# Pay-for-performance in healthcare provision: the role of discretion in policy implementation in Turkey

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#### **Abstract**

#### **Purpose**

New Public Management-informed pay-for-performance policies are common in public sectors internationally but can be controversial with delivery agents. More attention is needed on contingent forms of bottom-up implementation of challenging policies, in emerging market economies, for professionals who face tensions between policies and their codes of practice. Street-level bureaucrats (SLBs) mediate policy implementation through discretionary practices; health professionals have enhanced space for discretion based on autonomy derived from professional status. We explore policy implementation, adaptation and resistance by physicians, focusing on payments for health workers in Turkey.

# Design/methodology/approach

Semi-structured qualitative interviews with 12 physicians in Turkish hospitals. Thematic analysis of interview transcripts, using a blended (deductive and inductive) approach.

#### **Findings**

The policy fostered discretionary behaviours such as cherry-picking (high volume, low risk procedures) and pro-social rule-breaking (e.g. 'upcoding'), highlighting clinical autonomy to navigate within policy restrictions. Respondents described damage to relationships with patients and colleagues, and dissonance between professional practice and perverse policy incentives, sometimes leading to disengagement from clinical work. Policymakers were perceived to be detached from the realities experienced by SLBs. Tensions between the policy and professional values risked alienating physicians.

## Research limitations/implications

This study utilises participant self-reported perceptions of discretionary behaviours. Further work may adopt alternative methods to explore the relationship between self-reporting and observed practice.

### Originality/value

We contribute to research on differentiated, contingent roles of groups with high scope for discretion in bottom-up implementation, pointing to the potential for policy-professional role conflicts between top-down P4P policies, and the values and codes of practice of professional SLBs.

Keywords: pay-for-performance; discretion; policy alienation; street-level bureaucrats; Turkey

Article type: original

#### Introduction

Policies using performance-based remuneration of public sector workers aim to increase efficiency and quality in service provision. Performance-based payments are premised on ideas from New Public Management (NPM) approaches (Bryson, Crosby and Bloomberg, 2014), specifically that front-line workers are more likely to deliver policy goals and intentions if they benefit financially. However, top-down policies are not always enacted wholesale by those working in the public sector; the use of discretion by 'street level bureaucrats' (SLBs) means front-line workers may respond to policies with different degrees of compliance (Lipsky, 2010; Campbell, 2012; Tummers, Bekkers and Steijn, 2012; Morrison, 2016; Borry and Henderson, 2020). Offering people more pay might not necessarily result in them doing what policymakers want. There are context-specific, contingent differences in how policies are interpreted, implemented (or not), adapted and resisted by front-line actors. Front-line actors with strong bases of autonomy and their own sets of policy preferences have high potential to shape their responses. What do uses of discretion look like in the context of policy areas – like health - with long-standing challenges, in emerging market economies, and for SLBs with relatively high levels of autonomy to enact their discretion?

In this paper, we explore this question through the case of Turkish healthcare reform. As an emerging market economy, Turkey introduced performance-based payments in public hospitals to improve patient experience in access and reduce physician absenteeism. We present findings from primary qualitative research of Turkish physicians' perspectives on performance-based payments, using policy implementation literature to situate physicians as SLBs with complex motivations, shaped in dynamic interplay with organisational incentives, and power and resources to be mobilised based on their professional statuses.

The findings indicate a potential for policy alienation, and the use of a range of discretionary practices. We conclude more attention should be paid to bottom-up implementation in emerging market economies for controversial or challenging policies that rely on delivery by groups with professional status and high potential for the exercise of discretion. Next, we consider the development of performance-based payment systems in health care in emerging market economies. We then explore the role of discretion in associated P4P policies, before addressing the context for the case and methods. Finally, we report and discuss our findings and conclusions.

# The importance of implementation in performance-based payments

Since the late 1980s, New Public Management (NPM) gained popularity as a method purported to increase efficiency and user empowerment in the public sector by implementing private sector practices (Bryson, Crosby and Bloomberg, 2014); P4P policies are one expression of NPM principles. Starting in higher-income countries, P4P policies moved into lower- and middle-income countries (LMICs), assisted by institutions including the World Bank (World Bank, 1993). Many LMICs are characterised by a centralised public sector with weak institutional structure, lack of resources, lower levels of effective accountability, and a health workforce mostly employed as civil servants with fixed salaries (Mills, 2014). P4P policies are said by advocates to provide opportunities in resource-constrained settings such as LMICs to address problems of low responsiveness, overcome inefficiencies and inequities in healthcare delivery by incentivising health workers to meet policy targets. They promote allocation of resources towards indicators favoured by policymakers (Paul and Renmans, 2018), through the incentive itself and salience effects (Giacomini *et al.*, 1996).

Our focus is on how SLBs interpret and respond to P4P as policy, rather than a general review of policy outcomes. Some studies suggest evidence on effectiveness in improving health systems and quality of care is mixed (e.g. Meessen, Soucat and Sekabaraga, 2011; Lee, Lee and Jo, 2012; Turcotte-Tremblay *et al.*, 2016; Diaconu *et al.*, 2021). Others highlight fundamental issues with the design of the policy (e.g. Doran et al., 2008; Eijkenaar, 2013; Roland and Campbell, 2014). Our focus is on implementation of P4P in healthcare settings, which is determined by a complex set of factors, including the policy setting, flaws in the design of the policy itself, design of the implementation process, organisational structures, and amount of funding (Diaconu *et al.*, 2021). Policy implementation has been understood as series of dynamic interactions between policy decisions and the delivery of policy goals (Lipsky, 2010). Design issues are analytically linked to implementation problems; poorly designed logic models, and inappropriate problem framing are factors in ineffective implementation.

In P4P, there are potentially multiple problems in both design and implementation, with SLBs working within the constraints imposed by the policy design as set out. The type of front-line discretion or strategies deployed may also be influenced by the degree to which SLBs broadly support a policy, or feel alienated by it (Tummers, Bekkers and Steijn, 2021; Thomann et al., 2018), for example leading to a complete rejection in some cases (Lazarevik

and Kasapinov, 2013). A poorly designed top-down policy would imply the need for a greater focus on front-line implementation because of the likelihood or necessity of bottom-up adaption.

