities, making tradeoffs and leveraging off the target. In both these instances, resistance is addressed and buy-in achieved when there was opportunity for stakeholders to gain from a strategy in terms of resource or power, or to trade-off one power or resource for another of equivalence.

> We want an acute surgical decant and that would make a huge difference…and the
> surgeons want one…and I believe there's enthusiasm amongst them to have one.

> *But I believe they will have to convert some of their existing space and do it within their existing resources and that's taken away some of their motivation to do it. Motivation or ability to do it I should say… the executive managers say yeah look I think an acute surgical unit will be a good idea but surgeon you have to do it within your footprint. (Senior Medical Officer, ED, DHB 7)*

These complex political processes were accompanied by pressure on staff and services, particular the ED service in the initial phases of target implementation. Pressure came largely from management in the hospital, to achieve the target. Senior managers placed pressure on their staff at a clinical management and clinical service level. Pressure in the clinical setting was largely focused on medical staff to progress patients more rapidly through the ED service, along with the pressure to discharge patient from hospital wards.

Consequences of target implementation

Our research found a mix of positive and negative and consequences of the target. A key theme is notable improvement in the timely flow of patients through the ED with patients having greater certainty regarding their length of stay in the service. Reduced 'cherry picking' and corridors stays of patient in the ED were also regarded as a positive consequence of the target, and patient complaints regarding ED and acute service also reduced.

The target had several positive consequences for ED staff including a better working environment and better working relations with other services in the hospital. From an organizational perspective the target stimulated learning and development in such areas as hospital operations, change and project management.

> *"…it's changed me in the sense of the methodology. You know, it's very easy to write up on a white board what you think the answers to the problems are, you automatically jump to it and say well let's go and do it, but actually what this methodology has taught me through this process, is that actually you've got to be a bit more careful than that and you've got to do adequate data analysis…it's changed the organisation in terms of the way we approach problem solving because we're using the methodology in all sorts of other areas now…" (Hospital Manager, DHB 6)*

Whilst strategic innovation occurred as a result of the target it was not without concern for other impacts including issues of clinical quality and risk. Once such example is rapid response allied health teams able to progress and support more time discharge of patients from the ED:

> *What we've done in our team – we've created this rapid response team… and one of our aims of our team is that we support the target by being able to provide an occupational therapist and a physiotherapist and a social worker who can actually go out into the community, that can follow up those people that were discharged, maybe inappropriately, or maybe were not quite safe to go home. (ED Allied Health Professional, DHB 5)*

For the hospital wards and their staff the experience of chaos and ward churn is an important impact that many participants linked to issues of maintain clinical quality of care and taking clinical risks. Another set of negative consequences concerns the impact on staff. Experiences such as loss of motivation and morale were reported alongside some attrition. Moral and clinical practice tensions were also experienced by staff when the imperative to achieve the target overwhelmed normal clinical decision making. Moral concerns were also expressed regarding the gaming responses to the target which included stopping the clock prematurely in the ED when patients had not yet been discharged or admitted, and moving the patients from the targeted ED environment to acute assessment wards or observation status in order to achieve the target.

> …and I am forced into a situation where I have to move a patient, like for instance a patient I know is going to be a hospital admission, to move them to the acute assessment unit to stop the clock. I don't like it. But it's the way it has to be… (ED Charge Nurse, DHB 8).

Explaining the difference between target implementation experiences

Both targets were part of the same target regime with the same pattern of performance improvement over the three year period of 2009 to 2012. For both targets, the themes of focus, pressure and systems improvement were prominent. The key difference between the stories of the two targets, though, is the balance of positive and negative responses, behaviours and consequences. Responses to the immunisation target were predominantly positive, while responses to the emergency department target were far more mixed. This leads us to ask why the experience of one target was so much more positive than experience of the emergency department target. In the remainder of this paper we examine three possible explanations drawn from public policy, health policy and public management literature.

