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2025

Document Version:
Other version

Working Paper 2025:3

Department of Economics
School of Economics and Management

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March 2025

LUND UNIVERSITY

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March 4, 2025

Abstract

This paper studies the impact of truth-telling preferences on aggregate consumer welfare within a priority pricing (PP) mechanism. Traditional models assume individuals always misrepresent private information to maximize payoffs, yet recent evidence suggests there may be an innate preference for truth-telling. By incorporating these preferences into a theoretical framework, I show that PP enhances welfare over uniform pricing only when the probability of non-truthful individuals surpasses a critical threshold, suggesting that PP may benefit populations with low truth-telling tendencies but reduce welfare when this tendency is high. To empirically test this, I conducted an online experiment, finding that while PP incentivized truth-telling, its impact did not vary significantly across groups with differing truth-telling tendencies. Instead, participants' beliefs about others' truthfulness emerged as key in shaping behavior. These findings underscore that PP's welfare-enhancing potential depends not only on incentives created by the pricing structure but also on the population's truth-telling tendencies and beliefs, offering valuable insight for designing effective pricing mechanisms.

Keywords: priority pricing, consumer welfare, truth-telling behavior, incentive-compatible pricing.

JEL Classification: D82, D9, D47, D61

1 Introduction

In many situations where the demand for a service exceeds supply, prioritizing service recipients based on their need or valuation can significantly enhance overall welfare, particularly when timely access to a service is critical. However, when need or valuation is private information, efficiently allocating services becomes more challenging. In such situations, priority pricing (PP), a type of third degree price discrimination, often emerges as a practical method

*I am deeply grateful to my supervisors, Tommy Andersson and Pol Campos-Mercade, for their guidance and invaluable feedback throughout this project. I also wish to thank Agne Kajackaite, Erik Wengström, Roel van Veldhuizen, Eva Ranehill, and Adrian Nieto Castro for their insightful comments, which significantly enriched this work. I gratefully acknowledge financial support from the Jan Wallanders och Tom Hedelius Stiftelse and the Stiftelsen För Främjande av Ekonomisk Forskning vid Lund Universitet.

for aligning incentives and ensuring that those who need or value the service the most receive it first. This approach utilizes prices to get service recipients to self-select into distinct priority classes, with those in higher-priority groups experiencing shorter wait times in exchange for higher fees. Examples of this can be seen in real-world contexts such as expedited passport processing,[1] fast-track visa services,[2] and priority medical care,[3] where those who value the service most, or need it most urgently, can gain quicker access by paying a premium.

However, this approach to allocation overlooks the possibility that consumers may face budget constraints and, more importantly for this paper, implicitly assumes that individuals always misrepresent private information under informational asymmetry to maximize their personal gain. Yet, a large body of experimental evidence challenges this assumption (see, for example, Abeler et al., 2014; Fischbacher and Föllmi-Heusi, 2013; Gneezy, 2005; Gneezy et al., 2018; Hurkens and Kartik, 2009; Lundquist et al., 2009). In fact, a meta-analysis of experimental studies on truth-telling finds that, on average, individuals forgo three quarters of the potential gains from lying. The study also provides strong empirical evidence that truth-telling behavior is motivated both by a desire to be perceived as honest and by an intrinsic preference for truth-telling (Abeler et al., 2019).

This evidence indicates that if consumer welfare enhancement is the primary objective, then any evaluation of the benefits of adopting a PP scheme must also take into account the truth-telling behavior among individuals. The conventional rationale for and benefits from PP, i.e. its ability to align incentives and prevent misrepresentation, becomes less compelling if a substantial proportion of the population is already intrinsically motivated to tell the truth.

While there is a vast body of literature focused on determining the optimal PP scheme under different settings (see, for example, Adiri and Yechiali, 1974; Afeche and Mendelson, 2004; Dolan, 1978; Ghanem, 1975; Mendelson and Whang, 1990; Naor, 1969) and a few studies that examine their welfare effects (Chao & Wilson, 1987; Gershkov & Winter, 2023; R. Wilson, 1989), the consideration of truth-telling behavior and empirical evidence appears to be largely absent from the existing research.

Accordingly, this paper contributes to the theoretical and practical understanding of PP

[1]For example, in the United States, expedited passport processing reduces the wait time from 6-8 weeks to 2-3 weeks for an additional $60 (U.S. Department of State — Bureau of Consular Affairs, n.d.). The United Kingdom offers a 1-day Premium service for £207.50 and a 1-week Fast Track service for £178.50, compared to standard fees of £88.50 to £112 (His Majesty's Passport Office, n.d.). Several EU countries, such as Belgium, Germany, and the Netherlands, also offer expedited services for an additional fee (Symons, 2024).

[2]Many countries offer expedited processing for select visa applications. For example, the UK provides a Priority Service (£500 for a 5-day decision) and a Super Priority Service (£1000 for next-day processing) (UK Visas and Immigration, n.d.). In the US, premium processing is available for certain visa types, with fees that range from $1,685 to $2,805 (U.S. Citizenship and Immigration Services, n.d.).

[3]Examples of priority medical care include expedited specialist appointments, fast-track emergency department access, priority scheduling for elective surgeries, and concierge medicine, which offers same-day appointments and 24/7 doctor access for a higher fee. Further, in many countries with mixed healthcare systems, such as Australia, Germany, Denmark, and Poland, patients can also pay for private healthcare or insurance to access faster medical care than typically available through public systems (Australian Government Department of Health and Aged Care, n.d.; Kuchinke et al., 2009; Organisation for Economic Co-operation and Development, 2020). These services aim to reduce wait times for those who can afford them but raise ethical concerns about equity and access.

schemes by integrating preferences for truth-telling into the theoretical framework and providing empirical evidence on the behavioral responses to PP. Specifically, this paper first evaluates the expected aggregate consumer welfare of an incentive compatible PP scheme, relative to both free-of-charge and uniform pricing schemes, while accounting for the presence of always truth-telling individuals within a simplified model. The model examines the allocation of two appointment slots, one earlier and one later, between two agents, each with a privately known level of need—either high or low. The analysis identifies unique critical thresholds in the probability of encountering a low-need non-truthful individual, beyond which PP enhances expected aggregate consumer welfare relative to uniform pricing schemes.

These theoretical findings have two key implications. First, PP is unlikely to enhance welfare unless there is a sufficiently high propensity for non-truthfulness within the population. Second, while PP may enhance welfare in populations with a low propensity for truthfulness, it could reduce welfare in populations where this propensity is high. Further, since the primary mechanism through which PP impacts expected aggregate consumer welfare is by incentivizing individuals to truthfully report their level of need, it is crucial to empirically test whether the pricing incentive has the desired effect on truth-telling behavior.

Building on these theoretical insights, this paper conducts a pre-registered, between-subject online experiment to empirically test behavioral responses to an incentive-compatible PP scheme. In the experiment, participants simulated a scenario in which they attempted to secure an appointment by disclosing their privately known level of need—urgent or non-urgent—under two different pricing conditions. In the priority pricing condition, participants were charged a priority fee only if they reported their need as urgent. In the free-of-charge condition, appointments were offered at no cost regardless of reported need. Decisions were incentivized by linking participants' final payoffs to the appointment slot they secured, with an earlier slot yielding a higher payoff.[4]

A key challenge in testing the second theoretical insight lay in creating groups with differing propensities for truthfulness. This required addressing two critical aspects, simulating groups with the desired distribution of participants exhibiting high and low truthfulness propensities, and ensuring that participants' responses reflected how they would behave in such an environment. To address the distributional aspect, participants' tendencies toward non-truthfulness were observed during an initial stage, using an experimental design similar to Campos-Mercade (2022). These observed propensities were then used to weight the data during analysis, enabling the simulation of groups with high and low truthfulness propensities.[5] Second, it was crucial that participants believed they were part of either a high-truthfulness or low-truthfulness group, consistent with their assigned group, so their responses would reflect how they might behave in an environment shaped by these group characteristics. To achieve this, the observed propensities were used to shift participants'

[4]More specifically, participants were paid based on one randomly selected decision from the first two sections of the survey and could earn additional payments from the final section. As a result, each decision carried the potential for payment. Further details on the payment structure are provided in Section 4.

[5]This means that responses from participants who misreported their type in Section 1 were assigned a higher weight in the low-truthfulness group and a lower weight in the high-truthfulness group, while truthful participants were weighted more heavily in the high-truthfulness group and less so in the low-truthfulness group. Detailed methods are discussed in Section 4.

beliefs about the truthfulness of others within their assigned group.

The results show that while priority pricing (PP) reduces the proportion of participants who misrepresent their types, it did not completely eliminate misrepresentation. Specifically, 26.7% of participants in the priority pricing condition reported being Type U (Urgent) despite being assigned as Type N (Non-Urgent). This indicates that the threshold proportion of low-need, non-truthful individuals required for PP to improve welfare may be significantly higher than theoretical predictions suggest.

Furthermore, the experiment does not find significant evidence of a differential treatment effect of PP between high-truthfulness and low-truthfulness groups. Notably, this lack of a differential effect appears to stem, in part, from participants adjusting their behavior based on their beliefs about the truthfulness of others in their group, a relationship found to be statistically significant. Specifically, under priority pricing, participants who believed others were likely to be truthful tended to report more truthfully themselves, whereas those who believed others were unlikely to be truthful were more likely to misreport. In other words, participants' beliefs about the truthfulness of others played a significant role in determining the effectiveness of the pricing incentive. This suggest that measures such as public awareness campaigns or transparency initiatives, aimed at shifting beliefs about others' truthfulness, could substantially improve the effectiveness of PP mechanisms. These findings challenge the conventional assumptions and highlight the importance of incorporating behavioral responses into the design and evaluation of priority pricing mechanisms.

The paper is organized as follows. Section 2 presents a review of the relevant literature. Section 3 presents the theoretical framework and hypothesis that guide the experimental analysis. Section 4 details the experimental design. Section 5 presents the results. Finally, Section 6 discusses the broader implications of the results and offers some concluding insights.

2 Related Literature

The theoretical framework of this paper relates to the literature on incentive-compatible priority pricing and its properties. Wilson (1993) discusses nonlinear pricing strategies, demonstrating how pricing mechanisms can be designed to align individual incentives with socially optimal outcomes. While Naor (1969) was the first to formally introduce pricing as a tool for managing queues and enhancing social welfare, Dolan (1978) initiated the mechanism design literature on queuing by proposing a scheme where recipients are charged a price equal to the marginal delay cost they impose on others, incentivizing truthful reporting of delay costs. Since these seminal works, much of the focus in this strand of literature has been on determining optimal priority pricing schemes across various settings. Chapter 4 in Hassin and Haviv (2003) provides a comprehensive overview of the key theoretical developments.

Several papers have also examined the welfare implications of priority pricing schemes. For example, Chao and Wilson (1987) demonstrated that in markets subject to random shocks, such as electricity markets, priority pricing can achieve the same welfare-maximizing allocation with lower costs and greater efficiency than spot pricing. Wilson (1989) builds on this by proving that there exists a priority pricing scheme that maximizes total welfare and can be adjusted to redistribute revenues to consumers, leading to a Pareto improvement over random assignment. While these studies use dynamic continuous-time models and focus

on total welfare, this paper adopts a simplified static model for tractability and emphasizes consumer welfare, comparing priority pricing to free-of-charge and uniform pricing schemes.

While Gershkov and Winter (2023) examine the impact of priority pricing on consumer surplus, their focus is on monopoly settings. They find that although priority pricing can improve efficiency, it may reduce consumer surplus due to monopolistic surplus extraction. These negative effects can, however, be mitigated if priority services attract new consumers and expand market coverage. A key distinction between these studies and the current paper is that in this study prices are used exclusively as incentives for truthful information revelation, with the primary objective being the maximization of expected aggregate consumer welfare.

This paper also relates to the broader literature on preferences for truth-telling (also commonly referred to as lying aversion), a well-documented phenomenon in experimental economics (see, for example, Abeler et al., 2014; Erat and Gneezy, 2012; Fischbacher and Föllmi-Heusi, 2013; Gneezy, 2005; Gneezy et al., 2018; Hurkens and Kartik, 2009; Lundquist et al., 2009). Studies have shown that truth-telling, even at the expense of self-interest, can be driven by social preferences (Gneezy, 2005) and social-image concerns (Abeler et al., 2019; Gneezy et al., 2018), yet individuals also possess an inherent preference for truth-telling. For example, Fischbacher and Föllmi-Heusi (2013) found that 39% of participants were truthful in a private die-rolling experiment with guaranteed anonymity, Erat and Gneezy (2012) found evidence that individuals are reluctant to tell even Pareto white lies that benefit everyone, and Abeler et al. (2014) found that many participants in a representative German sample truthfully reported coin toss results over the phone, even though misreporting couldn't be detected and there were financial incentives to lie. Further evidence is provided by the influential paper by Abeler et al. (2019), which formalizes and tests various explanations for lying aversion using data combined from 90 different experimental studies. Their findings indicate that individuals not only prefer to be perceived as honest but also have an inherent preference for truth-telling.

While there is a substantial body of behavioral queueing literature focused on how various behavioral phenomena affect individual decision-making in queues and, in turn, shape the outcomes of the queueing system, it has largely overlooked the role of truth-telling behavior. Instead, this literature primarily explores the impact of factors such as cognitive biases and other preferences. For instance, it has been found that last-place aversion can prompt individuals to switch queues or renege (Buell, 2021), while waiting times have been shown to affect consumption decisions (Ülkü et al., 2020). Other studies have also explored bounded rationality (Conte et al., 2016), the sunk cost fallacy (Lu et al., 2013), and perceptions of fairness in queue management systems (Althenayyan et al., 2025).

An exception is Estrada Rodriguez et al. (2024), who explicitly incorporate truth-telling preferences into a queueing model. In a two-class priority system where priorities are based on unverifiable customer claims, using theory and experiments they show that individuals incur intrinsic lying costs and that lying behavior is shaped by scheduling policies rather than by waiting times themselves. They find that an honor system, with prioritization based on customer claims, is optimal under certain conditions, while an upgrading policy, promoting some low-priority claimants to the priority queue, can also be optimal under other conditions. This paper complements theirs by exploring how truth-telling preferences affect consumer welfare in the context of priority pricing mechanisms. While Estrada Rodriguez et al. (2024) studies a system without monetary incentives, this study examines a priority

pricing framework where prices serve as incentives to elicit truthful reporting. By incorporating truth-telling preferences into the analysis of welfare outcomes across different pricing mechanisms, this study provides insights into the conditions under which priority pricing mechanisms are relevant and effective.

This paper draws inspiration from and contributes to these bodies of literature in two key ways. First, it integrates truth-telling preferences into the analysis of PP mechanisms, connecting the theoretical literature on PP with behavioral insights. If individuals are already inclined to report truthfully, the need for PP as a tool to incentivize truth-telling diminishes. Therefore, it is importance to identify the specific conditions under which these mechanisms are most relevant and effective. Second, to the best of this author's knowledge, it is the first study to provide empirical evidence on how behavioral factors influence the expected consumer welfare gains from PP schemes.

3 The Model

This section presents the theoretical framework, results, and corresponding hypotheses that guide the experimental analysis. The first part outlines the model setting and introduces an incentive-compatible priority pricing mechanism aimed at optimizing the allocation of two appointment slots based on agents' private valuations, from the perspective of a social planner seeking to maximize expected aggregate consumer welfare. The second part presents some theoretical results derived by comparing the expected aggregate consumer welfare under the priority pricing (PP) scheme to that of free-of-charge and uniform pricing schemes, while accounting for the presence of individuals with truth-telling preferences. The final part outlines the key experimental hypotheses designed to test the theoretical predictions.

3.1 Primitives

The model considers a simple setting in which two agents approach a service provider at the same time in order to secure an appointment. There are two available appointment slots: one on the same day and another on the following day. The service provider aims to allocate these appointment slots to maximize the expected aggregate utility of the agents.

Agents are expected utility maximizers, each characterized by a private type which determines their valuation for the appointment slot. The true type is denoted by the random variable θ, where $\theta \in \Theta = \{\theta_H, \theta_L\}$ and $\theta_H > \theta_L > 0$.[6] The types are drawn independently with $\mathbb{P}(\theta = \theta_H) = \alpha$ and $\mathbb{P}(\theta = \theta_L) = 1 - \alpha$, where $\alpha \in (0, 1)$.

Further, the agents' utility is decreasing in the amount of time they have to wait (t). The waiting time is determined by a function that depends on both the agent's reported type, denoted by $\hat{\theta}_i \in \Theta$, and the reported type of the other agent, $\hat{\theta}_j \in \Theta$. Formally, an agent i's utility function is defined as:

[6] It is also assumed that $\theta_H > 2\theta_L$. This type of assumption is fairly standard in the broader mechanism design and nonlinear pricing literature, such as Tirole (1988), where sufficient heterogeneity between types is crucial for incentive-compatible mechanisms. Intuitively, this ensures that the difference in valuations between high-type and low-type agents is sufficiently large, so that the mechanism can extract meaningful surplus and enforce truthful reporting effectively.

$$u(\theta_i, t_i(\hat{\theta}_i, \hat{\theta}_j)) = \theta_i \delta^{t_i(\hat{\theta}_i, \hat{\theta}_j)}$$

where, $0 < \delta < 1$ represents the diminishing utility from a delayed appointment, $\hat{\theta}_i$ is the type that agent i reports, $\hat{\theta}_j$ is the reported type of other agent j and $t_i(\hat{\theta}_i, \hat{\theta}_j))$ is a function defined by:

$$t_i(\hat{\theta}_i, \hat{\theta}_j) = \begin{cases} 0 & \text{if } \hat{\theta}_i > \hat{\theta}_j, \\ 1 & \text{if } \hat{\theta}_i < \hat{\theta}_j, \\ X & \text{if } \hat{\theta}_i = \hat{\theta}_j, \end{cases}$$

where X is a random variable representing the allocation of the first appointment slot when $\hat{\theta}_i = \hat{\theta}_j$, with $\mathbb{P}(X = 1) = 0.5$ and $\mathbb{P}(X = 0) = 0.5$. This means that if agent i is the only one of the two agents to report as high type, agent i is assigned the first appointment slot (at $t = 0$). If agent i reports as low type while agent j reports as high type, then agent i is assigned the second slot (at $t = 1$). In the event that both agents report the same type, the first appointment slot is assigned randomly.

The agent knows their own type, θ_i, but does not know the type of the other agent. However, the distribution of types across agents is common knowledge. Therefore, agent i maximizes their expected utility by forming expectations over the possible types of the other agent j, based on this known distribution. Specifically, agent i seeks to maximize:

$$\mathbb{E}_{\theta_j}\left[u(\theta_i, t_i(\hat{\theta}_i, \hat{\theta}_j))\right] = \mathbb{P}(\theta_j = \theta_H) u(\theta_i, t_i(\hat{\theta}_i, \hat{\theta}_H)) + \mathbb{P}(\theta_j = \theta_L) u(\theta_i, t_i(\hat{\theta}_i, \hat{\theta}_L))$$

Or, equivalently,

$$\mathbb{E}_{\theta_j}\left[u(\theta_i, t_i(\hat{\theta}_i, \hat{\theta}_j))\right] = \alpha u(\theta_i, t_i(\hat{\theta}_i, \hat{\theta}_H)) + (1 - \alpha) u(\theta_i, t_i(\hat{\theta}_i, \hat{\theta}_L))$$

Misreporting Incentives

In the absence of prices, in this set-up, high-type agents always maximize their expected utility by truthfully reporting their type, whereas low-type agents have a strategic incentive to misrepresent their type.[7]

If the other agent reports $\hat{\theta}_L$, the low-type agent's utility from truthful reporting is a weighted average of securing either the first or the second appointment slot, $u(\theta_L, t(\hat{\theta}_L, \hat{\theta}_L)) = \frac{1}{2}\theta_L + \frac{1}{2}\theta_L\delta = \theta_L(\frac{1}{2} + \frac{1}{2}\delta)$, which is less than the utility from misreporting as $\hat{\theta}_H$, $u(\theta_L, t(\hat{\theta}_H, \hat{\theta}_L)) = \theta_L$, since $\delta \in (0, 1)$.