Existing studies suggest the perceptions of health workers of P4P measures in LMICs matter for implementation, for example, affecting adherence to the policy on the front-line. Some health workers have reported feeling motivated to improve services under P4P because of salary increases (Kalk, Paul and Grabosch, 2010; Witter *et al.*, 2012; Bertone and Meessen, 2013; Bhatnagar and George, 2016). However, resource-constrained settings and low administrative capacity in LMICs have resulted in common delays in disbursement of P4P bonuses, which has been linked to demotivation of health workers (Bhatnagar and George, 2016; Ogundeji *et al.*, 2016). Faced with performance goals and limited time to meet criteria, some health workers try to circumvent rules by misreporting information and retrospective form-filling (Kalk, Paul and Grabosch, 2010; Aryankhesal *et al.*, 2015). Linking high-quality care provision to financial incentives raised ethical concerns for some health providers (Millar *et al.*, 2017), indicating altruistic values which are considered essential for physicians (Arrow, 1963).

The reactions and perceptions of the front-line implementers matter, because of the role of discretion in bottom-up implementation. This is particularly acute for controversial or challenging policies like P4P, that rely on a positive reception by groups with professional status, strong codes of practice, and therefore high potential for the exercise of discretion over whether and how they implement policies. It is to a discussion of discretion that we now turn.

# What role does discretion on the front-line play in P4P?

In secondary healthcare, physicians are significant actors, and their compliance is crucial for policy implementation. Motivating SLBs to perform the behaviours needed to achieve policy goals is a complex task that has often resulted in unintended outcomes in health such as supplier-induced demand (Zhang et al., 2023). We use the literature on bottom-up policy implementation to better understand responses to policies. The policymaking role of the SLBs (Lipsky, 2010), is based on the space for discretion that is created by the gap when a government or the purchasing institution is a principle who assign tasks aiming to improve health outcomes to a healthcare provider institution and/or health workers, who are the

agents (Renmans, Paul and Dujardin, 2016) enacting the policy, furthered by the degree of perceived and enacted autonomy of the actors. Public service workers' decisions and routines shape the public policies they implement and how citizens experience policies (Lipsky, 2010; Brodkin, 2012; Nørup and Jacobsen, 2021). SLBs, or 'civic entrepreneurs' (Durose, 2011) and 'street-level policy entrepreneurs' (Arnold, 2015), are in effect creating policy in the process of implementing it. Street-level policy entrepreneurs have a good understanding of the bureaucratic contexts and the actors within it, enabling them a high capacity to work with others to achieve their goals (Aviv, Gal and Weiss-Gal, 2021). Physicians, like other front-line workers, are not mere recipients of policies, and may game the system in response to top-down regulations, such as P4P measures (e.g. Gravelle, Sutton and Ma, 2010; Wilding et al., 2022). In instances where front-line workers do not fully support policy objectives, they may sometimes use their discretionary decision-making to adapt, amend, or even subvert policies towards more preferred goals.

Medical professions arguably have an enhanced base for their clinical autonomy and use of discretion over diagnostic and treatment decisions based on resources such as expertise and professional status (Tummers, Bekkers and Steijn, 2012; Harrison, 2015; Schott, van Kleef and Noordegraaf, 2016). Non-professionals may have other resources and expertise but weaker status and leverage. Being a member of a well-established profession, with a strong knowledge base, high entry costs, associated benefits of status and authority, codified practices, as well as good level of collective leverage, all offer potential for enhanced discretionary power than non-professional SLBs (e.g. Hupe and Hill, 2009; Tummers et al., 2012), which gives much room of manoeuvre within NPM reforms (Dudau, Kominis and Brunetto, 2021). The contemporary medical profession is a textbook example of a profession, in the classic definition (Freidson, 1970), enjoying a wide range of legitimate authority over its work and the work practices of occupations falling into the sphere of the profession's work. Physicians as a group of front-line workers are noteworthy for the extent, codification, and coherence of their professional training and ongoing professional structures, which lead to potential strong affiliation or allegiance to profession norms and commitment to professional values (Riccucci, 2005; Evans, 2011), bolstered by knowledge and connections acquired through personal interactions (Sandfort, 2000; Durose, 2011; Lotta and Marques, 2020).

Health and medicine are necessarily heavily regulated policy areas, coupled with health policies based on narratives of evidence-based medicine both strengthens and constrains potential for physician discretion (Ferlie *et al.*, 2009; Harrison, 2015). Physicians high status can be a protective factor for their discretionary spaces in a context of regulatory frameworks (McDonald, 2002; Checkland, 2004; Tummers and Van de Walle, 2012), possibly more so than other professions such as teachers (Harrison, 2015).

Not only do physicians have enhanced discretion arising from professional status, their status also can give them more perceived need to use discretion, with role conflicts sometimes more prominent for professional SLBs given their strict professional codes of practice. Physicians have professional norms, and well-developed codes of practice, potentially generating a series of distinct role conflicts when those SLBs see themselves as facing competing or incompatible demands from a variety of role providers (Katz and Kahn, 1978).

Specifically, in the case of policy-professional role conflicts (Tummers *et al.*, 2012), policies are perceived as contradictory to professional values and behaviours, exacerbated when policies are implemented in a top-down manner (Hill and Hupe, 2009). Increasing role conflicts are expected with P4P considering the extensive use of performance management systems and output controls which are not always compatible with professional autonomy (Tummers, Bekkers and Steijn, 2009). Multiple different types of role conflict are represented for health workers when adjudicating between prioritising care and organisational goals such as cost containment (Tummers *et al.*, 2012; Hoyle, 2014).

Some responses to role conflicts can be seen in forms of hybridised professionalism (Noordegraaf, 2007), where boundaries between professionals and nonprofessional managers become more fluid, e.g. doctors adopting new managerial responsibilities. Hybridised professionalism is likely to enhance discretion by giving SLBs 'reflexive control' in the place of occupational control (Noordegraaf, 2007, p. 780). Some health workers have been more able to manage a smooth transition into managerial responsibilities and reconcile their new roles with their ethics and values; others have struggled (Carvalho, 2014; Spehar, Frich and Kjekshus, 2015).

