Equity with Prejudice: International NGOs and Healthcare Delivery in Refugee Crises

Melani Cammett and Aytuğ Şaşmaz

Working Paper
No. 44 2021

UNIVERSITY OF
GOTHENBURG

Equity with Prejudice:
International NGOs and Healthcare Delivery in Refugee Crises

Melani Cammett
Harvard University
mcammett@g.harvard.edu

Aytuğ Şaşmaz
Middle East Initiative, Harvard Kennedy School
sasmaz@g.harvard.edu

Front Cover: Russell Watkins/Department for International Development
Two Syrian women wait to collect a prescription at a health clinic in Lebanon's Bekaa Valley.

Abstract

Refugees often face prejudice in host countries. Does local resentment of refugees result in discrimination in access to social services? We explore the quality of care received by Syrian refugees and Lebanese nationals in Lebanese health facilities using data from original surveys in a nationally representative sample of primary health centers. The conventional wisdom in research on intergroup relations suggests Syrians would receive inferior services, while research on prosocial behavior would predict little variation, whether due to intrinsic or extrinsic motivations. Our results indicate no difference in the quality of care for Syrians and Lebanese. Instead, they suggest incentives from international organizations at both the organizational and individual levels, as well as perceived public health imperatives, may explain equitable treatment, despite evidence for prejudice against Syrians. The findings advance research on the politics of refugee crises and humanitarian response, illuminating the experience of everyday life for refugees.

1. Introduction

Now in its tenth year, the war in Syria has given rise to an enormous humanitarian catastrophe and has had a profound impact on neighboring countries. With about 1.5 million Syrian refugees residing within its borders, Lebanon hosts the largest per capita number of refugees – people displaced from their country due to war and violence – in the world, straining the country's infrastructure and public services, albeit with countervailing benefits for local economies (Cherri et al., 2016; Del Carpio and Wagner, 2015; Tumen, 2016). With support from international organizations and foreign governments, the Lebanese government and civil society groups have instituted various measures to provide basic services to displaced Syrians, such as schools and primary health centers run by public and non-state organizations. At the same time, the Syrian refugee crisis has given rise to growing resentment and prejudice among Lebanese nationals concerned that Syrians are taking their jobs and taxing their inadequate public infrastructure (Ark, 2017; Christopherson et al., 2013; Harb and Saab, 2014).

Through a study of primary healthcare in Lebanon, we first explore whether Syrians receive inferior care compared to Lebanese citizens, as social psychology research on intergroup relations, public health studies of racial concordance, and documented antipathy towards refugees would suggest. Conversely, research on prosocial behavior would lead us to expect that Syrians receive commensurate treatment, particularly as professional ethics call for equal treatment of all patients. On average, we find Syrians receive equal, and sometimes superior, quality of care, despite evidence of anti-Syrian bias.

Second, we probe potential explanations for these findings. International non-governmental organizations (INGOs) provide valuable resources to sustain local organizations and attractive jobs to educated Lebanese professionals. Qualitative and quantitative data suggest incentives from these INGOs, as well as the imperative to control infectious diseases, largely explain the apparent equitable treatment of Syrian refugees. Our analyses are based on data from multiple original surveys implemented in a nationally representative sample of primary health centers in Lebanon.

2. Refugee Access to Social Services: Discrimination v. Equity

A growing body of research explores host country attitudes and behavior towards refugees at the micro-level. However, few studies examine the de facto experiences refugees face in host countries, such as the quality of services they receive (Parkinson and Behrouzan, 2015). Beyond its importance for well-being and implications for humanitarian response, access to services deserves the attention

of social scientists as welfare organizations are key sites where refugees interface with host country nationals and where they may encounter discrimination or prejudice.

Both social science theory and empirical evidence give us reason to think that host country citizens, including educated professionals such as doctors, can negatively perceive refugees. As a result, refugees may face discrimination in welfare agencies, leading to lower quality care than citizens receive. Prejudice and discriminatory treatment in intergroup exchanges arises frequently due to social categorization processes (Tajfel and Turner, 1979). When ingroup members feel threatened by an outgroup, negative affect and behavior are even more likely to arise. For host country nationals, perceived economic (Adida, 2014; Dancygier and Donnelly, 2013) or security threats (Adida et al., 2018; Cowling et al., 2019; Ghosn et al., 2019; Yitmen and Verkuyten, 2018) are at the root of bias against refugees.

The public health literature on racial concordance underscores that negative attitudes and treatment extend to healthcare settings. Despite professional commitments, doctors can harbor prejudice and discriminate among patients (Chapman et al., 2013; Hsu et al., 2014; Shavers et al., 2012; Shen et al., 2018). For example, doctors in the U.S., especially white male doctors, have exhibited an implicit preference for white over Black Americans (Sabin et al., 2009). Doctors are less willing to interact with minorities, believe that patients from racial minority groups are less likely to comply with medical advice, and tend to understate the severity of symptoms in these patients due to negative outgroup stereotypes (Balsa and McGuire, 2003).

Although Lebanon shares many cultural characteristics with Syria, and has its own politicized ethnoreligious divisions, Syrians clearly represent an "outgroup" to Lebanese nationals. The massive influx of refugees has led to a documented spike in resentment (Ark, 2017). Even though most Syrian refugees in Lebanon have the same religious identity as one of the major sectarian groups in Lebanon (i.e., Sunni Muslim), levels of resentment and prejudice against Syrians among Lebanese nationals are remarkably similar across different sectarian groups, including Sunnis. For instance, in a 2013 survey, 93 percent of Sunni Lebanese agreed (to some extent or to a great extent) that Syrian refugees strain the country's water and energy resources, a sentiment shared by 90 percent of Shia and 96 percent of Maronite Christians. In the same survey, 44 percent of Sunnis, 47 percent of Shia, 63 percent of Maronites, and 52 percent of other Christians reported that they are not comfortable sending their children to the same school as Syrian refugees (Christopherson et al., 2013).

Furthermore, a history of low-skilled labor migration to Lebanon from Syria (Chalcraft, 2008), and the Syrian occupation of Lebanon from 1975-2005, have long fueled hostility towards Syrians. In

the Appendix (Section 1), we present findings from a conjoint experiment, showing that doctors in our sample prefer not to work in health centers with a heavy Syrian patient base. This is net of other factors that might shape workplace preferences, public opinion data showing negative attitudes towards Syrians among educated professionals, and data from follow-up qualitative interviews with randomly selected doctors in the sample. These interviews echo the precise forms of prejudice described in the public health literature on racial concordance.

