Bribery in the Workplace: A Field Experiment on the Threat of Making Group Behavior Visible

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Abstract. Can reputational threat among coworkers reduce bribery in organizations? I exploit within- and across-organizational variation in bribery to design and implement a field experiment in the maternity wards of five Moroccan public hospitals. I test whether threatening to reveal information about ward workers' involvement in bribery to their coworkers dissuades them from taking bribes from patients. Healthcare workers cut back on taking bribes in higher-incidence maternity wards but not in lower-incidence wards. Qualitative data show that bribery's baseline incidence sets the costs of revealing. Workers tolerate only so much bribery in their wards before they face the negative social consequences of belonging to a work group that takes bribes. They thus correct their behavior when it crosses a threshold. Moreover, ineffective applications of the field interventions betrayed welfare-diminishing effects. I furnish evidence for a novel kind of policy lever against workplace bribery and shed new light on the dynamics of bribery inside organizations.

1. Introduction

When I asked Moroccan patients to describe how they gave bribes to healthcare workers in hospital wards, they said, "hand to hand," as if shaking hands or greeting. Occasionally, they bundled the payment with a juice or an apple. Many patients described slipping it into a pocket or placing it under a pillow. Hand, pocket, or pillow, they took care to transfer bribes "stealthily," "secretly," "without drawing attention," and "making sure no one could see."

These patients' first-person accounts reflect bribes in their most elemental form: quick, seamless, hidden, and undocumented. Their accounts resonate with citizens' descriptions of these informal payments elsewhere, in other sectors, in other countries (Wade 1982, Gupta 1995, Blundo et al. 2008, Smith 2008, Hoang 2018). In 2018, in Africa alone, nearly 130 million people paid bribes, which translates to about a quarter of people who accessed public services; in Morocco, one-third of service-seekers made such payments.[1] Writing in the *The Lancet*, physician and former Peruvian health minister Patricia Garcia described corruption as acutely impeding the implementation of universal health coverage worldwide and urged researchers and policymakers to "think about corruption as an

important area of research in the same way we think about diseases" (García 2019, p. 2119). This is a pressing call because out-of-pocket spending on healthcare, including informal payments, can reach more than 40% of household income in low- and middle-income countries, with catastrophic consequences on healthcare seekers' ability to meet other basic needs.[2]

Because bribery is widespread, people assume that it is normalized, common, and, quite possibly, overt. However, these assumptions contradict patients' descriptions of how they bribe. Bribery is primarily dyadic and secret. It is hard-to-see and hard-to-document, making it inaccessible to third-party observers and difficult to police individually.

How do you stop bribes from flowing through millions of momentary secretly binding handshakes? Mainstream thinking, primarily theoretical, proposes policy interventions based on monitoring and financial payoffs in corruption control (Becker and Stigler 1974, Olken and Pande 2012, Pierce and Balasubramanian 2015, Finan et al. 2017). However, an effective monitoring regime ties actions to consequences, transgressions to penalties. This is achievable with other kinds of workplace misconduct, such as theft, shirking, and absenteeism (Hubbard 2000,

Pierce et al. 2015, Dhaliwal and Hanna 2017), less so with bribery. Even financial levers need minimum levels of effective monitoring to discipline behavior (Becker and Stigler 1974, Frey 1993). It is unsurprising then that the two policy experiments that try wage reform, without complementary changes to enforcement abilities, fail to stop bribery (Foltz and Opoku-Agyemang 2015, Khan et al. 2016).[3] What counts as an effective lever against bribery remains unsettled (Mungiu-Pippidi 2015, Fisman and Golden 2017, García 2019).

A new solution emerges when we reason from bribery's clandestine and dyadic nature. People reckon with the social consequences of their actions: The threat of social exposure dissuades them from participating in private behavior they're not willing to own up to publicly (Ali and Bénabou 2020). Bribe-takers are no different. Even in places where bribery is prevalent and punitive regimes are weak, bribe-takers work hard to keep their trades secret (Wade 1982, Gupta 1995, Granovetter 2007, Smith 2008, Rossman 2014, Hoang 2018, Dakhlallah 2022). My fieldwork lets on that no doctor, midwife, or nurse wants to be sized up as a bribe-taker at work; no bribe-taking doctor would be trusted with overseeing a ward or as hospital director. Moreover, their preoccupation with hiding their exploits cuts both ways. On the one hand, bribe-takers protect themselves. On the other hand, they do not learn about each other's behavior, so bribery does not get normalized. It stays a fraught and morally contentious practice, so social exposure is costly.[4] For stalwart coworkers, bosses, and third parties, an intervention that leverages the threat of exposure in the workplace might just be the solution to stop bribes.

I designed and implemented a field experiment to test whether the threat of revealing information about healthcare workers' involvement in bribery to their coworkers dissuades them from bribe exchange with patients. The setting is public hospitals in Morocco, where patients give bribes to improve the quality of care they receive. To avoid the inferential problems of convenience and self-selected sampling, I built a theoretically informed sample of public hospitals. I then mapped bribery's incidence within and across these hospitals by asking patients about how they accessed care. I found that bribery's incidence varied across hospital wards and across healthcare worker groups. Therefore, bribery was neither ubiquitous nor normalized in hospitals, which reinforced the intuition for leveraging reputational threat among coworkers and informed the design of my field interventions. I situated the field experiment in maternity wards because, across hospitals, they suffered most from bribery. I sorted maternity wards into two groups: in high baseline wards half of patients gave bribes and in low baseline wards about a quarter of patients did so.

I created two field interventions, based on patients' accounts of how they accessed care, that I shared with healthcare workers. The *visibility threat* treatment revealed to maternity staff their ward-level incidence of bribery and threatened to further disaggregate incidence rates by healthcare worker group and disseminate them hospital-wide. Thus, I tap into reputational concerns among cow-orker groups—doctors, midwives, and nurses—within maternity wards and across hospital wards. The *informational* treatment revealed to maternity staff their ward-level incidence of bribery, without threat of exposure among coworker groups and hospital-wide. Within each of the high and low baseline groups, I randomly assigned maternity wards to receive one of the two treatments. The two-treatment design with random assignment within a baseline group ensures that healthcare workers experience first-time revelations of bribery's incidence in the same way, netting out learning effects. The difference in the change in bribe rates between the two treatments captures the threat of exposure. I bolster my interpretation of the results with field observations of and conversations with healthcare workers and hospital directors, patient survey data, and provider survey data (Woolcock 2013, Deaton and Cartwright 2018).

Three core findings emerge. First, healthcare workers react to the visibility threat and informational treatments in similar and comparable measure—revealing bribery's ward-level incidence coupled with the threat of exposure was as effective in eliciting behavior change as only revealing bribery's ward-level incidence to maternity staff. Second, conditional on bribery's baseline incidence, both treatments reduce bribery in maternity wards: Healthcare workers cut back on taking bribes in high baseline wards but keep taking them in low baseline wards. Qualitative data—based on maternity staff's immediate hospital-floor reactions to the field interventions—reveal that baseline incidence set the costs of bribery: Healthcare workers tolerate only so much bribery in their wards, beyond which they experience the negative social consequences of belonging to a work group that takes bribes. They thus correct their behavior. Notably, even though management was not the target of the interventions, hospital directors reacted in a baseline sensitive manner also. That workers and managers tolerate some maximum level of bribery has precedent in other kinds of misconduct (Roy 1952, Gouldner 1954, Blau 1955, Crozier 1969, Burawoy 1982, Vaughan 1996, Anteby 2008, Pierce et al. 2015, Dhaliwal and Hanna 2017). Unlike prior research, however, I find that healthcare workers and hospital directors independently developed their tolerance thresholds and that these thresholds are ward specific. Third, post hoc analyses reveal that ineffective applications of the field interventions can be welfare-diminishing. Even though low baseline wards did not cut back on taking bribes, bribe solicitations strategically shifted to less conflictual forms, primarily to patient offers, which could make bribery stickier. Moreover, quality of care either stayed the same or slightly declined in low baseline wards, which contrasts with high baseline wards where quality of care improved.

This study advances scholarship on bribery, corruption, and misconduct in several ways. My field experiment targets workplace bribery by leveraging reputational threat among coworkers, a form of social accountability, thus expanding the use of information-based interventions beyond the primary ambit of individual-level top-down monitoring of more easily measurable workplace misconduct, such as theft, shirking, fraudulent accounting, and absenteeism (Hubbard 2000, Nagin et al. 2002, Olken 2007, Pierce et al. 2015, Dhaliwal and Hanna 2017). Furthermore, I augment the rare number of field studies of bribery in real-world organizational settings (Wade 1982, Sequeira and Djankov 2014) and the limited corpus of behavioral field research on misconduct (Larkin et al. 2021). I complement management research that either explains or leverages within- and across-organizational variation in misconduct to illuminate its dynamics (Pierce and Snyder 2008, Bennett et al. 2013, Aven 2015, Yenkey 2018, Mohliver 2019, Chan et al. 2021). In a step further, however, I combine a textured view of bribery inside and across hospitals with a field experiment to expand the set of possible solutions to this vexing problem.

That bribery abated in harder hit wards, despite its circumscribed effectiveness, is good news. That group-level reputational threat dissuades healthcare workers from taking bribes is a welcome counterpoint to scholarship and policymaking that assume high incidence environments are comprised of incorrigible public sector workers who self-select into public sector jobs based on their propensity to be corrupt (Besley 2005, Banerjee et al. 2015, Hanna and Wang 2017). There is growing interest in using social incentives to improve the functioning of public sector organizations (Besley and Ghatak 2005, Ashraf and Bandiera 2018). For example, research exploits frontline workers' concern for their social standing with external stakeholders, such as end-users and peer organizations, to improve public services delivery (Ashraf et al. 2014a, b; Christensen et al. 2021); I augment these works by demonstrating that internal stakeholders—such as coworker groups—can be an effective source of social accountability. Finally, my study jibes with the growing appreciation for integrating organizational theory insights of worker motivation with political economy research that considers bureaucratic effectiveness a core dimension of state capacity and development (Andrews et al. 2017, Pepinsky et al. 2017, Meyer-Sahling et al. 2018, Rasul and Rogger 2018, Rasul et al. 2021, Besley et al. 2022). My study scratches the surface of how social incentives can be used to reduce bribery and misconduct inside public sector organizations and is an invitation for exciting future research.

2. Experimental Design
2.1. Sampling and Measurement
Moroccans mostly use public hospitals (Ministère de la Santé 2016). When this study was conducted, from November 2015 to September 2016, 144 public hospitals served more than 30 million people. Like public workers elsewhere (Finan et al. 2017), healthcare workers are paid based on education and tenure rather than on performance. Staffing is done by the Ministry of Health (MoH), not by individual hospitals, which makes replacing healthcare workers and filling labor shortages difficult. Conversely, that centralized staffing reduces the chances of self-selection based on proclivity toward bribe-taking. In my field interviews, healthcare workers rarely complained about material shortages, but they complained often about staff shortages on the hospital floor, especially of paramedical staff.