The literature also identifies other important influences shaping uses of discretion in the attitudes and perceptions of SLBs. For example, SLBs exercise discretion based on their 'temprament' which leans them towards being more or less rule-following or rebellious (Tummers and Bekkers, 2014). At an individual level, factors have been identified in the literature including ideology, values, opinions (Wenger and Wilkins, 2008; Keiser, 2010;

Møller, 2016; Harrits, 2019), empathic abilities (Jensen and Pedersen, 2017), perspectives and attitudes about policy goals (Keiser, 2010; Tummers, Bekkers and Steijn, 2012). Client characteristics (Bosma *et al.*, 2018) and their level of deservingness as perceived by front line workers was also identified as a mediator of discretionary behaviour (Jilke and Tummers, 2018; Keulemans and Van de Walle, 2018).

SLBs' individual agency is also 'institutionally embedded', and the SLBs are 'institutionally constructed actors whose values, interests, and practices are partially determined by the institutional logics that structure the organizational fields in which they operate' (Garrow and Grusky, 2013, p. 104). Several studies show evidence on the significance of institutional factors, providing evidence on organisational culture and goals (Sandfort, 2000; Maynard-Moody and Musheno, 2003; Garrow and Grusky, 2013), and managerial characteristics (May and Winter, 2009; Henderson and Pandey, 2013).

The professional status of the SLBs in medical professions might offer a degree of consistency in their operating contexts. However, professional SLBs undertaking medical roles are still to some extent subject to organisational and individual contingencies; their contexts are rarely homogenous despite their status. Practices frequently operate in subtly context-specific ways (Sullivan, 2022), shaped at the level of specific organisations and even sub-organisational units, such as different medical specialties. Added to this, as described above, individuals also vary along the lines of ideology, attitudes, empathy and other values, which may shape a differential response to different institutional contexts. Discretionary practices are highly contingent and context-dependent, and the implementation of national policies is dependent on local infrastructure and practices (Sausman, Oborn and Barrett, 2016).

Discretionary practices are, therefore, shaped by an intertwinement of organisational and individual factors which requires studies of contingent uses of discretion in specific contexts in policy implementation. Incentives in policy can often lead to negative unintended consequences. Coupling financial incentives with scope for discretionary behaviours, legitimated by professional standards, is a policy context in which many things can go wrong between the policy as intended by 'top-down' policymakers, and the actual policy as implemented by 'bottom-up' policymakers. We now turn to the case study example of P4P reforms in the Turkish health system.

# Context of Turkish case study

The electoral victory of the Justice and Development Party (JDP) in 2002 after years of unstable coalitions created a window of opportunity to deliver on the electoral promise to transform the country's healthcare system (Agartan, 2015). The public was highly dissatisfied with the healthcare system which was characterised by cross-cutting inequities in access to healthcare services, long waiting times, health workforce problems such as skills-mix cleavages, physician shortage, physician absenteeism and dual practice caused by low salaries at public hospitals (Ökem and Çakar, 2015).

Influenced by the World Bank's pro-market discourse (Yilmaz, 2017), Turkey introduced the Health Transformation Programme (HTP) in 2003, with a restructuring of the state's role in service provision through introduction of a purchaser-provider split, allocation of a stewardship role to the Ministry of Health (MoH), aiming to increase efficiency, reduce healthcare spending, and improve the quality and extent of services provided to the patients (Agartan, 2015, p. 968). The focus of this study is performance-based supplementary payments (PBSPs) introduced in 2004 as part of HTP, and which aimed to address various service provision problems, by increasing service volume, reducing high levels of physician absenteeism and dual practice, prevent physicians withdrawing from public service, and improving institutional performance overall (The Ministry of Health, 2003). A remuneration model provided additional payments to top-up the low salaries of health workers, i.e. physicians and nurses, providing incentives for health workers to increase the number of services, such as examinations, diagnostic tests, and operations. In line with Kovacs et al.'s (2020) typology of P4P schemes in LMICs, the performance-based payment model incentivises consultation or service volume. Table 1 summarises the P4P mechanism in Turkey based on the framework developed by Ogundeji et al. (2018).

Table 1: Characteristics of Performance-Based Supplementary Payment in Turkey, Reported According to the Framework by Ogundeji et al. (2018)

Who receives the incentives?	Individuals	
Type of incentives	Bonuses	
Type of payment	Monetary	
Size of incentive	Large (Monetary or non-monetary reward or fine - 10%	
	of salary, budget, or anticipated payment)	
Payment mechanism	Absolute (Incentives are paid as a single payment for	
	an absolute increase in performance)	
Method of payment	Coupled (Incentives paid are coupled with usual	
	reimbursement i.e. salary)	
Performance	Absolute measure (Incentive is paid for improvement	
measure/payment scale	in performance or behaviour change not dependent on	
	other providers)	
Domain of performance	Within clinician control (Incentive payments are based	
measured	on process and structural outcomes)	
Time lag	Short (Payment of incentives four months or less after	
	measurement of performance)	

PBSPs are paid to health workers from revolving funds which are one of hospitals' two types of income (Sulku, 2012). Hospitals had a limit of up to 50% of revolving funds they can distribute to the personnel through PBSP. PBSPs are also adjusted according to the institutional performance multiplier determined by the MoH based on audit results, which can lead to different benefits for health workers with the same ranking. Under the PBSP, health workers collect performance points each month designed to incentivise increased activity, and the points translate into financial benefits. Performance points for diagnostics and medical procedures are determined centrally by the MoH and attributed to ICD-10 and Health Implementation Statement codes (Social Security Institution, 2022). Each month, the total performance score for each physician is adjusted by a job-title coefficient which measures other duties such as administrative roles and teaching, and their working days.

The net performance score for each health worker is multiplied with the hospital's performance payment coefficient for the month. The resulting amount is given to the health workers after deducting tax.\_Individual salary top-ups are capped at a specific coefficient of the base salary for different types of worker. Unlike other healthcare systems, such as the English Service, clinical coding in Turkey is performed by physicians, i.e. assigning standard codes for each diagnosis and treatment procedure using a coding framework (ICD-10). This responsibility means physicians have extensive knowledge of reimbursement amounts and performance-based payments. Performance records are audited by a committee formed at each hospital. Committees are led by the chief physician, and members are doctors and accountants. Physician salary top-ups were based on the clinical activity, within hospital budgets limits.

The PBSP model has been subjected to substantial critiques on the grounds of medical ethics (Turkish Medical Association Ethical Committee, 2009), for example doctors felt the policy had increased unnecessary diagnostic procedures in order to increase salary top-ups, and more than half of physicians declared an increase in malpractice, which is related to the incentives to overwork under PBSP model (Turkish Medical Association Ethical Committee, 2009). There are concerns about 'cherry-picking' less complicated, higher value patients which would result in access problems for high-risk patients with complex healthcare needs (Kadioglu, 2016).