[7] For high-type agents, truthful reporting always yields higher utility. When the other agent reports $\hat{\theta}_L$, the high-type agent's utility from truthful reporting, $u(\theta_H, t(\hat{\theta}_H, \hat{\theta}_L)) = \theta_H$, exceeds the utility from misreporting, $u(\theta_H, t(\hat{\theta}_L, \hat{\theta}_L)) = \frac{1}{2}\theta_H + \frac{1}{2}\theta_H\delta$. Similarly, if the other agent reports $\hat{\theta}_H$, the utility from truthful reporting, $u(\theta_H, t(\hat{\theta}_H, \hat{\theta}_H)) = \frac{1}{2}\theta_H + \frac{1}{2}\theta_H\delta$, exceeds the utility from misreporting, $u(\theta_H, t(\hat{\theta}_L, \hat{\theta}_H)) = \theta_H\delta$.

Similarly, if the other agents reports $\hat{\theta}_H$, the low-type agent's utility from truthful reporting is the utility derived from being appointed the second slot, $u(\theta_L, t(\hat{\theta}_L, \hat{\theta}_H)) = \theta_L\delta$, which is less than the utility from misreporting as $\hat{\theta}_H$, $u(\theta_L, t(\hat{\theta}_H, \hat{\theta}_H)) = \theta_L(\frac{1}{2} + \frac{1}{2}\delta)$.[8]

Therefore, without properly aligned pricing incentives, low-type agents will misreport their type to secure a better appointment slot, undermining the efficiency of the allocation process. Incentive-compatible pricing addresses this issue by aligning agents' incentives with truthful reporting.

Incentive-Compatible Priority Pricing

In the context of this simplified model, the optimal incentive-compatible pricing is derived by solving the following constrained optimization problem:

$$
\begin{aligned}
\max_{p_H, p_L} \quad & \mathbb{E}_{\theta_i,\theta_j} \left[\sum_{k\in\{i,j\}} \Big(u(\theta_k) - p(\hat{\theta}_k) \Big) \right] \\
\text{s.t.} \quad & \mathbb{E}_{\theta_j} \left[u(\theta_L, t(\hat{\theta}_L, \hat{\theta}_j)) - p_L \right] \geq \mathbb{E}_{\theta_j} \left[u(\theta_L, t(\hat{\theta}_H, \hat{\theta}_j)) - p_H \right] && \text{(IC-1)} \\
& \mathbb{E}_{\theta_j} \left[u(\theta_H, t(\hat{\theta}_H, \hat{\theta}_j)) - p_H \right] \geq \mathbb{E}_{\theta_j} \left[u(\theta_H, t(\hat{\theta}_L, \hat{\theta}_j)) - p_L \right] && \text{(IC-2)} \\
& \mathbb{E}_{\theta_j} \left[u(\theta_L, t(\hat{\theta}_L, \hat{\theta}_j)) - p_L \right] \geq 0 && \text{(IR-1)} \\
& \mathbb{E}_{\theta_j} \left[u(\theta_H, t(\hat{\theta}_H, \hat{\theta}_j)) - p_H \right] \geq 0 && \text{(IR-2)}
\end{aligned}
$$

where, $\hat{\theta}_k$ denotes the type reported by the agent, and $p(\hat{\theta}_k) = p_L$ if $\hat{\theta}_k = \hat{\theta}_L$ and $p(\hat{\theta}_k) = p_H$ if $\hat{\theta}_k = \hat{\theta}_H$. The incentive compatibility (IC) constraints ensure that agents are best off when they truthfully report their type conditional on the type of the other agent, and the individual rationality (IR) constraints ensures that participating is beneficial or at least not a loss, for every agent. The optimal pricing solution to this problem is obtained by setting $p_L^* = 0$ and $p_H^* = \frac{1}{2}\theta_L(1-\delta)$, as detailed in Annex A.

Incorporating Truth-Telling Preferences

To access how truth-telling preferences affect aggregate welfare under PP, the subsequent analysis differentiates low type agents based on their reporting behavior. Specifically, it is assumed that agent types are drawn from the set $\Theta' = \{\theta_H, \theta_{L_t}, \theta_{L_n}\}$.

Agents with the type θ_{L_t} have a valuation of θ_L for the appointment and are always truthful, i.e., they always report their true type or $\hat{\theta}_{L_t} = \hat{\theta}_L$. In contrast, agents with the type θ_{L_n}, despite having the same valuation θ_L, always misrepresent themselves as high type agents in the absence of properly aligned incentives, i.e., $\hat{\theta}_{L_n} = \hat{\theta}_H$.

Let α, β and γ denote the probabilities of an agent being high-type (θ_H), truthful low-type (θ_{L_t}), and non-truthful low-type (θ_{L_n}), respectively. These probabilities satisfy $\alpha+\beta+\gamma = 1$,

[8] This also applies to any uniform pricing scheme with a price that satisfies the individual rationality condition for low types, i.e., $\mathbb{E}_{\theta_j} \left[u(\theta_L, t(\hat{\theta}_L, \hat{\theta}_j)) - p \right] \geq 0$, ensuring that low-type agents are never worse off by securing an appointment. In such cases, a constant price p would be subtracted from each utility calculation, which does not affect the comparison of utilities or the overall conclusion.

with $0 < \alpha, \beta, \gamma < 1$, ensuring that each agent type occurs with positive probability. The distribution of these types is known to the social planner.

Expected Aggregate Consumer Welfare

Let $\mathbb{P}_{\theta_i\theta_j}$ denote the joint probability that the two agents arriving have the types θ_i and θ_j, respectively. The aggregate utility derived by the two agents from their allocated slots is given by:

$$U(\theta_i, \theta_j) = u(\theta_i, t(\hat{\theta}_i, \hat{\theta}_j)) + u(\theta_j, t(\hat{\theta}_j, \hat{\theta}_i)).$$

The total prices paid (or cost incurred) by the two agents is represented as:

$$P(\theta_i, \theta_j) = p(\hat{\theta}_i) + p(\hat{\theta}_j).$$

Therefore, the expected aggregate consumer welfare, considering both utilities and costs, is expressed as:

$$\mathbb{E}_{\theta_i,\theta_j}\left[U(\theta_i, \theta_j) - P(\theta_i, \theta_j)\right] = \sum_{\theta_i,\theta_j \in \Theta'} \mathbb{P}_{\theta_i\theta_j}(U(\theta_i, \theta_j) - P(\theta_i, \theta_j))$$

By linearity of expectation, this can be separated into expected aggregate utility minus the expected aggregate cost, as follows:

$$\mathbb{E}_{\theta_i,\theta_j}\left[U(\theta_i, \theta_j)\right] - \mathbb{E}_{\theta_i,\theta_j}\left[P(\theta_i, \theta_j)\right] = \sum_{\theta_i,\theta_j \in \Theta'} \mathbb{P}_{\theta_i\theta_j} U(\theta_i, \theta_j) - \sum_{\theta_i,\theta_j \in \Theta'} \mathbb{P}_{\theta_i\theta_j} P(\theta_i, \theta_j) \quad (1)$$

Under the optimal incentive-compatible PP scheme, only high type agents pay a price for the appointment ($p^*_H = \frac{1}{2}\theta_L(1-\delta)$), while low-type agents receive the service free of charge ($p^*_L = 0$). Thus, the expected cost per agent is $\mathbb{P}(\theta = \theta_H) \cdot p^*_H = \alpha p^*_H$ and for two agents this expectation is simply $2\alpha p^*_H$. Therefore, under incentive-compatible PP the expected aggregate consumer welfare simplifies to:

$$\mathbb{E}_{\theta_i,\theta_j}\left[U(\theta_i, \theta_j)\right] - \mathbb{E}_{\theta_i,\theta_j}\left[P(\theta_i, \theta_j)\right] = \sum_{\theta_i,\theta_j \in \Theta'} \mathbb{P}_{\theta_i\theta_j} U(\theta_i, \theta_j) - 2\alpha p^*_H \quad (2)$$

In the analysis that follows, the expected aggregate consumer welfare derived from the incentive-compatible PP scheme, where high type agents pay $p^*_H = \frac{1}{2}\theta_L(1-\delta)$ and low type agents receive the service free of charge, is compared to that from uniform pricing schemes, where the uniform price lies between zero and the expected cost under PP, $p \in [0, \alpha p^*_H]$.[9] Specifically, the analysis considers the following general case and two bounding cases:

1. **General Case:** The uniform price is set between zero and the expected cost under PP, $p \in (0, \alpha p^*_H)$. This scenario evaluates how intermediate pricing levels impact consumer welfare by comparing the expected aggregate welfare from PP, as given in equation (2), to $\sum_{\theta_i,\theta_j \in \Theta'} \mathbb{P}_{\theta_i\theta_j} U(\theta_i, \theta_j) - 2\alpha p^*_H \varepsilon$, for some $\varepsilon \in (0, 1)$ representing the relative pricing level.

[9] When the uniform price exceeds the expected cost under PP, i.e., $p > \alpha p^*_H$, PP will trivially generate higher expected aggregate consumer welfare by both increasing the expected utility from the allotted appointment slots and reducing the expected costs incurred by the agents.

2. **Bounding Case 1 (Free of Charge):** This case considers when no prices are charged, i.e., $p = 0$, corresponding to $\varepsilon = 0$ in the general case. It explores the welfare implications of PP relative to providing the service free of charge.

3. **Bounding Case 2 (Equal Expected Cost):** The uniform price is set equal to the expected cost under PP, i.e., $p = \alpha p_H^*$, which corresponds to $\varepsilon = 1$ in the general case. Here, the differences in expected costs across the pricing schemes are equalized, so the comparison focuses solely on the differences in the expected utilities arising from differences in the allocation of appointment slots.

3.2 Theoretical Results

By comparing the expected aggregate consumer welfare in equation (2) under the PP scheme with that of the three corresponding uniform pricing schemes, the following propositions are established. The proof for these propositions have been relegated to the Appendix B for brevity.

Proposition 1. *When the expected cost for agents under a uniform pricing scheme is less than under the incentive compatible priority pricing scheme, i.e. when the uniform price is set to $p' = \varepsilon\alpha p_H^*$, where $\varepsilon \in (0, 1)$, introducing incentive-compatible priority pricing (PP) will increase expected aggregate consumer welfare if and only if the probability of non-truthful, low-type agents (γ) exceeds the threshold $\gamma^\dagger$, where*

$$\gamma^\dagger = \frac{\theta_L(1-\varepsilon)}{\theta_H - \theta_L}.$$

Proposition 1 establishes that PP can enhance expected aggregate consumer welfare over any uniform pricing scheme with a lower expected cost, but only if the probability of non-truthful, low-type agents (γ) is sufficiently high, i.e. $\gamma > \gamma^\dagger$. This threshold $\gamma^\dagger$ decreases as the fraction ε increases, meaning that as the expected cost differential between PP and the uniform pricing narrows, a smaller probability of non-truthful, low-type agents is needed for PP to improve welfare.

Similarly, Proposition 2 addresses the first bounding case where $\varepsilon = 0$, meaning the expected cost differential between PP and the uniform pricing scheme is at its largest. In other words, this corresponds to a uniform pricing scheme where the service is provided free of charge to all. It states that even in this case, implementing PP can enhance the expected aggregate consumer welfare if and only if the probability of non-truthful, low-type agents (γ) is sufficiently high, i.e. $\gamma > \gamma^*$.

Proposition 2. *When there is no cost to the agents, i.e. when the price is set to $p = 0$, introducing incentive-compatible priority pricing (PP) will increase expected aggregate consumer welfare if and only if the probability of non-truthful, low-type agents (γ) exceeds the threshold γ^*, where*

$$\gamma^* = \frac{\theta_L}{\theta_H - \theta_L}.$$

Finally, Proposition 3 addresses the second bounding case where $\varepsilon = 1$, meaning the expected cost between PP and the uniform pricing scheme are equal. In other words, this corresponds to the case where the uniform price $p = \alpha p_H^*$. The proposition states that the PP scheme always enhances expected aggregate consumer welfare compared to a uniform pricing scheme that imposes the same expected cost on agents. This result is driven by PP's theoretical ability to more accurately align appointment slot allocation with agents' true valuations. When the expected costs across the pricing schemes are identical, PP leads to higher aggregate consumer welfare by ensuring that the earlier appointment slot is allocated to the agent with the higher valuation, thereby, maximizing the expected aggregate utility.

Proposition 3. *When the expected cost for the agents under the incentive-compatible priority pricing (PP) scheme equals that under a uniform pricing scheme, i.e., when the uniform price is set to $p = \alpha p_H^*$, introducing priority pricing (PP) will always generate higher expected aggregate consumer welfare.*

3.3 Experimental Hypotheses

The implications of the theoretical findings presented in the preceding section are twofold: First, introducing priority pricing (PP) may not enhance expected aggregate consumer welfare unless the probability of non-truthful, low-need agents in the population is sufficiently large. Second, while PP could improve expected aggregate consumer welfare in populations with a low propensity for truthfulness, it could potentially reduce welfare in populations with a high propensity for truthfulness.

While the theoretical model focuses on aggregate welfare outcomes, budgetary constraints did not allow for a sample size with sufficient statistical power to measure these effects directly. However, the underlying mechanism presumed to influence welfare is the agents' tendency to truthfully disclose private information. Furthermore, the theoretical implications rest on the assumption that individuals will respond to the pricing incentive as predicted. Therefore, the experiment was designed to test the behavioral responses to priority pricing and its impact on populations with varying propensities for truth-telling. Specifically, the following hypotheses were tested:

Hypothesis 1. *The proportion of low-need individuals misreporting their type will be lower under priority pricing (PP) than when the service is offered free-of-charge, i.e. $\pi_{fc} > \pi_{pp}$ where π denotes the proportion of non-truthful, low-need individuals, and the subscripts fc and pp denote free-of-charge and incentive-compatible priority pricing (PP), respectively.*

In other words, priority pricing has an effect in the desired direction and leads to a reduction in the proportion of low need individuals who misreport their level of need.

The next two hypotheses follow mechanically from the first one. They introduce a distinction between high-truthfulness and low-truthfulness populations, referring respectively to populations with higher and lower proportions of individuals with a propensity for truth-telling.

Hypothesis 2. *The proportion of low-need individuals who misreport their type will be lower under priority pricing (PP) than when the service is offered free-of-charge, across both high-truthfulness and low-truthfulness populations. Specifically, $\pi_{fc_t} > \pi_{pp_t}$ and $\pi_{fc_n} > \pi_{pp_n}$, where*

π denotes the proportion of non-truthful, low-need individuals, fc denotes free-of-charge, pp denotes incentive-compatible priority pricing, t denotes the high-truthfulness population, and n denotes the low-truthfulness population.

This is to say, the priority fee will have an effect in the desired direction regardless of the underlying propensity for truth-telling in populations.

Hypothesis 3. *The reduction in the proportion of non-truthful, low-need individuals under priority pricing (PP) will be greater for the high-truthfulness population than for the low-truthfulness population. This is denoted as:*

$$(\pi_{pp} - \pi_{fc})_t < (\pi_{pp} - \pi_{fc})_n$$

where, π denotes the proportion of non-truthful, low-need individuals, fc denotes free-of-charge, pp represents incentive-compatible priority pricing, t denotes the high-truthfulness population, and n denotes the low-truthfulness population.

Given that the low-truthfulness population has a higher proportion of individuals likely to be non-truthful in the absence of incentives compared to the high-truthfulness population, priority pricing should have a greater effect on reducing non-truthful behavior in the low-truthfulness group.

4 Experimental Design

To test the hypotheses, a between-subjects online experiment was conducted using a survey-based approach.[10] The experiment was pre-registered in the AEA RCT Registry (Thami, 2024). The survey was programmed in Qualtrics, and the participants were recruited through Prolific. A total of 696 individuals from Prolific's U.S.-based participant pool completed the survey, which took an average of approximately 12 minutes to complete.[11] Participants earned an average of $5, comprising a $2 participation fee in accordance with the wage rate recommended by Prolific, and an additional average of $3 in experimental earnings.

4.1 Online Experiment

The experimental design closely resembles the one used in Campos-Mercade (2022), where participants' types are first observed and later successfully used to vary the composition of types in sub-groups. Accordingly, in this study, participants' propensity for truth-telling is first observed and then used in two ways: first, to shift the participants' beliefs about the truth-telling propensities of others, encouraging responses consistent with these beliefs; and second, to conduct a weighted analysis simulating high- and low-truthfulness populations.

The survey used to collect data for the experiment consisted of three sections, requiring participants to make six decisions about whether to truthful disclose private information.

[10] The experiment was conducted on March 4, 2024. Three pilot studies were also conducted prior to the main experiment. Appendix D presents a discussion of these pilot studies.

[11] Although 700 participants completed the survey, four submissions were excluded from the study based on recommendations from Prolific due to concerns over shared IP addresses, which violates Prolific's policy.

Participants were randomly assigned to one of the following four conditions: 1) Free of Charge with Truthful Prompt (N = 179, 25.72%); 2) Free of Charge with Non-Truthful Prompt (N = 184, 26.44%); 3) Priority Pricing with Truthful Prompt (N = 169, 24.28%); or 4) Priority Pricing with Non-Truthful Prompt (N = 164, 23.56%).

In each section, participants were first introduced to the setup of the interaction, the two potential types they could be assigned as, and the associated payoffs for each type. They were then randomly assigned a type and had to decide whether to disclose their assigned type truthfully. Participants made decisions as both types, with the order of type allocation randomized. Figure 1 details the differences in prompts across sections according to the assigned condition.

Furthermore, at the beginning of the survey, participants were informed that they would receive additional compensation based on the outcome of one randomly selected decision from the first two sections. They were also notified of the possibility to earn an extra bonus from their decisions in Section 3. This ensured that each decision carried the potential for increased earnings.

Section 1 sought to identify participants with a higher propensity for being non-truthful. While common identification measures typically rely on the use of experimental paradigms such as sender-receiver games (Gneezy, 2005),[12] die-roll tasks (Fischbacher & Föllmi-Heusi, 2013),[13] coin flip tasks (Bucciol & Piovesan, 2011),[14] and matrix tasks (Mazar et al., 2008),[15], here a more direct approach was adopted. Participants were informed that they would randomly be assigned as either a Type A or Type B individual. They were told that they would receive \$1.50 for saying that they are Type A and \$0 for Type B, irrespective of their actual type assignment. They then responded to the question "What is your Type?" This approach offered two key advantages over other established paradigms: 1) it allowed for the identification of non-truthful responses at the individual level, enabling the creation of weights to simulate high- and low- truthfulness populations; and 2) the structure of this interaction and the size of the monetary incentive closely mirrors those in the subsequent sections, which are central to the experiment.