In sum, studies of intergroup relations and host country attitudes towards refugees, as well as public opinion data from Lebanon, predict inferior quality of services for Syrians. *Our first hypothesis, therefore, holds that Syrians receive lower-quality care than Lebanese patients.*

However, research on prosocial behavior in social psychology shows that individuals can treat outgroups fairly, even while harboring prejudice against them. Despite resentment against Syrians, Lebanese citizens and, by extension, frontline service providers may engage with refugees equitably, resulting in no differences in the quality of service delivery. Some may even go out of their way to cater to outgroups, resulting in superior care.

Several mechanisms may account for the equitable behavior of Lebanese doctors towards Syrian refugees. We classify these into intrinsic versus extrinsic motivations. Regarding the former, a pluralistic conceptualization of human motivations acknowledges that not all behavior is egoistic (Alrababa'h et al., 2019; Batson and Shaw, 1991). Altruism may shape provider treatment of refugees.

A second form of intrinsic motivation – a commitment to professionalism, or the duty to carry out professional obligations – may compel Lebanese doctors to treat Syrian patients fairly, even if they hold prejudicial views. In compliance with the Hippocratic Oath, providers may deliver consistent care to all patients (Stern, 2006; Swick, 2000; Wagner et al., 2007).

Alternatively, extrinsic motivations may account for the equitable treatment of outgroup members. Financial incentives represent a quintessential type of extrinsic motivation. Suppose doctors benefit from the influx of Syrian refugees by earning supplemental income, or centers benefit from additional subsidies earmarked for this population. In that case, providers and their supervisors have incentives to treat Syrians on par with other patients or even devote greater attention to them (Das and Hammer, 2005, p. 378). In conflict-affected countries and those with large numbers of refugees, INGOs often play a vital role in humanitarian response, either by delivering services directly to the displaced or funneling resources to local service delivery organizations. This generates both organizational and individual-level incentives to cater to refugees: Local NGOs become reliant on material resources from INGOs for their sustainability, while educated professionals from the host

country prioritize employment with INGOs or their local affiliates, as these jobs are often prestigious and have attractive salaries and benefit packages – a phenomenon known as "internal brain drain" (Lemay-Hébert et al., 2020).

A distinct type of extrinsic motivation – strategic behavior in response to non-material incentives – may also compel providers to provide the same quality of care to outgroup patients (van Leeuwen and Zagefka, 2017). On the one hand, prosocial behavior can provide "moral credentials" to mask discriminatory attitudes (Monin and Miller, 2001). This can occur subconsciously, particularly where discriminatory beliefs contradict prevailing social norms and legal frameworks (Dovidio et al., 2017, pp. 6-7). Helping an outgroup can also reinforce existing power relations by underscoring the social dominance of the giver (Dovidio et al., 2017, p. 14, 17; Halabi and Nadler, 2017, pp. 205-206).

Strategic behavior can also arise when efforts to contain perceived threats compel ingroup members to treat outgroup members equitably. Public health threats, such as the prospect of the spread of communicable diseases, may compel doctors to devote special attention to refugees, who may be viewed as vectors of transmission. This motivation is particularly relevant in the context of war and humanitarian disasters, when public welfare systems break down and health risks are heightened (Ghobarah et al., 2003).

Based on factors identified in studies of prosocial behavior, *our second hypothesis holds that there is no observed difference in the quality of healthcare received by Syrian and Lebanese patients*. While normatively preferable motivations, such as altruism or professionalism, may hold for some providers, less selfless motivations may also account for the equitable treatment of outgroup members, particularly regarding prejudice. Next, we discuss the data and methods we employ to address the two questions at the center of our inquiry: whether Syrians receive equal or inferior treatment and potential explanations for the findings.

3. Case Selection, Data, and Methods

Our analyses draw on a set of original, nationally representative surveys conducted in primary healthcare facilities in Lebanon in 2017, as well as follow-up interviews with physicians at randomly selected centers from the sample.

Case Selection

With its high refugee population, Lebanon provides an ideal setting to assess the quality of service delivery available to refugees versus citizens. We focus on primary healthcare because of its inherent

importance to well-being and because health centers run by Lebanese governmental and civil society organizations treat both Lebanese and Syrian nationals.

The Lebanese welfare regime relies heavily on non-state actors, including religious charities, sectarian parties, and non-affiliated or "secular" non-governmental organizations (NGOs). A network of primary healthcare centers (PHCCs), most of which are run by non-state actors, provides the majority of healthcare services to Syrian refugees in Lebanon—as well as to low-income Lebanese and residents of other nationalities. PHCCs are overseen by the Ministry of Public Health (MOPH), and an accreditation program launched in 2012 helps to ensure participating centers adhere to minimum basic quality standards (El-Jardali et al., 2014). In virtually all centers in the network, doctors are Lebanese and work on a part-time basis, devoting most of their time to private, for-profit practices.

The initial response of the Lebanese Government to the refugee influx was uncoordinated, and Syrians faced especially daunting challenges to access healthcare (El-Khatib et al., 2013; Geha and Talhouk, 2018; Mourad, 2017). Beginning in 2015, the MOPH, in partnership with local stakeholders and international agencies, adopted a more prominent role in coordinating the response. The PHCC network is the foundation of this effort. Participating centers across the country provide essential services for low or no cost to displaced Syrians with support from the United Nations High Commissioner for Refugees (UNHCR) and other international donors. To mitigate potential tensions with Lebanese nationals, the MOPH also offers subsidized care to vulnerable Lebanese to address critical health needs in most centers (Government of Lebanon, 2017, pp. 94-95; Saiyed et al., 2018; UNHCR, 2017a, p.3).

Data and Methods

Based on a two-stage random selection process, the primary sampling unit (PSU) is the cadastral region, a socially meaningful grouping comprising villages in rural areas and neighborhoods in urban areas. Within each PSU, all centers were included in the sample. The choice of cadastral regions as PSUs and the geographical clustering of centers was necessary given the intensive nature of data collection, which entailed multiple visits over four- to five-day periods, sometimes in remote areas. To select cadastral regions, we relied on a dataset constructed by the World Bank (Muñoz and Aguilera, 2016) that includes population information (for both Lebanese and Syrians) in 1,301 units. Using probability-proportional-to-size sampling, we selected 70 cadastral regions, yielding a sample of 99 centers. Data collection was carried out in 69 of these centers. We classify health centers in the MOPH network into four types, including facilities run by the: public sector, secular NGOs, religious charities,

and political parties, with each running about one-quarter of primary health facilities in the non-profit sector. Our sample includes data from 18 public centers, 22 centers run by religious charities, 8 centers run by political parties and 21 centers run by secular NGOs. Non-response was highest among centers run by political parties as Hezbollah, the main Shia party, did not permit its centers to participate in the study.