What is noteworthy about Turkish PBSP outcomes for our research is how one might predict that they influence implementation. If SLBs personal financial incentives were positive then, does this reduce the motivation to adapt or resist the policies? How might the ethical issues impact on physicians responses, particularly when the policy created a policy-professional role and value conflict? We have proposed that theories of bottom-up implementation can usefully help to explain what is happening between the policy intent and its implementation. That requires a better in-depth understanding of how front-line workers are implementing policies. Next, we describe the methods for the primary research looking at bottom-up implementation.

#### Methods

Semi-structured interviews were conducted with 12 physicians actively working in Turkey between January and March 2022. Table 2 below describes interviewee characteristics. All

interviewees were employed at public hospitals for at least five years. Interviewees were recruited using a combination of distributing a participation email via existing networks of contracts working within Turkish hospitals, and emailing doctors based in a broad range of hospitals directly using publicly available contact details. Recruitment and data analysis occurred concurrently. After 12 interviews a point of saturation was reached, whereby there was little new information regarding physician experiences arising, and recruitment ceased.

Interviews were conducted by PA in Turkish and lasted an average of 40 minutes. Both remote (Zoom) and in-person data collection methods were used according to the preference of the participant. In-person interviews were conducted at physicians' clinics. Interviews were audio-recorded with participants' written consent and transcribed verbatim. The interview topic guide was developed based on a review of the literature on P4P schemes and SLB discretionary strategies, and included discussions on physician perceptions on the HTP, the experience of PBSP, the changes in medical work under PBSP, impacts on patient care, and relationships with managerial levels. Ethical approval was granted by The University of Manchester University Research Ethics Committee (No: 2021-11210-18759).

Interview transcripts were analysed thematically in Turkish using NVivo 12 using a blended (deductive and inductive) approach (Graebner, Martin and Roundy, 2012) with a sensitivity to key concepts from our literature review specifically, discretion (Lipsky, 2010), clinical autonomy (Harrison, 2015), and workarounds (Campbell, 2012). This was underpinned by a broadly interpretivist theoretical framework informed by Schaffer's (2016) approach which focuses on the need to 'elucidate' the application and use of concepts in lived practices. Adopting this perspective highlights a need to locate discretion as a contingent and context-dependent practice.

PA familiarised herself with the interview transcripts, identified 'pattern responses' (Braun and Clarke, 2006), created codes for overarching themes that were then discussed and amended by the authors. Data included in this article is translated from Turkish to English by PA after finalising the coding. Extracts from interviews are denoted as follows: (Interview role, interviewee unique identifier, month and year of interview), e.g. (Paediatrician, C7 Feb22).

**Table 2: Interviewee Details** 

Interviewee Code	Specialty:	Hospital location
C1_Feb22	General Surgeon	Rural
C2_Feb22	OB/GYN	Rural
C3_Feb22	Urologist	Urban
C4_Feb22	OB/GYN	Urban
C5_Feb22	Cardiovascular Surgeon	Urban
C6_Feb22	Internal Medicine	Rural
C7_Feb22	Paediatrician	Urban
C8_Feb22	Paediatrician	Rural
C9_Feb22	Cardiologist	Urban
C10_Feb22	Urologist	Urban
C11_Feb22	Oncologist	Urban
C12_Feb22	OB/GYN	Rural

# **Findings**

Our research produced finding under three inter-connected themes: top-down policy and finance mechanisms; competition, perceptions of work, and relationships; risk and perverse incentives. In summary, respondents suggested P4P structures were predicated on a lack of awareness about realities of the healthcare system. They highlighted the top-down nature of policy implementation, and uncritical transfer of NPM policy models, without the active involvement of those responsible for implementing the policy. P4P contributed to perverse incentives to compete for patients, which also damaged professional relationships, and to focus on lower risk procedures. There was a perception of unequal/unfair pay between specialities, and lack of mechanisms to take local need and context into account. In some specialities, the lack of remuneration and higher risk of procedures contributed to physician's calculations to leave the profession. Perceived conflicts between clinical discretionary preferences and forces of incentivisation encouraging additional activity generated dissonance for physicians between their practice and professional ethics. P4P had initial positive effects on absenteeism and productivity, but these became increasingly negative as pay rates lowered. These findings are presented in detail below.

Top-down policy and finance mechanisms

Performance-based payment amounts depended on hospitals' annual budgets. All interviewees mentioned PBSPs either reduced or stopped, because of the budget deficit within public hospitals. This was attributed by respondents to national macroeconomic problems and the low reimbursement amounts from the Social Security Institution (SSI) under the DRG which did not reflect high inflation rates.

Interviewees emphasised the policymaking process had been top-down, without significant medical professional involvement. C2\_Feb22 suggested that 'market mechanisms from the UK', i.e. NPM mechanisms, were one reason for the problems in Turkey's healthcare system. The Turkish Medical Association was excluded from the development of the HTP reform, and some respondents argued that more active involvement of front-line decision-makers (SLBs), via the Turkish Medical Association, was needed. Indeed, the policy was seen as profoundly disconnected from the clinical realities of those working on the ground and this resulted in imbalances in remuneration mechanisms. A cardiologist highlighted disparities between performance-based payments across specialities because of the healthcare needs of populations in specific locations. Working in a rural, deprived area with a high birth rate, this physician earned less performance-based payments compared to obstetricians:

I worked in [CITY], [TOWN]. It is a place with a very high birth rate. While obstetricians were making 120,000 points, we, cardiologists, were making 40,000 points. [...] You are in [TOWN], you also suffer those bad conditions in socioeconomic and socio-cultural terms, you are also dealing with the same patient population, but you earn maybe one third, one fourth of that money.

(Cardiologist, C9 Feb22)

Interviewees also pointed to significant disparities in performance-based payment rates between surgical and non-surgical specialities, and patient characteristics. Respondents felt there was an unfair distribution of additional payments between specialities, with physicians from non-surgical specialities arguing that it was much harder for non-surgical specialities to earn as much as surgeons because of the payments associated with the different procedures they performed, which was demotivating for some:

If I examine babies between 0-1 month, I get 40 points. I get 30 points between the ages of 1 month and 2 years. [...] When an internist examines a 16-year-old patient, they get 30 points [...] when I examine a 16-year-old patient, I get 20 points. There are such ridiculous practices. Therefore, in this unfair system, your work does not make much sense.