2.1.1. Sampling Hospitals. My goal was to compare hospitals that differ on theoretically relevant dimensions for bribery but that are qualitatively comparable on other dimensions. Neither a convenience sample nor self-selection would ensure this. Because I did not know the incidence of bribery across and within hospitals, building this sample was nontrivial.

I began with the full population of hospitals, indexed by the *Direction des hôpitaux et des soins ambulatoires* (DHSA), a division of the MoH. I augmented the DHSA's 2013 data set with two other MoH sources: the *Carte sanitaire 2013* and the *Santé en chiffres 2013*.[5] I then excluded categories of hospitals for practical (budget and time) and theoretical reasons. I set aside hospitals that were too small, remote from cities, or highly specialized, as well as teaching and local hospitals. This leaves 34 hospitals from which I sampled based on theory. Scholars argue that resource constraints are associated with more corruption and lower-quality service delivery (Kornai 1992, Shleifer and Vishny 2002). Resource constraints may also moderate how workers respond to social incentives (Bowles 2016). In resource-strapped environments, workers may be more likely to discount the social consequences of their transgressions. I thus selected three hospitals from each side of the resource-constraint distribution (Online Appendix A). Given that prior surveys document high rates of bribery throughout the Moroccan healthcare sector (ICPC 2011, Afrobarometer 2013), it seemed reasonable to expect appreciable levels of bribery even in less resource-constrained hospitals.

After selecting these six hospitals, I visited each hospital's director to explain the purpose of the study, prepare hospital-specific paperwork, and establish a contact person to facilitate study implementation. I communicated that this was a national-level study that focused on testing how healthcare workers respond to nonfinancial incentives—specifically, to sharing information about their performance with them—to improve the quality and integrity of care.

2.1.2. Patient Survey and Measuring Bribery. The main sources of data are pre- and postintervention patient

surveys. If anything, getting patients to talk about bribery is harder than building a hospital sample. Patients do not feel safe disclosing their involvement in bribe exchange because offering and soliciting bribes is illegal in Morocco (see Transparency International Morocco). Given the mixed track record of indirect elicitation techniques for measuring sensitive behavior (Holbrook and Krosnick 2010, Coutts and Jann 2011, Gelman 2014, Rosenfeld et al. 2016, Kramon and Weghorst 2019), and their implementation problems (Gelman 2014), how best to measure bribery remains an open question. To mitigate underreporting, aside from direct measurement of bribe activity (Bertrand et al. 2007, Olken and Barron 2009, Sequeira and Djankov 2014), the best researchers can do is create a psychologically safe space for respondents to share their experiences (Simpser 2017). I do so in several ways.

To invite patients to converse, I formulated the survey in Darija, the local Moroccan dialect, and worked with experienced local surveyors to field the surveys. I also adjusted the survey's contents based on a field pilot, surveyors' feedback during training workshops, and regional differences in local populations. At the hospital sites, surveyors solicited patients on their way out of hospital, who had completed their course of care, to participate in an anonymous and voluntary survey about the ease and fairness with which public hospitals deliver care. Surveyors briefed patients that the survey was designed by researchers at Stanford University, an American university, collaborating with the Moroccan MoH. The solicitation text did not mention bribery (Online Appendix B.1), so I do not expect patients who participated in the survey to be more inclined to talk about bribery than whose who did not (Online Appendix B.2 for patient sampling). Surveyors interviewed patients on hospital premises but far from hospital buildings.

To make disclosure of bribery more likely, the survey eased patients into the question of how they obtained care in a number of ways. First, the survey did not exclusively focus on bribery, but also captured other important aspects of the care experience that bear on quality of care. Moreover, by asking patients to rechart their care path in the order in which they received services, the induced narrative structure strikes a conversational tone between patients and surveyors, which created an interpersonal rapport. Second, patients were asked about the quality of care before they were asked about how they obtained care. Third, the survey used the colloquial term for bribe *tadweera* (Moroccan Darija) rather than *rashwa* (formal Arabic). And finally, an introductory text and a question about other peoples' bribing behavior in the hospital in the past six months preceded the question regarding how they obtained care (Online Appendix B.3). Despite best efforts, bribe payments may remain underreported, but this is fine because, for a field experiment, what matters is that underreporting rates are comparable pre- and postintervention. I have neither theoretical nor empirical reason to believe otherwise.

I derive the key outcome variable from the question: "And you, when you were [hospitalized how did they take care of you in this hospital]?"[6] Up to three response choices are allowed: (1) normally, without resorting to bribery, benefits-in-kind exchange, or connections; (2) by paying a bribe; (3) I know someone who works at the hospital; (4) I know someone who works outside the hospital; (5) by benefits-in-kind exchange with someone at this hospital; (6) I prefer to not answer; and (7) I do not know. Except for the last two, answer choices were read out loud to respondents.

To map the prevalence of bribery within and across hospitals, I conducted the preintervention baseline survey in November and December 2015. The field experiment focuses on maternity wards because, across hospitals, they suffer the most from bribery. The postintervention survey I conducted in September 2016 targeted maternity patients who received care after the interventions were fielded. Table 1 gives an overview of the study timeline. In both survey waves, for each service discussed, patients listed the type of providers with whom they interacted, described the quality of care, and recounted how they accessed services; if they bribed, questions about the dynamics of the exchange ensued. Table 2 gives the number of patients surveyed and the corresponding number of interactions they reported on, per hospital at baseline and per maternity ward at baseline and postintervention.

2.2. Distribution and Performance of Bribery at Baseline

I first set out to establish a baseline understanding of how bribery was distributed and performed in hospitals. This allowed me to ring in context-relevant primitives about the phenomenon that informed the design and interpretation of my field interventions (Deaton and Cartwright 2018).

2.2.1. Distribution of Bribery Inside Hospitals.
Figure 1 displays maternity wards as bribery hotspots. Except for hospital 6, bribery is at least five times more prevalent in maternity compared with other hospital wards. Bribe rates vary more across maternity wards than across hospitals, and hospital-level rates do not track with maternity ward rates. Online Appendix B.5.1 details within-hospital variation with a breakdown of bribery's incidence by hospital ward. The uneven intensity with which bribery occurs inside hospitals resonates with scholarship that documents substantial variation in performance outputs and corruption across work units inside public sector bureaucracies (McDonnell 2017, Rasul and Rogger 2018, Rasul et al. 2021). Finally, bribe rates do not correlate with objective measures of hospital-level resource constraints. In fact, hospitals 2, 4, and 5 are more resource-strapped

Table 1. Study Timeline

Preintervention baseline survey	
Sept–Oct 2015	• Hospital selection and site visits
Nov–Dec 2015	• Preintervention baseline survey of patients in each hospital
Experimental design matrix	
	• Baseline data analysis suggests focus on maternity wards
	• Maternity ward conditions: Baseline Incidence Group {High Baseline, Low Baseline} × Treatment Arms {Visibility Threat, Informational}
	• Randomization of treatments within baseline group
Administration of intervention	
May 2016	• Exposure 1: Via electronic provider survey; incomplete compliance with treatment
July–Aug 2016	• Exposure 2: hand-delivered paper report; complete compliance with treatment
Postintervention survey	
Sept 2016	• Postintervention survey of maternity ward patients only

than hospitals 1, 3, and 6. Consonantly, healthcare workers' experiences with insufficient resources are comparable across maternity wards and do not vary with bribery (Online Appendix D); recent reviews of the relationship between resource constraints and corruption are consistent with these results (Fisman and Golden 2017).

2.2.2. Bribery in Maternity Wards. Returning to Figure 1, the eye sorts maternity wards into two groups. In the high baseline (HB) maternity wards, about half of patients pay bribes: 0.56 and 0.52 in hospitals 1 and 2, respectively. Across the low baseline (LB) maternity wards, between a quarter to a third of patients pay bribes: 0.22, 0.33, and 0.30 in hospitals 3, 4, and 5, respectively.

The high and low baseline designations are inductively generated based on one preintervention wave of data collection. Although an important question, this study is not designed to address what generates variation in the incidence of bribery across maternity wards at baseline. However, it is important to ascertain that the
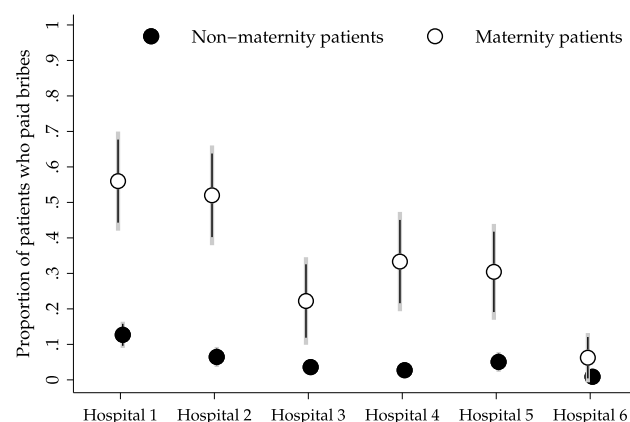
variation in maternity ward bribe rates is not the result of a sampling wave artifact. This is important because the baseline rates constitute a key design feature in the allocation of the field interventions. It is unlikely maternity baseline rates are a sampling wave artifact for several reasons that I detail in Online Appendix B.5.

Who takes bribes in maternity wards? On average, patients interact with three providers, including nonmedical staff, during their maternity ward stay. Doctors, midwives, and nurses deliver care in maternity wards. Table 3 reports the proportion of patient-provider interactions involving bribe exchange for each maternity ward per healthcare worker group. To calculate this interaction-level bribe rate, I divide the number of interactions that involve bribe exchange by the total number of interactions patients had with providers in the ward, stratified by provider type. Across maternity wards, 17% of interactions involve bribery. For high baseline wards the average is 27.5% and for low baseline wards the average is 10.7%. Furthermore, providers unevenly

Table 2. Sample Sizes of All Patients and of Maternity Patients from Pre- and Postintervention Surveys by Hospital

	All patients	Maternity patients	
Hospital (maternity ward)	Preintervention	Preintervention	Postintervention
Hospital 1 (HB$_{VT}$)	365 (2,426)	50 (137)	80 (269)
Hospital 2 (HB$_{Info}$)	344 (2,226)	50 (144)	81 (294)
Hospital 3 (LB$_{VT}$)	351 (3,556)	45 (133)	80 (254)
Hospital 4 (LB$_{Info1}$)	339 (2,521)	45 (143)	83 (330)
Hospital 5 (LB$_{Info2}$)	283 (2,605)	46 (167)	80 (312)
Hospital 6 (–)	387 (2,839)	48 (157)	—
Total	2,069 (16,173)	284 (881)	404 (1,459)
Survey response rate	46.45%	—	57.73%

Notes. Number of patients surveyed alongside the corresponding number of patient-provider interactions in parentheses. Hospital 6's maternity bribe rate is too different from the remaining five hospitals, about 6%, to be exploitable by the experimental design that matches maternity wards by baseline bribe rate, so it was excluded from the experiment. Tables B1 and B2 breakdown survey response rates by hospital and by maternity ward.