1) Characteristics of the Policy Problem

The first possible explanation starts from the characteristics of the problems that each target is addressing. It may be that the experience in implementing the immunisation target was more positive because it is a more tractable problem.

A useful framework for exploring this question is Robert Hoppe's typology of problems outlined in *The Governance of Policy Problems* (Hoppe 2011). Hoppe's typology of policy problems is organised around two cross-cutting axes. The first axis denotes the level of agreement regarding the norms and values at stake – in essence, this is about the level of agreement regarding why a particular state of affairs is problematic. The second axis denotes the level of agreement and certainty regarding the knowledge and the means by which the problem can be addressed. Policy issues in which there is high agreement on both values and means are characterised as structured problems; whereas those low on both dimensions are unstructured problems.

The remaining two categories are intermediate, or moderately structured problems. Issues in which there is agreement and certainty about knowledge and means are moderately structured (means) problems. Examples include high valence value debates such as abortion and euthanasia.

The remaining category (moderately structured (ends)) refers to problems in which values and norms are agreed by policy actors, but knowledge and means are uncertain. Crucial to Hoppe's typology is the contention that the nature of problems is the product of social construction – meaning that the nature of a problem can change as a consequence of development in debates and framing of values and of means.

In this framework, structured policy problems are the easiest to solve or manage, while unstructured problems are the most difficult (Rittel and Webber 1973). The two types of moderately structured problems present intermediate level of policy challenge and difficulty.

Regarding the immunisation target, our research shows that there was widespread agreement regarding the *desirability* of high levels of child immunisation throughout the health sector. Those that object to immunisation remain outsiders in the policy process. All interviewees across the health sector supported the goal, and regarded low immunisation rates as an important problem to be solved. In 2009-10, however, there was much less certainty about whether and how the 95% target could be achieved. As indicated previously, lifting immunisation rates had long been a policy aspiration, but it was also seen as a significant stretch as those involved in immunisation services did not regard it as being achievable because they did not know how the obstacles could be overcome. Thus, prior to 2010, we could characterise immunisation as a moderately structured (goals) policy problem.

This changed over the next two years, as immunisation co-ordinators in DHBs and PHOs shared information and experiences about specific techniques that appeared to be successful in increasing immunisation rates. These included appointing immunisation champions at each level of implementation, the creation of networks between key implementers, and specific developments in the gathering and interpretation of immunisation data. Importantly, most of these techniques were not particularly context-specific and were thus easily transferrable across localities. By mid-2012, therefore, the immunisation issue had been transformed from a moderately structured to a structured problem.

The trajectory of the emergency department issue has some similarities, but also important differences. We would suggest the starting point (where the problem can be situated in Hoppe's typology) in 2009-10 was different. While there was widespread recognition in hospitals, government and the broader public that 'ED overcrowding' was a problem that needed addressing, a closer look reveals less agreement regarding the values and norms pertinent to this issue. Crucially, key players in hospitals, notably surgical consultants and medical specialists on wards, did not generally regard ED overcrowding as a problem that implicated them, or as a problem that warranted a change in the way that their work was organised.

Secondly, the experience and learning how to meet the target from other sites was not as straightforward as the experience of the immunisation target. There was a significant dissension and ambivalence over the causes of the problem, as well as caution regarding the appropriateness of the target as a way of addressing problems of ED overcrowding. There were certainly examples of transfer of techniques and knowledge across localities, but there was also a considerable

element of context-specificity regarding the ways in which hospitals were organised, and they ways in which local organisational cultures influence implementation practices. There was less of a consensus regarding the right ways to achieve the target. Although the use of acute assessment wards to help with patient flow was common, there was debate and hesitancy about whether this was an effective way of dealing with the underlying problems of flow and access block, or whether it would simply shift the sites of pressure on the hospital.