Section 2 captured the baseline effect of adopting priority pricing on truth-telling behavior, compared to free-of-charge service provision, providing the data to test Hypothesis 1. In it, participants simulated the scenario outlined in the theoretical model. They were informed that they would be randomly paired with another participant to simulate a queuing scenario for booking a doctor's appointment with two available slots: one immediate and

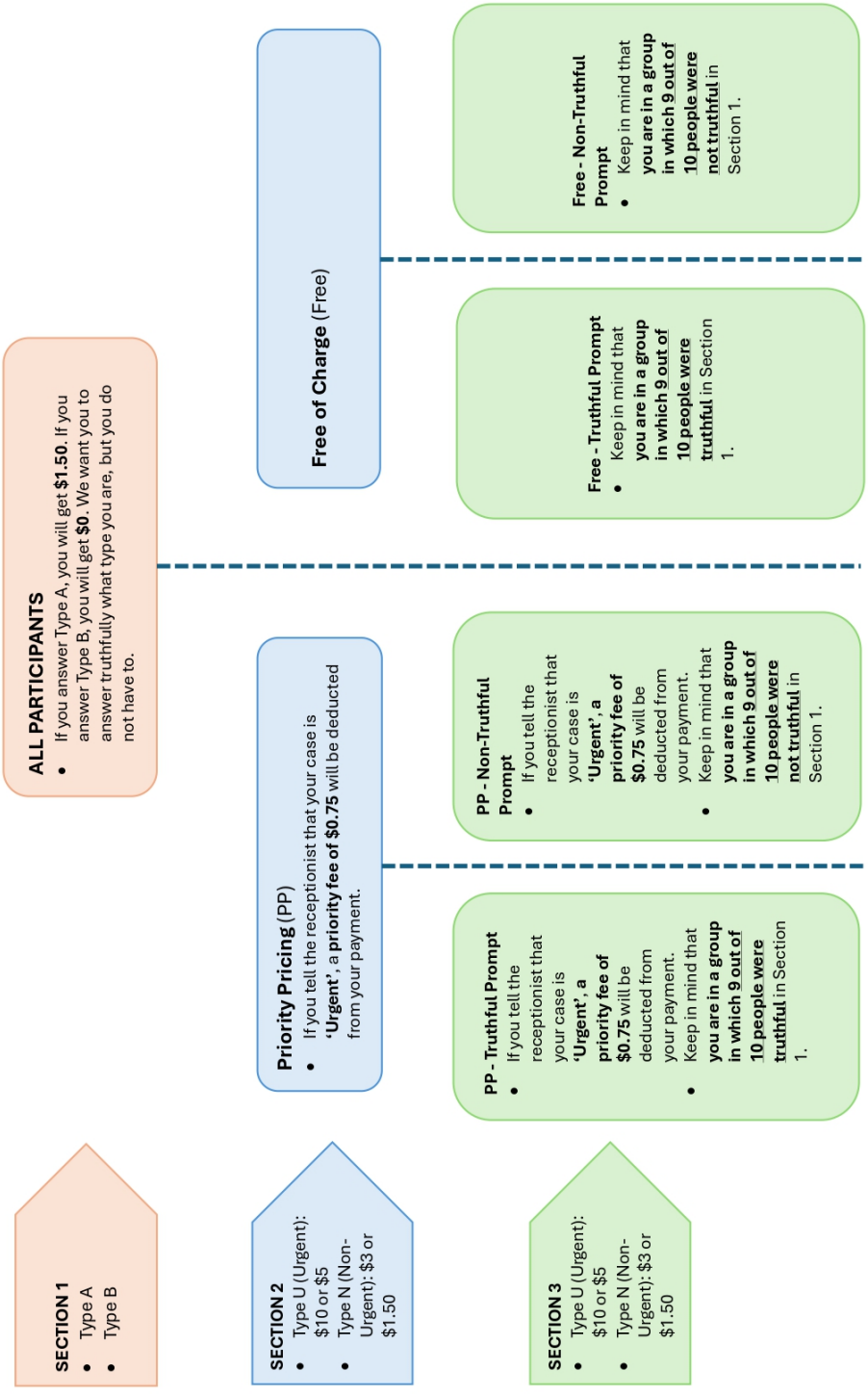
[12] In sender-receiver games, one participant (the sender) knows the payoffs of different options and chooses to send a truthful or false message to a second participant (the receiver), whose decision determines the final payoffs for both players, creating a dilemma for the sender between truth-telling and maximizing personal gain.

[13] In die-roll tasks, participants report a private roll outcome linked to a payment, enabling researchers to estimate dishonesty by comparing reported averages to expected random distributions.

[14] In coin-flip tasks, participants report the outcome of a self-generated coin toss, with rewards for one outcome, allowing researchers to estimate dishonesty by comparing reported win rates to the expected random 50/50 distribution, though individual dishonesty cannot be directly detected.

[15] In matrix tasks, participants search for number pairs in matrices that add up to 10.00 and self-report their performance for a monetary reward, with dishonesty measured by comparing reported versus verified solutions, either at the aggregate level by contrasting self-graded and experimenter-graded groups or at the individual level through direct self-reporting.

Figure 1: Experimental Design



one for the following day.

The two potential types were Type U (Urgent), with a higher valuation for the appointment slots ($10 for the immediate one and $5 for the next day), and Type N (Non-Urgent), with a lower valuation for the appointment slot ($3 for the immediate and $1.50 for the next day). To address potential concerns about inequality aversion, Type N participants were guaranteed an additional payment of $7 to ensure perceived fairness in compensation across types. This was particularly important given that the primary payment was determined by a randomly selected decision.

In keeping with the theoretical model's assumption of known type distribution, participants were informed that Type U would be assigned with a 25% probability and Type N with a 75% probability. Further, participants in the priority pricing treatment groups were informed that a priority fee of $0.75 would be applied if they answered that they were Type U (Urgent).[16] They were also explicitly informed that this fee was set such that reporting their type truthfully would maximize their expected payoff.

Participants were also briefed on the appointment allocation rules, which were identical to those outlined in the theoretical model. If one participant reported Type U while the other reported Type N, the Type U participant would receive the first appointment. If both participants reported the same type, the first appointment would be randomly assigned to one of them.

In **Section 3**, participants were presented with the same scenario and made the same decision as in Section 2, with the only difference being that, prior to making the decision, they were informed that they would be randomly assigned to a group of 10 participants and could qualify for additional payment based on their group's characteristics. Specifically, those assigned to the Free-Truthful and PP-Truthful Prompt conditions were told that they would receive extra payment from the outcome of their decision in the section only if 9 out of 10 group members had been truthful in Section 1. Conversely, those assigned to the Free-Non-Truthful and PP-Non-Truthful Prompt conditions were told that they would receive extra payment only if 9 out of 10 had been non-truthful in Section 1. This section provided the data necessary to test Hypotheses 2 and 3.

By introducing this additional payment criteria based on group characteristic, the design created an incentive for participants to respond as if their group composition aligned with the specified criteria. For instance, participants assigned to the Free-Truthful Prompt and PP-Truthful Prompt conditions were encouraged to respond as they might if most of the others in their group were likely to be truthful. Conversely, those assigned to the Non-Truthful prompt conditions were encouraged to respond as they might if most of the others were likely to be non-truthful.

This experimental design enabled the simulation of high- and low-truthfulness populations in two ways. First, it allowed for the assignment of probability weights to participant responses based on whether they had been truthful or non-truthful when assigned as Type B in Section 1.[17] Specifically, in the Truthful Prompt conditions, responses from participants

[16]Recall that in the optimal incentive-compatible priority pricing scheme, low-type agents receive the service free of charge, while high-type agents pay a fee of $p_H^* = \frac{1}{2}\theta_L(1-\delta)$. The priority fee was calculated assuming a discount factor, δ of 0.5. Given, that in this setup $\theta_L = \$3$, this results in a priority fee of $p_H^* = \frac{3}{2}(1-0.5) = \$0.75$.

[17]Probability weights were calculated as the inverse of the relative selection probability given the observed

who were truthful in Section 1 were assigned a probability weight of 1.8, while responses from non-truthful participants were weighted at 0.2 to simulate a high-truthfulness population. Conversely, in the Non-Truthful Prompt conditions, responses from participants who had been non-truthful in Section 1 were weighted at 1.8, and those from participants who had been truthful were weighted at 0.2 to simulate a low-truthfulness population. Second, the additional payment criteria introduced in Section 3 encouraged participants to respond as they would in a group predominantly composed of truthful or non-truthful individuals, further aligning participant responses with the simulated population characteristics.

Additionally, since the prompt regarding the criteria for additional payment was the only source of variation between the two Priority Pricing (PP) conditions and, separately, the two Free-of-Charge (Free) conditions, this design also enables the study of how beliefs about others' propensities for truth-telling influence the effect of priority pricing.

Furthermore, to ensure that participants fully understood the experimental setup, they were required to successfully answer a series of comprehensive control questions before being allowed to advance to the main decision questions.[18] These questions were designed to ensure a thorough understanding of the experimental setup and the potential payoffs. Participants in the treatment groups answered additional questions about the priority fee, which clarified that truthful responses would maximize their potential earnings. Participants were allowed to reattempt the control questions as many times as needed to ensure they thoroughly understood the experimental setup.

5 Results

This section presents descriptive results and the test results for the hypotheses outlined in Section 3.3. It also includes results from simulation exercises that illustrate the impact of observed behaviors on aggregate consumer welfare.

5.1 Descriptive Results

Table 1 presents the distribution of reported type by assigned type in Section 1. Nearly all participants (98.85% or 688 participants) reported their type truthfully when assigned as Type A. In contrast, only about half (49.84% or 347 participants) reported their type truthfully when assigned as Type B. This response pattern is consistent with the preference

proportion in the sample and an assumed underlying distribution of truthfulness in the population. For example, the probability weight for participants who had been truthful in Section 1 and were assigned to one of the Truthful Prompt conditions was derived as follows. Assuming the participant was randomly drawn from a high-truthfulness population—one where 90% are likely to be truthful and only 10% non-truthful—their selection probability in this theoretical population would be 0.9. However, in the experiment, there were 175 participants who were truthful in Section 1 of a total of 348 participants assigned to the Truthful Prompt conditions giving a sample selection probability of $\frac{175}{348} \approx 0.5$. Since the assumed underlying population has 90% truthful individuals but the actual sample only had 50%, the selection probability for truthful individuals relative to the population distribution is $\frac{0.5}{0.9}$. The probability weight is then determined by taking its inverse, i.e., $\frac{0.9}{0.5} = 1.8$.

[18] While this meant there was a high attrition rate of approximately 18%, this measure was crucial to ensuring participant attention and comprehension.

for truth-telling that motivates this study: participants are truthful when incentives are aligned, and a substantial proportion are truthfully even when incentives are misaligned.

Table 1: Distribution of Reported vs. Assigned Type in Section 1

		Assigned Type	
		Type A	**Type B**
Reported Type	**Type A**	98.85%	50.14%
	Type B	1.15%	49.84%

Table 2 presents the distribution of responses in Section 2. The vast majority of participants responded truthfully when assigned as Type U (Urgent), with 96.42% of participants in the Free of Charge condition reporting their type truthfully and 93.09% under Priority Pricing. However, a significant proportion of participants misreported their level of need when assigned as Type N (Non-Urgent), especially when appointments were offered free of charge. Specifically, nearly half of Type N participants (49.04%) reported as Type U (Urgent) when appointments were free, compared to only 26.73% when a priority fee was charged.

Table 2: Distribution of Reported vs. Assigned Type by Pricing Condition in Section 2

		Assigned Type			
		Free of Charge		**Priority Pricing**	
		Non-Urgent	**Urgent**	**Non-Urgent**	**Urgent**
Reported Type	**Non-Urgent**	50.96%	3.58%	73.27%	6.91%
	Urgent	49.04%	96.42%	26.73%	93.09%

Table 3 presents the distribution of responses in Section 3 under the Truthful and Non-Truthful prompt conditions. The general pattern is similar to the one observed in Section 2 (Table 2), with a high proportion of truthful responses from participants when assigned as Type U (Urgent). Additionally, when participants were assigned as Type N (Non-Urgent), the proportion of non-truthful responses is notably lower under priority pricing compared to the free-of-charge condition, across participants in both the Truthful and Non-truthful prompt conditions. However, there are notable differences across the two prompt conditions that merit further discussion.

In the Truthful Prompt condition, a substantial increase in truthful reporting is observed for Type N (Non-Urgent) participants compared to the baseline case in Section 2, suggesting that when participants believed others would likely report truthfully, they were more inclined to do the same. Specifically, in the Free of Charge condition, 60.34% of the participants reported truthfully when assigned as Type N (compared to 50.96% in Section 2), and in the Priority Pricing condition, truthful reporting increased to 82.25% (up from 73.27% in Section 2).

Conversely, under the Non-Truthful Prompt condition, the opposite pattern is observed, with there being an increase in misreporting relative to Section 2. In the Priority Pricing condition, only 64.63% of Type N participants reported truthfully, a rate significantly lower than the Truthful Prompt condition (82.25%) and from Section 2 (73.27%). This suggests that when participants believed others were more likely to misreport, they were more inclined to misreport under Priority Pricing. However, the Free of Charge condition a small increase in truthful reporting, with 53.80% reporting truthfully compared to 50.96% in Section 2.

Table 3: Distribution of Responses by Assigned Type and Pricing Condition for Truthful and Non-Truthful Prompt Conditions in Section 3

(a) Truthful Prompt

		Assigned Type			
		Free of Charge		**Priority Pricing**	
		Non-Urgent	**Urgent**	**Non-Urgent**	**Urgent**
Reported Type	**Non-Urgent**	60.34%	3.35%	82.25%	4.73%
	Urgent	39.66%	96.65%	17.75%	95.27%

(b) Non-Truthful Prompt

		Assigned Type			
		Free of Charge		**Priority Pricing**	
		Non-Urgent	**Urgent**	**Non-Urgent**	**Urgent**
Reported Type	**Non-Urgent**	53.80%	7.07%	64.63%	12.80%
	Urgent	46.20%	92.93%	35.37%	87.20%

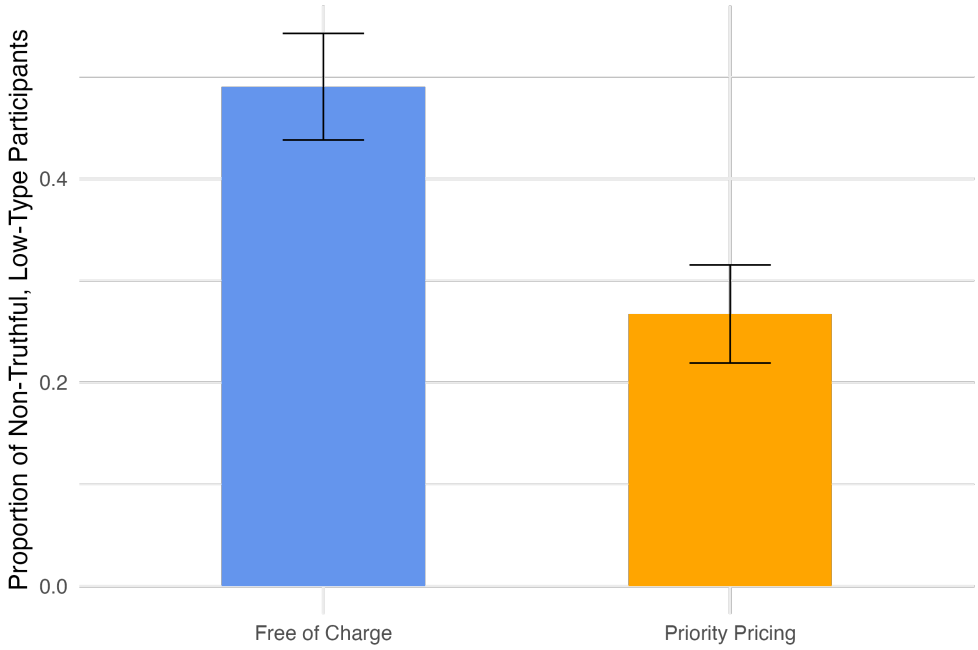
5.2 Main Results

The analysis presented in this section was pre-registered in the AEA RCT Registry (Thami, 2024). The sample size in this study had sufficient power to detect the main effect.[19]

Figure 2 shows the proportion of participants who were non-truthful about their type when assigned as Type N (Non-Urgent) in Section 2 of the survey. Hypothesis 1 posits

[19]The power analysis was conducted using a simulation-based approach (STATA code available upon request) with a latent variable model assuming a standard normal distribution for truth-telling propensity. Key assumptions included a 55% explanatory power of non-truthfulness in Section 1 on later behavior, a baseline non-truthful behavior of approximately 50% in the absence of a priority fee, and a priority fee effect size of 56%. This analysis indicated 100% power to detect the main effect (Hypothesis 1), 96.4% power for detecting the treatment effect in the Truthful prompt conditions and 100% for detecting it in the Non-Truthful prompts conditions, and 87.3% power for detecting an interaction effects between priority pricing and truthful prompts conditions at the 5% significance level.

Figure 2: Proportion of Participants who were Non-Truthful (Section 2)



Note: The confidence intervals were computed using bootstrap resampling with 10,000 iterations.

that the priority pricing should have a statistically significantly lower proportion of non-truthful, low-need participants compared to the free-of-charge control groups. A Wilcoxon rank-sum test strongly supports this hypothesis, showing a significant difference ($p < 0.01$) between the priority pricing conditions (N = 333) and the free-of-charge conditions (N = 363). Specifically, 49% of participants in the free-of-charge control groups were non-truthful, compared to only 26.7% of those in the priority pricing treatments, representing a 45.5% reduction in non-truthful responses.

Result 1. *The proportion of non-truthful, low-type participants, i.e., Type N (Non-Urgent) reporting as Type U (Urgent), is statistically significantly lower under priority pricing compared to the free of charge condition.*

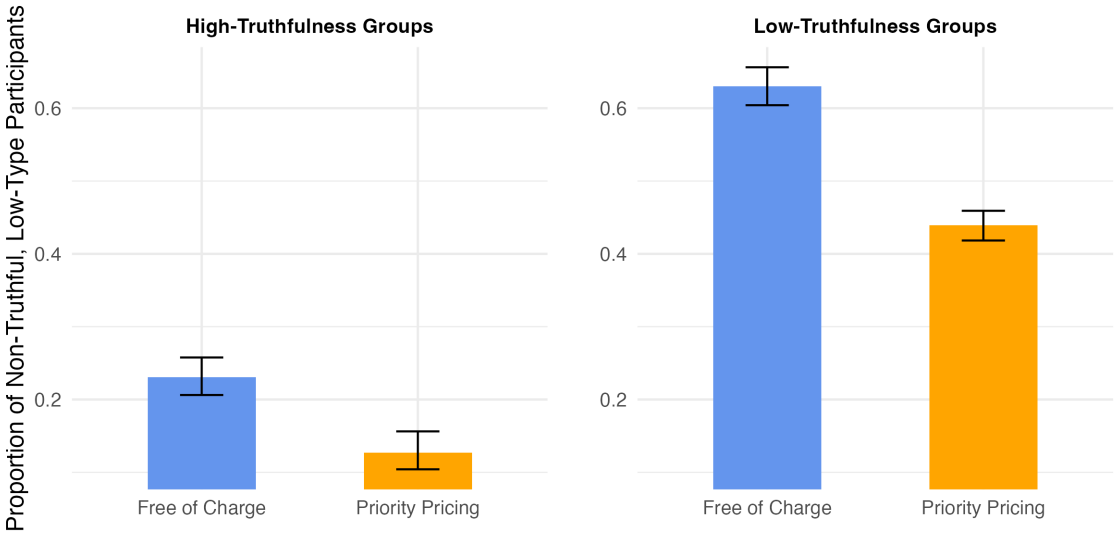
To test Hypothesis 2, samples representing high- and low-truthfulness populations were generated based on participants' responses in Section 1 when assigned as Type B. For the high-truthfulness groups, only observations from participants in the Truthful prompt conditions were included—specifically, from participants in the PP-Truthful prompt condition for the priority pricing group and from the Free-Truthful prompt condition for the free-of-charge group. Each sample was constructed to ensure that at least 90% of participants had truthfully reported as Type B in Section 1.