Figure 1. Proportion of Patients Who Bribed at Least Once During Service Provision, Preintervention

Notes. 95% confidence intervals. The nonmaternity bribe rates are 0.12, 0.06, 0.04, 0.03, 0.05, and 0.01 for hospitals 1 to 6, respectively. The nonmaternity bribe rate corresponds to bribes paid by nonmaternity patients in any service of the hospital; the maternity bribe rate corresponds to bribes paid by maternity patients while hospitalized in the maternity ward.

participate in bribery. Across wards, midwives are consistently the most active in the market for bribes, followed by nurses, and the occasional exchange with doctors. For example, in HB_{VT}, 47% of patient-midwife, 29% of patient-nurse, and 4% of patient-doctor interactions involve bribery. In LB_{VT}, 23% of patient-midwife, 8% of patient-nurse, and 2% of patient-doctor interactions involve bribery.[7]

Why and how did patients bribe? Patients reported paying bribes primarily for peace of mind, exemplified by the words "care," "attention," "fear of being neglected," and "help." Some cited more concrete reasons such as to avoid an episiotomy during childbirth, to take the time to deliver naturally, and to get a provider to deliver a change of clothes from family members waiting outside. Patients paid bribes before a service was

Table 3. Proportion of Patient-Provider Interactions That Involve Bribe Exchange at Baseline by Maternity Ward

Maternity ward	Doctor	Midwife	Nurse[a]	Other[b]	Total
HB_{VT}	0.04 (28)	0.47 (36)	0.29 (69)	0.00 (4)	0.28 (137)
HB_{Info}	0.08 (24)	0.50 (36)	0.23 (70)	0.21 (14)	0.27 (144)
LB_{VT}	0.02 (43)	0.23 (40)	0.08 (39)	0.09 (11)	0.11 (133)
LB_{Info1}	0.00 (29)	0.33 (43)	0.06 (67)	0.00 (4)	0.13 (143)
LB_{Info2}	0.00 (48)	0.19 (37)	0.14 (64)	0.00 (18)	0.10 (167)
Total	0.02 (172)	0.34 (192)	0.17 (309)	0.08 (51)	0.17 (724)

Notes. Number of interactions between patient and provider group member in parentheses. For example, in HB_{VT}, maternity patients report on 36 interactions with midwives, of which almost half involve a bribe payment.
[a]Nurses' aides are combined with nurses.
[b]Other refers to other healthcare workers such as the chief nurse, chief midwife, and nonmedical staff like support, cleaning, and security agents.

provisioned or a request was fulfilled; these payments were unambiguously quid pro quo. Turning to Table 4, I find that bribe exchanges are dyadic—either patients offer or providers initiate through indirect or direct asks. Indirect asks dominate provider-initiated solicitations for bribes; they make up about 30% of bribe asks across maternity wards. A patient's mother-in-law asked the midwife about her daughter-in-law's state and the midwife retorted, "You people are reluctant to understand," which the patient interpreted as an indirect request for a bribe. Another patient disclosed that, despite her labor pains, she was unexamined by the midwife, which she interpreted as an implicit demand for a bribe. Direct asks make up about 14% of bribe asks across maternity wards. A patient described how she was directly solicited by a midwife: "When she was examining me, she asked me to give her 300 dirhams so they help me give birth quickly and I avoid staying in pain for too long." Patient offers make up about 56% of bribe solicitations across maternity wards. Patients offered in various ways: "I put it in her hand"; "I called for her and told her 'take care of me, I'll take care of you well' after which I placed it in her pocket; "I told her this amount was for the children"; "I put it in her pocket." Solicitation patterns vary across maternity wards and do not map onto maternity ward bribe rates.

Moreover, on average patients paid one bribe and typically determined the bribe size. Midwives received larger bribes compared with nurses, commensurate with their higher status in maternity wards. The dyadic nature of bribes, combined with the caution with which bribes are exchanged, and the fact that patients paid one bribe on average and determined its value, indicate that healthcare workers operate primarily as independent agents. Finally, confrontations between patients and providers are exceptionally rare, as are unrealized bribe attempts.[8] These results are consistent with previous work that documents conflict-minimizing strategic behavior and low confrontation rates (Olken and Barron 2009, Dakhlallah 2022). This seamless execution of bribe exchanges occurs even though a patient spends between 6% and 23% of her monthly household income on bribes while hospitalized (Table B3). The incentives for healthcare workers to take bribes are not only strong because of their often smooth exchange but also because of the extent to which bribes supplement their monthly income. I estimate that bribes supplement the monthly household income of midwives and nurses by bribe amounts that fall between 10% and 43% of their monthly household income (Table B3).

2.3. Intervention Design

From the baseline data, we learn that bribery is unevenly distributed across hospitals and hospital wards, and that healthcare worker groups, even in the same maternity ward, are unevenly involved in bribery. We also learn about the dyadic nature of bribe exchanges and the

Table 4. Dynamics of Bribe Exchange in Maternity Wards, Preintervention Data

	HB$_{VT}$	HB$_{Info}$	LB$_{VT}$	LB$_{Info1}$	LB$_{Info2}$
Total number of patient-provider interactions	137	144	133	143	167
Total number of bribes paid	38	39	14	18	16
Number of unrealized bribe attempts	1	0	1	0	0
For bribes paid					
Proportion that are provider-initiated asks	0.61	0.36	0.07	0.83	0.125
Proportion that are patient offers	0.39	0.64	0.93	0.17	0.875
Mean number of bribes paid per patient (SD)	1.36 (0.49)	1.50 (0.65)	1.40 (0.52)	1.20 (0.56)	1.14 (0.36)
Proportion of patients who set bribe size	0.84	0.87	1.00	0.89	1.00
Proportion of bribes paid without confrontation	1.00	0.95	1.00	0.89	0.88
Median bribe size in Dirhams	50	200	100	100	100
Average bribe size to midwives in Dirhams (SD)	150 (121)	294 (132)	102 (45)	185 (92)	171 (57)
Average bribe size to nurses in Dirhams (SD)	51 (27)	98 (68)	40 (17)	38 (14)	72 (51)

Notes. Ten Moroccan Dirhams equals about 1 USD. SD is standard deviation. Provider-initiated asks capture direct and indirect demands; confrontation may be verbal or involve filing an official complaint.

cautious exchange dynamics that keep them concealed. Considering bribery's unevenness and secrecy in hospitals, alongside Ministry of Health-generated posters that interdict bribery and clientelism and hang on hospital walls, it is unsurprising that maternity staff have poor knowledge of bribery's incidence levels in their wards (Figure C1)—they do not talk about it. The bottom line message of the baseline data are that bribery is neither pervasive nor normalized, neither across work units nor across coworker groups in the hospital, and this is a core contextual feature for leveraging a reputation-based intervention, such as threat of social exposure in the workplace, against bribery. It is to such treatments that I now turn.

2.3.1. Treatments. To test whether the threat of exposure among coworker groups reduces bribe-taking in organizations, workers must learn, even if approximately, about their work unit's participation levels in bribery. The *visibility threat* (VT) treatment reveals the maternity ward-level incidence of bribery alongside maternity staff's ward-level performance on four ward-relevant care acts. It also notifies healthcare workers of an impending breakdown of bribe rates by healthcare worker group (more disaggregated) and hospital-wide dissemination of these rates (more public), with explicit cues for cross-provider and cross-ward comparisons. The left panel of Table 5 summarizes its core features that signal the threat of exposure: More disaggregated: " … in the next survey we will ask about the quality of care provided by doctors, midwives, and nurses separately." More public: " … allow you to compare the performance of doctors, midwives, and nurses to each other on indicators" and "share your performance in a hospital-wide report so providers from other service divisions can compare themselves to you and you can compare yourselves to them on common indicators." I prime reputational concerns among coworker groups by exploiting well-defined occupational groups that structure the delivery of healthcare in hospitals and shape social

relations between healthcare workers within and across hospital wards (Freidson 1974, Starr 2008, Abbott 2014, DiBenigno and Kellogg 2014, King and Nembhard 2016).

The visibility threat treatment, however, amounts to the first time that data about bribery's incidence is collected and the first time that healthcare workers learn about bribery's incidence in their wards. Because the goal of the intervention is to capture the effect of visibility threat on behavior, we must account for the novelty of first-time revelations to avoid conflating the two effects. To this end, I use an *informational* (Info) treatment as a comparative control. The right panel of Table 5 describes the core features of the informational intervention. The Info treatment shares the same structure as the VT treatment: it reports maternity ward-level incidence of bribery alongside maternity staff's performance on four ward-relevant care acts, except for the threat of exposure. In both interventions, information about bribery is collected, revealed to ward members, and discussed for the first time. Thus, by comparing behavior change between treatments, I subtract out the novelty of first-time revelations and isolate the threat of social exposure effect on behavior.

I decided against two possible alternatives for the control condition. The first alternative is a pure or no-treatment control condition (Carroll 2001, Banerjee et al. 2021), in which maternity wards are not subject to an intervention. The second alternative is a neutral control (Carroll 2001, Ashraf et al. 2020), in which only the four care acts are reported without the ward-level bribe rate. The problem with both alternatives is that they do not account for the fact that collecting and sharing data with maternity staff about bribery is uncommon in Moroccan public hospitals. Therefore, neither the pure nor the neutral control would generate the right contrast to VT for isolating the visibility threat effect. The comparison between VT and Info hinges on the active ingredient that distinguishes the two treatments: the threat of exposure among coworker groups and hospital-wide, per the italicized text in Table 5.[9]

Table 5. Main Aspects of the Field Interventions Administered in Maternity Wards in May 2016 (First Exposure) and July–August 2016 (Second Exposure)

Visibility threat (VT) treatment	Informational (info) treatment
Reference to the date the baseline survey was conducted in Nov–Dec 2015	Reference to the date the baseline survey was conducted in Nov–Dec 2015
Ward-level performance on four quality of care indicators[a]	Ward-level performance on four quality of care indicators
Did your service accept informal payments from patients?[b] $X\%$ of patients said yes	Did your service accept informal payments from patients? $X\%$ of patients said yes

<table>
<tr><td colspan="2" align="center">Intervention text translated from French</td></tr>
</table>

In a couple of months we will survey patients in your service again. We will ask them about these indicators again.	*In a couple of months we will survey patients in your service again. We will ask them about these indicators again.*
However, in the next survey we will ask about the quality of care provided by doctors, midwives, and nurses separately.	
What to expect next time? *1. You will receive a letter that will allow you to compare the performance of doctors, midwives, and nurses to each other on these indicators*	
2. We will share your performance information in a hospital-wide report so providers from other service divisions can compare themselves to you and you can compare yourselves to them on common indicators	

Notes. The X changes by maternity ward. See Online Appendix E for compliance with treatment rates and the paper version of the interventions shared with healthcare workers.
[a]Did your ward verify the heart rate for patients' fetus? $X\%$ of patients said yes; did your ward help patients with their pain? $X\%$ of patients said yes; how many times a day did your ward check up on patients? On average, X times per day; did your ward ask patients about their allergies to medication? $X\%$ of patients said yes.
[b]Informal payments refer to bribes.