The data are derived from multiple original surveys fielded at the center level, including: surveys with the Chief Medical Officer (CMO); surveys with physicians; multiple-choice questionnaires assessing the selected physician's medical knowledge; direct observation of the surveyed physicians' clinical examinations to obtain indicators of process quality; and exit interviews with patients to collect information on patient characteristics and satisfaction levels. Enumerators were asked to observe the examination of every other patient in the center based on their arrival to ensure a random selection of patients.[1] Upon exiting, the same patient was then interviewed by another enumerator. All patients and doctors were assigned unique identification numbers, enabling them to be linked to the facilities where the interviews took place and track which doctors examined which patients. Finally, after analyzing the survey data, one enumerator conducted follow-up interviews with physicians at randomly selected centers from the original sample.[2]

The resulting merged dataset includes data from the exit interviews of 1,198 Lebanese and Syrian patients, examined by 213 unique doctors in 68 unique centers. Trained enumerators observed examinations of 1,158 patients. Out of the full sample of patients, 603 were Lebanese, and 595 were Syrian (50.3% and 49.7%, respectively).

4. Do Lebanese and Syrian Patients Receive Equal Treatment?

The results of multivariate statistical analyses from our surveys show that Syrian refugees and Lebanese nationals receive equal quality in the centers in our sample. By accounting for patient and center-level factors and potential interviewer effects, which might otherwise affect the findings, as well as the clustered nature of data collection, the findings provide relatively rigorous assessments of the quality of care received by distinct patient bases.

---

[1] Although the findings from direct observation are subject to Hawthorne effects, bias tends to decline with time spent under observation (Leonard and Masatu, 2006). Our analyses account for this potential source of bias.
[2] See the Appendix for the sampling procedures and protocol.

Variables and Descriptive Statistics

In broad terms, healthcare quality encompasses the structure, process, and outcome of health service delivery (Donabedian, 1988; Klassen et al., 2010). The structural dimension of quality refers to the environment where care is provided, such as infrastructure, personnel, and equipment. The process-oriented component addresses how healthcare is provided, focusing on provider capabilities and effort, as well as interactions with patients. Process measures assess doctor knowledge and training and whether they apply their knowledge to deliver appropriate care to patients in a timely and respectful manner. Finally, outcomes denote the health status of patients and patient satisfaction (Stelfox and Straus, 2013; Tuan et al., 2005), which also result from factors beyond the delivery of medical care (Marmot and Wilkinson, 2005).

We focus on process quality because it generally outweighs structural factors affecting health outcomes (Das and Hammer, 2014). A well-trained doctor who regularly comes to work and practices medicine at their "knowledge frontier" has a greater impact on patient health than the mere availability of medical supplies and equipment. We capture objective, technical healthcare measures within process quality, although the Appendix presents additional results using subjective quality measures.

Following widely validated measures (Das and Hammer, 2014; Das et al., 2008), we use three variables constructed from data collected by trained enumerators during the direct observation of clinical examinations to assess objective process quality. These three variables include the number of questions asked by the doctor, the number of physical examinations conducted by the doctor, and the total number of minutes spent during the examination.[3] All results were collected by trained enumerators who directly observed the examination and the interaction between the doctor and the patient in the examination room. Because the number of questions asked by the doctor and the amount of time spent during the examination (in minutes) had some right-side outliers, we use the natural logarithms of these measures.

Following Das and Sohnesen (2007), we also constructed a "doctor effort index" by extracting the first principal component of the three indicators of doctor-patient interaction we counted above.[4] Factor loadings from the principal component analysis confirm all three observable indicators reflect

---

[3] The potential physical examinations included are: examination with a stethoscope; blood pressure measurement; checking temperature (with an instrument); palpating the abdomen or another part of the body; checking pulse; checking ears, nose, and/or throat; "other," which was specified by the enumerator.

[4] Principal component analysis is a tool of exploratory data analysis in which possibly correlated variables are transformed into a set of values of linearly uncorrelated (orthogonal) variables called "principal components." The transformation is conducted so that the first principal component accounts for the most variability in the data, enabling one variable to summarize many variables.

doctor effort—all factor loadings are positive. Health process quality can also be measured by the "know-do gap," which captures the difference between the general level of the doctor's competence and the effort exerted in a patient examination (Das and Hammer, 2007). Accurate measures of the know-do gap tend to rely on vignettes for competence and standardized patients for effort (Mohanan et al., 2015) and require a large number of patients presenting the same symptoms. Political and logistical challenges prevented us from adopting these approaches.

Table 1 shows descriptive statistics of these variables and the results of t-tests comparing the means of ingroup and outgroup patients. As Table 1 depicts, there is a significant difference in favor of Syrian patients in the number of questions asked by the doctor and the overall doctor effort index (although the latter is at a 10% significance level). Table 1 also shows descriptive statistics of control variables used in multivariate analyses.[5] Other control variables include visit type, type of center (i.e., public, religious charity, political party, or secular NGO), and order of the observed examination to account for potential Hawthorne effects. In the Appendix Section 3, we test whether the Hawthorne effect plays out differently for Lebanese and Syrian patients, finding no variation.

Table 1: Key Variables

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max	Diff of means (Syr-Leb)
Key independent variable								
Patient nationality: Syrian	1,158	0.484	0.500	0	0	1	1	
Dependent variables								
Questions by the doctor (log)	1,066	2.563	0.733	0	2.079	3.045	4.5	0.100**
Physical examinations	1,067	2.464	1.605	0	1	4	8	0.092
Min. of examination (log)	1,063	1.975	0.590	0	1.609	2.303	3.714	0.028
Doctor effort index	1,063	0.133	0.984	-3.2	-0.470	0.825	3.028	0.103*
Control variables								
Patient age	1,152	20.732	22.511	0	1	37	85	-11.628***
Respondent age	1,148	36.212	13.753	14	2	44	85	-8.346***
Patient gender: Female	1,157	0.583	0.493	0	0	1	1	-0.025
Respondent gender: Female	1,157	0.793	0.405	0	1	1	1	0.019
Socioeconomic status	1,121	1.500	0.687	0.25	0.983	2.017	3	-0.697***
Patient general health	1,151	3.891	0.926	1	3	5	5	-0.052
Religiosity	1,138	2.665	1.058	0	2	3.667	4	-0.138**

Note: *p<.1, **p<.05, ***p<.01.