Similarly, the low-truthfulness groups were created using only observations from participants assigned to the Non-Truthful prompt conditions. Observations for the priority pricing group came from the PP-Non-Truthful prompt condition, while those for the free-of-charge

group were drawn from the Free-Non-Truthful prompt condition. These samples were constructed to ensure that at least 90% of participants had misreported as Type A when assigned as Type B in Section 1.

To account for potential variability in the selection process, 10,000 samples were generated following the criteria above, and the Dunn test was conducted on each sample.[20] The primary variable of interest was participants' responses as Type N (Non-Urgent) in Section 3 of the survey.

Figure 3: Proportion of Participants who were Non-Truthful (Section 3)



Note: The confidence intervals were calculated by using the 2.5^{th} and 97.5^{th} percentiles of the proportion of non-truthful, low-type participants across the 10,000 subsamples.

Hypothesis 2 states that the proportion of non-truthful, low-need participants should be lower under priority pricing compared to the free of charge condition, across both high- and low-truthfulness populations. Figure 3 presents the average proportion of non-truthful, low-need participants (i.e., participants who misreported when assigned as Type N in Section 3) across 10,000 samples under Free of Charge and Priority Pricing conditions for both high-truthfulness and low-truthfulness groups.

Dunn test consistently rejects the null hypothesis that the proportion of non-truthful, low-need participants are equal across all four groups, with $p < 0.01$ in all samples in each of the 10,000 bootstrap samples. Furthermore, the tests reveal a statistically significant difference between the priority pricing and free of charge conditions within the low-truthfulness groups, with $p < 0.05$ observed in 94.8% of the samples. Conversely, no statistically significant difference was found within the high-truthfulness groups. However, it is notable that the bootstrapped confidence intervals, constructed by taking the 2.5^{th} and 97.5^{th} percentile observations from the 10,000 samples, do not overlap between the priority pricing and free of

[20]The tests were conducting using STATA's dunntest command with Bonferroni adjustment to account for multiple comparisons.

charge conditions for either the high-or low-truthfulness groups. This non-overlap suggests a consistent directional difference, even in the absence of statistically significant results in the high-truthfulness group.

Result 2. *The proportion of non-truthful, low-need participants, i.e. Type N (Non-Urgent) reporting as Type U (Urgent), is significantly lower under priority pricing condition compared to the free of charge condition within the low-truthfulness groups.*

Table 4: Differential Treatment Effect of Priority Pricing Across High- and Low-Truthfulness Groups (Probability Weighted Analysis)

	OLS		Logit		Probit	
	(1)	(2)	(3)	(4)	(5)	(6)
Priority Price	–0.183***	–0.178***	–0.145***	–0.139***	–0.145***	–0.140***
	(0.067)	(0.067)	(0.042)	(0.041)	(0.042)	(0.041)
High-Truthfulness Group	–0.388***	–0.376***	–0.351***	–0.337***	–0.351***	–0.339***
	(0.060)	(0.060)	(0.042)	(0.042)	(0.042)	(0.041)
Priority Price X High-Truthfulness Group	0.075	0.079	–0.001	0.016	0.047	0.045
	(0.083)	(0.083)	(0.449)	(0.453)	(0.260)	(0.261)
Constant	0.623***	0.738***				
	(0.046)	(0.087)				
Controls	No	Yes	No	Yes	No	Yes
Observations	696	696	696	696	696	696
R-squared	0.158	0.174				

[a] This table presents the results of OLS, logitistic, and probit regressions that test for the differential effect of priority pricing across high- and low-truthfulness groups. Columns (3)-(6) report the average marginal effects from the logit and probit models. The binary outcome variable takes the value of 0 if the participant truthfully reported their type as Type N when assigned as Type N in Section 3 and 1 otherwise. Priority Price is a dummy variable indicating if the participant had been assigned to one of the priority price conditions. High-Truthfulness Group is a dummy variable indicating if the participant belonged to one of the Truthful prompt conditions. Priority Price × High-Truthfulness Group captures the interaction effect of being assigned to both the priority fee condition and the truthful prompt condition, and it is the primary variable of interest in this analysis. Participant age, sex and employment status are used are control variables.
[b] Robust standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Hypothesis 3 posits that priority pricing treatment will have a larger effect in reducing non-truthful behavior in low-truthfulness populations compared to high-truthfulness populations. To test this hypothesis, probability-weighted regressions were conducted. The probability weights simulate the desired distribution of truthful and non-truthful individuals within each experimental condition, thus enabling comparisons across high- and low-truthfulness populations. In the results table, the truthful prompt assignment is labeled as the high-truthfulness group, reflecting the probability-weighted approach to simulate the high- and low-truthfulness distributions.

The primary variable of interest is a binary indicator for whether the participant misreported when assigned as Type N in Section 3. The key coefficient of interest is the interaction between assignment to the Priority Pricing condition and the Truthful prompt condition which captures the differential effect of priority pricing across high-truthfulness and low-truthfulness groups.

Table 6 presents the results. For comparability, OLS coefficients and average marginal effects (AMEs) from logit and probit models are reported, as AMEs reflect the change in probability rather than log-odds.[21] The results remain consistent across all models.

Column (1) indicates that while priority pricing appears to reduce non-truthful reporting, the interaction effect between belonging to a high-truthfulness group and assignment to the priority fee condition, contrary to Hypothesis 3, is not statistically significant. Columns (3) and (5) present the logit and probit regression results, which corroborate the direction, effect size and statistical significance observed in the OLS regression. Columns (2), (4) and (6) presents the OLS, logistic and probit regression estimates, respectively, including control variables sex, age and employment status.[22] These control variables were included because they were available as part of the demographic data automatically provided by Prolific, and there is substantial evidence indicating their relevance in the context of truth-telling (see, for example, Gerlach et al., 2019).[23]

Result 3. *Contrary to Hypothesis 3, the analysis reveals no statistically significant difference in the effect of priority pricing between the high-truthfulness and low-truthfulness groups.*

5.3 Role of Beliefs in the Experimental Outcome

While the predicted effect is not observed in the weighted regressions, a significant nonlinear interaction effect emerges in the non-weighted regressions (Table 7, Columns (3) to (6)). As before, OLS coefficients and average marginal effects (AMEs) from logit and probit models are reported for comparability. The only source of systematic variation across the Truthful and Non-Truthful prompt conditions was the prompt itself, i.e., whether participants were informed that qualifying for additional payment required 9 out of 10 participants in their group to be either truthful or non-truthful in their responses in Section 1.

These results suggest that participants adjust their truth-telling behavior based on their beliefs about the truthfulness of others in their group. Specifically, the significant negative interaction effect between being assigned to a truthful prompt condition and the priority pricing condition indicates that priority pricing significantly reduces the likelihood of non-truthful reporting when participants believe others are more likely to be truthful, compared to when they believe others are likely to misreport.

Additionally, while the AMEs for the Truthful prompt condition are significant in the nonlinear models, the corresponding coefficients in the logit and probit regressions (See Annex C) are not. This suggests that the observed significance is driven by the functional form of the logit and probit models rather than a strong underlying treatment effect.

Hypothesis 3 relies on the idea that because there are more non-truthful participants in the low-truthfulness groups, the introduction of priority pricing should have a more pronounced effect in reducing non-truthful behavior within these groups compared to high-

[21] See Annex C for regression coefficients.

[22] Employment status is a categorical variable that classifies each participant's employment status as either "Employed," "Unemployed," "Other," or "Missing.".

[23] Research suggests that age and sex may be correlated to truth-telling behavior. Specifically, studies have found that men and younger individuals may have a higher propensity for non-truthfulness. Furthermore, employment status is included as a control variable because it may be associated with systematic differences in participants' financial motivations.

truthfulness groups. However, data from Section 2 reveals that some participants continue to misreport their type under priority pricing, indicating that the mechanism does not fully incentivize truthful reporting. Furthermore, participants' tendency to adjust their behavior based on their beliefs about the truthfulness of others weaken the expected distributional effects. Together, these factors likely contribute to the lack of significant results in the weighted regressions.

Table 5: Differential Treatment Effect of Priority Pricing Across Truthful and Non-Truthful Conditions (Non-Weighted Analysis)

	OLS		Logit		Probit	
	(1)	(2)	(3)	(4)	(5)	(6)
Priority Price	–0.108**	–0.111**	–0.164***	–0.161***	–0.164***	–0.161***
	(0.053)	(0.052)	(0.035)	(0.035)	(0.035)	(0.035)
Truthful Prompt	–0.065	–0.068	–0.118***	–0.116***	–0.118***	–0.116***
	(0.052)	(0.052)	(0.035)	(0.035)	(0.035)	(0.035)
Priority Price X Truthful Prompt	–0.111	–0.097	–0.663**	–0.607*	–0.383*	–0.348*
	(0.071)	(0.071)	(0.336)	(0.339)	(0.201)	(0.203)
Constant	0.462***	0.556***				
	(0.037)	(0.076)				
Controls	No	Yes	No	Yes	No	Yes
Observations	696	696	696	696	696	696
R-squared	0.049	0.064				

[a] This table presents the results of OLS, logitistic, and probit regressions that test for the differential effect of priority pricing across truthful and non-truthful prompt conditions. Columns (3)-(6) report the average marginal effects from the logit and probit models. The binary outcome variable takes the value of 0 if the participant truthfully reported their type as Type N when assigned as Type N in Section 3 and 1 otherwise. Priority Price is a dummy variable indicating if the participant belonged to one of the priority price conditions. Truthful prompt is a dummy variable indicating if the participant belonged to one of the truthful prompt conditions. Priority Price × Truthful Prompt captures the interaction effect of being assigned to both the priority price and the truthful prompt condition, and it is the primary variable of interest in this analysis. Participant age, sex and employment status are used as control variables.

[b] Robust standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

5.4 Implications for Expected Aggregate Welfare

The primary aim of this section is to demonstrate how the observed behavioral patterns in the experimental data affects aggregate welfare outcomes. To this end, this section presents results from three different simulation exercises, each of which calculates and compares the average aggregate payoffs across different pricing schemes using the experimental data and evaluates these outcomes against their theoretical expectations. In these simulations, 10 participants were sampled with replacement 50,000 times from each of the four experimental conditions. In line with the setup in the theoretical model, participants within each sample were randomly paired. Each participant was assigned either Type U (Urgent) with a probability of 0.25 or Type N (Non-Urgent) with a probability of 0.75. These assigned types, along with the participants' actual responses corresponding to their assigned types, were used to determine the appointment allocations and payoffs for each pair. The average

aggregate payoff was then calculated for each sample. Although the underlying sample size lacks sufficient power to detect statistically significant differences, the simulations serve as an illustrative tool to provide valuable insights.

5.4.1 Baseline Comparison of Aggregate Payoff Across Pricing Schemes

Figure 4: Average Aggregate Payoff in Section 2

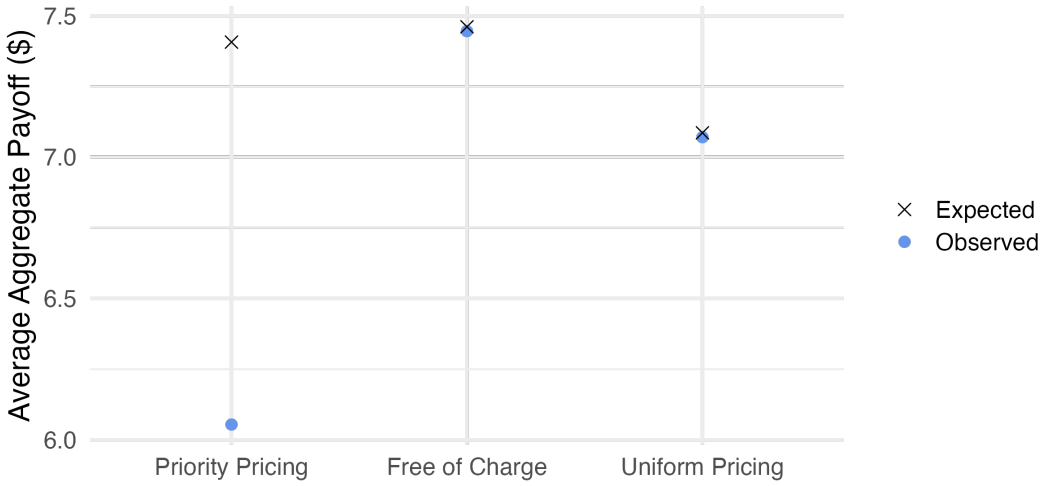


Figure 4 presents the average aggregate payoff calculated using data from Section 2, along with the theoretical expectation, with results shown for each pricing scheme: priority pricing (using data from the priority pricing condition), and free-of-charge and a uniform pricing scheme (using data from the free-of-charge condition). Under the uniform pricing scheme, all participants were charged a uniform price of \$0.1875, calibrated so that the total expected cost for each pair of participants under the priority pricing scheme equals the expected cost under the uniform pricing scheme.[24]

According to theoretical expectations, the average aggregate payoff from priority pricing will exceed that from the free of charge condition if and only if the probability of low-need, non-truthful participants exceeds the threshold, $\gamma^* = \frac{\theta_L}{\theta_H - \theta_L}$ (which is 0.429 in this experimental setting).[25] However, the empirical probability of non-truthful Type N participants in the free of charge conditions, was 0.367, which falls below this threshold.[26] Consequently, the theoretical expected payoff for the free of charge scenario was \$7.46 which exceeded the \$7.41 expected for priority pricing. The expected payoff for uniform pricing was \$7.09, the lowest among the three.

Moreover, contrary to theoretical predictions, the empirical average aggregate payoff from uniform pricing was higher than that from priority pricing. Priority pricing resulted in the

[24]The uniform price is set to $p_{\text{uniform}} = \alpha p_H^*$. Given that α, the probability of being assigned Type U, is 0.25, and $p_H^* = 0.75$, the uniform price is calculated as $p_{\text{uniform}} = 0.25 \times 0.75 = \$0.1875$.

[25]Given, $\theta_H = 10$ and $\theta_L = 3$, the threshold γ^* is calculated as $\gamma^* = \frac{3}{10-3} = 0.429$.

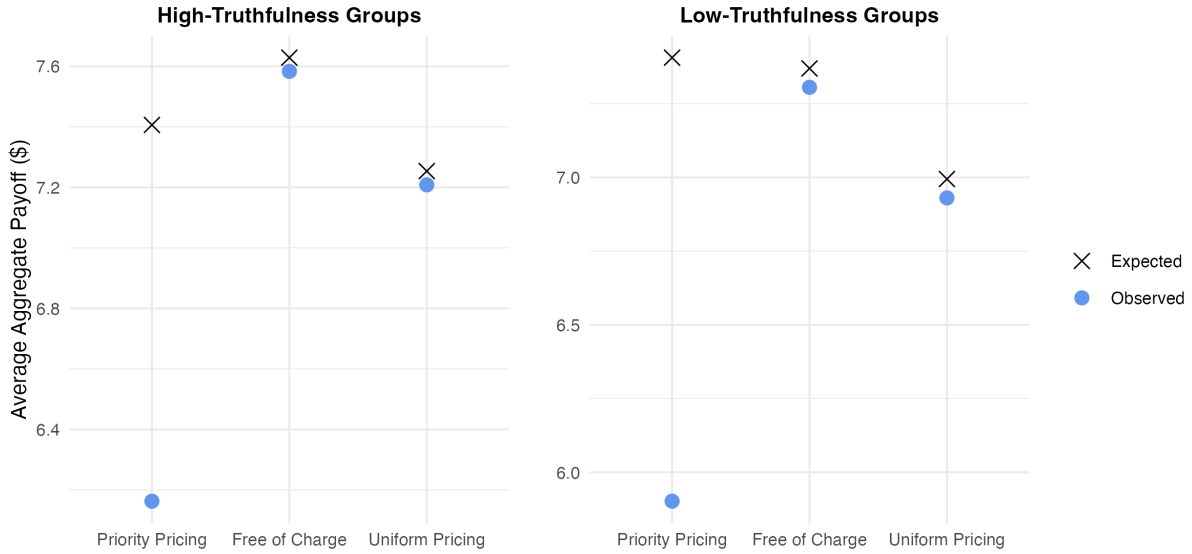
[26]The empirical probability is calculated as the proportion of observed non-truthful Type N participants in the generated samples.

lowest average aggregate payoff among the three pricing schemes, showing the greatest deviation from theoretical expectation. This result is driven by the fact that not all participants responded to the incentive under priority pricing - i.e., a substantial proprotion of participants misreported even under priority pricing (26.7%). These findings highlight that not all individuals respond to priority pricing incentives as expected, suggesting that the actual threshold for priority pricing to be welfare-enhancing may be substantially higher than theoretical predictions.

5.4.2 Population Truthfulness Propensity and Average Aggregate Payoffs Across Pricing Schemes

Figure 5 presents the average aggregate payoff from Section 3 across the three pricing schemes, comparing high-truthfulness and low-truthfulness groups. The figure also includes the theoretical expected payoff. Samples were selected based on responses from Section 1. Each high-truthfulness group consisted of 10 participants drawn from the truthful prompts condition within each pricing scheme (free-of-charge and priority pricing): nine participants were randomly selected from those who had truthfully identified as Type B when assigned as such in Section 1, and one was randomly selected from those who had been non-truthful. Conversely, each low-truthfulness group was drawn from the non-truthful prompts condition within each pricing scheme and included nine participants randomly selected from those who had misrepresented themselves as Type A when assigned as Type B, along with one randomly selected truthful participant.

Figure 5: Average Aggregate Payoff in Section 3



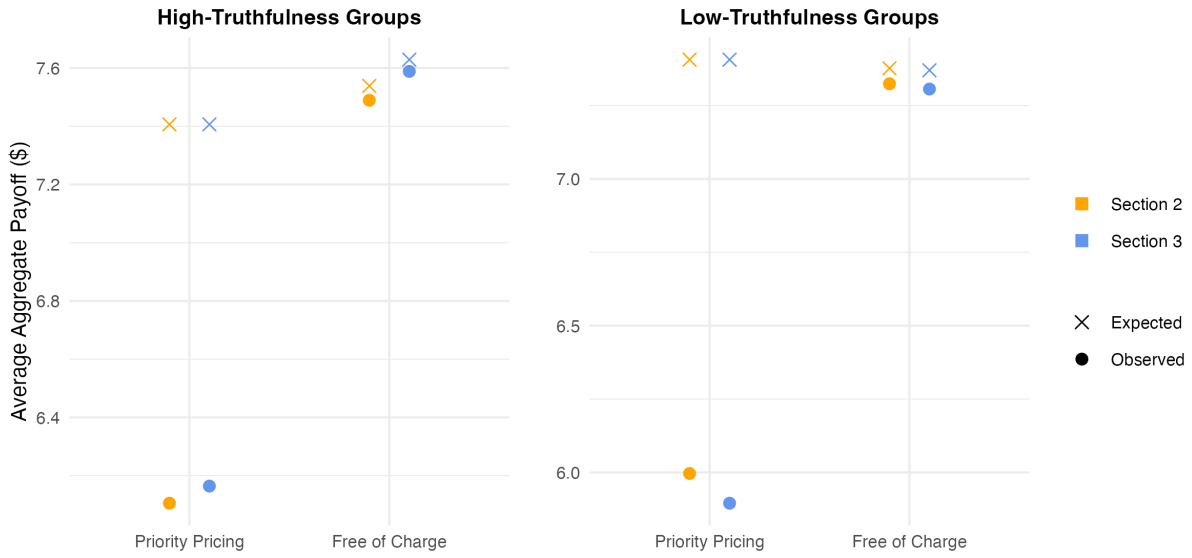
The empirical probabilities of non-truthful Type N participants in the free of charge conditions were 0.176 in the high-truthfulness groups and 0.47 in the low-truthfulness groups. Therefore, according to theoretical predictions, the average aggregate payoff from priority pricing should exceed that of the free-of-charge case for the low-truthfulness groups, while it

should be lower for the high-truthfulness groups. As shown in Figure 5, the latter expectation aligns with the experimental data, but the former is contradicted. Specifically, priority pricing is found to yield lower average aggregate payoffs across both the high- and low-truthfulness groups.