That said, two limitations come from excluding pure and neutral control arms from the experimental design. First, I cannot measure the treatment effect of ward-level revelations about bribery. To capture this effect, we would need to set up a contrast between my Info treatment and a structurally identical neutral informational control which contains information about the ward-relevant care acts but not bribery. Under this contrast, the active ingredient would be the ward-level bribe rate. This would have been valuable because information-based interventions against misconduct and corruption do not target bribery. However, given the limited number of "strategic research sites" (Merton 1987) at my disposal, I prioritized clean identification of the visibility threat effect. Second, because I have one wave of baseline data, a pure control would have allowed me to rule out regression-to-the-mean effects in maternity wards with greater certainty. Speaking to this point, my analyses of baseline rates in Online Appendix B.5 indicate that regression to the mean is unlikely.

2.3.2. Allocation of Treatments. I match maternity wards on their baseline bribe rate and randomly allocate the treatments within the same baseline group. The resulting experimental design matrix is as follows: Baseline Group {High, Low} × Treatment Arm {Visibility Threat, Informational}, which follows the logic of a matched-pair, cluster-randomized design (Imai et al. 2009, Gerber and Green 2012). Matched-pair designs

assume that similarity on relevant baseline covariates between treated units implies similarity on potential outcomes under each treatment (Gerber and Green 2012, Imbens and Rubin 2015). They make treatment effect estimates more precise and pairwise comparisons available for separate analysis (Gerber and Green 2012, Imbens and Rubin 2015). Matching treatment arms on the most important preintervention variable of interest—the baseline bribe rate—ensures that for a given VT-Info comparison, healthcare workers who belong to maternity wards of the same baseline group experience first-time revelations of bribery similarly. In other words, I create a controlled comparison of healthcare workers' reactions to treatments that are anchored in similar bribery environments. I define the *visibility threat premium* (VT-premium) as the difference in the change in bribe rates from baseline to postintervention between the VT and Info conditions.

The MoH and hospital directors are blind to the treatment arm to which a given maternity ward is assigned. For a given maternity ward, neither the hospital director nor healthcare workers knew the identity of the remaining hospitals participating in the study; this should mitigate concerns about cross-hospital comparisons by hospital directors and healthcare workers.

2.3.3. Administration of Treatments. To achieve complete treatment compliance, healthcare workers across maternity wards were exposed to the treatments twice.

First Exposure: Healthcare workers in maternity wards were first exposed in May 2016, approximately five to six months after baseline data were collected. During the month of May, I was on location in each hospital site for about four days. I invited maternity staff to fill out a provider survey on electronic tablets. I had two goals with the provider survey. The first goal was to develop a well-rounded picture of maternity healthcare workers; this way I put patient survey data and healthcare workers' response to the interventions in context. The second goal was to distribute the field interventions to healthcare workers. In the survey, I inquired about healthcare workers' socioeconomic and demographic background; about their work constraints, relationships, and routines; and about their priors regarding bribery and the quality of care they provided patients with. I shared the field interventions with them at the end of the survey.

By distributing the field interventions through the provider survey, I was able to document up close healthcare workers' reactions to the interventions. I kept extensive notes of the field conversations I had and the behavioral reactions I observed. Because of the uneven participation rates in the survey across maternity wards, however, only a subsample of healthcare workers in maternity wards were treated; between 11% and 50% of doctors and 46% and 85% of midwives and nurses (Table E1).

I also administered the provider survey to pediatrics wards concurrently with maternity. Although they were not part of the experiment, I reasoned that collecting data from pediatrics would give me a more well-rounded understanding, even if incomplete and descriptive, of the cross-ward variation in bribery. Moreover, although pediatrics is not unique in its low bribe rates, it is more comparable to maternity than the remaining hospital wards.[10] These data prove useful in interpreting the experimental results.

Second Exposure: To ensure complete exposure to the treatments, across maternity wards, healthcare workers were exposed to the field interventions a second time, between mid-July and the first week of August 2016. For each ward, I prepared the one-page paper report (Figure E1), which communicated the same contents as the electronic diffusion. The paper reports were hand-delivered in a sealed envelope to each provider. Although unconventional, the double exposure resulted in complete compliance with treatment (Table E1). The second exposure furnished another set of informative reactions to the interventions.

3. Quantitative Analysis for Estimating Treatment Effects

In the field interventions, I shared the patient-level bribe rate, which I calculated as the proportion of patients who paid bribes. This is an easy figure for providers to grasp. For my analysis, however, I focus on the interaction-level bribe rate, which I calculate as the proportion of patient-provider interactions that involved bribe exchange. This formulation takes into account patient-provider contact frequency—some patients interact with three providers, others with five—which determines opportunities for bribe exchange.

3.1. Estimation Strategy

To estimate the difference in bribe rates before and after the interventions between the VT and Info wards, I use a difference-in-differences (DD) linear regression model (Gerber and Green 2012). On the one hand, DD estimates are advantageous because they net out the time-invariant factors that vary across maternity wards and the time-varying factors that are common across wards, which impact treatment effect estimates (Wing et al. 2018). On the other hand, it is important to ensure the common-trends assumption underlying the DD estimates holds. This assumption states that changes in bribery over time would have been the same in the wards in the absence of the interventions (Bertrand et al. 2004). My field research and analyses in Online Appendix B.5 make me reasonably confident this assumption holds.

In the analysis, the main regression specification of the DD model is

$$Y = \beta_0 + \beta_1 \times dT + \beta_2 \times dW + \beta_3 \times (dT \times dW) + \epsilon, \quad (1)$$

where dT is a dummy for the treatment arm (VT or Info), dW indicates the period (pre- or postintervention), and $dT \times dW$ captures the visibility threat premium that gives the average causal effect of visibility threat.

To evaluate the visibility threat premium separately for each baseline group, the triple difference (DDD) model is

$$\begin{aligned} Y = \beta_0 &+ \beta_1 \times dT + \beta_2 \times dW + \beta_3 \times dB \\ &+ \beta_4 \times (dT \times dW) + \beta_5 \times (dT \times dB) + \beta_6 \times (dW \times dB), \\ &+ \beta_7 \times (dT \times dW \times dB) + \epsilon \end{aligned} \quad (2)$$

where dT and dW are defined as in Equation (1), dB is the baseline group (high or low) and $dT \times dW \times dB$ is the triple difference that captures the baseline group-specific causal effect of visibility threat.

To account for the unequal probability of assignment to the VT treatment between baseline groups, 1/2 and 1/3 for HB and LB wards, respectively, the estimated models incorporate inverse probability weights (IPW) (Gerber and Green 2012, Imbens and Rubin 2015). IPW is calculated as $w_{ij} = (1/p_{ij}) \times d_i + (1/(1 - p_{ij})) \times (1 - d_i)$, where i is the maternity ward, j is the baseline group, and d_i is the treatment condition (Gerber and Green 2012). This yields IPW$_{HB}$: {HB$_{VT}$, HB$_{Info}$} = {2, 2} and IPW$_{LB}$: {LB$_{VT}$, LB$_{Info1}$, LB$_{Info2}$} = {3, 3/2, 3/2}. I estimate multilevel DD and DDD models to account for the correlated error structure by specifying group-level random effects (Raudenbush and Bryk 2002, Bertrand et al. 2004, Gelman and Hill 2006). To inform the random effects

specification in the multilevel models, I conduct an analysis of variance that reveals that the largest driver of variance in patient-provider interactions is between patient (Appendix F).
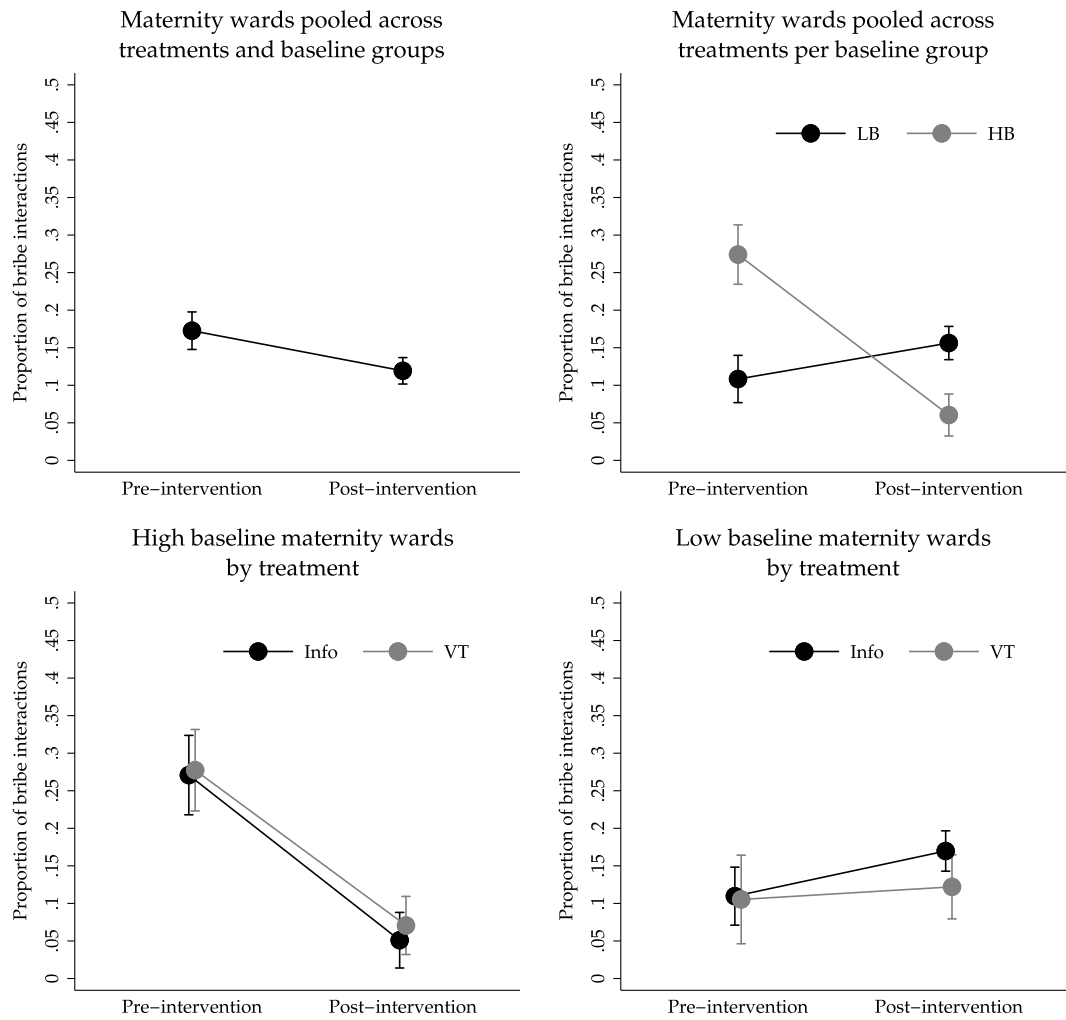
Robustness and Balance Checks: The smaller scale of this field experiment could compromise the soundness of the causal identification that matched-pair randomization proffers (Gerber and Green 2012, Imbens and Rubin 2015, Deaton and Cartwright 2018). To mitigate concerns about enfeebled identification, I examine maternity ward-level characteristics preintervention (Appendix D) and compare patient profiles between wards, preintervention within a baseline group, and within a ward, across the two time periods (Figure G2). There are no substantial differences or changes between the VT and Info maternity wards that would confound the estimation of treatment effects. Existing differences do not map onto ward-level bribe rates and are orthogonal to the treatments received. I also confirmed with the head nurse of each ward that—

other than the field interventions' administration—no significant changes occurred in the wards between the baseline and postintervention surveys, neither in terms of staffing nor the organization of work. Routine changes, such as retirements, that did occur were few and are unlikely to impact bribery in a substantive way.