---

[5] We describe these variables and other control variables in the Appendix Section 2.

Results

Multivariate statistical analyses assess whether Syrian and Lebanese patients experience a different quality of care, taking the clinical examination as the unit of analysis. To increase comparability, we use several controls at the patient and examination levels: the patient's socioeconomic and demographic characteristics; identity-based relationship to the center, where relevant (i.e., whether the center is a sectarian ingroup center or if it is non-affiliated); the purpose of the visit; the order of the examination observed. To account for the centers' and providers' characteristics that do not vary from patient to patient or from examination to examination, the second and third models include center- and provider-fixed effects, respectively. Clustering-robust standard errors at the provider level account for the clustered nature of our data, while enumerator fixed effects account for potential variation in responses across interviewers.

As Table 2 shows, Syrian patients do not receive lower quality care than Lebanese nationals. If anything, Syrians may receive higher quality care, based on the positive coefficients in the first models that take questions asked by the doctor, duration of examination, and the composite doctor effort index as dependent variables. However, when including center and provider fixed effects (i.e., when Syrian patients are compared with Lebanese patients within the same centers and treated by the same providers), the coefficients largely approximate zero, even though they remain positive.[6] Another potential concern might be that Syrian and Lebanese patients come to centers with very different symptom profiles and cannot be easily compared. To alleviate this issue, we incorporate symptom indicator variables into the models instead of patient self-reported general health as a control. The results of these models are presented in the Appendix Section 10, and the findings hold.

These results suggest that Syrian patients are more likely to visit centers where they receive higher quality care. They do not appear to receive lower quality care, even within the same center and when visiting the same doctor as Lebanese patients. The models also show a strong negative relationship between patient health status and our process quality measures. Similar relationships are observed with other health status measures such as symptom count (not shown here), enhancing the validity of our measures. Therefore, we do not find evidence for systematic discrimination against Syrians in these centers.

---

[6] All of the main findings of the paper that are presented in Tables 2, 3, and 4 hold when enumerator-fixed effects are incorporated to the models. See Appendix Section 9 for the results of those models.

Table 2: The Effect of Syrian Patient Nationality on the Quality of Care in Lebanese Health Centers

	Dependent variable:											
	Questions by the doctor (log)			Physical examinations			Min. of examination (log)			Doctor effort index		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Patient nationality: Syrian	0.117*	0.069	0.050	-0.014	0.114	0.078	0.156***	0.065	0.026	0.196*	0.115	0.064
	(0.070)	(0.057)	(0.061)	(0.152)	(0.122)	(0.120)	(0.059)	(0.047)	(0.053)	(0.103)	(0.080)	(0.083)
Patient age	0.004*	0.005**	0.005*	-0.019***	-0.016***	-0.008	0.005***	0.006***	0.004**	0.003	0.004*	0.004
	(0.002)	(0.002)	(0.002)	(0.005)	(0.004)	(0.005)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)
Respondent age	-0.003	-0.004*	-0.005*	0.013**	0.017***	0.007	-0.0001	-0.003*	-0.0002	0.001	-0.002	-0.002
	(0.003)	(0.002)	(0.003)	(0.006)	(0.004)	(0.005)	(0.002)	(0.002)	(0.002)	(0.004)	(0.003)	(0.003)
Patient gender: Female	0.008	-0.014	0.004	-0.232*	-0.201**	-0.252**	-0.001	-0.025	-0.045	-0.045	-0.070	-0.088
	(0.050)	(0.039)	(0.039)	(0.122)	(0.095)	(0.099)	(0.038)	(0.034)	(0.036)	(0.068)	(0.055)	(0.055)
Respondent gender: Female	-0.074	-0.023	-0.036	0.016	0.058	0.104	0.025	-0.006	0.019	-0.029	-0.012	0.010
	(0.063)	(0.053)	(0.054)	(0.150)	(0.120)	(0.129)	(0.052)	(0.045)	(0.048)	(0.090)	(0.076)	(0.077)
Socioecon. status	0.066	0.057	0.051	-0.005	0.061	-0.0003	0.095***	0.034	0.034	0.119*	0.076	0.057
	(0.043)	(0.036)	(0.037)	(0.097)	(0.074)	(0.083)	(0.035)	(0.027)	(0.030)	(0.062)	(0.048)	(0.049)
Patient general health	-0.075**	-0.079***	-0.066**	-0.034	-0.042	-0.001	-0.087***	-0.059***	-0.041*	-0.125***	-0.106***	-0.074**
	(0.035)	(0.026)	(0.027)	(0.071)	(0.062)	(0.059)	(0.027)	(0.021)	(0.022)	(0.047)	(0.037)	(0.036)
Religiosity	0.080***	-0.015	0.007	0.073	0.016	0.030	0.030	0.0004	0.008	0.090**	-0.007	0.016
	(0.030)	(0.023)	(0.025)	(0.051)	(0.044)	(0.048)	(0.021)	(0.018)	(0.018)	(0.038)	(0.031)	(0.032)
Public center	-0.011	0.371	0.225	-0.112	-1.747***	-0.286	0.038	-0.068	-0.156	-0.001	-0.178	-0.041
	(0.121)	(0.267)	(0.267)	(0.249)	(0.384)	(0.370)	(0.090)	(0.222)	(0.226)	(0.158)	(0.327)	(0.328)
Outgroup sectarian center	0.127	-0.040	0.007	-0.372*	-0.173	-0.263	-0.007	-0.160**	-0.093	-0.007	-0.201*	-0.141
	(0.105)	(0.078)	(0.078)	(0.208)	(0.197)	(0.209)	(0.078)	(0.063)	(0.072)	(0.142)	(0.109)	(0.107)
Secular NGO center	-0.099	-0.273*	-0.959***	-0.427**	-0.878**	-0.341	-0.143*	-0.323***	-0.892***	-0.275**	-0.626***	-1.433***
	(0.099)	(0.146)	(0.110)	(0.203)	(0.374)	(0.253)	(0.078)	(0.104)	(0.090)	(0.137)	(0.228)	(0.135)
Exam. order (log)	-0.083**	-0.078***	-0.087***	-0.099	-0.103*	-0.154**	-0.038	-0.040*	-0.031	-0.106**	-0.107***	-0.115***
	(0.035)	(0.027)	(0.029)	(0.060)	(0.055)	(0.062)	(0.026)	(0.023)	(0.024)	(0.042)	(0.037)	(0.039)
Constant	2.443***	2.549***	3.031***	1.779***	1.765***	1.118**	1.818***	1.927***	2.204***	-0.212	-0.053	0.356
	(0.267)	(0.202)	(0.200)	(0.646)	(0.504)	(0.529)	(0.195)	(0.162)	(0.157)	(0.379)	(0.288)	(0.260)
Visit type f.e.	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Center f.e.	N	Y	N	N	Y	N	N	Y	N	N	Y	N
Provider f.e.	N	N	Y	N	N	Y	N	N	Y	N	N	Y
Observations	987	987	987	987	987	987	984	984	984	984	984	984
R^2	0.135	0.457	0.661	0.224	0.501	0.663	0.085	0.428	0.618	0.105	0.449	0.653
Adjusted R^2	0.121	0.410	0.575	0.211	0.457	0.578	0.070	0.378	0.520	0.090	0.400	0.564
Residual Std. Error	0.696 (df = 970)	0.571 (df = 907)	0.484 (df = 786)	1.416 (df = 970)	1.175 (df = 907)	1.036 (df = 786)	0.566 (df = 967)	0.463 (df = 904)	0.406 (df = 783)	0.939 (df = 967)	0.763 (df = 904)	0.650 (df = 783)
F Statistic	9.467*** (df = 16; 970)	9.662*** (df = 79; 907)	7.664*** (df = 200; 786)	17.475*** (df = 16; 970)	11.512*** (df = 79; 907)	7.744*** (df = 200; 786)	5.642*** (df = 16; 967)	8.569*** (df = 79; 904)	6.335*** (df = 200; 783)	7.071*** (df = 16; 967)	9.312*** (df = 79; 904)	7.368*** (df = 200; 783)