This is because priority pricing did not completely eliminate misreporting and it was also less effective at deterring misrepresentation among participants in the low-truthfulness groups, as discussed in the preceding sections. To add further clarity, the average proportion of non-truthful Type N participants in the priority pricing conditions were 0.10 in the high-truthfulness groups, compared to 0.33 in the low-truthfulness groups. This is to say that while priority pricing reduced non-truthful reporting by about 44.89% in the high-truthfulness group, it only reduced it by about 30.64% in the low-truthfulness group.

5.4.3 Beliefs and Average Aggregate Payoffs Across Pricing Schemes

Figure 6: Comparison of Average Aggregate Payoff in Section 2 and Section 3



The results presented in Section 5.3 show that beliefs about others' propensity for truthfulness has a significant effect on how participants respond to the truth-telling incentives under priority pricing. Specifically, participants who believed others were more likely to be truthful also tended to be more truthful under priority pricing. Conversely, those who believed others were less likely to be truthful were more inclined to misreport under priority pricing. This behavioral adjustment is significant, as it directly influences the aggregate welfare outcomes.

To illustrate this further, Figure 6 presents a comparison of the average aggregate payoffs for high- and low-truthfulness groups using participant responses from Section 2 and Section 3. This approach allows for a direct comparison of the impact of participant behavior under different informational conditions on aggregate outcomes as the only distinction between Sections 2 and 3 was that, in section 3, participants were explicitly informed about the

criteria for qualifying for additional payment. Specifically, in Section 3, they were informed that additional payment criteria required either nine out of ten group members to have been truthful or non-truthful in Section 1, depending on the experimental condition to which they had been assigned.

As shown in Figure 6, in Section 3 the high-truthfulness groups achieved a higher average aggregate payoff compared to Section 2. In contrast, the average aggregate payoff for the low-truthfulness groups in Section 3 was lower than in Section 2. These findings highlight the critical role that beliefs play in shaping individual actions and, consequently, in determining overall aggregate outcomes.

6 Discussion and Conclusion

This study examines the impact of incentive-compatible priority pricing (PP) on consumer welfare and investigates how preferences for truth-telling influence these outcomes. The results show that PP generally reduces non-truthful reporting among participants. However, contrary to expectations, PP did not have significantly different effects between groups with low and high propensities for truth-telling. The lack of significant differences appears to stem, in part, from participants adjusting their reporting behavior based on their beliefs about their group members' truthfulness. These findings demonstrate that PP's ability to enhance welfare depends not only on the incentives created by the pricing structure but also on the population's underlying propensity for truth-telling and their beliefs about others' truthfulness.

While many participants remained truthful even at a personal cost, there were others who did not respond to the pricing incentive, resulting in lower average payoffs than theoretical predictions. Given that participants demonstrated a clear understanding of the experimental setup, as evidenced by their successful completion of control questions, and those in the priority pricing treatment groups were explicitly informed that truthful responses would maximize their payments, the lack of responsiveness to PP likely stems from factors other than a lack of understanding and is something that warrants further investigation. This suggests that future work could benefit from incorporating a broader spectrum of truth-telling behaviors and exploring other potential underlying drivers of this behavior, such as bounded rationality (see, for example, Kahneman and Tversky, 1974, 1979; Simon, 1955).

Moreover, the finding that participants adjust their truth-telling behavior based on their beliefs about others' truthfulness highlights the critical role that beliefs play in the effectiveness of pricing incentives. This observation aligns with the broader literature on social preferences, which shows that individuals care not only about their own material payoffs but also about social comparisons (see, for example, Fehr and Gächter, 2000; Fehr and Schmidt, 2001). Future research could incorporate these social dimensions into modeling frameworks to better understand their influence on truth-telling and the effectiveness of priority pricing mechanisms.

While this study provides valuable insights, there are two key limitations that should be acknowledged. First, although online data collection offers advantages, such as access to more representative samples and the ability to gather larger sample sizes at a lower cost, it is also more vulnerable to data quality concerns. Research has found that data collected

virtually may exhibit higher levels of noise due to participant inattention, which can lead to reduced sensitivity to treatment variations. This issue can be especially pronounced in settings with complex strategic interactions, where repeated interactions and learning are required (see, for example, Fréchette et al., 2022). To mitigate these concerns, in this study, participants were required to successfully complete comprehension checks, and the survey was kept brief, with an average completion time of 12 minutes. Although these measures do not entirely eliminate data quality concerns, it is worth noting that the setup of this experiment was relatively simple, which may help minimize the impact of these issues.

Second, it is important to note that the experimental setup is highly stylized, serving as a proof of concept rather than offering broad generalizability across different contexts. In practice, studies have shown that various nuances influence when and how likely individuals are to be untruthful. Factors such as the magnitude of the lie (Fischbacher & Föllmi-Heusi, 2013) and the size of the financial incentive (Gneezy, 2005) can significantly shape the relevance and magnitude of the effects observed in this study.[27] These nuances are not fully captured in this study. However, the primary aim was to establish the general direction of these effects rather than to precisely quantify them. Despite these limitations, the study provides a foundation for understanding how preferences for truth-telling influences aggregate consumer welfare under priority pricing.

[27] This was also observed in the pilot studies, as discussed in Appendix D.

References

Abeler, J., Becker, A., & Falk, A. (2014). Representative evidence on lying costs. *Journal of Public Economics*, *113*, 96–104. https://doi.org/10.1016/j.jpubeco.2014.01.005

Abeler, J., Nosenzo, D., & Raymond, C. (2019). Preferences for truth-telling. *Econometrica*, *87*(4), 1115–1153. https://doi.org/10.3982/ECTA14673

Adiri, I., & Yechiali, U. (1974). Optimal priority-purchasing and pricing decisions in nonmonopoly and monopoly queues. *Operations Research*, *22*(5), 1051–1066. https://doi.org/10.1287/opre.22.5.1051

Afeche, P., & Mendelson, H. (2004). Pricing and priority auctions in queueing systems with a generalized delay cost structure. *Management Science*, *50*(7), 869–882. https://doi.org/10.1287/mnsc.1030.0156

Althenayyan, A., Cui, S., Ulku, S., & Yang, L. (2025). Not all lines are skipped equally: An experimental investigation of line-sitting and express lines. *Manufacturing & Service Operations Management*, *27*(1), 287–304. https://doi.org/10.1287/msom.2022.0338

Australian Government Department of Health and Aged Care. (n.d.). *About private health insurance*. Retrieved August 15, 2024, from https://www.health.gov.au/topics/private-health-insurance/about-private-health-insurance

Bucciol, A., & Piovesan, M. (2011). Luck or cheating? a field experiment on honesty with children. *Journal of Economic Psychology*, *32*(1), 73–78. https://doi.org/10.1016/j.joep.2010.12.001

Buell, R. W. (2021). Last-place aversion in queues. *Management Science*, *67*(3), 1430–1452. https://doi.org/10.1287/mnsc.2020.3619

Campos-Mercade, P. (2022). When are groups less moral than individuals? *Games and Economic Behavior*, *134*, 20–36. https://doi.org/10.1016/j.geb.2022.03.009

Chao, H.-p., & Wilson, R. (1987). Priority service: Pricing, investment, and market organization. *The American Economic Review*, 899–916.

Conte, A., Scarsini, M., & Sürücü, O. (2016). The impact of time limitation: Insights from a queueing experiment. *Judgment and Decision Making*, *11*(3), 260–274. https://doi.org/10.1017/S1930297500003090

Dolan, R. J. (1978). Incentive mechanisms for priority queuing problems. *The Bell Journal of Economics*, *9*(2), 421–436. https://doi.org/10.2307/3003591

Erat, S., & Gneezy, U. (2012). White lies. *Management Science*, *58*(4), 723–733. https://doi.org/10.1287/mnsc.1110.1449

Estrada Rodriguez, A., Ibrahim, R., & Zhan, D. (2024). On customer (dis-)honesty in unobservable queues: The role of lying aversion. *Management Science*, *71*(1), 844–860. https://doi.org/10.1287/mnsc.2022.04036

Fehr, E., & Gächter, S. (2000). Fairness and retaliation: The economics of reciprocity. *Journal of Economic Perspectives*, *14*(3), 159–182. https://doi.org/10.1257/jep.14.3.159

Fehr, E., & Schmidt, K. (2001, April). *Theories of fairness and reciprocity - Evidence and economic applications* (Working Paper No. 75). Institute for Empirical Research in Economics, University of Zurich. https://doi.org/10.5167/uzh-51976

Fischbacher, U., & Föllmi-Heusi, F. (2013). Lies in disguise—an experimental study on cheating. *Journal of the European Economic Association*, *11*(3), 525–547. https://doi.org/10.1111/jeea.12014

Fréchette, G. R., Sarnoff, K., & Yariv, L. (2022). Experimental economics: Past and future. *Annual Review of Economics*, *14*(1), 777–794. https://doi.org/10.1146/annurev-economics-081621-124424

Gerlach, P., Teodorescu, K., & Hertwig, R. (2019). The truth about lies: A meta-analysis on dishonest behavior. *Psychological Bulletin*, *145*(1), 1–44. https://doi.org/10.1037/bul0000174

Gershkov, A., & Winter, E. (2023). Gainers and losers in priority services. *Journal of Political Economy*, *131*(11), 3103–3155. https://doi.org/10.1086/724850

Ghanem, S. B. (1975). Computing center optimization by a pricing-priority policy. *IBM Systems Journal*, *14*(3), 272–291. https://doi.org/10.1147/sj.143.0272

Gneezy, U. (2005). Deception: The role of consequences. *American Economic Review*, *95*(1), 384–394. https://doi.org/10.1257/0002828053828662

Gneezy, U., Kajackaite, A., & Sobel, J. (2018). Lying aversion and the size of the lie. *American Economic Review*, *108*(2), 419–453. https://doi.org/10.1257/aer.20161553

Hassin, R., & Haviv, M. (2003). *To queue or not to queue: Equilibrium behavior in queueing systems* (Vol. 59). Kluwer Acedemic Publishers. https://doi.org/10.1007/978-1-4615-0359-0

His Majesty's Passport Office. (n.d.). *Get a passport urgently*. GOV.UK. Retrieved August 15, 2024, from https://www.gov.uk/get-a-passport-urgently

Hurkens, S., & Kartik, N. (2009). Would i lie to you? On social preferences and lying aversion. *Experimental Economics*, *12*, 180–192. https://doi.org/10.1007/s10683-008-9208-2

Kahneman, D., & Tversky, A. (1974). Judgment under uncertainty: Heuristics and biases: Biases in judgments reveal some heuristics of thinking under uncertainty. *Science*, *185*(4157), 1124–1131. https://doi.org/10.1126/science.185.4157.1124

Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, *47*(2), 263–291. Retrieved November 26, 2024, from http://www.jstor.org/stable/1914185

Kuchinke, B. A., Sauerland, D., & Wübker, A. (2009). The influence of insurance status on waiting times in German acute care hospitals: An empirical analysis of new data. *International Journal for Equity in Health*, *8*(1), 1–10. https://doi.org/10.1186/1475-9276-8-44

Lu, Y., Musalem, A., Olivares, M., & Schilkrut, A. (2013). Measuring the effect of queues on customer purchases. *Management Science*, *59*(8), 1743–1763. https://doi.org/10.1287/mnsc.1120.1686

Lundquist, T., Ellingsen, T., Gribbe, E., & Johannesson, M. (2009). The aversion to lying. *Journal of Economic Behavior & Organization*, *70*(1-2), 81–92. https://doi.org/10.1016/j.jebo.2009.02.010

Mazar, N., Amir, O., & Ariely, D. (2008). The dishonesty of honest people: A theory of self-concept maintenance. *Journal of Marketing Research*, *45*(6), 633–644. https://doi.org/10.1509/jmkr.45.6.633

Mendelson, H., & Whang, S. (1990). Optimal incentive-compatible priority pricing for the M/M/1 queue. *Operations Research*, *38*(5), 870–883. https://doi.org/10.1287/opre.38.5.870

Naor, P. (1969). The regulation of queue size by levying tolls. *Econometrica*, *37*(1), 15–24. https://doi.org/10.2307/1909200

Organisation for Economic Co-operation and Development. (2020). *Waiting times for health services: Next in line*. OECD Publishing. https://doi.org/10.1787/242e3c8c-en

Simon, H. A. (1955). A behavioral model of rational choice. *The Quarterly Journal of Economics*, 99–118. https://doi.org/10.2307/1884852

Symons, A. (2024, July 11). *Need to renew your passport? Here's what it will cost and how long it will take around Europe*. Euronews. https://www.euronews.com/travel/2024/07/11/germans-warned-of-long-passport-waiting-times-how-do-other-european-countries-compare

Thami, P. (2024). *Queuing decisions* (AEA RCT Registry No. 13064). American Economic Association. https://doi.org/10.1257/rct.13064-1.0

Tirole, J. (1988). *The theory of industrial organization*. MIT press.

UK Visas and Immigration. (n.d.). *Get a faster decision on your visa or settlement application*. GOV.UK. Retrieved August 15, 2024, from https://www.gov.uk/faster-decision-visa-settlement

Ülkü, S., Hydock, C., & Cui, S. (2020). Making the wait worthwhile: Experiments on the effect of queueing on consumption. *Management Science*, *66*(3), 1149–1171. https://doi.org/10.1287/mnsc.2018.3277

U.S. Citizenship and Immigration Services. (n.d.). *How Do I Request Premium Processing?* U.S. Department of Homeland Security. Retrieved August 15, 2024, from https://www.uscis.gov/forms/all-forms/how-do-i-request-premium-processing

U.S. Department of State — Bureau of Consular Affairs. (n.d.). *U.S. Passports*. U.S. Department of State. Retrieved August 15, 2024, from https://travel.state.gov/content/travel/en/passports.html

Wilson, R. (1989). Efficient and competitive rationing. *Econometrica*, *57*(1), 1–40. https://doi.org/10.2307/1912571

Wilson, R. B. (1993). *Nonlinear pricing*. Oxford University Press. https://doi.org/10.1093/oso/9780195068856.001.0001

A Appendix: Incentive Compatible Priority Pricing

This section presents the solution to the designer's optimization problem. The first incentive-compatibility constraint, (IC-1), ensures that it is weakly optimal for the low type agents to truthfully report their type rather than misrepresenting themselves as high type agents. This constraint is satisfied if:

$$\mathbb{E}_{\theta_j}[u(\theta_L, t(\hat{\theta}_L, \hat{\theta}_j)) - p_L] \geq \mathbb{E}_{\theta_j}[u(\theta_L, t(\hat{\theta}_H, \hat{\theta}_j)) - p_H]$$

Equivalently, this can be expressed as:

$$\begin{aligned}&\mathbb{P}[\theta_j = \theta_H](u(\theta_L, t(\hat{\theta}_L, \hat{\theta}_H)) - p_L) + \mathbb{P}[\theta_j = \theta_L](u(\theta_L, t(\hat{\theta}_L, \hat{\theta}_L)) - p_L)\\ &\geq \mathbb{P}[\theta_j = \theta_H](u(\theta_L, t(\hat{\theta}_H, \hat{\theta}_H)) - p_H) + \mathbb{P}[\theta_j = \theta_L](u(\theta_L, t(\hat{\theta}_H, \hat{\theta}_L)) - p_H)\end{aligned}$$

Substituting the respective utilities and probabilities gives:

$$\alpha(\theta_L\delta - p_L) + (1-\alpha)(\frac{1}{2}\theta_L + \frac{1}{2}\theta_L\delta - p_L) \geq \alpha(\frac{1}{2}\theta_L + \frac{1}{2}\theta_L\delta - p_H) + (1-\alpha)(\theta_L - p_H)$$

Simplification yields:

$$p_H - p_L \geq \frac{1}{2}\theta_L(1-\delta) \tag{3}$$

Similarly, the second incentive compatibility constraint, (IC-2), ensures that it is also weakly optimal for high type agents to truthfully report their type rather than misrepresent as low type agents. This constraint is satisfied if:

$$\mathbb{E}_{\theta_j}\left[u(\theta_H, t(\hat{\theta}_H, \hat{\theta}_j)) - p_H\right] \geq \mathbb{E}_{\theta_j}\left[u(\theta_H, t(\hat{\theta}_L, \hat{\theta}_j)) - p_L\right]$$

Equivalently, this can be expressed as:

$$\begin{aligned}&\mathbb{P}[\theta_j = \theta_H](u(\theta_H, t(\hat{\theta}_H, \hat{\theta}_H)) - p_H) + \mathbb{P}[\theta_j = \theta_L](u(\theta_H, t(\hat{\theta}_H, \hat{\theta}_L)) - p_H)\\ &\geq \mathbb{P}[\theta_j = \theta_H](u(\theta_H, t(\hat{\theta}_L, \hat{\theta}_H)) - p_L) + \mathbb{P}[\theta_j = \theta_L](u(\theta_H, t(\hat{\theta}_L, \hat{\theta}_L)) - p_L)\end{aligned}$$

Substituting the respective utilities and probabilities, and simplification yields:

$$p_H - p_L \leq \frac{1}{2}\theta_H(1-\delta) \tag{4}$$

The first individual rationality constraint, (IR-1), ensures that the low type agents are not worse off by seeking an appointment. Formally, this condition is given by:

$$\mathbb{E}_{\theta_j}\left[u(\theta_L, t(\hat{\theta}_L, \hat{\theta}_j)) - p_L\right] \geq 0$$

Expressed equivalently as:

$$\mathbb{P}[\theta_j = \theta_H](u(\theta_L, t(\hat{\theta}_L, \hat{\theta}_H)) - p_L) + \mathbb{P}[\theta_j = \theta_L](u(\theta_L, t(\hat{\theta}_L, \hat{\theta}_L)) - p_L) \geq 0$$

Substituting the respective utilities and probabilities, and simplification yields:

$$p_L \leq \frac{1}{2}\theta_L(1+\delta-\alpha(1-\delta)) \tag{5}$$

Similarly, the second individual rationality constraint, (IR-2), ensures that the high type agents are not worse off by seeking an appointment. The condition is expressed formally as:

$$\mathbb{E}_{\theta_j}\left[u(\theta_H, t(\hat{\theta}_H, \hat{\theta}_j)) - p_H\right] \geq 0$$

Equivalently, this can be expressed as:

$$\mathbb{P}[\theta_j = \theta_H](u(\theta_H, t(\hat{\theta}_H, \hat{\theta}_H)) - p_H) + \mathbb{P}[\theta_j = \theta_L](u(\theta_H, t(\hat{\theta}_H, \hat{\theta}_L)) - p_H)$$

Substituting the respective utilities and probabilities, and simplification gives:

$$p_H \leq \frac{1}{2}\theta_H(2-\alpha(1-\delta)) \tag{6}$$

Further, the optimal prices need to be non-negative, i.e.:

$$p_L \geq 0 \tag{7}$$
$$p_H \geq 0 \tag{8}$$

Since aggregate utility decreases as p_L and p_H increase, the optimal solution must minimize these payments while satisfying the incentive compatibility (IC), individual rationality (IR), and non-negative prices constraints, namely, equations (3) through (8).