3.2. Results

3.2.1. Before and After Mean Plots.
I start by comparing interaction-level bribe rates, hereafter bribe rates, before and after the administration of the treatments. Figure 2 plots before and after bribe rates pooled across treatment arms and baseline groups (top left); pooled across treatment arms by baseline group (top right); by treatment arm for the high baseline group (bottom left); and by treatment arm for the low baseline group (bottom right). We see that the VT and Info treatments impacted provider behavior similarly within a baseline group and differently across baseline groups. With this

Figure 2. Proportion of Patient-Provider Interactions That Involve Bribe Exchange Pre- and Postintervention While Hospitalized in Maternity Wards

Notes. Interactions with all providers counted. Nonparametric plots with 95% confidence intervals.

nonparametric benchmark analysis in mind, I turn to estimating the visibility threat effect.

3.2.2. Estimated Treatment Effects. Table 6 reports DD estimates of the visibility threat premium for ordinary least squares (OLS) Models 1–3 and linear multilevel (ML) Models 4–7. The VT × Post coefficient captures the visibility threat premium. OLS models with standard error corrections account for the grouped data structure but, unlike ML models, cannot estimate group-level random effects, nor do they account for multilevel clustering in the data (Raudenbush and Bryk 2002, Gelman and Hill 2006). Because the largest driver of variance of bribe exchange in patient-provider interactions is between-patient, Model 2 clusters standard errors by patient and Model 4 incorporates patient-level random effects. Both models estimate that visibility threat reduces bribe exchange by 6.9 percentage points, a statistically significant reduction. This decrease is consistent with estimates

from Model 1, which does not account for clustering, and Model 5, which includes patient- and maternity-level random effects.

Once I incorporate inverse probability weights into the models to account for unequal probability of assignment to treatments, however, the VT premium disappears. In Model 6, the coefficient decreases by half and loses statistical significance—which means bribe rates in the VT and Info wards changed in the same way. To see this, I calculate the predicted probabilities of bribe exchange from Model 6 by treatment and plot the predictions in Figure 3. Although bribe rates decrease under both treatments, the prospect of increasing the social visibility of healthcare workers' bribe activity is no more effective in discouraging them from taking bribes than only sharing the ward-level incidence with them.
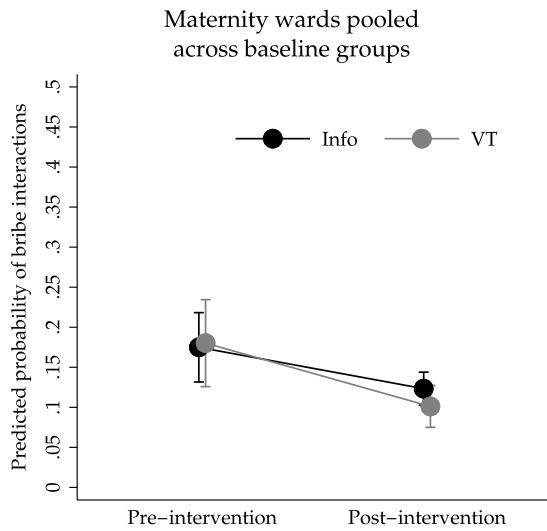
I next examine differences in how the treatments affect provider behavior between high and low baseline maternity wards. Model 8 reports the triple difference, which

Table 6. Ordinary Least Squares (Models 1–3) and Multilevel (Models 4–8) Difference-in-Differences Regressions Predicting the Probability of Bribe Exchange in Patient-Provider Interactions

	Ordinary least squares models			Multilevel models				
	(1)	(2)	(3) IPW	(4)	(5)	(6) IPW	(7) IPW	(8) IPW, baseline
VT (dT)	0.032	0.032	0.004	0.034	0.034	0.005	0.005	−0.003
Ref = Info	(0.026)	(0.034)	(0.035)	(0.028)	(0.028)	(0.035)	(0.087)	(0.037)
Post (dW)	−0.028	−0.028	−0.047*	−0.032	−0.032	−0.052**	−0.052	0.059***
Ref = Pre	(0.020)	(0.023)	(0.024)	(0.021)	(0.021)	(0.024)	(0.093)	(0.023)
VT × Post (dT × dW) *DD*	−0.069**	−0.069*	−0.028	−0.069**	−0.069**	−0.027	−0.027	−0.044
	(0.032)	(0.039)	(0.039)	(0.034)	(0.034)	(0.039)	(0.127)	(0.044)
HB								0.164***
Ref = LB								(0.050)
VT × HB (dT × dB)								0.010
								(0.073)
Post × HB (dW × dB)								−0.283***
								(0.053)
VT × Post × HB (dT × dW × dB) *DDD*								0.056
								(0.080)
Intercept	0.161***	0.161***	0.171***	0.164***	0.164***	0.175***	0.175***	0.110***
	(0.016)	(0.020)	(0.022)	(0.017)	(0.017)	(0.022)	(0.055)	(0.018)
Random effects								
$\sigma^2_{patient}$				0.007***	0.007***	0.008***	0.008***	0.005***
				(0.003)	(0.003)	(0.003)	(0.006)	(0.003)
$\sigma^2_{maternity}$					0.000		0.000***	
					(0.000)		(0.000)	
$\sigma^2_{residual}$				0.111***	0.111***	0.107***	0.107***	0.107***
				(0.004)	(0.004)	(0.006)	(0.010)	(0.006)
No. interactions	2,183	2,183	2,183	2,183	2,183	2,183	2,183	2,183
Cluster patient ($n = 640$)	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster maternity ($n = 5$)	No	No	No	No	Yes	No	Yes	No
df	3	3	3	3	3	3	3	7
χ^2				16.648	16.648	12.281	18.643	70.9

Notes. Interaction-level bribe rate used. Models 1–7 estimate difference-in-difference (DD) treatment effects, and Model 8 estimates the triple difference (DDD). Standard errors in parentheses. σ^2 corresponds to the variance component estimates. The models cluster by patient, maternity ward, or both. IPW refers to inverse probability weights to account for unequal probability of assignment to the visibility threat treatment across baseline groups. Baseline refers to the baseline group (high or low). My preferred models are 6 and 8; see Table F2 for the analysis of variance I conducted to support this preference. The visibility threat premium is captured by the VT × Post coefficient in Model 6 and the VT × Post × HB coefficient in Model 8.

*p < 0.10; **p < 0.05; ***p < 0.01.

Figure 3. Predicted Probability of Bribe Exchange Pre- and Postintervention by Treatment Arm

Maternity wards pooled
across baseline groups

Notes. Interaction-level bribe rate. Interactions with all providers counted. 95% confidence intervals. Calculated from Model 6 in Table 6.

expresses the intuition that baseline bribery levels may moderate treatment effects. The coefficient VT × Post × Baseline captures the triple difference and can be algebraically expressed as $DDD = (\Delta_{VT} - \Delta_{Info})^{HB} - (\Delta_{VT} - \Delta_{Info})^{LB}$, where Δ denotes change in bribe rates before and after treatment. We do not see a visibility threat premium even when we account for bribery's baseline incidence levels.

We do not detect a VT premium but the *kind* of behavioral changes that the field interventions induce in the high and low baseline wards is substantively and substantially different. Figure 4 plots the predicted probabilities of bribe exchange, calculated from Model 8, by treatment arm per baseline group, for the high baseline

(left) and low baseline (right) maternity wards. Across treatment arms, providers in high baseline wards significantly decrease their bribe exchanges with patients postintervention, by about 22 percentage points. In contrast, providers in low baseline wards maintain their preintervention bribe exchange levels.
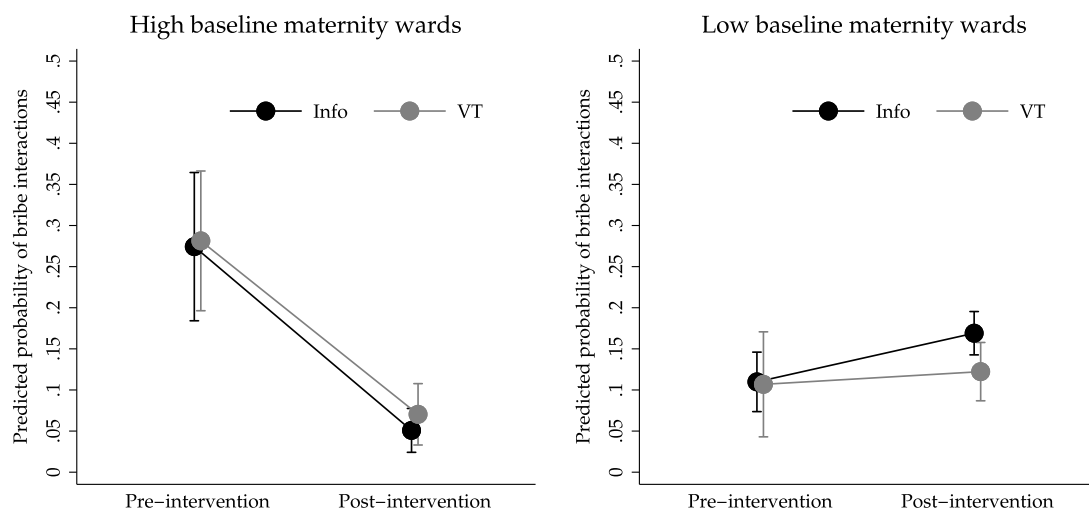
The difference between the high and the low baseline wards in the field interventions' effects suggests that the baseline incidence rate is the more salient feature of the interventions. The VT and Info treatments decrease bribery in high baseline wards and are ineffective in reducing bribery in low baseline wards.[11] To explain these results, I turn to the analysis of qualitative field data.

4. Qualitative Data Analysis for Explaining Treatment Effects

Given the surprising results—the absence of the visibility threat premium and the divergent effects on bribery by baseline group—qualitative reactions to the field interventions can illuminate *how* the interventions worked in maternity wards (Deaton and Cartwright 2018). Here, I share healthcare workers' and hospital directors' reactions to the field interventions. They give a sharp account of how the interventions were received and reveal where the implementation protocol deviated, thus rendering the results of this field experiment more serviceable for evidence-based theory development and for the design of anticorruption policy levers in organizations.