Note: * denotes p-value < 0.1, ** denotes p-value < 0.05 and *** denotes p-value < 0.01.

Cluster-robust standard errors (at the provider level) are presented in parentheses.

5. Explaining Equity Despite Prejudice

Our empirical evidence, public opinion data, and social psychology and public health research indicate that some Lebanese doctors in these centers harbor negative attitudes towards Syrian patients. Nonetheless, on average, doctors provide equal and even superior care to Syrian refugees in these centers. What explains the apparent divergence between doctors' preferences and behavior towards this marginalized group? What factors distinguish centers and doctors who report negative perceptions of Syrian patients yet exert higher effort in treating them? By providing superior quality care, and attracting large numbers of Syrians, these centers and doctors may partially compensate for discrimination in the quality of care.

To answer these questions, our analytical strategy is as follows: Based on theoretical expectations, we construct variables that might account for the equitable treatment of outgroup patients. We then interact these variables individually with the Syrian patient indicator variable. If we find significant effects in models with interaction terms, this suggests doctors and centers exhibiting this characteristic provide superior care for Syrian patients.

We probe multiple potential moderators that could result in better care for Syrian patients, as identified above: We explore whether providers (1) who take altruism as a guiding principle in their careers, (2) who have more pride in their profession as doctors, (3) whose compensation structure incentivizes them to boost their total patient load or, (4) who have strategic motivations aimed at promoting the image of their organization are more likely to exert greater effort in examining Syrian patients. None of these factors has a significant and positive moderation effect on doctor effort. On the contrary, they were all negative and far from statistically significant.[7] Next, we focus on two additional forms of extrinsic motivation specified above – incentives from international humanitarian organizations and public health imperatives – which might influence the behavior of local NGOs and frontline service providers in refugee-hosting countries.

Superior Care: International Support and Provider Incentives

INGOs are integral to humanitarian response in conflict-affected countries. In Lebanon, INGOs shoulder a major burden in addressing refugee social needs, enabling government agencies to focus on serving citizens. Additional material and non-material resources may help account for the relatively superior or equal treatment of Syrian refugees at facilities with INGO support. This treatment may be due to the terms of INGO contracts stipulate or enforce minimum quality standards or because the

---

[7] Appendix Section 4 describes the measures for these mechanisms and shows the results of the analyses.

anticipated supplemental compensation motivates providers to exert greater effort to maintain the revenue stream generated by an expanded patient base.

Various intergovernmental organizations and INGOs, including the UNHCR, have established operations in Lebanon to cater to refugee social needs. An interview conducted with Dr. Jakob Arhem, a UNHCR Public Health Officer in Lebanon, clarified the nature of INGO partnerships with the facilities in our sample.[8] In late 2014, the Lebanon Crisis Response Plan (LCRP), a loose working group overseen by the World Health Organization (WHO), UNHCR, and the Lebanese MOPH, was created to share information from the field and operational plans to more formally coordinate their work (Janmyr, 2017, pp. 396-397). To support healthcare for Syrians, INGOs establish partnerships with preexisting PHCCs, often selected at LCRP meetings based on the concentration of refugees and vulnerable Lebanese populations, as well as observed difficulties in accessing healthcare in their respective geographic regions. Although the terms of contracts vary across centers, at a minimum, they usually include subsidies for consultations and lab tests for refugee patients. Some centers also receive subsidies to care for low-income Lebanese patients to minimize Lebanese resentment of Syrians. Centers also provide equipment, guidance on good medical practices, and contribute to maintenance costs. Some of these partnerships are funded directly by the UNHCR. Centers with INGO partnerships serve Syrians at subsidized rates and are advertised in brochures prepared and distributed by the UNHCR to refugees. Lebanese NGOs also run a handful of centers with partnerships.

The UNHCR maintains a master list of PHCCs, indicating the INGO partner, the subsidized services offered, and whether the partnership receives funding from the UNHCR (UNHCR, 2017b). Using the 2017 version of this list, we matched information for 66 of the 68 centers in our random sample, of which 31 had an INGO partnership facilitated through the LCRP, to create a variable indicating whether a center had international support. Among the patients in our sample, 55% visited centers with partnerships, including 66% of Syrian patients and 43% of Lebanese patients.

When we incorporate an interaction term, combining the international support variable and the Syrian patient variable in the model, the beneficial impact of INGO partnerships for the quality of care received by Syrian patients is apparent (See Table 3). The coefficient for the interaction term is unmistakably positive, and, as we explain below, the average marginal effect of the "Syrian" variable is statistically significant for centers with INGO partnerships. Moreover, the positive coefficient for

---

[8] Author interview – Beirut, Lebanon, July 16, 2019.

the Syrian variable disappears both in statistical and substantive significance, suggesting the interaction term accounts for much of the doctor effort advantage for Syrian patients. In other words, centers with international backing are more likely to supply superior care to Syrians.