Non-Binding of $p_H \geq 0$

Equation (3), $p_H \geq \frac{1}{2}\theta_L(1-\delta) + p_L$ (IC constraint for the low type), implies that if $p_H = 0$, then p_L would be negative, violating Equation (7). Therefore, $p_H > 0$.

Binding of $p_L = 0$

When $p_L = 0$ satisfying Equation (7), the IR constraint (Equation 5) for the low type agent is satisfied, and the cost for the low type agents is minimized. For this value of p_L, the smallest p_H that satisfies the IC constraint for the low type (Equation 3) is $p_H = \frac{1}{2}\theta_L(1-\delta)$.

Verifying that $p_H = \frac{1}{2}\theta_L(1-\delta)$ satisfies all constraints for high type agents

IC constraint (Equation 4) is satisfied as $p_H - p_L = \frac{1}{2}\theta_L(1-\delta)$ and it follows from $\theta_H > \theta_L$ that $\frac{1}{2}\theta_H(1-\delta) > \frac{1}{2}\theta_L(1-\delta)$.

IR constraint (Equation 6) is satisfied as $2-\alpha(1-\delta) > 1-\delta$ as $\alpha, \delta \in (0,1)$ implies $p_H = \frac{1}{2}\theta_L(1-\delta) < \frac{1}{2}\theta_H(2-\alpha(1-\delta))$.

Equation 8 is satisfied as $p_H = \frac{1}{2}\theta_L(1-\delta) > 0$ as $\theta_L > 0$ and $\delta \in (0,1)$.

Conclusion

Thus, the optimal pricing scheme is given by setting $p_L^* = 0$ and $p_H^* = \frac{1}{2}\theta_L(1-\delta)$.

B Appendix: Proofs

The adoption of an incentive-compatible pricing scheme, as opposed to a uniform pricing scheme, affects aggregate expected welfare through two primary mechanisms. First, it affects the allocation of appointment slots by altering the information revelation behavior of θ_{L_n} type agents. Specifically, when a type θ_H agent and a type θ_{L_n} agent simultaneously seek appointments, incentive-compatible pricing ensures that the θ_{L_n} agent truthfully reports their type, allowing the type θ_H agent to consistently receive the first appointment. Without the incentives created by priority pricing, this appointment would be allocated randomly between the two agents.[28] Second, changes in expected aggregate welfare are also driven by differences in the total expected prices paid by agents.

To assess these changes, recall the expression for expected aggregate consumer welfare from equation (1), restated below for convenience:

$$\mathbb{E}_{\theta_i,\theta_j}\left[U(\theta_i,\theta_j)\right] - \mathbb{E}_{\theta_i,\theta_j}\left[P(\theta_i,\theta_j)\right] = \sum_{\theta_i,\theta_j\in\Theta'} \mathbb{P}_{\theta_i\theta_j} U(\theta_i,\theta_j) - \sum_{\theta_i,\theta_j\in\Theta'} \mathbb{P}_{\theta_i\theta_j} P(\theta_i,\theta_j) \tag{1}$$

As discussed above, the impact on expected aggregate welfare arises specifically from changes in the following subset of terms from equation (1):

$$2\mathbb{P}_{\theta_{L_n}\theta_H} U(\theta_{L_n},\theta_H) - \sum_{\theta_i,\theta_j\in\Theta'} \mathbb{P}_{\theta_i\theta_j} P(\theta_i,\theta_j). \tag{4}$$

Under incentive-compatible priority pricing, this expression is given by:

$$2\mathbb{P}_{\theta_{L_n}\theta_H}\left(u(\theta_{L_n}, t(\hat{\theta}_L,\hat{\theta}_H)) + u(\theta_H, t(\hat{\theta}_H,\hat{\theta}_L))\right) - \sum_{\theta_i,\theta_j\in\Theta'} \mathbb{P}_{\theta_i\theta_j}(p(\hat{\theta}_i)+p(\hat{\theta}_j))$$

where, θ_{L_n} type agents are incentivized to truthfully report their true type as $\hat{\theta}_L$. Substituting the respective utilities and prices, we obtain:

$$\begin{aligned}&2\mathbb{P}_{\theta_{L_n}\theta_H}(\delta\theta_L+\theta_H) - (\mathbb{P}_{\theta_H\theta_H}(p_H^*+p_H^*) + 2\mathbb{P}_{\theta_H\theta_{L_t}}(p_H^*+p_L^*) + 2\mathbb{P}_{\theta_H\theta_{L_n}}(p_H^*+p_L^*)\\ &+ 2\mathbb{P}_{\theta_{L_t}\theta_{L_n}}(p_L^*+p_L^*) + \mathbb{P}_{L_tL_t}(p_L^*+p_L^*) + \mathbb{P}_{\theta_{L_n}\theta_{L_n}}(p_L^*+p_L^*))\end{aligned}$$

Substituting the respective probabilities, setting $p_L^* = 0$ and simplifying yields:

$$2\alpha\gamma(\delta\theta_L+\theta_H) - 2\alpha p_H^* \tag{5}$$

On the other hand, under a uniform pricing scheme with price p, equation (4) is given by:

$$2\alpha\gamma\left(u(\theta_{L_n}, t(\hat{\theta}_H,\hat{\theta}_H)) + u(\theta_H, t(\hat{\theta}_H,\hat{\theta}_H))\right) - \sum_{\theta_i,\theta_j\in\Theta'} \mathbb{P}_{\theta_i\theta_j}(p(\hat{\theta}_i)+p(\hat{\theta}_j))$$

[28] While the specific allocation of slots under incentive-compatible pricing may also vary when types θ_{L_t} and θ_{L_n}, or when two θ_{L_n} type agents arrive at the time, this does not affect aggregate utility since both agent types have the same valuation (θ_L).

where, θ_{L_n} type agents misrepresent their type as $\hat{\theta}_H$.

It is useful to recall that $\sum_{\theta_i,\theta_j \in \Theta'} \mathbb{P}_{\theta_i\theta_j}(p(\hat{\theta}_i) + p(\hat{\theta}_j)) = \mathbb{E}[p(\hat{\theta}_i) + p(\hat{\theta}_j)]$ and under a uniform pricing scheme $p(\hat{\theta}) = p \ \forall \ \hat{\theta} \in \Theta'$. Therefore, $\mathbb{E}[p(\hat{\theta}_i) + p(\hat{\theta}_j)] = 2p$. Substituting the respective utilities and expected total prices gives:

$$2\alpha\gamma \ (\frac{1}{2}(\theta_L + \delta\theta_H) + \frac{1}{2}(\delta\theta_L + \theta_H)) - 2p. \tag{6}$$

By comparing the expressions in equation (5) and equation (6), the conditions under which the incentive compatible priority pricing scheme will result in an increase in expected welfare outcome compared to uniform pricing schemes can be derived. This analysis leads to the following propositions:

Proposition 1. *When the expected cost for agents under a uniform pricing scheme is less than under the incentive compatible priority pricing scheme, i.e. when the uniform price is set to* $p' = \varepsilon\alpha p^*_H$*, where* $\varepsilon \in (0, 1)$*, introducing incentive-compatible priority pricing (PP) will increase expected aggregate consumer welfare if and only if the probability of non-truthful, low-type agents* (γ) *exceeds the threshold* $\gamma^\dagger$*, where*

$$\gamma^\dagger = \frac{\theta_L(1-\varepsilon)}{\theta_H - \theta_L}.$$

Proof. The expected aggregate utility from an incentive compatible priority pricing scheme will exceed the expected aggregate utility under a uniform pricing scheme with a lower expected cost if (5) is greater than (6) when $p^*_H = \frac{1}{2}\theta_L(1-\delta)$ and $p = \varepsilon\alpha p^*_H$, where $\varepsilon \in (0, 1)$, i.e. :

$$2\alpha\gamma(\delta\theta_L + \theta_H) - 2\alpha\frac{1}{2}\theta_L(1-\delta) > 2\alpha\gamma \ (\frac{1}{2}(\theta_L + \delta\theta_H) + \frac{1}{2}(\delta\theta_L + \theta_H)) - 2\epsilon\alpha\frac{1}{2}\theta_L(1-\delta)$$

Simplification gives:

$$\gamma^\dagger > \frac{\theta_L(1-\varepsilon)}{\theta_H - \theta_L}$$

The threshold $\gamma^\dagger$ is well-defined as $\theta_H > 2\theta_L > 0 \implies \theta_H > (2-\epsilon)\theta_L > 0$ as $\varepsilon \in (0, 1)$.

□

Proposition 2. *When there is no cost to the agents, i.e. when the price is set to* $p = 0$*, introducing incentive-compatible priority pricing (PP) will increase expected aggregate consumer welfare if and only if the probability of non-truthful, low-type agents* (γ) *exceeds the threshold* γ^**, where*

$$\gamma^* = \frac{\theta_L}{\theta_H - \theta_L}.$$

Proof. The expected aggregate utility from an incentive compatible priority pricing scheme will exceed the expected aggregate utility when there is no cost to the agents if equation (5) is greater than equation (6) when $p_H^* = \frac{1}{2}\theta_L(1-\delta)$ and $p = 0$, i.e. :

$$2\alpha\gamma(\delta\theta_L + \theta_H) - 2\alpha\frac{1}{2}\theta_L(1-\delta) > 2\alpha\gamma\ (\frac{1}{2}(\theta_L + \delta\theta_H) + \frac{1}{2}(\delta\theta_L + \theta_H))$$

Simplification yields:

$$\gamma^* > \frac{\theta_L}{\theta_H - \theta_L}.$$

The threshold γ^* is well-defined as $\theta_H > 2\theta_L > 0$. This result can also be directly derived from Proposition 1, as it corresponds to the case where $\varepsilon = 0$. □

Proposition 3. *When the expected cost for the agents under the incentive-compatible priority pricing (PP) scheme equals that under a uniform pricing scheme, i.e., when the uniform price is set to $p = \alpha p_H^*$, introducing priority pricing (PP) will always generate higher expected aggregate consumer welfare.*

Proof. Substituting the uniform price $p = \alpha p_H^*$ into equation (6) gives:

$$2\alpha\gamma\ (\frac{1}{2}(\theta_L + \delta\theta_H) + \frac{1}{2}(\delta\theta_L + \theta_H)) - 2\alpha p_H^*$$

Equation (5) can be rewritten as:

$$2\alpha\gamma(\frac{1}{2}(\delta\theta_L + \theta_H) + \frac{1}{2}(\delta\theta_L + \theta_H)) - 2\alpha p_H^*$$

The later is greater than the former as $\theta_H > \theta_L$ and $\delta \in (0, 1)$. □

C Appendix: Regression Coefficients

Table 6: Differential Treatment Effect of Priority Pricing Across High- and Low-Truthfulness Groups (Probability Weighted Analysis)

	OLS		Logit		Probit	
	(1)	(2)	(3)	(4)	(5)	(6)
Priority Price	–0.183***	–0.178***	–0.743***	–0.735***	–0.464***	–0.455***
	(0.067)	(0.067)	(0.276)	(0.283)	(0.172)	(0.174)
High-Truthfulness Group	–0.388***	–0.376***	–1.683***	–1.657***	–1.036***	–1.018***
	(0.060)	(0.060)	(0.289)	(0.293)	(0.173)	(0.175)
Priority Price X High-Truthfulness Group	0.075	0.079	–0.001	0.016	0.047	0.045
	(0.083)	(0.083)	(0.449)	(0.453)	(0.260)	(0.261)
Constant	0.623***	0.738***	0.502***	1.158**	0.313***	0.716***
	(0.046)	(0.087)	(0.194)	(0.460)	(0.120)	(0.271)
Controls	No	Yes	No	Yes	No	Yes
Observations	696	696	696	696	696	696
R-squared	0.158	0.174				

[a] This table presents the coefficients from OLS, logistic, and probit regressions testing the differential effect of priority pricing across the high- and low-truthfulness groups. The binary outcome variable takes the value of 0 if the participant truthfully reported their type as Type N when assigned as Type N in Section 3 and 1 otherwise. Priority Price is a dummy variable indicating if the participant had been assigned to one of the priority price conditions. High-Truthfulness Group is a dummy variable indicating if the participant belonged to one of the Truthful prompt conditions. Priority Price × High-Truthfulness Group captures the interaction effect of being assigned to both the priority fee condition and the truthful prompt condition, and it is the primary variable of interest in this analysis. Participant age, sex and employment status are used are control variables.
[b] Robust standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

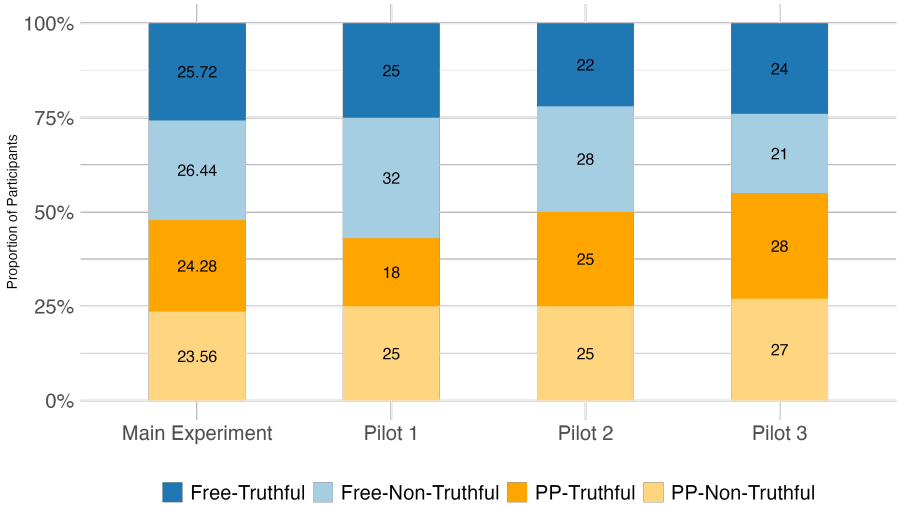
Table 7: Differential Treatment Effect of Priority Pricing Across Truthful and Non-Truthful Conditions (Non-Weighted Analysis)

	OLS		Logit		Probit	
	(1)	(2)	(3)	(4)	(5)	(6)
Priority Price	–0.108**	–0.111**	–0.451**	–0.474**	–0.280**	–0.295**
	(0.053)	(0.052)	(0.220)	(0.224)	(0.137)	(0.138)
Truthful Prompt	–0.065	–0.068	–0.267	–0.287	–0.167	–0.179
	(0.052)	(0.052)	(0.213)	(0.217)	(0.133)	(0.134)
Priority Price X Truthful Prompt	–0.111	–0.097	–0.663**	–0.607*	–0.383*	–0.348*
	(0.071)	(0.071)	(0.336)	(0.339)	(0.201)	(0.203)
Constant	0.462***	0.556***	–0.152	0.302	–0.096	0.181
	(0.037)	(0.076)	(0.148)	(0.349)	(0.093)	(0.211)
Controls	No	Yes	No	Yes	No	Yes
Observations	696	696	696	696	696	696
R-squared	0.049	0.064				

[a] This table presents the coefficients from OLS, logistic, and probit regressions testing the differential effect of priority pricing across the Truthful and Non-Truthful prompt conditions. The binary outcome variable takes the value of 0 if the participant truthfully reported their type as Type N when assigned as Type N in Section 3 and 1 otherwise. Priority Price is a dummy variable indicating if the participant belonged to one of the priority price conditions. Truthful prompt is a dummy variable indicating if the participant belonged to one of the truthful prompt conditions. Priority Price × Truthful Prompt captures the interaction effect of being assigned to both the priority price and the truthful prompt condition, and it is the primary variable of interest in this analysis. Participant age, sex and employment status are used as control variables.
[b] Robust standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

D Appendix: Pilots

Figure 7: Participant Distribution Across Experimental Conditions in Pilots and Main Experiment



This section provides an overview of the distribution of responses across the three pilot studies and the main experiment, supported by comparative tables. The three pilot studies were conducted prior to the main experiment to refine the survey design, ensure clarity of the questions, and confirm the effectiveness of randomization across experimental conditions. Table 11 summarizes the key differences between each pilot and the main experiment. While Pilots 1 and 2 primarily differed from the main experiment in how information was presented, Pilot 3 tested a reduced appointment valuation for Type N (Non-Urgent) as a potential method for containing costs and increasing sample size. However, this adjustment lead to a substantial decrease in non-truthful reporting, reducing the behavioral variation, so it was not implemented in the main experiment. Each pilot included 100 unique participants, recruited from Prolific's American survey respondent pool. As shown in Figure 8, randomization across the four experimental conditions was generally effective across all surveys.

Table 8: Distribution of Responses by Assigned Type in Section 1

		Assigned Type							
		Pilot 1		Pilot 2		Pilot 3		Main Experiment	
		Type A	Type B	Type A	Type B	Type A	Type B	Type A	Type B
Reported Type	Type A	97	53	100	51	100	55	98.9	50.1
	Type B	3	49	0	49	0	45	1.1	49.8

Overall, response patterns were consistent across all surveys. Table 8 displays the dis-

tribution of responses in Section 1. The majority of participants reported truthfully when assigned as Type A across all surveys, while about half misreported their type when assigned as Type B.

Table 9 presents the distribution of responses in Section 2. While there was some variation in proportions across surveys, participants' response patterns in Section 2 remained consistent. In both the free-of-charge and priority pricing conditions, the vast majority of participants reported their type truthfully when assigned as Type U (Urgent), aligning with expectations and the theoretical setup. In contrast, a substantial proportion of participants misreported their type when assigned as Type N (Non-Urgent), with misreporting rates ranging from 33% to 42% in the free-of-charge conditions. Further, misreporting was consistently lower under the priority pricing conditions, ranging from 11% to 28%.

Table 9: Distribution of Responses by Assigned Type in Section 2

(a) Free of Charge Condition

		Assigned Type							
		Pilot 1		Pilot 2		Pilot 3		Main Experiment	
		Type N	Type U	Type N	Type U	Type N	Type U	Type N	Type U
Reported Type	Type N	65	0	58	6	67	4	50.96	3.58
	Type U	35	100	42	94	33	96	40.04	96.42

(b) Priority Price Condition

		Assigned Type							
		Pilot 1		Pilot 2		Pilot 3		Main Experiment	
		Type N	Type U	Type N	Type U	Type N	Type U	Type N	Type U
Reported Type	Type N	72	9	80	10	89	2	73.27	6.91
	Type U	28	91	20	90	11	98	26.73	93.09

Figure 8 presents the distribution of responses when participants were assigned as Type N (Non-Urgent) in section 3, alongside the response distribution from Section 2, which serves as a measure of baseline behavior. Under the priority pricing conditions across all surveys, participants who believed others were likely to be truthful reported more truthfully compared to the baseline behavior in Section 2. Conversely, those who believed others were unlikely to be truthful exhibited higher levels of misreporting. Under the free of charge conditions, while in general more participants misreported when they believed others were likely to misreport compared to when they believed others were likely to be truthful, the pattern relative to the baseline is not consistent. However, with the exception of Pilot 3, the proportion of participants who misreported is substantially lower under the truthful prompt condition compared to the baseline.