4.1. Close Up of the Hospital Floor: Immediate Aftermath of Exposure to the Field Interventions

I documented healthcare workers' hospital floor reactions in the immediate aftermath of sharing the field interventions on two occasions. On the first occasion—

Figure 4. Predicted Probability of Bribe Exchange Pre- and Postintervention by Treatment Arm per Baseline Group

Notes. Interactions with all providers counted. 95% confidence intervals. Calculated from Model 8 in Table 6.

their first exposure—I shared the interventions at the end of an electronic provider survey; my interactions and conversations with survey participants generated a close up view of individual healthcare workers' reactions. On the second occasion—their second exposure—maternity staff received a one-page paper report; healthcare workers were individually emotive and also reacted as a group.

First Exposure Reactions: Healthcare workers' reactions varied. For the most part, LB_{Info2} and LB_{VT} survey participants were laconic. In LB_{Info2}, one midwife asked what I meant by informal payments and I explained using a colloquial term for bribe, "cadeau" (gift). A second midwife slipped out, survey incomplete, to take phone calls about where she was—her exit coincided with her landing on the bribe rate page of the survey. A third midwife thought the quality of care numbers were reasonable but that "patients lie about bribery." A physician remarked: "I thought it [bribe rate] was much worse than this." In LB_{VT}, one midwife said, "The data were interesting and somewhat expected," but she was also "disappointed at some," referencing the bribe rate.

In LB_{Info1}, one midwife criticized some of the quality-of-care numbers but believed the bribe rate reported. When I asked her why informal payments were made, she refrained from direct comment; in general, however, she believed that the conditions of work in her maternity ward did not encourage good work. Another midwife was remarkably accurate in her estimates of care acts and bribery, and when she shared her estimate of the incidence of bribery, she asked "to keep it a secret between us." A third midwife turned red in the face when I shared the bribe rate with her and retorted, "This doesn't happen, you saw the patients who come here!" A fourth midwife thought one possible reason for bribery is that "midwives aren't compensated well enough relative to the risks that they take, neither are nurse anaesthetists"; she also commented on the far from ideal working conditions, such as "foul smells" and "inadequate sanitation."

In HB_{VT}, a physician wanted to be the first to take the survey. The physician was inquisitive about the choice of questions and felt I understood the Moroccan healthcare sector well. Once at the bribe rate page, the physician clarified whether by informal payments I meant corruption and I responded, "Oui, pots de vin" ("Yes, bribes"). Face flushed, the physician further inquired whether the number pertained to maternity or the hospital. I said maternity and was met with "Shocking." One midwife was engaged with and inquisitive about the survey questions until she landed on the bribe rate page. Thereafter, she fidgeted with her phone and stepped out of the room, only to return to address her coworkers taking the survey: "Come on, we need to work"; she then turned to me: "You're delaying my girls." A third midwife moved gregariously through the survey only to pause in silence once she landed on the bribe rate page; she was overcome by the sudden impulse to inquire about an expecting patient she left with her coworker: "Let me just call and check that this lady gave birth."

In HB_{Info}, one midwife was caught off guard by the 52% incidence rate and succumbed to laughter. As she laughed, she would say, "Ah, bizzaf! bizzaf!" ("Ah, too much! too much!"). A second midwife, once she confirmed the meaning of informal payments, estimated bribery as "Ah, ma bakash! C'est dépassé!" ("Ah, no longer! That's old fashioned!"). She reasoned the younger generation had a different mindset, only to be thrown off by the revealed rate. She was surprised to see the number on the percent of women who had their fetus's heart rate measured: "It's absolutely critical to do!" A third midwife revealed that, although she found the information interesting, some of the numbers did not sit well with what she felt they did. She gave pain management as an example: "The medication exists to manage pain, so why not offer it? Particularly when it's going to make the midwife's life easier." She did not comment on bribery.

A fourth midwife said the topics were great, "including corruption." She did, however, think the questions were too focused on how providers dealt with patients and that I should also be asking about how patients interact with providers and that I look at the demands they make on providers. She proceeded with an example: "The midwife should help the woman who just had a caesarean section with her 'première levée' ('the first time she gets up'); however, patients expect to be helped by the midwife every single time they need to get up." She continued: "I gave birth. I didn't behave the way they do. They need to have more patience. 'Elles sont trés exigeantes' ('They're very demanding). These women, they want to be taken to the toilet, to be helped to sit, to walk. It's not possible. And if we don't help, we're told that we're not being good to patients. I don't see pregnant women as 'malades' ('sick'). They're simply expectant mothers." She didn't believe the number on whether patients were asked about their allergies to medication because she asks every single time, and she knows the rest of her teammates do too. She suggested questions to capture the demands that patients make on providers.

A fifth midwife did not agree with the numbers on pain management and allergy to medication questions: "Patients are never satisfied." She didn't comment on the bribe rate. A sixth midwife: "Patients are never satisfied. They're lying about corruption." She added, "The allergy number doesn't make sense," because if they do not ask and something happens to the patient, it's their neck on the line. A seventh midwife didn't entirely buy the numbers either, especially on fetal heart rate measurement, pain management, and allergy to medication: "There's a human side to all this. Why not help people

with pain if you can?!" An eighth midwife, with an eye irritation from placental blood that splashed into it, clarified the meaning of informal payments when asked for an estimate, only to respond: "Man ahdak ahabbak" ("Who gifts you, loves you"). She laughed at the revealed bribe rate and said "Patients lie about corruption."

Compared with low baseline wards, healthcare workers in high baseline wards were more expressive. Moreover, about half of healthcare workers who participated in the provider survey in high baseline wards felt (extremely) disappointed compared with about a quarter in low baseline wards (Figure C1).

Second Exposure Reactions: Compared with the first exposure, healthcare workers in high baseline wards were significantly less tempered in their reactions to the second exposure. This time, the field interventions posed an unwelcome intrusion into their workplace.[12] Much to their chagrin, HB_{VT} providers unrelentingly countered the reports' contents, which contrasts with HB_{Info}, who were also vexed but less collectively emotive and more collectively tempered. An HB_{VT} midwife galvanised her coworkers into refusing the hand-delivered reports. In support of the midwife's initiative, a fellow midwife and a physician combined forces to block the report's circulation. They retorted that "to accept the report is to acknowledge that its contents truthfully reflect [their] work." They could not accept "erroneous numbers" that "hit [them] hard in the heart," "devalued [their] work," and "made [them] look bad." They planned to complain to the hospital director with feedback from the ward's remaining staff members. Considering the commotion, I contacted HB_{VT}'s director and offered an exit from the study. He declined exit and tasked the head of paramedical personnel at the hospital with reaching out to maternity staff. One week later, the reports were confirmed as distributed. In HB_{Info}, providers verbalised their disappointment and disbelief of the report's contents but did not block its distribution. Nevertheless, one HB_{Info} provider tore into the report, challenging its veracity, and said that asking about bribery was out of bounds. In contrast, in low baseline wards, the second exposure was met with the uneventful circulation of the field reports, although providers were not keen about the report's contents.

Healthcare workers' first and second exposure reactions reveal the field interventions struck a chord in maternity wards, especially in high baseline wards. By the second exposure, it was evident the baseline bribe rate played a salient role in shaping healthcare workers' experiences of the field interventions. I therefore expected to see a larger treatment effect in high baseline wards. About two months later, I proceeded to collect postintervention data. By the end of this second wave of data collection, however, it became clear that HB_{VT} and HB_{Info} workers had cut back on bribe-taking in comparable measure and that LB_{VT} and LB_{Info} workers had not. I

was surprised to see that the threat of exposure did not result in a larger decrease in HB_{VT} compared with HB_{Info}, nor did it activate a decrease in LB_{VT}, even if the LB_{Info} bribe rate were to remain unchanged. Puzzled, I investigated.

Because of HB_{VT}'s strong reactions, I reasoned that, perhaps, HB_{Info} workers had also mobilized in discontent and complained to their hospital director, only after the distribution of the reports was complete. I contacted HB_{Info}'s hospital director, only to learn that, quite the opposite, it was the director himself who initiated a staff meeting two weeks after the distribution of the paper reports. He convened a meeting to discuss the numbers and ways to improve. He said maternity staff were displeased with the numbers and rejected them on the grounds that patients did not understand the questions asked by surveyors. He was unswayed by this argument and said to them that if they were convinced that they performed all the medical acts, then they should improve their communication of the acts to patients. He also admitted to convening a meeting two weeks before the start of the postintervention survey of patients. In contrast, in the low baseline wards, neither provider-initiated nor director-initiated contact between maternity staff and hospital directors transpired concerning the field reports.

Braced with this information, I can explain, in large part, why the visibility threat premium did not show up in the high baseline group. HB_{Info}'s hospital director breached experimental protocol by convening meetings with maternity staff to press them toward remedial action. The director's initiative eliminated the design-based identification between the treatments. This does, however, raise the question: Do HB_{VT} and HB_{Info} really differ that much in terms of management's response to the field interventions? On the one hand, HB_{Info} may have convened two meetings, but HB_{VT}'s director declined exiting the study despite the incensed maternity staff and tasked the chief of paramedical staff to reach out to them. On the other hand, who moves first to involve management—the director of the hospital (top-down mobilization in HB_{Info}) or maternity ward staff (bottom-up mobilization in HB_{VT})—matters for interventions that aim to prompt behavior change (Kellogg 2011).

Regardless, we now have a probable cause for why the incidence of bribe exchange decreased in equal measure across high baseline wards. Even so, we have yet to explain why the visibility threat premium is absent and why bribery rates did not change in low baseline wards. It's tempting to chalk up the difference between baseline groups *solely* to managerial follow-up—present in high and absent in low baseline wards. But this denies the reality of healthcare workers' reactions in the immediate aftermath of the field interventions. It implausibly assumes that without managerial follow-up, the field interventions would not have

stimulated behavior change. We would be hard-pressed to ignore the reactions of the hospital directors, but wrong to treat them as the sole trigger.

If anything, the more reasonable counterfactual is that, without the directors' follow-up (setting aside the important nuance of who mobilized for action first), healthcare workers in HB_{VT} and HB_{Info} would have both decreased their involvement in bribery. However, given HB_{VT} workers' more heated rejection of the intervention's contents, they would have reduced their involvement in bribery more so than HB_{Info} workers would have. Such a hypothetical concords well with my field observations before management got involved.

4.2. How Bad to Feel Bad: The "Tolerance Threshold," a Unifying Explanation

A compelling explanation of the full set of results across wards should demystify (1) why healthcare workers in high baseline wards were collectively more perturbed by the field reports than their low baseline counterparts; (2) why hospital directors of high baseline wards followed up with maternity staff and the directors of low baseline wards did not; and (3) why the threat of greater social visibility did not generate a response premium in *both* baseline groups.

The qualitative evidence of healthcare workers' reactions to the field interventions point to an explanation that resides in bribery's baseline incidence levels. As a group, healthcare workers tolerate their ward's involvement in bribery up to a certain level, beyond which they incur costs for being associated with a group that takes bribes. As a result, they take remedial action. If bribery's baseline incidence level determines its "badness" for the group, then it is conceivable that LB_{VT} workers did not feel compromised by the threat of exposure and thus behaved like their LB_{Info} counterparts.