(Paediatrician, C7 Feb22)

Competition, perceptions of work, and relationships

As described earlier, physicians in the Turkish system are involved in clinical coding. Respondents were aware of their hospital budgets and the costs of medical procedures. Their granular involvement in coding meant physicians were profoundly aware of the financial implications of their daily encounters. This had implications for inter-personal and professional dynamics within the system. Interviewees highlighted one consequence was increased competition for patients, which damaged relationships among physicians and between physicians and patients, as illustrated by one respondent:

When the performance-based payments started, [physicians] got into a rush to have more patients, to increase their performance points. Attempts to catch more patients jeopardised the peaceful structure between physicians. [...] People literally got into a rat race to exploit performance system and get benefits out of it.

(Paediatrician, C7\_Feb22)

A combination of high service demand and competition between physicians for salary topups resulted in short amounts of time allocated to examinations. This generated a certain amount of 'automation' in how physicians dealt with patients, and less dialogue between physicians and patients, as one participant explained:

You start to think on a procedure basis, not on a patient basis. No matter how ethical you act, in the end, you have to sustain the clinic and earn money [through PBSPs]. [...] I think that approaching patients on a procedure basis is not in line with medical ethics. (Cardiovascular Surgeon, C5\_Feb22)

The nature of the relationship between hospital managers and physicians was also affected, with hospital managers asking for cooperation to reduce hospital expenditure e.g.: making fewer diagnostic tests:

This is the budget given by the ministry. You either contribute to it, or increase the expenditure, then the hospital budget goes into deficit. When the hospital budget is in deficit, the money distributed to the staff decreases. This is a vicious circle. What they want from us is – the idea that the less money you spend, the more additional payment you can get.

(Paediatrician, C8\_Feb22)

Interviewees highlighted that these changes, associated with the performance-based payment system, had undermined their satisfaction with their job. This was related to additional factors associated with risk and perverse incentives, discussed below.

# Risk and perverse incentives

Respondents reported that low reimbursement amounts and resulting low performance payments disincentivised them from performing higher risk procedures. Thinking that they would not receive enough compensation for the effort expended, some physicians stopped performing high risk/low pay procedures, as mentioned by several physicians:

In specialities with high risk of complications, physicians do not want to do surgery. They stay away from these complicated procedures because there is not enough compensation [financial]. Performance points are low regarding the risk they take. Instead, a simpler procedure, for example, varicose veins removal isn't risky, and the pay is good. So, the physician prefers doing those procedures instead of complex ones. (Cardiologist, C9 Feb22)

In some cases, these calculations resulted in physicians choosing to refer patients to other hospitals. This 'buck passing' of perceived low value (in terms of PBSPs) treatment had direct and uncertain consequences for patients, who did not receive treatment needed at the hospital they were admitted to. In some cases, a physician would not conduct certain

procedures if they were unconvinced they would receive sufficient performance points. However, this behaviour was reportedly more common among non-emergency departments (C5\_Feb22 related this to dermatology) where not performing a procedure was perceived as not causing patient harm. All of this highlights the wide space of discretion that some physicians had to regulate their workload in different ways.

The perceived mismatch between risk and remuneration was particularly significant for paediatricians. Paediatricians perceived they were involved in a high-risk practice (i.e. providing health services to children) but performance payments reflected non-surgical and primarily low-cost medical tests and were seen as inadequate. C7\_Feb22 argued they were not able to collect enough monthly performance points to receive a perceived reasonable payment from the total distributed. Paediatrician interviewees were highly demotivated because of the low pay rates compared to the risks undertaken and had both recently retired.

Physicians' role in coding activity raises questions about the extent to which discretionary practices occur to increase salary top-ups through performance-based payments. Physicians argued that where colleagues used discretion to adjust coding, this was for patient benefit rather than to increase their own payments.

I honestly do not think that any physician does this [coding adjustment] for the sake of fraud to multiply their own performance payments. These [discretionary practices] are usually done in Turkey for the sake of, let's say, white lies for the benefit of the patient.

(Obstetrician & Gynaecologist, C4\_Feb22)

Not all surgical procedures attached higher payments and these anomalies also affected physicians' decisions. One example given (C4\_Feb22) related to births, where vaginal deliveries were worth double that of C-sections, (Social Security Institution, 2022), intended to incentivise a reduction in C-sections, despite them being more complicated procedures, resulting in some cases in malpractice (Evrensel, 2013).

### Discussion and conclusions: policy alienation, rule-breaking, or back to rationing?

This study is not a comprehensive evaluation of HTP or PBSP. However, outcomes of the policy are the context for physicians' responses. In terms of productivity incentives, there were

positive outcomes from PBSP on higher numbers of patients examined and reduced waiting lists (Akinci *et al.*, 2012), and improved efficiency in public hospitals (Ökem and Çakar, 2015). Specialist wages of health workers increased by approximately 675% through PBSP, contributing also to reducing dual employment (Vujicic *et al.*, 2009). However, payment levels depended on hospitals' overall (and latterly reduced) budgets, when a significant number of public hospitals were in deficit then P4Ps were low or non-existent (Medimagazin, 2020).

In this broader context, we examined the use of agency via discretion by high status SLBs in response to the policy, affecting implementation. The literature on discretion has identified different kinds of responses from SLBs, ranging from Lipsky's classic discussion of largely negative coping strategies such as rationing and stereotyping (Lipsky, 2010), to a more optimistic view of front-line workers positive uses of discretion as civic entrepreneurs (Durose, 2011). Within these discussions, there are different categories of response. SLBs as 'citizen-agents' (Maynard-Moody and Musheno, 2000) try to intermediate between public service users and institutions to lever maximum benefits for citizens. 'Work-arounds' are typically attempts to amend policies around the margins within the rules (Campbell, 2012). Pro-social rule-breaking results from a desire to contribute to the organisation and those involved (Morrison, 2016). None of these responses involve SLBs making a fundamental challenge to the overall policy goals; they are focused on making existing policy work better.