Table 3: The Effect of INGO Support on the Quality of Care for Syrian Patients in Lebanese PHCCs

	Dependent variable:	
	Doctor effort index	
	(1)	(2)
Patient nationality: Syrian	0.196*	-0.013
	(0.103)	(0.161)
LCRP partner		-0.198
		(0.150)
LCRP partner * Syrian		0.322*
		(0.190)
Constant	-0.212	-0.100
	(0.379)	(0.363)
Demographic controls	Y	Y
Relation to center controls	Y	Y
Visit type f.e. and exam order control	Y	Y
Observations	984	936
R²	0.105	0.111
Adjusted R²	0.090	0.094
Residual Std. Error	0.939 (df = 967)	0.943 (df = 917)
F Statistic	7.071*** (df = 16; 967)	6.380*** (df = 18; 917)

Note: * denotes p-value < 0.1, ** denotes p-value < 0.05 and *** denotes p-value < 0.01.
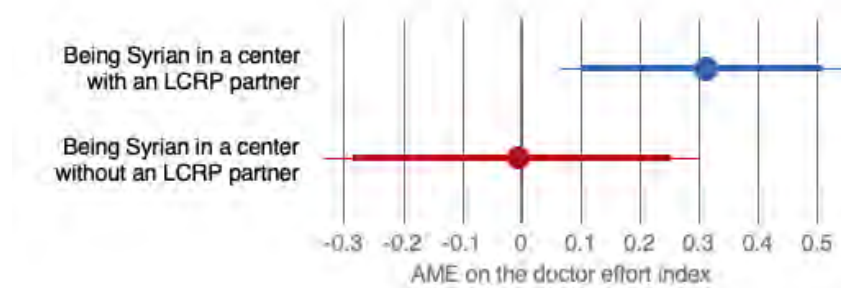Cluster-robust standard errors (at the provider level) are presented in parentheses.

Figure 1 shows the average marginal effects of being Syrian (instead of being Lebanese) in a center with LCRP partners presents even more striking results. The average doctor effort is the same for Syrians and Lebanese patients in centers without an LCRP partner, but the average doctor effort is markedly better in centers with such partners. The difference between the doctor effort index for an average Syrian patient and an average Lebanese patient is approximately one-third of the index's standard deviation and is statistically significant.[9] Substantively, this means that a Syrian patient in an INGO-supported center is being asked, on average, 2.6 questions more and spends 1.5 minutes more with the doctor than a Lebanese patient. As we show in the Appendix Section 5, a similar difference between Syrian and Lebanese patients is also detected in the subjective quality measures: In INGO-supported centers, Syrian patients are more likely to report that the doctor listened to them or

---

[9] The average marginal effect of the "Syrian" variable at centers with an LCRP partner = 0.309, clustering-robust standard error = 0.126, p-value = 0.015.

respected them than the Lebanese patients. These findings support our overall finding that, in INGO-supported centers, Syrian patients are treated slightly better than their Lebanese counterparts.

Figure 1: Average Marginal Effect of Being Syrian (as opposed to Being Lebanese) in Centers with and without an LCRP Partner

Notes: This figure is based on Model (2) in Table 3. The thick line represents the 95% confidence interval, whereas the thin line represents the 90% confidence interval. Confidence intervals are calculated with cluster-robust standard errors (at the provider level).

Moreover, this variation does not appear to arise from different underlying attitudes towards Syrians. In our center selection conjoint experiment, we find that doctors working in centers with and without INGO backing report comparable levels of negative attitudes towards health centers with a majority-Syrian patient base (See Section 1.2.5 of the Appendix). Nor do doctors working in centers with international contracts exhibit higher levels of altruism or professionalism than their counterparts in centers without such partnerships. The only difference we detected is that doctors working in INGO-affiliated facilities express greater job satisfaction, a finding consistent with the argument developed below about employment incentives in the INGO sector (See Section 7 of the Appendix). These findings suggest a coordinated INGO effort might be associated with the divergence between provider attitudes and behaviors.

Equal Care: Public Health Imperatives

If centers with international partnerships offer superior care to Syrian refugees, what explains the relative equality of care observed in other centers? As Figure 1 suggests, even in centers without INGO contracts, Syrians and Lebanese, on average, receive equal treatment.

The relative equity in patient care may arise from system-wide spillovers of the positive effect of INGO partnerships. Centers with INGO partnerships absorb a majority of Syrian patients—66% of those in our sample—who likely learn of their services through UNHCR outreach efforts. As a result, centers without international support receive a smaller portion of Syrians, potentially facilitating their capacity to treat nationals and refugees equally.

Interviews suggest a second potential reason for the relatively equal level of effort exerted by doctors across Lebanese and Syrian patients, notably the imperative to block the spread of infectious diseases. In 13 out of 15 follow-up interviews, doctors emphasized that Syrians carry communicable diseases, and virtually all of them referred specifically to dermatological conditions such as leishmaniasis, a parasitic disease prevalent among displaced Syrians at the time of data collection (Alawieh et al., 2014; El Safadi et al., 2019). In open-ended reflections on the challenges of serving the needs of all patients, interviewees underscored the novelty and potential disease risks for Lebanon brought about by wartime conditions in neighboring Syria. When asked why and how doctors can address rising demands at Lebanese health centers, one physician noted, "[D]octors have to give the same quality of care in order to prevent the spread of infectious diseases to the rest of the population. They consider it as this way: They will protect the Lebanese population."[10]

Statistical analyses based on our data present suggestive evidence in support of this interpretation. As seen in Table 4, when a dermatological problem or rash are presented to the doctor as a symptom during an examination with a Syrian patient, doctors exert more effort than when examining a Lebanese patient. The average marginal effect of the "Syrian" variable during examinations with dermatological symptoms is between 0.40 in the model with no fixed effects, 0.69 in the model with center fixed effects,[11] and 0.38 in the model with provider fixed effects. These substantive levels of significance across the models suggest that Syrian patients with dermatological symptoms are more likely to elicit greater doctor effort even within the same centers. The urgent symptoms presented by Syrian patients and the motivation to prevent the spread of infectious diseases may help to explain the generally equal levels of doctor effort across Syrian and Lebanese patients, even in centers lacking international support.