Moreover, although maternity ward staff are the field interventions' target audience, management's decision to follow up appears to also be due to hospital directors' tolerance threshold. For each maternity ward, right before fielding the provider surveyor and healthcare workers' first exposure to the field interventions, I verbally communicated the numbers to hospital directors in one-on-one meetings. These meetings accomplished three goals: they gave me insight into directors' reactions to the reports' contents; they ensured directors were no less informed than their staff; and they allowed me to explore directors' reactions to additional information I shared with them about their pediatrics wards—reactions which suggest that hospital directors' tolerance thresholds are in part shaped by expectations about *where* bribery takes place in the hospital. The documented differences in hospital directors' affect and verbal reactions regarding the reports' contents—hospital directors of the high baseline wards did not try to vindicate the reports' contents in the way that the directors of the low baseline

wards did—foreshadowed the presence and absence of managerial follow-up in the run up to the postintervention survey.

Hospital directors of the high baseline wards found "the numbers to be somewhat reasonable" and "within the range of what was expected." One director was particularly displeased about the numbers on fetal heart rate measurement and allergy to medications: "They're a problem and should be higher." His face contorted in shock at the bribe rate. He admitted that bribery exists, but also doubted the reported magnitude because "patients may say they paid bribes when they didn't because of the bad reputation of the public sector." The second director thought the bribery rate in maternity was high, but was more moved by pediatrics' significantly lower rate, flummoxed by its close to 10% incidence.

In marked contrast, hospital directors of the low baseline wards were concerned with calling into question the reliability of the numbers. One director described the numbers as "what [he] expected, more or less," but in the same breath was quick to doubt them, inquiring about sample size. He judged it "small and equivalent to about three-days' worth of patients" and argued a more appropriate sample size was one-month's worth of patients. He justified the low number on the allergy to medication question with the use of standard medications in maternity wards. He shared that when he first arrived as director of the hospital it bothered him that bribery happens, but that not once during his tenure did he receive a complaint about it from a patient.

The second director opened our conversation by communicating his first impressions of the baseline data collection effort—that it was qualitative, used open-ended questions, and focused on patient satisfaction. The subtext of his impressions was to de-legitimize the data. I proceeded to share the data from the field report's contents. Similar to his aforementioned counterpart, he justified the low number on the allergy to medication question with the use of standard medications in maternity. He said, "Bribery should be zero, even if patients are the ones soliciting healthcare workers, workers should say no." The third director expended less effort to cast doubt on the intervention's contents; he appeared somewhat disinterested. He did not believe the fetal heart rate measurement number and gave a medical argument. He did not comment on the maternity bribe rate, but he expressed surprise at bribery's incidence in pediatrics, although it was significantly lower compared with maternity.

By revealing bribery levels to ward members and hospital directors, both parties were invited to openly contend with what they considered tolerable levels of a morally and socially contentious behavior. The idea that the experienced contentiousness of bribery and its consequences are connected to its *quantity* has precedent. Politicians with three corrupt violations suffer twice the loss

in votes compared with politicians with two corrupt violations (Ferraz and Finan 2008). Organizational theorists document threshold effects for varied transgressions. Even when they can cheat undetected, most people participate in incomplete dishonesty, cheating up to the point above which they would have to admit they are dishonest (Shalvi et al. 2011, Fischbacher and Föllmi-Heusi 2013, Irlenbusch and Villeval 2015). French aeronautic plant workers distinguish the making and exchanging of artifacts using plant materials and resources—an officially forbidden practice—from theft by using scrap material and by prohibiting the use of their "artisanal" artifacts in quid pro quos or for profiteering (Anteby 2008). Managers tolerate workers' transgressions if they fall within "reasonable" limits. Restaurant management tolerates low levels of theft by servers to avoid worker replacement costs and to minimize direct accusations of theft, which would create worker resentment and productivity falls in the workplace (Pierce et al. 2015). Indian state officials overlook a certain level of doctor absenteeism to maintain positive probabilities of doctor retention in and recruitment into primary healthcare centers to ensure rural populations receive healthcare (Dhaliwal and Hanna 2017).

What counts as "too much" and why? Why are healthcare workers and hospital directors activated when they learn half their patients paid bribes? What makes a quarter or a third small stuff, not worth the sweat? Neither I nor the literature can give an answer, unfortunately. Yet the results of this experiment suggest that managers and workers tolerate similar levels of bribery. Organizational theorists say the two parties often cocreate the shared threshold, either through tacit or explicit coordination (Burawoy 1982, Anteby 2008, Pierce et al. 2015). In contrast, here, I show that directors' and workers' thresholds appear to have been developed independently—remember, prior to my intervention, they did not have information about the incidence of bribery to coordinate their expectations. Importantly, I revealed the contents of the field reports on the first occasion *separately* and *simultaneously*. One might say, well, if thresholds were independently developed and then together confirmed on, then perhaps this reflects a cultural baseline. On the contrary, these thresholds are *ward specific* within the organization. To round up on this point, let us contrast reactions to the pediatrics bribe rate with those of maternity.

Tolerating misconduct is not just about "how much," but also about local expectations of where bribery happens in hospitals. The incidence levels of bribery are 11%, 9%, 11%, 2%, and 4% for the pediatrics wards in the hospitals that house HB_{VT}, HB_{Info}, LB_{VT}, LB_{Info1}, and LB_{Info2}, respectively. Pediatrics rates are orders of magnitude lower than maternity rates. When solicited for estimates of bribery's incidence, and after clarifying the meaning of informal payments, a pediatrics nurse responded, "No, not at all! Do you see anything on this table? All we get is yelled at and aggressed by [patients'

families]." Another nurse: "No no, we don't take that here. They offer but we say no." Yet another nurse: "No no, never. Maybe in maternity but not here." A fourth nurse didn't believe the 2% rate on bribery. A fifth nurse, who had worked in other wards before starting in pediatrics, was surprised by the 2% rate: "It exists in the hospital but not in pediatrics." The nurse brought up maternity as an example of where bribery occurs because midwives' pay is incompatible with the nature of their work. Having delivered babies in health dispensaries before, the nurse stated, "Midwives should not be treated like me or like other nurses."

Perhaps, more telling is pediatrics workers' degree of disappointment with the revealed incidence rates: Across pediatrics wards, about two-thirds of healthcare workers reported feeling (extremely) disappointed. Contrast this with maternity, where half of healthcare workers in high baseline wards and a quarter-to-a-third in low baseline wards expressed (extreme) disappointment at the revealed rates. High-incidence maternity wards and low-incidence pediatrics wards report similar disappointment levels. As I have discussed, hospital directors were taken aback by the pediatrics rates, although they were significantly lower than maternity's rates; and in some cases, their surprise was greater.

5. Discussion

Bribery is neither ubiquitous nor normalized in hospitals in Morocco. By mapping its incidence, we learn that it is unevenly distributed across hospitals, hospital wards, and healthcare worker groups. Moreover, the uneven distribution, coupled with the dyadic and cautious exchange dynamics, confirm bribery's fraught social standing in the workplace. That bribery is not normalized is further reinforced by the results of the field experiment: revealing bribery's incidence to maternity staff elicited reactions that signaled a preoccupation with the consequences of social exposure.

In high baseline wards, healthcare workers dialled down on taking bribes by over three-quarters the preintervention rate, but in low baseline wards, they maintained their preintervention involvement levels. Bribery's baseline incidence levels—arguably the most salient feature of the field interventions—set the cost of social exposure for ward members: Maternity staff tolerate only so much bribery in their wards, beyond which they incur the costs of belonging to a work group that takes bribes and correct their behavior. Furthermore, although hospital directors were not the target of the interventions, their reactions reveal that they share similar tolerance thresholds.

That workers and managers tolerate only so much bribery is consistent with research on other kinds of transgressions in the workplace (Gouldner 1954, Blau 1955, Crozier 1969, Burawoy 1982, Anteby 2008, Pierce et al. 2015, Dhaliwal and Hanna 2017). My findings

augment past research, however, by revealing these tolerance thresholds to be independently developed by healthcare workers and hospital directors and ward specific. Bribery's practice and expectations about where it's practiced are localized and work group specific inside organizations. Moreover, high and low baseline ward members' divergent reactions spotlight the distinction between the incidence and the tolerance and normalization of bribery. Such a distinction is absent from academic and policy work that use incidence rates to ascertain the degree to which bribery, corruption, or misconduct is normalized in an organization, sector, or country (Ashforth and Anand 2003, Palmer 2008, Mungiu-Pippidi 2015, Fisman and Golden 2017). Rather, whether an incidence rate proxies what is tolerated or what is accepted should be treated as an empirical question.

Indeed, consider that, although bribe rates only decreased in high baseline wards, bribe-takers shifted toward less risky solicitation patterns, both in the high and low baseline wards. They shifted their repertoire primarily toward patient offers, in some measure toward the use of intermediaries and sharply away from contentious direct asks and the mildly contentious indirect asks (Online Appendix H.1). That transgressors strategically adjust their participation in corruption and misconduct when they learn that third parties are paying attention has precedent (Olken 2007, Chan et al. 2021). However, more enlightening is what bribe-takers' impulse to shift to lower risk invitations tells us—although high and low baseline wards tolerated different levels of bribery, in neither incidence environment was bribery acceptable. It tells us that bribe-takers process individual and group stakes differently. When healthcare workers in low baseline wards do not cut back on bribes but shift to lower risk asks, they, in effect, communicate that being part of a ward that takes bribes from 30% of its patients is different from being identified as *the* midwife who takes bribes from her patients. Thus, to fully appreciate the use-value of deploying reputation threat-based interventions against workplace bribery and misconduct, future research is well served by investigating how individual workers and work groups reason about and justify their tolerance thresholds for bribery and misconduct in organizations.

Moreover, high-ranking organizational members often subvert or block misconduct-reducing interventions (Dhaliwal and Hanna 2017, Banerjee et al. 2021), but we do not see that here. We see either positive capture (high baseline hospital directors followed up with maternity staff and encouraged remedial action) or indifference (low baseline hospital directors remained at bay). Therefore, future work should design for such interventions' heterogeneous effects on workers *and* managers to delineate the productivity-misconduct tradeoff that managers grapple with—a consistent but qualitative finding in research on workplace misconduct (Anteby 2008, Pierce et al. 2015, Dhaliwal and Hanna 2017). Characterizing the range of managerial reactions to levels of worker misconduct will help policymakers anticipate how managerial capture plays out in anticorruption interventions.

Despite the interventions' circumscribed effectiveness, this experiment bears good news for tackling bribery in organizations: In harder hit environments, bribe-taking is a fixable problem. You do not need to take extreme measures—like mass firing a police agency's officer corps (Block and Siegel 2005)—to do so. *Existing* healthcare workers change their behavior in response to group-level information about bribery, when bribe-takers are individually unidentifiable. These results present an important counterpoint to arguments about self-selection into public sector jobs based on propensity to be corrupt (Besley 2005, Banerjee et al. 2015, Hanna and Wang 2017).