However, some have suggested that there is another category of response where SLBs become disillusioned with policy and diverge from policy goals to such an extent that they experience policy alienation. Policy alienation is defined as 'a general cognitive state of psychological disconnection from the policy program being implemented' (Tummers, Bekkers and Steijn, 2012). The psychological disconnection from policy programmes might result in an extensive level of informal practices to diverge from policies and official regulations.

So, what was going on in the Turkish case study for the participants in our study? Was there a profound divergence from the policy programme as antagonistic to professional values such as autonomy, professional ethics, and equity?

Physicians were concerned about conflicting values between PBSP policy and the values and codes of ethics of them as medical professionals. Despite their efforts to act for patient benefit, physicians expressed facing an ethical dilemma between acting according to Hippocratic Oath and sustaining hospital budgets and earning performance-based payments. They perceived a policy-professional role conflict between P4P regulations and their

professional values (Tummers and Bekkers, 2014). The data shows uneasiness about the negative impacts of the policy on relationships with patients and between co-workers. Physicians expressed a lack of trust in policymakers and perceived them as incapable of making meaningful policy improvements. It is unclear how profoundly alienated the respondents were. It was certainly the case, though, that people reported experiencing dissonance between their professional selves and the policy and financial context in which they were operating.

Despite, or perhaps partly because of, this dissonance, physicians were able to navigate between policy restrictions using their discretion built upon clinical autonomy (Harrison, 2015). The findings suggest some use of the classic strategies of discretion, particularly rationing or limiting client demand by attempting to see multiple patients quickly. Interviewees discussed cherry-picking less complex, less risky procedures to maximise financial benefit. Yet, there was also emphasis on pro-social rule breaking associated with physicians' coding practices. Upcoding, such as assigning a higher paying ICD-10 code to a patient, was a common practice to maintain hospital budgets under the context of low reimbursement amounts. For physicians, the maintenance of hospital budgets ensured further service provision to patients. The country's economic recession resulted in a more negative experience of P4P over time. The gap between the SSI tariffs and costs of medical services emphasises the need for significant restructuring of the P4P model in Turkey.

The findings raise fundamental questions about the operating assumptions underpinning NPM about using individual cash payments to incentivise performance (Bryson, Crosby and Bloomberg, 2014). Despite salary gains, our findings echo those of other studies showing negative impacts on motivation and retention (Bhatnagar and George, 2016; Ogundeji *et al.*, 2016), circumvention of rules (Kalk, Paul and Grabosch, 2010; Aryankhesal *et al.*, 2015)., and ethical concerns (Millar *et al.*, 2017).

Arguably, these problems with front-line implementation sit against a backdrop of the policy itself being poorly designed (Doran et al., 2008; Eijkenaar, 2013; Roland and Campbell, 2014). We argue that policy design and policy implementation interact and are dynamically linked via front-line delivery. In any case, poorly designed policies imply the need for even more focus on front-line implementation as the grounds for adaption and resistance are greater. One key implication of our study is that a neglect of the realities of bottom-up implementation by SLBs with significant amounts of professional autonomy, and lack of

engagement with professional organisations in LMIC countries, might hinder policy-implementation processes. Hence, this study suggests that universal policy tools must include the perspectives of those delivering on the front-line, particularly those with high scope for discretion, such as groups with professional status.

#### References

Agartan, T.I. (2015) 'Explaining large-scale policy change in the Turkish health care system: Ideas, institutions, and political actors', *Journal of Health Politics, Policy and Law*, 40(5), pp. 971–999.

Akinci, F. et al. (2012) 'Assessment of the Turkish health care system reforms', Health Policy, 107(1), pp. 21–30.

Arnold, G. (2015). 'Street-level policy entrepreneurship'. *Public Management Review*, 17(3), 307-327.

Arrow, K.J. (1963) 'Uncertainty and the welfare economics of medical care', *American Economic Review*, 53, pp. 941–973.

Aryankhesal, A. et al. (2015) 'The dysfunctional consequences of a performance measurement system', Journal of Health Services Research & Policy, 20(3), pp. 138–145.

Aviv, I., Gal, J., & Weiss-Gal, I. (2021). 'Social workers as street-level policy entrepreneurs'. *Public Administration*, 99(3), 454-468.

Bertone, M.P. and Meessen, B. (2013) 'Studying the link between institutions and health system performance', *Health Policy and Planning*, 28(8), pp. 847–857.

Bhatnagar, A. and George, A.S. (2016) 'Motivating health workers up to a limit', *Health Policy and Planning*, 31(7), pp. 868–877.

Borry, E.L. and Henderson, A.C. (2020) 'Patients, protocols, and prosocial behavior: Rule breaking in Frontline Health Care', *American Review of Public Administration*, 50(1), pp. 45–61.

Bosma, A.Q. et al. (2018) 'Selection processes in prison-based treatment referrals: A street-level bureaucracy perspective', *Crime and Delinquency*, 64(8), pp. 1001–1032.

Braun, V. and Clarke, V. (2006) 'Using thematic analysis in psychology', *Qualitative Research in Psychology*, 3(2), pp. 77–101.

Bryson, J.M., Crosby, B.C. and Bloomberg, L. (2014) 'Public value governancet', *Public Administration Review*, 74(4), pp. 445–456.

Campbell, D. (2012) 'Public managers in integrated services collaboratives: What works is workarounds', *Public Administration Review*, 72(5), pp. 721–730.

Checkland, K. (2004) 'National Service Frameworks and UK general practitioners: street-level bureaucrats at work?', *Sociology of health & illness*, 26(7), pp. 951–975.

Diaconu, K. et al. (2021) 'Paying for performance to improve the delivery of health interventions in low-and middle-income countries', Cochrane Database of Systematic Reviews [Preprint], (5).

Doran, T. et al. (2008) 'Exclusion of patients from pay-for-performance targets by English physicians'. *New England Journal of Medicine*, *359*(3), pp.274-284.

Dudau, A., Kominis, G. and Brunetto, Y. (2021) 'Red tape and psychological capital', *Journal of Professions and Organization*, 7(3), pp. 334–350.

Durose, C. (2011) 'Revisiting Lipsky: Front-line work in UK local governance', *Political Studies*, 59(4), pp. 978–995.

Eijkenaar, F. (2013) 'Key issues in the design of pay for performance programs'. *The European Journal of Health Economics*, 14, pp.117-131.

Evans, T. (2011) 'Professionals, managers and discretion: Critiquing street-level bureaucracy', *The British Journal of Social Work*, 41(2), pp. 368–386.