In that sense, the ED issue started as a moderately structured (ends) problem, but with more dissension over ends (the idea that any attempt to cure the problem might be worse than the problem itself). Over time, it moved only a relatively short distance in Hoppe's typology, and remained within the moderately structured (ends) quadrant.

2) Characteristics of the Policy Instrument (target)

A second way of understanding the differences between the consequences of the two targets is to focus on the characteristics of the target itself as a policy instrument. Targets can measure outcomes (e.g. rates of morbidity, educational achievement), outputs (services performed, degrees awarded), or processes (e.g. timeliness of service delivery, accuracy of administration) (Talbot 2010). Outcome targets are likely to be more meaningful to communities and stakeholders than process or output targets. However, outcome targets present major difficulties in the attribution of success, as many highly valued outcomes are beyond the scope and influence of single organisations, or even inter-organisational systems. Accordingly, when targets take the form of outputs or processes, the key question becomes how well these output and process measures can be considered as proxies for desired outcomes.[3]

As such, the central question is whether the chosen measure adequately stands for the desired state of affairs. Drawing on Carter, Klein and Day's (1992) distinction between performance measures as 'dials' or 'tin-openers', Bevan and Hood (2006b) draw attention of the 'synecdoche' attributes of targets, whether the part (the target that is measured) adequately stands for the whole (the desired state of affairs). In this sense, it may not matter whether the target is an output, process or outcome as long as it is an effective proxy.

The immunisation target (95% of 2 year olds fully immunised) should best be considered as an output target – essentially the objective is to reach a target number of immunisations to be performed once the magnitude of the denominator (the total population of 2 year olds) is known. Although it is an output target, it can be regarded as a very effective proxy for the policy objective which is herd immunity against a range of infectious diseases. Achievement of the target provides a necessary, if not sufficient condition for the achievement of herd immunity against the infectious diseases if 95% levels of child immunisation are achieved consistently over a generation. Our research showed clearly that the target was regarded as legitimate by PHO and DHB staff because it effectively stood for the desired goal.

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[3] Some have argued that these distinctions are confusing and/or not particularly relevant, see Busse & Smith 2008; Talbot 2010.

It is also important to note that one of the reasons that the health target was viewed as an appropriate policy objective was that rates of childhood immunisation coverage are often used as a proxy measure of engagement with primary health care. The immunisation schedule requires a child to have regular contact with their primary care provider and these visits can be used as an opportunity to engage with parents about their child's health and development. If a child is fully immunised at two years of age, this indicates that they have had regular contact with their primary care provider.

The emergency department (95% of ED patients seen within 6 hours) should be regarded as a *process* target. Whether or not this is an effective synecdoche for quality health care is significantly more contestable, and contested than the immunisation target. The reasons for this are largely similar to those outlined in Bevan and Hood's (2006) analysis of the English A & E target. In this setting, there is far more scope in the emergency department target for 'hitting the target, but missing the point'. Some examples include transferring patients out of ED into wards when beds were not available in the wards, and the development of a 'spike' of ED length-of-stay at the target time.

Another way of looking at this issue regards the scope for gaming. In contrast, the only real scope for gaming the immunisation target is to manipulate the denominator. The scope for this was very limited in New Zealand because there is a national immunisation register (NIR) that could be easily compared to local primary care enrolment information. The official target measure was tied to NIR data, and this meant that local organisations did not have the opportunity to manipulate the denominator.

For the emergency department target, however, our research did show a number of examples in which some activity aimed at hitting the target could not be justified in terms of improving workflow, or patient outcomes. These included activities which removed or moved patients from the targeted stream in the ED when it was not clinically necessary and indeed may have been clinically risky.

3) Characteristics of the Implementation Context

Our third possible explanation switches the focus to the implementation context, by which we mean the inter-organisational and intra-organisational co-ordination and the relationships between and amongst professionals with a role in implementation.