Moreover, information-based interventions that target workplace misconduct often collect *individual level* data—thought of as "hard" (or verifiable) information—about worker misconduct (Nagin et al. 2002, Pierce et al. 2015, Dhaliwal and Hanna 2017, Banerjee et al. 2021). The ensuant ability to enforce consequences incentivizes behavior change. However, direct top-down surveillance of healthcare workers fails against bribery. Bribery complicates catching perpetrators red-handed because—unlike theft, fraudulent reporting, absenteeism, and shirking—it is hard to see and document individual-level moments of soliciting and pocketing bribes in the workplace. On the rare occasion that citizens report solicitors of bribes, which is the way organizations typically collect information about bribery, their initiative is thwarted by the "soft" information they communicate. Neither procedural justice inside an organization (e.g., firing bribe-takers) nor legal prosecution by authorities (e.g., convicting bribe-takers) can bring perpetrators to justice based on hearsay evidence (field conversations; Olken 2007).[13] Thus, information-based interventions against workplace bribery are most likely to be effective when soft information taps into reputational concerns. Suggested involvement in or association with misconduct can trigger worker concerns about the social consequences (Tirole 1996, Olken 2007, Adut 2008, Azoulay et al. 2017, Zhang and King 2021).

My preferred interpretation of the results is that maternity staff in both high baseline wards felt reputationally compromised. They were preoccupied with the social costs of being exposed as members of a ward that takes bribes at such high rates. In the HB_{VT} ward, they were concerned about their social image vis-à-vis their coworker groups upon further disaggregation and dissemination and vis-à-vis their hospital director—they talked about erroneous numbers that made them look back, about how accepting the reports meant acknowledging their veracity, about how they planned to complain to their director. Absent the threat of social exposure, in the

HB$_{Info}$ ward, healthcare workers also rejected the report as a true reflection of their work and were primarily concerned about their social image vis-à-vis their hospital director, who convened two meetings about the report urging them to improve. I designed for reputational threat among coworker groups, but hospital directors' reactions introduced vertical reputational effects too.

Two additional things may have shaped healthcare workers' response somewhat. First, it is possible that the visibility threat treatment did not just capture social cost concerns tied to the threat of wider exposure but may have also activated concerns about social comparisons. Returning to Table 5, I cue visibility threat by mentioning further disaggregation by healthcare worker group (more private) and hospital-wide dissemination (more public), but I also use the language of "comparisons." Although I did not include occupational group- or ward-specific rank information about bribery, a staple of social comparison-based interventions, the anticipation of the comparisons could itself change behavior. In the context of a nationwide training programme for Zambian health workers, Ashraf et al. (2014, p. 46) find that their social comparisons treatments change trainees' performance "as soon as they are announced—that is, before trainees get the first letter with their rank information."

Second, the fact that bribery's incidence levels determined healthcare workers' reactions suggests that they may have responded to self-image concerns too—the revelations compromised their worker and moral identities (Akerlof and Kranton 2005, Anteby 2008, Bénabou and Tirole 2011). Self- and social-image concerns can lead to qualitatively similar reactions (Bursztyn and Jensen 2017). Differences in the structure of information revelations is one way to disentangle the contribution of both channels. In theory, because the informational and visibility threat interventions share the same information structure, except for the intervention text, self-image effects should have been netted out. However, that may not have happened if social- and self-image cues are substitutes for each other when individual behavior is unidentifiable.

This study documents group-based reputational threat effects on bribe-taking in the workplace. To my knowledge, it provides a first direct test of leveraging group-based reputational concerns against bribery. It is promising that policymakers do not need to resort to a name-and-shame model—a common construction to dissuade people from engaging in undesirable behavior (Ali and Bénabou 2020). The name-and-shame construction robs individuals of opportunities for redemption (it is difficult to recover from being outed as a bribe-taker) and would substantially disrupt the provision of care.[14]

Despite their promise, the field interventions' circumscribed effectiveness also cautions against their indiscriminate adoption. In low baseline wards, although bribe rates did not change, quality of care declined in some wards (Figure H2). Moreover, the strategic shifts to patient offers could make bribery stickier (Online Appendix H.1). Finally, although in the high baseline wards bribery decreased and the quality of care improved (Figure H1), healthcare workers got upset (Section 4.1), so the emotional costs should be considered. If policymakers choose to use these interventions in *select* incidence environments, it is critical to know at what incidence levels and under what conditions we should draw the boundaries of their application to avoid their welfare-diminishing effects. To establish boundary conditions, more research on tolerance thresholds and social accountability effects is needed.

This field experiment is a first incursion into and invitation for anticorruption solutions that capitalise on social incentives inside organizations. Variation in bribery's incidence inside and across hospitals should inspire researchers to explore alternative social incentive-based levers at the heart of organizational life, such as the organization of work relationships and job design. Focusing on variation will bring us closer to explaining the motivational structure of bribery—we lack good answers to why bribery happens and why bribery varies (Mungiu-Pippidi 2015, Fisman and Golden 2017). I hope this study and the proposed future research directions move us in that direction.

Acknowledgments

Endnotes

1 See https://www.transparency.org/en/press/one-in-four-people-in-africa-pay-bribes-survey-says.

2 See https://www.who.int/data/gho/indicator-metadata-registry/imr-details/4989.

3 Less focused on intervention and more on understanding the dynamics of bribe markets, a body of field studies focuses on frontline personnel to study: the industrial organization of bribe markets (Olken and Barron 2009, Sequeira and Djankov 2014), the welfare consequences of bribery (Bertrand et al. 2007), and strategic targeting

of citizens (Fried et al. 2010, Robinson and Seim 2018). A discussion of this work is beyond the scope of this paper.

[4] Research on the social consequences of transgressions and effort choices in the workplace runs the gamut (Barnard 1938, Roy 1952, Crozier 1969, Burawoy 1979, Kandel and Lazear 1992, Akerlof and Kranton 2005, Anteby 2008, Smith 2010, Bursztyn and Jensen 2017, Ashraf and Bandiera 2018, Ali and Bénabou 2020). This research reveals that transgressors are held socially accountable by their coworkers and bosses in various ways, including reputational damage, private reproach, social ostracism, and obstructed career ladders.

[5] *Santé en chiffres* is an annual report published by the MoH describing public healthcare infrastructure and activities in numbers. The *Carte sanitaire* is a healthcare-infrastructure mapping initiative by the MoH's *Direction de planification et des ressources financières* (DPRF).

[6] The statement in brackets changes depending on the service or ward. For example, when asked about how they entered the hospital, the content in brackets is [to enter this hospital] and so on. I adapted this question from a survey on healthcare provision across five major cities that the Moroccan anti-corruption commission conducted in 2010/2011.

[7] To put the uneven participation rates in context, it is useful to know how work is organized in maternity wards. Over 80% of cases received in maternity wards are childbirth-related. Maternity admissions comprise between one-fifth and two-thirds of hospital-level admissions (Table D1). Midwives are the workhorses. Each ward has a head physician and head nurse (usually an experienced midwife). The head nurse is the administrator of the ward and provides oversight over patient care. Maternity wards average twenty midwives, five doctors, and four nurses (excluding nurse aides). Midwives triage all patients and take charge of pregnant women, deciding if the latter need to be delivered or seen by a physician. Physicians take charge of gynaecological and complicated obstetric cases. On any given shift, work teams are composed of about four midwives, two nurses, and on call physician(s). Teams function on 12-hour shifts. Physicians complete their rounds and may be on-call remotely. This organization of care work is standard across maternity wards. Work teams are social units: midwives and nurses breakfast, lunch, and dine together in their resting areas. Doctors do not usually partake in this kind of socialising with paramedical staff.

[8] For each of HB_{VT} and LB_{VT}, one unrealized attempt was reported and for LB_{Info2} a patient was not sure whether there was an attempt or not. In both cases, the patient offered, but the provider refused. One possible explanation for the rarity of unrealized attempts in the data are that patients systematically underreport unrealized attempts because as rejected first movers they might look bad. However, this requires us to make the unjustified assumption that unrealized attempts are primarily initiated by patients. Another plausible explanation is that these transactions proceed in such a subtle Goffmanian way that rarely are transactions initiated without having interpreted the intent of the other with the utmost certainty.

[9] Ashraf et al. (2020, p. 1360) leverage a similar design principle to study selection effects in recruiting community health workers in Zambia. Their goal was to test whether career benefits attract talent at the expense of prosocial motivation and whether this affects performance on public service delivery. They generated recruitment posters in which they highlighted the career benefits (treatment) and the social impact benefits (control). They opted for the social impact benefits as an active control rather than a neutral control in which no benefits were advertised at all; otherwise, they would be conflating career benefits effects with the effects of advertising the benefits. Moreover, they were mindful of their field context—they conducted their field experiment in a context where government jobs are scarce, which would make a government poster advertising job openings a novelty. By carefully considering the specific features of their context alongside their precise research question, they chose "treatment and

control posters [that] have exactly the same structure except the wording of the benefits." I do a similar thing here.

[10] Pediatrics and maternity are independent wards but fall under the same department in hospitals. They are tied together in the MoH's strategic plans, such as promotion of mother-infant health (Ministère de la Santé 2012, p. 1360). Moreover, in Moroccan public hospitals, mothers stay with their admitted infants and children for the duration of their hospitalization stay. Therefore, the structural features of the healthcare relationship are similar across the two wards—they involve the (expecting) mother, the infant or child, and the healthcare worker. In contrast to maternity, however, pediatrics work is more solitary for healthcare workers.

[11] For robustness, I estimate the previous models (1) for patient-midwife and nurse-patient interactions separately and (2) using the patient-level bribe rate. The conclusions are the same. Results available upon request.

[12] I do not know why the paper report garnered a stronger reaction than the electronic format of the field intervention. Perhaps a physical report to touch, discuss, and refer to feels more real, more on the record. Perhaps, the physical documentation served as a concrete tool to coordinate their disagreement around.

[13] Case in point: In an unusual move of making audiovisual recordings of his bribe transactions and of keeping signed receipts, the former head of the Peruvian National Intelligence Service Vladimiro Montesinos generated the hard evidence of bribery that eventually brought him and the Fujimori regime down (McMillan and Zoido 2004).

[14] Workers often tie their bosses' hands using the real, albeit informal, power they enjoy; this power determines the kinds of interventions workers will put up with (Burawoy 1982, Anteby 2008, Banerjee et al. 2008, Pierce et al. 2015, Dhaliwal and Hanna 2017). In public sector organizations, like healthcare establishments, that depend on more than run-of-the-mill labor, the constraints that workers impose over the exercise of managerial oversight are particularly acute. For example, in my fieldwork, I discovered that, some time in the early 2000s, a hospital director attempted to improve patients' surgical outcomes by collecting and posting surgeon-specific postoperative infection rates on the surgical ward's noticeboard. Surgeons strong-armed the hospital director into abandoning the initiative—they stopped operating and threatened to resign.

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1222

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