Evrensel (2013) 'Bakana zorla normal doğum sorusu (Question to the minister on forced normal birth)', Evrensel, 9 January. Available at:

https://www.evrensel.net/haber/45812/bakana-zorla-normal-dogum-sorusu (Accessed: 18 September 2022).

Ferlie, E. et al. (2009) 'Renewing policy to support evidence-based health care', *Public Administration*, 87(4), pp. 837–852.

Freidson, E. (1970) *Profession of medicine: A study of the sociology of applied knowledge*. New York: Dodd, Mead & Company.

Garrow, E.E. and Grusky, O. (2013) 'Institutional logic and street-level discretion', *Journal of Public Administration Research and Theory*, 23(1), pp. 103–131.

Giacomini, M. et al. (1996) The Many Meanings of Money. Centre for Health Economics and Policy Analysis (CHEPA), McMaster University.

Graebner, M.E., Martin, J.A. and Roundy, P.T. (2012) 'Qualitative data: Cooking without a recipe', *Strategic Organization*, 10(3), pp. 276–284.

Gravelle, H., Sutton, M. and Ma, A. (2010) 'Doctor Behaviour under a Pay for Performance Contract: Treating, Cheating and Case Finding?', *The Economic Journal*, 120(542), pp. F129–F156.

Ha, J., Kose, M.A. and Ohnsorge, F. (2021) *One-stop source: A global database of inflation*. Washington DC: World Bank.

Harrison, S. (2015) 'Street-level bureaucracy and professionalism in health services', in P.L. Hupe, M. Hill, and A. Buffat (eds) *Understanding Street-Level Bureaucracy*. Bristol, UK Chicago, IL: Bristol University Press, pp. 61–78.

Harrits, G.S. (2019) 'Stereotypes in Context: How and When Do Street-Level Bureaucrats Use Class Stereotypes?', *Public Administration Review*, 79(1), pp. 93–103.

Henderson, A.C. and Pandey, S.K. (2013) 'Leadership in street-level bureaucracy', *International Review of Public Administration*, 18(1), pp. 7–23.

Hill, M. and Hupe, P. (2009) *Implementing public policy: Governance in theory and in practice*. Thousand Oaks, CA: SAGE.

Hoyle, L. (2014) "I mean, obviously you're using your discretion": Nurses Use of Discretion in Policy Implementation', *Social Policy and Society*, 13(2), pp. 189–202.

Jensen, D.C. and Pedersen, L.B. (2017) 'The impact of empathy-explaining diversity in street-level decision-making', *Journal of Public Administration Research and Theory (JPART)*, 27(3), pp. 433–449.

Jilke, S. and Tummers, L. (2018) 'Which clients are deserving of help? A theoretical model and experimental test', *JPART*, 28(2), pp. 226–238.

Kadioglu, F.G. (2016) 'An Ethical Analysis of Performance-Based Supplementary Payment in Turkey's Healthcare System', *Cambridge Quarterly of Healthcare Ethics*, 25(3), pp. 493–496.

Kalk, A., Paul, F.A. and Grabosch, E. (2010) "Paying for performance" in Rwanda: does it pay off?', *Tropical Medicine & International Health*, 15(2), pp. 182–190.

Katz, D. and Kahn, R.L. (1978) The social psychology of organizations. New York: Wiley.

Keiser, L.R. (2010) 'Understanding street-level bureaucrats' decision making', *Public Administration Review*, 70(2), pp. 247–257.

Keulemans, S. and Van de Walle, S. (2018) 'Understanding street-level bureaucrats' attitude towards clients', *Public Policy and Administration*, 35(1).

Kovacs, R.J., Powell-Jackson, T., Kristensen, S.R., Singh, N. and Borghi, J. (2020) 'How are pay-for-performance schemes in healthcare designed in low-and middle-income countries?', *BMC Health Services Research*, 20(1), pp.1-14.

Lazarevik, V. and Kasapinov, B. (2013) 'Pay-for-performance in the former Yugoslav Republic of Macedonia: between a good title and a bad reform', *Eurohealth*, 19(1), pp. 29–32.

Lee, J.Y., Lee, S.-I. and Jo, M.-W. (2012) 'Lessons From Healthcare Providers' Attitudes Toward Pay-for-performance', *Journal of Preventive Medicine & Public Health*, 45(3), pp. 137–147.

Lipsky, M. (2010) *Street-level bureaucracy: Dilemmas of the individual in public service*. New York: Russell Sage Foundation.

Lotta, G. and Marques, E.C. (2020) 'How social networks affect policy implementation: An analysis of street-level bureaucrats' performance regarding a health policy', *Social Policy & Administration*, 54(3), pp. 345–360.

May, P.J. and Winter, S.C. (2009) 'Politicians, managers, and street-level bureaucrats: Influences on policy implementation', *Journal of Public Administration Research and Theory*, 19(3), pp. 453–476.

Maynard-Moody, S. and Musheno, M. (2000) 'State agent or citizen agent: Two narratives of discretion', *JPART*, 10(2), pp. 329–358.

Maynard-Moody, S.W. and Musheno, M.C. (2003) *Cops, teachers, counselors: Stories from the front lines of public service*. Ann Arbor: University of Michigan Press.

McDonald, R. (2002) 'Street-level bureaucrats? Heart disease, health economics and policy in a primary care group', *Health & social care in the community*, 10(3), pp. 129–135.

Medimagazin (2020) 'Döner yok, performans yok, nöbet ücreti yok: Hastane çalışanları isyan etti!', *Medimagazin*, 2 February. Available at: https://medimagazin.com.tr/hekim/doner-yok-performans-yok-nobet-ucreti-yok-hastane-calisanlari-isyan-etti-85815 (Accessed: 11 May 2023).

Meessen, B., Soucat, A. and Sekabaraga, C. (2011) 'Performance-based financing: just a donor fad or a catalyst towards comprehensive health-care reform?', *Bulletin of the World Health Organization*, 89(2), pp. 153–156.

Millar, R. et al. (2017) 'It's all about the money? A qualitative study of healthcare worker motivation in urban China', *International Journal for Equity in Health*, 16(1).

Mills, A. (2014) 'Health Care Systems in Low- and Middle-Income Countries', *New England Journal of Medicine*, 370(6), pp. 552–557.