Figure 8: Distribution of Reported Type when Assigned as Type N in Section 3 and Section 2

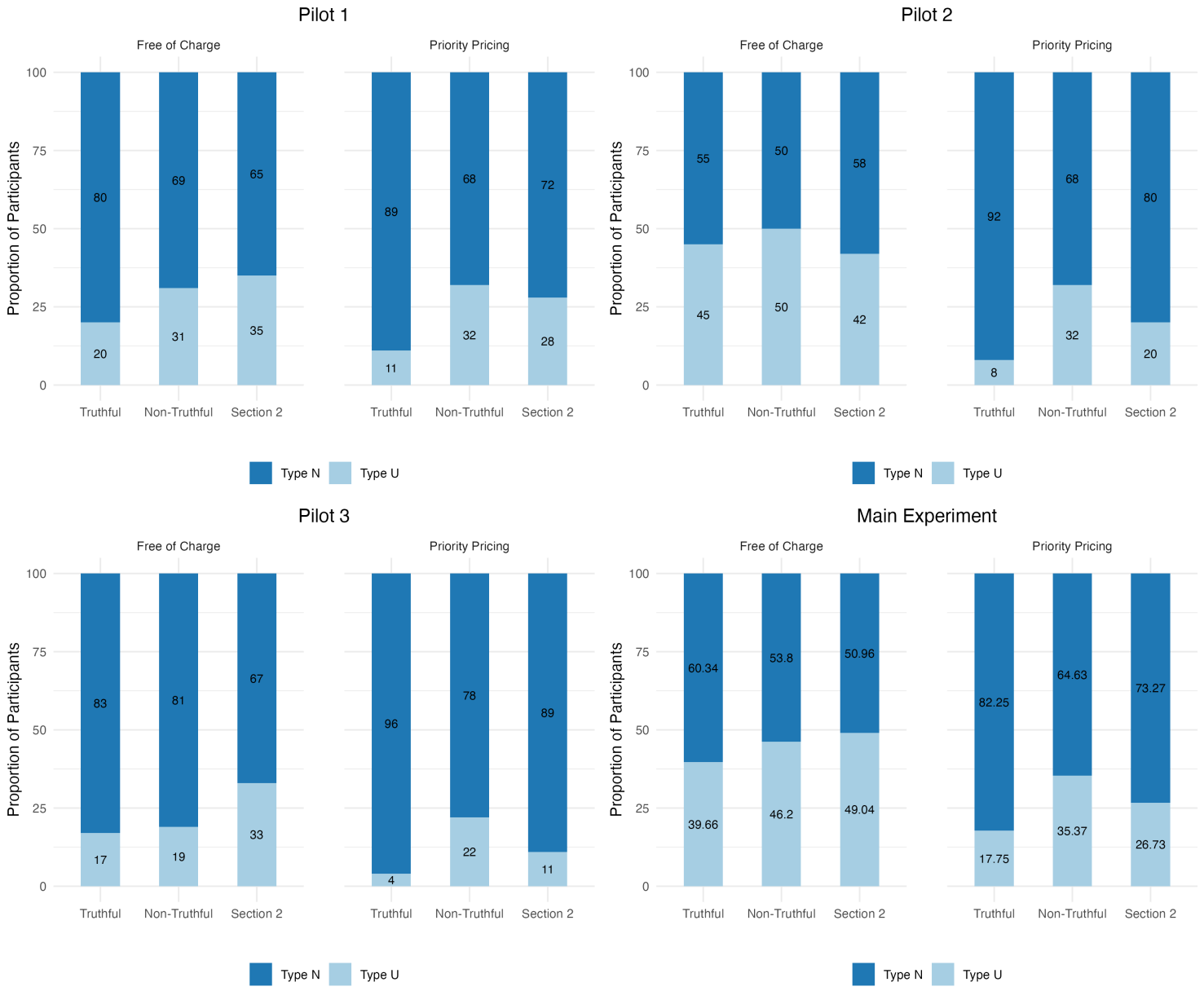


Table 10: Distribution of Responses

(a) Truthful Conditions

		Pilot 1		Pilot 2		Pilot 3		Main Experiment	
		Free	PP	Free	PP	Free	PP	Free	PP
Reported Type	Type N	0	0	5	16	8	4	3.35	4.73
	Type U	100	100	95	84	92	96	96.65	95.27

(b) Non-Truthful Conditions

		Pilot 1		Pilot 2		Pilot 3		Main Experiment	
		Free	PP	Free	PP	Free	PP	Free	PP
Reported Type	Type N	3	20	4	0	10	7	7.07	12.80
	Type U	97	80	96	100	90	93	92.93	87.20

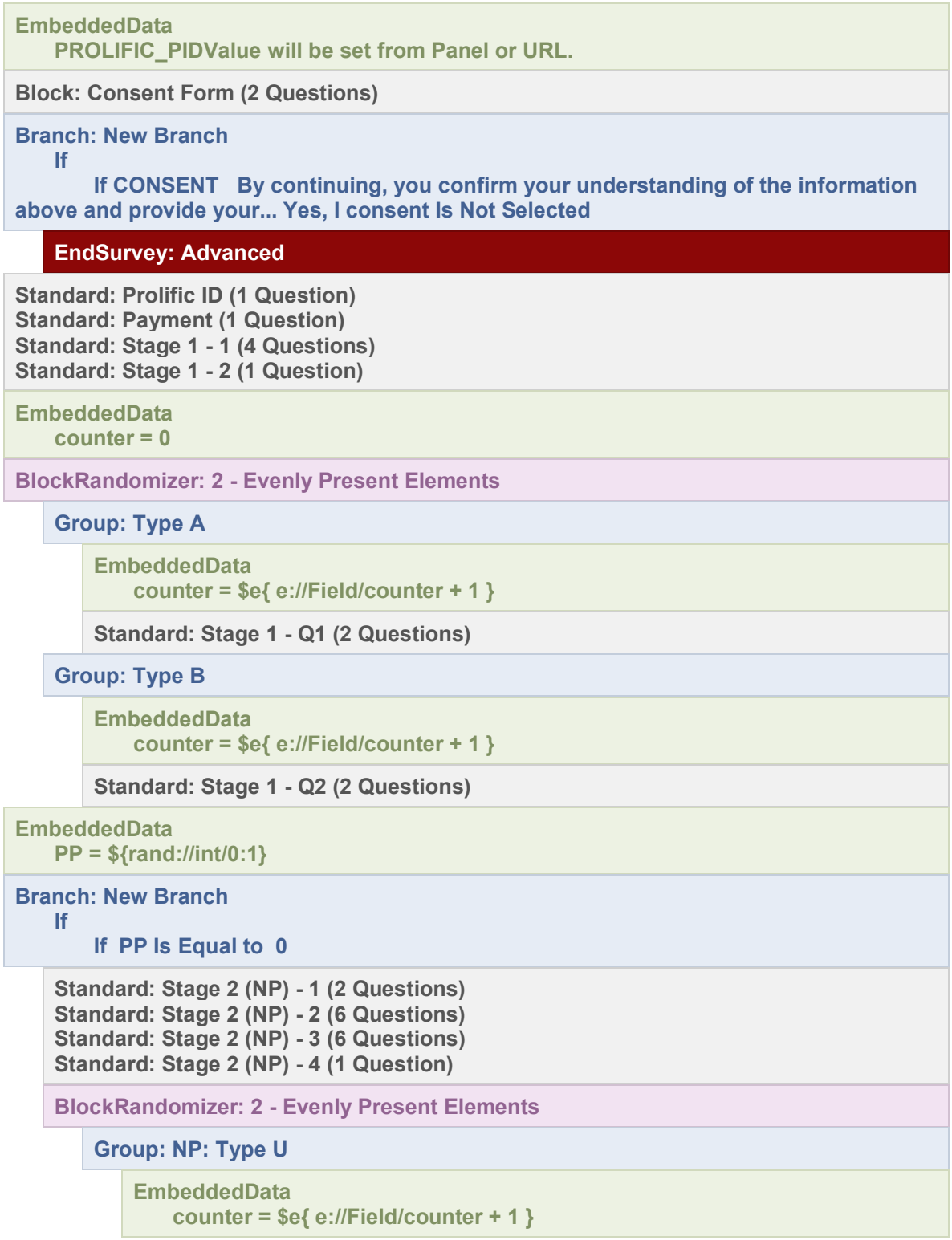
Table 10 presents the distribution of responses when the participants were assigned as Type U (Urgent). The vast majority of participants reported truthfully under this type assignment, albeit, with some variation across the surveys.

Overall, the pilot studies not only helped refine the main experimental design but also provide valuable insights, as these tables and figures highlight consistent response patterns across surveys. This consistency supports the findings of the main experiment, particularly regarding the adjustments in participants' behavioral responses based on their beliefs about others' truthfulness. Notably, Pilot 3, which tested a reduced appointment valuation for Type N, indicates that lowering the payoff from misreporting may decrease non-truthful reporting. This finding suggests that absolute valuation levels may influence participants' propensity for truthfulness, a factor that could have broader implications for designing incentive structures in similar studies.

Table 11: Summary of Modifications from Pilot Studies to Main Experiment

	PILOT 1	**PILOT 2**	**PILOT 3**
Date	23 November 2023	11 December 2023	18 January 2024
Average Time	12 minutes	13 minutes	11 minutes
Payment	• N/A	• N/A	• Type N's appointment slot valuation was \$2 for the first and \$1 for the second slot with a guaranteed payment of \$8. • Section 1 payment for reporting as Type A \$1. • Priority fee charged was \$0.50.
Decision Questions	• The Type N prompt stated: "You are **guaranteed a payment of \$7**. Additionally, you will receive: o **\$3 more** for the first appointment or o **\$1.50 more** for the second." • The PP conditions prompt did not include the statement, "If you would like to maximize your potential payment, it is in your best interest to answer your assigned type." • Minor differences in phrasing and words emphasized in bold.	• The PP conditions prompt did not include the statement, "If you would like to maximize your potential payment, it is in your best interest to answer your assigned type." • Minor differences in phrasing and words emphasized in bold.	• The prompt for the PP conditions stated, "If you and the other person want to maximize potential earning, it is better for you both to answer honestly."
Control Questions	• For Type N, the questions on potential payments emphasized the total payment amount (i.e., \$10 for first and \$8.5 for second slot) rather than the payment for the appointment (i.e., \$3 or \$1.50). • In the PP conditions, potential payments shown to participants reflected the fee deduction. • The PP conditions did not include the separate page on the priority fee, which contained the question "When will you be charged a priority fee of \$0.75?" • Minor differences in phrasing and words emphasized in bold.	• In the PP conditions, potential payments shown to participants reflected the fee deduction. • The PP conditions did not include the separate page on the priority fee, which contained the question "When will you be charged a priority fee of \$0.75?" • Minor differences in phrasing and words emphasized in bold.	• The priority fee page stated "The **priority fee** has been set to encourage honesty. It has been set in a way that **ensures that by being honest both you and the other player can maximize your potential earnings,**" instead of "The **priority fee** has been set in a way that it is **in your best interest**, in terms of payment, to **answer the type you have been assigned.**"

E Appendix: Survey Flow



Standard: Stage 2 (NP) - Q3 (2 Questions)

Group: NP: Type N

EmbeddedData
counter = $e{ e://Field/counter + 1 }

Standard: Stage 2 (NP) - Q4 (2 Questions)

EmbeddedData
honest-np = ${rand://int/0:1}

Branch: New Branch
If
If honest-np Is Equal to 1

Standard: Stage 3 (NP-Honest) - Ins (2 Questions)

BlockRandomizer: 2 - Evenly Present Elements

Group: NPH: Type U

EmbeddedData
counter = $e{ e://Field/counter + 1 }

Standard: Stage 3 (NP-Honest) - Q5 (2 Questions)

Group: NPH: Type N

EmbeddedData
counter = $e{ e://Field/counter + 1 }

Standard: Stage 3 (NP-Honest) - Q6 (2 Questions)

Branch: New Branch
If
If honest-np Is Equal to 0

Standard: Stage 3 (NP-Dishonest) - Ins (2 Questions)

BlockRandomizer: 2 - Evenly Present Elements

Group: NPD: Type U

EmbeddedData
counter = $e{ e://Field/counter + 1 }

Standard: Stage 3 (NP-Dishonest) - Q5 (2 Questions)

Group: NPD: Type N

EmbeddedData
counter = $e{ e://Field/counter + 1 }

Standard: Stage 3 (NP-Dishonest) - Q6 (2 Questions)

Branch: New Branch

If
If PP Is Equal to 1

Standard: Stage 2 (PP) - 1 (2 Questions)
Standard: Stage 2 (PP) - 2 (5 Questions)
Standard: Stage 2 (PP) - 3 (9 Questions)
Standard: Stage 2 (PP) - 4 (1 Question)

BlockRandomizer: 2 - Evenly Present Elements

Group: PP: Type U

EmbeddedData
counter = $e{ e://Field/counter + 1 }

Standard: Stage 2 (PP) - Q3 (2 Questions)

Group: PP: Type N

EmbeddedData
counter = $e{ e://Field/counter + 1 }

Standard: Stage 2 (PP) - Q4 (2 Questions)

EmbeddedData
honest = ${rand://int/0:1}

Branch: New Branch
If
If honest Is Equal to 1

Standard: Stage 3 (PP-Honest) - Ins (2 Questions)

BlockRandomizer: 2 - Evenly Present Elements

Group: PPH: Type U

EmbeddedData
counter = $e{ e://Field/counter + 1 }

Standard: Stage 3 (PP-Honest) - Q5 (2 Questions)

Group: PPH: Type N

EmbeddedData
counter = $e{ e://Field/counter + 1 }

Standard: Stage 3 (PP-Honest) - Q6 (2 Questions)

Branch: New Branch
If
If honest Is Equal to 0

Standard: Stage 3 (PP-Dishonest) - Ins (2 Questions)

BlockRandomizer: 2 - Evenly Present Elements

Group: PPD: Type U

EmbeddedData
counter = $e{ e://Field/counter + 1 }

Standard: Stage 3 (PP-Dishonest) - Q5 (2 Questions)

Group: PPD: Type N

EmbeddedData
counter = $e{ e://Field/counter + 1 }

Standard: Stage 3 (PP-Dishonest) - Q6 (2 Questions)

Standard: End of Survey message (1 Question)

EndSurvey: Advanced

Page Break

F Appendix: Survey

Start of Block: Consent Form

This study is carried out by researchers at Lund University, Sweden.

The study is expected to take about **10 minutes** to complete. In appreciation of your time and effort, you will receive a **fixed payment of $2,** and also have the **opportunity to earn additional payment based on your answers** as you progress through the survey.

In this survey, you will be presented with hypothetical scenarios, required to correctly answer some control questions, and asked to make six decisions. You will not be required to provide any additional information. However, we will utilize the demographic information provided by Prolific on age, gender, student status, and employment status.

The responses you provide will be kept confidential and anonymized to protect your privacy. The data will be used strictly for research purposes and stored securely. Anonymized data might be shared with other researchers.

CONSENT

By continuing, you confirm your understanding of the information above and provide your voluntary consent to participate in the study. You can withdraw your consent and cancel your participation at any time. Please note, however, that compensation is only paid if you complete the study.

- ○ Yes, I consent
- ○ No, I do not consent

End of Block: Consent Form

Start of Block: Prolific ID

What is your Prolific ID?
Please note that this response should auto-fill with the correct ID

_____

End of Block: Prolific ID

Start of Block: Payment

PAYMENT

In this survey you will have to **make 6 decisions**. At the end of the survey, we will **randomly pick one** of your first four decisions, and **your payment will be determined based on the outcome of that particular decision.** You might also get extra payment from the last two decisions (more information will be provided later on in the survey). So, each time you make a decision and answer a question, there is a chance that you could earn extra money. **You can earn between $2 to $22 in total from this survey based on the answers you give.**

End of Block: Payment

Start of Block: Stage 1 - 1

SECTION 1

In this section, you will have to answer two questions. In these questions there will be two types of persons, referred to as Type A and Type B. For each question, you will be designated as either a Type A or Type B person.

Then, you will be asked to reveal what type you are. If one of the questions in this section gets selected for compensation, the payment structure will be as follows: If you **answer Type A**, you will receive **$1.50;** If you **answer Type B**, you will receive **$0**.

We want you to answer truthfully what type you are, but you do not have to. Your payment will be determined solely based on your answer, regardless of your assigned type.

Before we get to the actual questions, we want to be certain that you have understood the instructions. Please answer the following control questions correctly to proceed with the survey.

Control Question. You are told you are a **Type A** person, how much will you receive in each case?

	$ 0	**$ 1.50**
If you answer Type A	○	○
If you answer Type B	○	○

Control Question. You are told you are a **Type B** person, how much will you receive in each case?

	$ 0	**$ 1.50**
If you answer Type A	○	○
If you answer Type B	○	○

End of Block: Stage 1 - 1

Start of Block: Stage 1 - 2

Excellent! Now let's move on to the actual decisions.

Please note that once you move forward from this point, you will not have the option to return and view the instructions for this section.

End of Block: Stage 1 - 2

Start of Block: Stage 1 - Q1

DECISION ${e://Field/counter}
You are now a **Type A** person.

If you answer Type A, you will get **$1.50**. If you answer Type B, you will get **$0**. We want you to answer truthfully what type you are, but you do not have to.
What is your type?

- ○ Type A
- ○ Type B

End of Block: Stage 1 - Q1

Start of Block: Stage 1 - Q2

DECISION ${e://Field/counter} You are now a **Type B** person.

If you answer Type A, you will get **$1.50**. If you answer Type B, you will get **$0**. We want you to answer truthfully what type you are, but you do not have to.

What is your type?

- ○ Type A
- ○ Type B

End of Block: Stage 1 - Q2

Start of Block: Stage 2 (NP) – 1

SECTION 2

In this section, you will have to answer **two more questions**. For each of the questions, you will be **paired randomly with another person** participating in this survey. The two of you will simulate a scenario in which you are both trying to get a doctor's appointment.

Imagine a situation where **you and the other person arrive at a hospital at the same time**. There is one doctor's appointment that is available immediately (first appointment) and another one available the next day (second appointment). **Each of you can tell the receptionist whether you need to see the doctor urgently or if you just need an appointment**.

End of Block: Stage 2 (NP) - 1

Start of Block: Stage 2 (NP) – 2

Each of you will be randomly assigned a type which determines your health status and how much you value the appointments.

TYPE U (or Type Urgent)

If you are assigned as a person with the Type U (or Urgent), it means that you need to see the doctor right away. You will receive the following payments:

- **$10** if you get the **first appointment**
- **$5** if you get the **second appointment**

This type of person places a higher value on an appointment than a person with the Type N.

Control Question. How much does a **Type U** person receive for each appointment?

- ○ $3 for the first appointment or $1.50 for the second
- ○ $10 for the first appointment or $5 for the second

TYPE N (or Type Non-Urgent)

If you are assigned as a person with the Type N (or Non-Urgent), this means that you need an appointment but do not need to see the doctor urgently. You will receive **$7 plus** the following payments:

- **$3** if you get the **first appointment**
- **$1.50** if you get the **second appointment**

This type of person places a lower value on an appointment than a person with the Type U.

Control Question. How much does a **Type N** person receive for each appointment?

- ○ $3 for the first appointment and $1.50 for the second
- ○ $10 for the first appointment and $5 for the second

To proceed with the survey, you must have answered all of the control questions above correctly.

End of Block: Stage 2 (NP) - 2

Start of Block: Stage 2 (NP) – 3

Now you will be randomly paired with another person. You do not know the type assigned to the other person. However, in this survey, there is a **25 percent chance that the other person is Type U** (or urgent) and a **75 percent chance that they are Type N** (or non-urgent).

Control Question. What is the chance that the person you are paired with is a Type U person?