3a) Inter-organisational context

The original generation of implementation studies exemplified by Pressman and Wildavsky (1973), and Hogwood and Gunn (1984), would lead us to expect that the achievement of the immunisation target would be more difficult because it involved more inter-organisational 'links in the chain' in the form of relationships between different organisations spanning DHBs, PHOs

and individual general practices, than the emergency department target which was predominantly implemented within single organisations.[4]

As our research as indicated, the reverse is the case – the experience of implementation of immunisation was more positive than the experience of the emergency target. The key to this may lie in the nature of implementation networks, and the complexity of these networks. In essence, the effect of the organisational and inter-organisational context comes down to the degree of 'buy-in' to the target across the board.

The management of implementation of the immunisation target was relatively straightforward. Although linkages needed to be made between organisations in the same district, only a few key linkages were required (between DHB immunisation co-ordinators and PHO co-ordinators) and these relationships were stable once trust had been established. Furthermore, it was much more feasible for linkages to be made across districts in order to facilitate the sharing of experience and the transfer of knowledge about successful mechanisms.

For the District Health Boards that managed it, engineering change in the emergency department and the wider hospital, proved to be a rather complex exercise requiring multiple activities, areas and levels of co-ordination with a broad range of managers and clinicians across the hospital. A great deal of energy was exerted on generating focus on the target and gaining buy-in from relevant parts of the hospital. DHBs that struggled to achieve and manage the target were generally those that struggled to get and maintain buy-in.

3b) Inter and intra-professional context

The second important feature of the implementation context of the two targets is regarding issues around relationships between inter-professional relations (Abbott 1988; Degeling, Kennedy et al. 2001) and between organisational and professional identities (Freidson 2001; Earle and Letherby 2008; Noordegraaf 2011).

Glouberman and Mintzberg (2001) have characterised hospitals as highly complex sites of activity. The ED target as an intervention activated well-established tensions and political dynamics between organisational units, and between medical specialties and sub-specialities within the hospital. Importantly, it did not do this in a uniform way across different case study sites. In some case study hospitals it served to highlight the tensions between emergency medicine and general medicine. In another hospital, the most noticeable obstacle to meeting the target was identified as the degree of specialisation within medicine, as each sub-specialty operated its own system of gatekeeping admission to the hospital wards.

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[4] Some DHBs have more than one hospital. Many experts and stakeholders have also argued effective implementation really required the engagement with non-hospital organisations, but our research showed little evidence of this.

Thus, a significant source of resistance to the emergency department target stemmed from the tendency of organisational units and/or physician specialities within hospitals to regard the ED target as 'not their problem'. This resulted in pushback and resistance when staff from EDs and hospital management attempted to make changes to enhance flow from EDs into medical and surgical wards.

In contrast, the experience of implementing the immunisation target raised very few, if any issues of professional identity and boundary management for service managers and professionals. The development of immunisation champions within DHBs and PHOs was a manifestation of shared ownership of the problem and the target. Inter-professional tensions were not evident, and PHO and DHB immunisation co-ordinators often shared a particular professional background (public health nurse).

Discussion

We have identified three ways of explaining the different experiences of implementing the New Zealand health targets, summarised in Table 1 below.

Table 1: Characteristics of the targets

	Immunisation – 95% of 2 yr-olds fully immunised by July 2012	Emergency Department – 95% of presentations dealt with within six hours
Characteristics of policy problem	2009: Moderately structured (agreement on ends, but not means) 2012: Structured (agreement on ends and means)	2009: Moderately structured (some, but not complete, agreement on ends, little agreement about means) 2012: Little change from 2009
Characteristics of the policy instrument (is the target an effective proxy?)	An output measure which effectively stands for the desired outcome (building herd immunity)	A process measure in which compliance is sometimes not a proxy for quality service, and for which gaming is possible.
Characteristics of the implementation context	Inter-organisational buy-in, ownership and co-ordination required. Shared goals and identities of implementers across organisations	Intra-organisational and intra-professional buy-in, ownership and co-ordination are required but difficult to achieve.