Table 4: Interaction of Dermatological Symptoms with the "Syrian" Variable in Centers without INGO Partnership

	Dependent variable:		
	Doctor effort index		
	(1)	(2)	(3)
Patient nationality: Syrian	-0.195	0.147	0.078
	(0.191)	(0.146)	(0.141)
Symptom: Dermatological or rash	-0.419	-0.406*	-0.323
	(0.257)	(0.227)	(0.254)
Syrian * Symptom: Dermatological or rash	0.592	0.542*	0.302
	(0.377)	(0.282)	(0.381)

---

[10] Interview by E. Hobeika, Center #2111, December 2018.
[11] With cluster-robust standard error at 0.29 and p-value at 0.02, statistically significant at 5% level.

Constant	0.316	0.108	0.373
	(0.521)	(0.425)	(0.432)
Demographic controls	Y	Y	Y
Relation to center controls	Y	Y	Y
Visit type f.e. and exam order control	Y	Y	Y
Center f.e.	N	Y	N
Provider f.e.	N	N	Y
Observations	365	365	365
R^2	0.173	0.459	0.727
Adjusted R^2	0.133	0.379	0.619
Residual Std. Error	0.965 (df = 347)	0.817 (df = 317)	0.640 (df = 261)
F Statistic	4.273*** (df = 17; 347)	5.718*** (df = 47; 317)	6.734*** (df = 103; 261)

Note: * denotes p-value < 0.1, ** denotes p-value < 0.05 and *** denotes p-value < 0.01. Cluster-robust standard errors (at the provider level) are presented in parentheses

6. Discussion

Our analyses indicate Syrian refugees receive roughly equivalent—and sometimes superior—care in Lebanese health centers compared to Lebanese nationals. Intrinsic motivations, such as altruism or professionalism, undoubtedly explain the professional conduct of some frontline providers, as two doctors in follow-up interviews emphasized.[12]

On aggregate, however, our statistical analyses indicate weak support for such explanations. Rather, we find that doctors who exert the most effort in treating Syrian patients tend to be based in centers with international partnerships. One interpretation of this finding is that INGOs enforce contractual standards of care more effectively. We are skeptical of this explanation. Implementing quality standards is not unique to international agencies: An MOPH-led effort to improve quality of care through an accreditation process administered by a Canadian agency introduced standardized monitoring procedures among centers in the network (El-Jardali et al., 2014). Supplemental analyses find no difference in the monitoring practices of INGO-affiliated centers and non-affiliated centers (See Appendix Section 8). Furthermore, as noted previously, INGO-affiliated centers do not attract doctors with higher levels of altruism or professionalism or less aversion to working in centers with large Syrian patient populations.

Instead, we posit that the importance of relationships with international aid organizations in conflict-affected countries such as Lebanon accounts for the apparent "INGO effect." At the organizational or center level, local NGOs have an incentive to maintain good relations with INGOs, which are critical sources of financial and logistical support. INGO partnerships are often critical for

---

[12] Social desirability bias might invite such explanations, but the few interviewees who made these comments did so without prompting.

the sustainability of local organizations; a finding echoed in the broader literature on NGOs (Cammett and MacLean, 2014). At the individual level, INGOs are major employers of educated professionals in the host country. A high proportion of Lebanese medical professionals express a desire to emigrate, and many practice medicine abroad (Akl et al., 2008). Working for INGOs, which tend to provide higher salaries, superior benefits, and greater prestige, can serve a similar function – a phenomenon known as "internal brain drain" (Lemay-Hébert et al., 2020). Consistent with this interpretation, doctors working in INGO-affiliated facilities express greater job satisfaction (See Appendix Section 7.1).

Through these two channels – financial and logistical support for centers and labor market incentives for professionals – international partnerships present extrinsic motivations to improve, or at least ensure, relatively equitable quality of care across groups.[13] In line with the interpretation that INGOs are sources of extrinsic motivation, multiple doctors in follow-up interviews emphasized that the influx of Syrian refugees provided a welcome additional source of income and increased resources for local health centers (See Appendix Section 7.2).

The imperative to control the spread of infectious diseases constitutes a second potential mechanism underlying the equitable treatment of Syrian patients. Paradoxically, this implies that the privileging of the ingroup – that is, the urge to protect citizens – may override potential negative effects towards the outgroup. In a perceived life-or-death situation, such as public health emergencies, considerations about the treatment of groups held in lower esteem may be tempered or suppressed.

Together, these findings suggest that theories emphasizing extrinsic motivations for prosocial behavior may help explain why Syrian refugees, on average, receive equal or superior quality of care compared to Lebanese nationals. Doctor- and center-level incentives to maintain good relations with international humanitarian agencies may derive from both financial incentives and strategic motivations that, in turn, promote prosocial behavior. Based on the results in Figure 1, the INGO effect may arise from a combination of enhanced doctor effort in treating Syrian patients and a crowding out of time devoted to Lebanese patients. The imperative to contain infectious diseases also constitutes a type of strategic motivation.

These findings call for further research on INGOs' roles and public health threats in humanitarian response. Future studies could test the potential micro-level mechanisms of the INGO

---

[13] INGO support may also introduce an additional layer of care monitoring for Syrian patients. During visits to centers and interactions with doctors, INGO representatives may signal that the equitable treatment of Syrian patients is important for the continued support of the center, compelling doctors to regulate their clinical behavior more actively and resulting in superior care for Syrian patients.

effect and assess whether INGOs raise the level of care for the displaced or crowd out services for the host population. INGO partnerships attract medical professionals who deliver high-quality care to Syrians, suggesting that international support can improve service delivery to marginalized groups such as refugees. Yet INGO involvement is temporary and unsustainable and, if international donors are perceived to favor refugees, prejudice against this vulnerable population will be exacerbated. Research should also investigate whether perceived public health emergencies elicit prosocial actions, even if for self-interested reasons, such as stemming the spread of infection.

References

Adida, C. (2014) *Immigrant exclusion and insecurity in Africa*. New York: Cambridge University Press.

Adida, C. L., Dionne, K. Y. and Platas, M. R. (2018) "Ebola, elections, and immigration: How politicizing an epidemic can shape public attitudes," *Politics, Groups, and Identities*, 8(3), pp. 488-514.

Akl, E. A., Maroun, N., Major, S., Afif, C., Abdo, A., Choucair, J., Sakr, M., Li, C. K., Grant, B. J. B. and Schünemann, H. J. (2008) "Post-graduation migration intentions of students of Lebanese medical schools: A survey study," *BMC Public Health*, 8 (1): 191.