- ○ 0% - No Chance
- ○ 25% - Small Chance
- ○ 75% - High Chance
- ○ 100% - Always the Case

Each of you will now have to **decide if you want to tell the receptionist that your case is 'Urgent' or 'Non-Urgent'**. The receptionist will give you either the first or the second appointment based on your answers:

- If one of you answer 'Urgent' and the other answers 'Non-Urgent', the **'Urgent' case gets the first appointment**
- If you **both** have the **same answer**, the first appointment is **assigned randomly.**

Before we move to the actual decision questions, let's do another quick test to make sure that you have understood the instructions clearly. You will have to answer all of the control questions below correctly to proceed to the actual decision questions.

Control question.

You are now a **Type U** person.

This means that you will receive **$10 if you get the first appointment** and **$5 if you get the second appointment**.

	Who gets the first appointment?			How much will you get paid for the appointment?		
	You	Other person	Random assignment	$10	$5	Either $10 or $5
You answer 'Urgent' and the other person answers 'Non-Urgent'	○	○	○	○	○	○
You answer 'Non-Urgent' and the other person answers 'Urgent'	○	○	○	○	○	○
Both answer 'Urgent' or both answer 'Non-Urgent'	○	○	○	○	○	

Control question.

You are now a **Type N** person.

This means that you will receive $7 plus **$3 if you get the first appointment** and **$1.50 if you get the second appointment**.

	Who gets the first appointment?	How much will you get paid for the

	appointment?					
	You	Other person	Random assignment	$3	$1.50	Either $3 or $1.50
You answer 'Urgent' and the other person answers 'Non-Urgent'	○	○	○	○	○	○
You answer 'Non-Urgent' and the other person answers 'Urgent'	○	○	○	○	○	○
Both answer 'Urgent' or both answer 'Non-Urgent'	○	○	○	○	○	○

End of Block: Stage 2 (NP) - 3

Start of Block: Stage 2 (NP) - 4

Great! Now let's move on to the actual decisions.

Please note that once you move forward from this point, you will not have the option to return and view the instructions for this section.

End of Block: Stage 2 (NP) - 4

Start of Block: Stage 2 (NP) - Q3

DECISION ${e://Field/counter}

You are now a **Type U** person.

This means that you will receive:

- **$10** if you get the **first appointment**, or
- **$5** if you get the **second appointment**.

You have been paired with another person. There is a 25 percent chance that this person is type U and a 75 percent chance that they are type N.

The receptionist asks you whether your case is urgent or non-urgent. What would you like to tell the receptionist?

- ○ Urgent
- ○ Non-Urgent

End of Block: Stage 2 (NP) - Q3

Start of Block: Stage 2 (NP) - Q4

DECISION ${e://Field/counter}

You are now a **Type N** person.

This means that you will receive $7 plus:

- **$3** if you get the **first appointment**, or
- **$1.50** if you get the **second appointment.**

You have been paired with another person. There is a 25 percent chance that this person is type U and a 75 percent chance that they are type N.

The receptionist asks you whether your case is urgent or non-urgent. What would you like to tell the receptionist?

- ○ Urgent
- ○ Non-Urgent

End of Block: Stage 2 (NP) - Q4

Start of Block: Stage 3 (NP-Honest) – Ins

SECTION 3

You're done with 4 decisions, and now you have the opportunity to potentially increase your payment by making two additional decisions.

Recall in **Section 1**, you were asked to decide whether to truthfully reveal your type given that you would always receive $1.50 for answering Type A and $0 for answering Type B.

- We have now **randomly assigned each participant to a group of 10 people.**
- You have been assigned to one of these groups with nine other people.

Criteria for extra payment:

- If it happens to be the case that you have been **assigned to a group in which 9 out of the 10 people were truthful in Section 1**, then the next two decisions you make will qualify for **extra payment.**

Since you receive extra payment only in such an event, moving forward the instructions are presented as if you are in a group in which 9 out of 10 people were truthful in Section 1.

Now we would like you to answer the last two questions again.

Keep in mind that **you are in a group in which 9 out of 10 people were truthful in Section 1.**

End of Block: Stage 3 (NP-Honest) - Ins

Start of Block: Stage 3 (NP-Honest) - Q5

DECISION ${e://Field/counter}
You are now a **Type U** person.

This means that you will receive:

- **$10** if you get the **first appointment**, or
- **$5** if you get the **second appointment**.

You have been paired with another person in your assigned group. There is a 25 percent chance that this person is type U and a 75 percent chance that they are type N.

Keep in mind that **you are in a group in which 9 out of 10 people were truthful in Section 1.**

The receptionist asks you whether your case is urgent or non-urgent. What would you like to tell the receptionist?

- ○ Urgent
- ○ Non-Urgent

End of Block: Stage 3 (NP-Honest) - Q5

Start of Block: Stage 3 (NP-Honest) - Q6

DECISION ${e://Field/counter}

You are now a **Type N** person.

This means that you will receive $7 plus:

- **$3** if you get the **first appointment**, or
- **$1.50** if you get the **second appointment**.

You have been paired with another person in your assigned group. There is a 25 percent chance that this person is type U and a 75 percent chance that they are type N.

Keep in mind that **you are in a group in which 9 out of 10 people were truthful in Section 1.**

The receptionist asks you whether your case is urgent or non-urgent. What would you like to tell the receptionist?

- ○ Urgent
- ○ Non-Urgent

End of Block: Stage 3 (NP-Honest) - Q6

Start of Block: Stage 3 (NP-Dishonest) – Ins

SECTION 3

You're done with 4 decisions, and now you have the opportunity to potentially increase your payment by making two additional decisions.

Recall in **Section 1**, you were asked to decide whether to truthfully reveal your type given that you would always receive $1.50 for answering Type A and $0 for answering Type B.

- We have now **randomly assigned each participant to a group of 10 people.**
- You have been assigned to one of these groups with nine other people.

Criteria for extra payment:

- If it happens to be the case that you have been **assigned to a group in which 9 out of the 10 people were not truthful in Section 1**, then **you will receive extra payment** from the next two decisions you make.

Since you receive extra payment only in such an event, moving forward the instructions are presented as if you are in a group in which 9 out of 10 people were not truthful in Section 1.

Now we would like you to answer the last two questions again.

Keep in mind that **you are in a group in which 9 out of 10 people were not truthful in Section 1.**

End of Block: Stage 3 (NP-Dishonest) - Ins

Start of Block: Stage 3 (NP-Dishonest) - Q5

DECISION ${e://Field/counter}
You are now a **Type U** person.

This means that you will receive:
- **$10** if you get the **first appointment**, or
- **$5** if you get the **second appointment**.

You have been paired with another person in your assigned group. There is a 25 percent chance that this person is type U and a 75 percent chance that they are type N.

Keep in mind that **you are in a group in which 9 out of 10 people were not truthful in Section 1.**

The receptionist asks you whether your case is urgent or non-urgent. What would you like to tell the receptionist?

- ○ Urgent
- ○ Non-Urgent

End of Block: Stage 3 (NP-Dishonest) - Q5

Start of Block: Stage 3 (NP-Dishonest) - Q6

DECISION ${e://Field/counter}

You are now a **Type N** person.

This means that you will receive $7 plus:
- **$3** if you get the **first appointment**, or
- **$1.50** if you get the **second appointment**.

You have been paired with another person in your assigned group. There is a 25 percent chance that this person is type U and a 75 percent chance that they are type N.

Keep in mind that **you are in a group in which 9 out of 10 people were not truthful in Section 1.**

The receptionist asks you whether your case is urgent or non-urgent. What would you like to tell the receptionist?

- ○ Urgent
- ○ Non-Urgent

End of Block: Stage 3 (NP-Dishonest) - Q6

Start of Block: Stage 2 (PP) – 1

SECTION 2

In this section, you will have to answer **two more questions**. For each of the questions, you will be **paired randomly with another person** participating in this survey. The two of you will simulate a scenario in which you are both trying to get a doctor's appointment.

Imagine a situation where **you and the other person arrive at a hospital at the same time**. There is one doctor's appointment that is available immediately (first appointment) and another one available the next day (second appointment). **Each of you can tell the receptionist whether you need to see the doctor urgently or if you just need an appointment**. If you say that you need to see the doctor urgently, **you have to pay a fee to get an appointment priority**.

End of Block: Stage 2 (PP) - 1

Start of Block: Stage 2 (PP) - 2

Each of you will be randomly assigned a type which determines your health status and how much you value the appointments.

TYPE U (or Type Urgent)

If you are assigned as a person with the Type U (or Urgent), it means that you need to see the doctor right away. You will receive the following payments:

- **$10** if you get the **first appointment**
- **$5** if you get the **second appointment**

This type of person places a higher value on an appointment than a person with the Type N.

Control Question. How much does a Type U person receive for each appointment?

- ○ $3 for the first appointment and $1.50 for the second
- ○ $10 for the first appointment and $5 for the second

TYPE N (or Type Non-Urgent)

If you are assigned as a person with the Type N (or Non-Urgent), this means that you need an appointment but do not need to see the doctor urgently. You will receive **$7 plus** the following payments:

- **$3** if you get the **first appointment**
- **$1.50** if you get the **second appointment**

This type of person places a lower value on an appointment than a person with the Type U.

Control Question. How much does a Type N person receive for each appointment?

- ○ $3 for the first appointment and $1.50 for the second
- ○ $10 for the first appointment or $5 for the second

End of Block: Stage 2 (PP) - 2

Start of Block: Stage 2 (PP) – 3

You will be **randomly paired with another person** participating in this survey and each of you will have to **decide if you want to tell the receptionist that your case is 'Urgent' or 'Non-Urgent'**.

If you tell the receptionist that your case is **'Urgent'** a **priority fee of $0.75** is deducted from your payment, regardless of your assigned type.

This **priority fee** has been set in a way such that it is **in your best interest,** in terms of payment**,** to **answer the type you have been assigned**.

Please answer the control question below correctly to proceed with the survey.

When will you be charged a priority fee of $0.75?

- ○ When you tell the receptionist that your case is 'Urgent'
- ○ When you tell the receptionist that your case is 'Non-Urgent'

Page Break

Now you will be **randomly paired with another person** participating in this survey. You will not know the type assigned to the person you get paired with. However, in this survey, there is a **25 percent chance that the other person is Type U** (or urgent) and a **75 percent chance that they are Type N** (or non-urgent).

Control Question. What is the chance that the person you are paired with is a Type U person?

- 0% - No Chance
- 25% - Small Chance
- 75% - High Chance
- 100% - Always the Case

Each of you will now have to **decide if you want to tell the receptionist that your case is 'Urgent' or 'Non-Urgent'**. The receptionist will give you either the first or the second appointment based on your answers: If one of you answer 'Urgent' and the other answers 'Non-Urgent', the **'Urgent' case gets the first appointment** If you **both** have the **same answer**, the first appointment is **assigned randomly**.

Before we move to the actual decision questions, let's do another quick test to make sure that you have understood the instructions clearly. You will have to answer all of the control questions below correctly to proceed to the actual decision questions.

Control question.

You are now a **Type U** person.

This means that you will receive **$10 if you get the first appointment** and **$5 if you get the second appointment**.

If you tell the receptionist that your case is **'Urgent'**, a **priority fee of $0.75** will be deducted from your payment.

	Who gets the first appointment?			How much will you get paid for the appointment?			Will you be charged a priority fee?
	You	Other person	Random assignment	$10	$5	Either $10 or $5	

You answer 'Urgent' and the other person answers 'Non-Urgent'	○	○	○	○	○	○	▼ Yes ... No
You answer 'Non-Urgent' and the other person answers 'Urgent'	○	○	○	○	○	○	▼ Yes ... No
Both answer 'Urgent'	○	○	○	○	○	○	▼ Yes ... No
Both answer 'Non-Urgent'	○	○	○	○	○	○	▼ Yes ... No

Control question.

You are now a **Type N** person.

This means that you will receive $7 plus **$3 if you get the first appointment** and **$1.50 if you get the second appointment**.

If you tell the receptionist that your case is **'Urgent'**, a **priority fee of $0.75** will be deducted from your payment.

	Who gets the first appointment?			How much will you get paid for the appointment?			Will you be charged a priority fee?
	You	Other person	Random assignment	$3	$1.50	Either $3 or $1.50	

You answer 'Urgent' and the other person answers 'Non-Urgent'	○	○	○	○	○	○	▼ Yes ... No
You answer 'Non-Urgent' and the other person answers 'Urgent'	○	○	○	○	○	○	▼ Yes ... No
Both answer 'Urgent'	○	○	○	○	○	○	▼ Yes ... No
Both answer 'Non-Urgent'	○	○	○	○	○	○	▼ Yes ... No

End of Block: Stage 2 (PP) - 3

Start of Block: Stage 2 (PP) - 4

Great! Now let's move on to the actual decisions.

Please note that once you move forward from this point, you will not have the option to return and view the instructions for this section.

End of Block: Stage 2 (PP) - 4

Start of Block: Stage 2 (PP) - Q3

DECISION ${e://Field/counter}

You are now a **Type U** person.

This means that you will receive:

- **$10** if you get the **first appointment**, or
- **$5** if you get the **second appointment**.

You have been paired with another person. There is a 25 percent chance that this person is type U and a 75 percent chance that they are type N.

If you tell the receptionist that your case is **'Urgent'**, a **priority fee of $0.75** will be deducted from your payment.

If you would like to maximize your potential payment, it is in your best interest to answer your assigned type.

The receptionist asks you whether your case is urgent or non-urgent. What would you like to tell the receptionist?

- ○ Urgent
- ○ Non-Urgent

End of Block: Stage 2 (PP) - Q3

Start of Block: Stage 2 (PP) - Q4

DECISION ${e://Field/counter}

You are now a **Type N** person.

This means that you will receive $7 plus:

- **$3** if you get the **first appointment**, or
- **$1.50** if you get the **second appointment**.

You have been paired with another person. There is a 25 percent chance that this person is type U and a 75 percent chance that they are type N.

If you tell the receptionist that your case is '**Urgent**', a **priority fee of $0.75** will be deducted from your payment.

If you would like to maximize your potential payment, it is in your best interest to answer your assigned type.

The receptionist asks you whether your case is urgent or non-urgent. What would you like to tell the receptionist?

○ Urgent

○ Non-Urgent

End of Block: Stage 2 (PP) - Q4

Start of Block: Stage 3 (PP-Honest) - Ins

SECTION 3

You're done with 4 decisions, and now you have the opportunity to potentially increase your payment by making two additional decisions.

Recall in **Section 1**, you were asked to decide whether to truthfully reveal your type given that you would always receive $1.50 for answering Type A and $0 for answering Type B.

- We have now **randomly assigned each participant to a group of 10 people.**
- You have been assigned to one of these groups with nine other people.

Criteria for extra payment:

- If it happens to be the case that you have been **assigned to a group in which 9 out of the 10 people were truthful in Section 1**, then **you will receive extra payment** from the next two decisions you make.

Since you receive extra payment only in such an event, moving forward the instructions are presented as if you are in a group in which 9 out of 10 people were truthful in Section 1.

Now we would like you to answer the last two questions again.

Keep in mind that **you are in a group in which 9 out of 10 people were truthful in Section 1.**

End of Block: Stage 3 (PP-Honest) - Ins

Start of Block: Stage 3 (PP-Honest) - Q5

DECISION ${e://Field/counter}

You are now a **Type U** person.

This means that you will receive:

- **$10** if you get the **first appointment**, or
- **$5** if you get the **second appointment**.

You have been paired with another person in your assigned group. There is a 25 percent chance that this person is type U and a 75 percent chance that they are type N.

If you tell the receptionist that your case is **'Urgent'**, a **priority fee of $0.75** will be deducted from your payment.

If you would like to maximize your potential payment, it is in your best interest to answer your

assigned type.

Keep in mind that **you are in a group in which 9 out of 10 people were truthful in Section 1.**

The receptionist asks you whether your case is urgent or non-urgent. What would you like to tell the receptionist?

- ○ Urgent
- ○ Non-Urgent

End of Block: Stage 3 (PP-Honest) - Q5

Start of Block: Stage 3 (PP-Honest) - Q6

DECISION ${e://Field/counter}

You are now a **Type N** person.

This means that you will receive $7 plus:

- **$3** if you get the **first appointment**, or
- **$1.50** if you get the **second appointment**.

You have been paired with another person in your assigned group. There is a 25 percent chance that this person is type U and a 75 percent chance that they are type N.

If you tell the receptionist that your case is **'Urgent'**, a **priority fee of $0.75** will be deducted from your payment.

If you would like to maximize your potential payment, it is in your best interest to answer your assigned type.

Keep in mind that **you are in a group in which 9 out of 10 people were truthful in Section 1.**

The receptionist asks you whether your case is urgent or non-urgent. What would you like to tell the receptionist?

- ○ Urgent
- ○ Non-Urgent

End of Block: Stage 3 (PP-Honest) - Q6

Start of Block: Stage 3 (PP-Dishonest) - Ins

SECTION 3

You're done with 4 decisions, and now you have the opportunity to potentially increase your payment by making two additional decisions.

Recall in **Section 1**, you were asked to decide whether to truthfully reveal your type given that you would always receive $1.50 for answering Type A and $0 for answering Type B.

- We have now **randomly assigned each participant to a group of 10 people.**
- You have been assigned to one of these groups with nine other people.

Criteria for extra payment:

- If it happens to be the case that you have been **assigned to a group in which 9 out of the 10 people were not truthful in Section 1**, then **you will receive extra payment** from the next two decisions you make.

Since you receive extra payment only in such an event, moving forward the instructions are presented as if you are in a group in which 9 out of 10 people were not truthful in Section 1.

Now we would like you to answer the last two questions again.

Keep in mind that **you are in a group in which 9 out of 10 people were not truthful in Section 1.**

End of Block: Stage 3 (PP-Dishonest) - Ins

Start of Block: Stage 3 (PP-Dishonest) - Q5

DECISION ${e://Field/counter}

You are now a **Type U** person.

This means that you will receive:

- **$10** if you get the **first appointment**, or
- **$5** if you get the **second appointment.**

You have been paired with another person in your assigned group. There is a 25 percent chance that this person is type U and a 75 percent chance that they are type N.

If you tell the receptionist that your case is '**Urgent**', a **priority fee of $0.75** will be deducted from your payment.

If you would like to maximize your potential payment, it is in your best interest to answer your assigned type.

Keep in mind that **you are in a group in which 9 out of 10 people were not truthful** in Section 1.

The receptionist asks you whether your case is urgent or non-urgent. What would you like to tell the receptionist?

- ○ Urgent
- ○ Non-Urgent

End of Block: Stage 3 (PP-Dishonest) - Q5

Start of Block: Stage 3 (PP-Dishonest) - Q6

DECISION ${e://Field/counter}

You are now a **Type N** person.

This means that you will receive $7 plus:

- **$3** if you get the **first appointment**, or
- **$1.50** if you get the **second appointment.**

You have been paired with another person in your assigned group. There is a 25 percent chance that this person is type U and a 75 percent chance that they are type N.

If you tell the receptionist that your case is **'Urgent'**, a **priority fee of $0.75** will be deducted from your payment.

If you would like to maximize your potential payment, it is in your best interest to answer your assigned type.

Keep in mind that **you are in a group in which 9 out of 10 people were not truthful in Section 1.**

The receptionist asks you whether your case is urgent or non-urgent. What would you like to tell the receptionist?

- ○ Urgent
- ○ Non-Urgent

End of Block: Stage 3 (PP-Dishonest) - Q6

Start of Block: End of Survey message

Thank you for taking part in this survey! Please click the button below to be redirected back to Prolific and register your submission.

End of Block: End of Survey message