Clearly, there are inter-connections between the three explanations. The implementation context – the strength and extent of differences between groups involved in implementation - is related to the tractability of the problem. A fractious implementation environment increases the chances of there being disagreement about ends and/or means.

In order to identify which circumstances are most important as a way of informing decisions about future use of targets, it is important to start from the characteristics of each target as they

appeared prior to attempts to implement them. On this basis, there is little to distinguish between the two targets in terms of problem characteristics. The differences in the tractability of the problem only as the implementation processes took shape. Similarly, while it is possible in hindsight to say that the implementation context for the immunisation target was more amenable, it would have been difficult to make this assessment in 2009. At that time, as indicated by one of the respondents quoted above, the implementation context for immunisation *was* fragmented and subject to quite different degrees of ownership and buy-in. These characteristics, however, turned out to be malleable.

In order to disentangle the alternative explanations, we can devise a couple of thought experiments. The first thought experiment is to imagine what could have happened if the immunisation target had been a less effective as a proxy. Here, the greater scope for gaming may well have led to lower levels of buy-in and ownership amongst DHB and PHO staff. Although the target would probably still have been largely achieved (as, indeed, the ED target was largely achieved) adverse consequences would be likely to have been more prominent.

The second thought experiment is to imagine what would have happened had the emergency department target been a better representation of the desired policy objective. Would this target experience have been more positive if there was less contention about the appropriateness of the target? If it was more effective in 'standing for' the desired state of affairs, would the inter-professional tensions have been less problematic? We don't know the counterfactual, but we contend that the contested, intra-professional and intra-organisational space is the dominating feature here – it is what primarily shapes the dissension over the legitimacy of the target and the different levels of buy-in from different parts of the hospital and different sub-professional groupings, although the way in which this plays out is very context-specific. It is the reason why it is difficult to develop performance measures and targets that are unproblematic. Even if there was less contestation about the legitimacy of the target, there would still have been tensions around 'whose target is it anyway', and some groups would have remained resistant to the encroachment of demands from the target, whatever its legitimacy. This, in turn, shapes the extent to which the policy problem is tractable.

In summary, we argue that the key factor in the relative success of the immunisation target was that the target effectively stood for the desired policy goal. In addition, few identities were challenged in the implementation context and the context provided a space in which learning between districts (scale-up) became quite straightforward, and the problem became something solvable and structured. Our explanation of the mixed picture of the ED target starts from the complex and fragmented intra-professional and intra-organisational landscape of implementation. Even if the target had been a better proxy, many of the same responses and negative implementation experiences may well have eventuated.

Conclusion

What then does this research tell us about the appropriateness of targets as a policy instrument, and how might it inform debates about their use? The first thing we can say is that it is clear that targets can generate the positive effects and consequences that their advocates claim, and can do so without adverse consequences. The immunisation example also shows that broader, systemic change can be stimulated by targets. The next question is whether this should be considered an isolated, exceptional example, or a success template that can be built upon.

On the basis of a single comparison, it isn't feasible to provide a comprehensive checklist of contextual characteristics for the successful implementation of targets on the basis of a comparison of two examples. Nevertheless, we suggest that all three factors identified– the application of targets to a tractable problem, the appropriateness of the target as a proxy for the desired objective, and an implementation context in which the target does not exacerbate existing differences and tensions between groups central to the implementation process – are necessary. We suspect that this set of conditions is not all that common in health policy.

However, our comparison also shows that it may not be fruitful to discern the appropriateness of targets on the basis of a checklist, as some of the key drivers of positive and negative consequences are not always readily apparent. Instead, the relationship between the different factors appears to be rather complex and contingent. What we can say with confidence is that it is necessary to investigate specific instances of target implementation in order to answer the bigger questions. Now is an appropriate time to move beyond broad brush categorisations of their potential or their dysfunctional consequences, and to continue a more fine-grained approach to the question of whether targets are an appropriate policy instrument.

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