Møller, M.Ø. (2016) "She isn't Someone I Associate with Pension", *Professions and Professionalism*, 6(1).

Morrison, E.W. (2016) 'Doing the Job Well: An Investigation of Pro-Social Rule Breaking', *Journal of Management*, 32(1), pp. 5–28.

Noordegraaf, M. (2007) 'From "pure" to "hybrid" professionalism: Present-day professionalism in ambiguous public domains', *Administration & Society*, 39(6), pp. 761–785.

Nørup, I. and Jacobsen, B. (2022) 'Searching for "the usual suspects": The role of discretion and target group constructions in the frontline of policy implementation', *Public Administration*, pp. 1-22.

Ogundeji, Y.K. *et al.* (2016) 'Pay for performance in Nigeria: the influence of context and implementation on results', *Health Policy and Planning*, 31(8), pp. 955–963.

Ogundeji, Y.K., Sheldon, T.A. and Maynard, A. (2018) 'A reporting framework for describing and a typology for categorizing and analyzing the designs of health care pay for performance schemes', *BMC Health Services Research*, 18(1), p. 686.

Ökem, Z.G. and Çakar, M. (2015) 'What have health care reforms achieved in Turkey? An appraisal of the "Health Transformation Programme", Health Policy, 119(9), pp. 1153–1163.

Paul, E. and Renmans, D. (2018) 'Performance-based financing in the heath sector in low-and middle-income countries: Is there anything whereof it may be said, see, this is new?', The International Journal of Health Planning and Management, 33(1), pp. 51–66.

Renmans, D., Paul, E. and Dujardin, B. (2016) *Analysing performance-based financing through the lenses of the principal-agent theory* University of Antwerp IDPM Working Paper No: 2016.14.

Riccucci, N.M. (2005) 'Street-level bureaucrats and intrastate variation in the implementation of temporary assistance for needy families policies', *Journal of Public Administration Research and Theory*, 15(1), pp. 89–111.

Roland, M. and Campbell, S. (2014) 'Successes and failures of pay for performance in the United Kingdom'. *The New England Journal of Medicine*, 370(20), pp. 274-284.

Sandfort, J.R. (2000) 'Moving beyond discretion and outcomes: Examining public management from the front lines of the welfare system', *Journal of Public Administration Research and Theory*, 10(4), pp. 729–756.

Sausman, C., Oborn, E. and Barrett, M. (2016) 'Policy translation through localisation: implementing national policy in the UK', *Policy & Politics*, 44(4), pp. 563–589. Available at: https://doi.org/10.1332/030557315x14298807527143.

Schaffer, F.C. (2016) *Elucidating social science concepts: an interpretivist guide*. New York, NY: Routledge, Taylor & Francis Group (Routledge series on interpretive methods, 4).

Schott, C., Van Kleef, D. and Noordegraaf, M., (2016) 'Confused professionals?: Capacities to cope with pressures on professional work', *Public Management Review*, 18(4), pp.583-610.

Social Security Institution (2022) '25 Ağustos 2022 Tarihli Resmi Gazete'de Yayımlanan Sosyal Güvenlik Kurumu Sağlık Uygulama Tebliği İşlenmiş Güncel SUT (Social Security Institution Health Implementation Statement with Updated SUT Published on 25 August 2022)'. Social Security Institution.

Spehar, I., Frich, J.C. and Kjekshus, L.E. (2015) 'Professional identity and role transitions in clinical managers', *Journal of Health Organization and Management*, 29(3), pp. 353-366.

Sulku, S.N. (2012) 'The health sector reforms and the efficiency of public hospitals in Turkey: provincial markets', *The European Journal of Public Health*, 22(5), pp. 634–638.

Sullivan, H. (2022) *Collaboration and Public Policy: Agency in the Pursuit of Public Purpose*, Basingstoke, Palgrave Macmillan.

Tatar, M. et al. (2011) 'Turkey: Health system review', Health Systems in Transition, 13(6).

The Ministry of Health (2003) Sağlıkta Dönüşüm Programı Konsept Notu (The Health Transformation Programme Conceptual Note). Ankara: The Ministry of Health.

Thomann, E., van Engen, N. and Tummers, L. (2018) 'The necessity of discretion: A behavioral evaluation of bottom-up implementation theory', *Journal of Public Administration Research and Theory*, 28(4), pp. 583–601.

Tummers, L. and Bekkers, V. (2014) 'Policy implementation, street-level bureaucracy, and the importance of discretion', *Public Management Review*, 16(4), pp. 527–547.

Tummers, L., Bekkers, V. and Steijn, B. (2012) 'Policy alienation of public professionals: A comparative case study of insurance physicians and secondary school teachers', *International Journal of Public Administration*, 35(4), pp. 259–271.

Tummers, L.G. and Van de Walle, S. (2012) 'Explaining health care professionals' resistance to implement Diagnosis Related Groups', *Health Policy*, 108(2–3), pp. 158–166.

Turcotte-Tremblay, A.-M. *et al.* (2016) 'Does performance-based financing increase value for money in low- and middle- income countries? A systematic review', *Health Economics Review*, 6(1), p. 30.

Turkish Medical Association Ethical Committee (2009) *Hekimlerin değerlendirmesi ile performansa dayalı ödeme*. Ankara: Turkish Medical Association.

Vujicic, M., Sparkes, S. and Mollahaliloglu, S. (2009) *Health workforce policy in Turkey: Recent reforms and issues for the future*. Washington, DC: The World Bank.

Wenger, J.B. and Wilkins, V.M. (2008) 'At the Discretion of Rogue Agents: How Automation Improves Women's Outcomes in Unemployment Insurance', *Journal of Public Administration Research and Theory*, 19(2), pp. 313–333.

Wilding, A. et al. (2022) 'Family doctor responses to changes in target stringency under financial incentives', *Journal of Health Economics*, 85, p. 102651.

Witter, S. et al. (2012) 'Paying for performance to improve the delivery of health interventions in low-and middle-income countries', Cochrane Database of Systematic reviews [Preprint], (2).

World Bank (1993) World Development Report 1993: Investing in Health. New York: World Bank.

Yilmaz, V. (2017) *The politics of healthcare reform in Turkey*. Basingstoke: Palgrave Macmillan.

Zhang, Y. et al. (2023) 'Physician altruism under the change from pure payment system to mixed payment schemes: experimental evidence', BMC Health Services Research, 23(1), p. 111.