Alawieh, A., Musharrafieh, U., Jaber, A., Berry, A., Ghosn, N. and Rahman Bizri, A. (2014) "Revisiting leishmaniasis in the time of war: The Syrian conflict and the Lebanese outbreak," *International Journal of Infectious Diseases*, 29, pp. 115-119.

Alrababa'h, A., Dillon, A., Williamson, S., Hainmueller, J., Hangartner, D. and Weinstein, J. (2019) "Attitudes toward migrants in a highly-impacted economy: Evidence from the Syrian Refugee Crisis in Jordan," *IPL Working Paper Series*, Immigration Policy Lab, Stanford University.

Ammar, W., Kdouh, O., Hammoud, R., Hamadeh, R., Harb, H., Ammar, Z., Atun, R., Christiani, D., and Zalloua. P. A. (2016) "Health system resilience: Lebanon and the Syrian refugee crisis," *Journal of Global Health*, 6(2).

Arab Barometer. (2017) Arab Barometer wave IV. Available at: https://www.arabbarometer.org/.

Ark. (2017) *Narrative report: Regular perception surveys on social tensions throughout Lebanon: Wave I*. Beirut, Lebanon: UNDP Lebanon.

Balsa, A. I. and McGuire, T. G. (2003) "Prejudice, clinical uncertainty and stereotyping as sources of health disparities," *Journal of Health Economics*, 22(1), pp. 89-116.

Batson, C. D. and Shaw, L. L. (1991) "Evidence for altruism: Toward a pluralism of prosocial motives," *Psychological Inquiry*, 2(2), pp.107-122.

Blanchet, K., Fouad, F. M. and Pherali, T. (2016) "Syrian refugees in Lebanon: The search for universal health coverage," *Conflict and Health*, 10(1):12.

Cammett, M., and Lauren M. MacLean, L. M. (eds.) (2014) *The politics of non-state social welfare*. Ithaca, NY: Cornell University Press.

Chalcraft, J. (2008) *The invisible cage: Syrian migrant workers in Lebanon*. Stanford, CA: Stanford University Press.

Chapman, E. N., Kaatz, A. and Carnes, M. (2013) "Physicians and implicit bias: How doctors may unwittingly perpetuate healthcare disparities," *Journal of General Internal Medicine*, 28(11),p pp. 1504-1510.

Cherri, Z., González, P. A. and Delgado, R. C. (2016) "The Lebanese–Syrian crisis: Impact of influx of Syrian refugees to an already weak state," *Risk Management and Healthcare Policy*, 9, pp. 165-172.

Christopherson, M., Liu, J., Thorleifsson, C. M. and Tiltnes, A. A. (2013) "Lebanese attitudes towards Syrian refugees and the Syrian crisis," *Fafo-paper* No. 13, Fafo Research Foundation. Available at: https://www.fafo.no/images/pub/2013/10179.pdf.

Cowling, M. M., Anderson, J. R. and Ferguson, R. (2019) "Prejudice-relevant correlates of attitudes towards refugees: A meta-analysis," *Journal of Refugee Studies*, 32(3), pp. 502-524.

Dancygier, R. M. and Donnelly, M. J. (2013) "Sectoral economies, economic contexts, and attitudes toward immigration," *The Journal of Politics*, 75(1), pp. 17-35.

Das, J. and Hammer, J. (2005) "Which doctor? Combining vignettes and item response to measure clinical competence," *Journal of Development Economics*, 78(2), pp. 348-383.

Das, J. and Hammer, J. (2007) "Money for nothing: The dire straits of medical practice in Delhi, India," *Journal of Development Economics*, 83(1), pp. 1-36.

Das, J. and Hammer, J. (2014) "Quality of primary care in low-income countries: Facts and economics," *Annual Review of Economics*, 6, pp. 525–553.

Das, J. Hammer, J. and Leonard, K. (2008) "The quality of medical advice in low-income countries," *Journal of Economic Perspectives*, 22(2), pp. 93-114.

Das, J. and Sohnesen, T. P. (2007) "Variations in doctor effort: Evidence from Paraguay," *Health Affairs*, 26(3), pp. 324-337.

Del Carpio, X. V. and Wagner, M. (2015) *The impact of Syrians refugees on the Turkish labor market.* Washington, D.C.: World Bank.

Donabedian, A. (1988) "The quality of care: How can it be assessed?" *Journal of the American Medical Association*, 260(12), pp. 1743-1748.

Dovidio, J. F., Gaertner, S. L. and Abad-Merino, S. (2017) "helping behaviour and subtle discrimination," in van Leeuwen, E. and Zagefka, H. (eds.) *Intergroup helping.* New York: Springer, pp. 3-22.

El Safadi, D., Merhabi, S., Rafei, R., Mallat, H., Hamze, M. and Acosta-Serrano, A. (2019) "Cutaneous leishmaniasis in north Lebanon: Re-emergence of an important neglected tropical disease," *Transactions of the Royal Society of Tropical Medicine and Hygiene,* 113(8), pp. 471-476.

El-Jardali, F., Hemadeh, R., Jaafar, M., Sagherian, L., El-Skaff, R., Mdeihly, R., Jamal, D. and Ataya, N. (2014) "The impact of accreditation of primary healthcare centers: Successes, challenges and policy implications as perceived by healthcare providers and directors in Lebanon," *BMC Health Services Research*, 14: 86.

El-Khatib, Z., Scales, D., Vearey, J. and Forsberg, B. C. (2013) "Syrian refugees, between rocky crisis in Syria and hard inaccessibility to healthcare services in Lebanon and Jordan," *Conflict and Health*, 7: 18.

Geha, C. and Talhouk J. (2018) *Politics and the plight of Syrian refugees in Lebanon.* Beirut, Lebanon: American University of Beirut.

Ghobarah, H. A., Huth, P. and Russett, B. (2003) "Civil wars kill and maim people—Long after the shooting stops," *American Political Science Review*, 97(2), pp. 189-202.

Ghosn, F, Braithwaite, A. and Chu, T. S. (2019) "Violence, displacement, contact, and attitudes toward hosting refugees," *Journal of Peace Research*, 56(1), pp. 118-133.

Government of Lebanon. (2017) *Lebanon crisis response plan, 2017-2010*. Beirut, Lebanon: Government of Lebanon.

Halabi, S. and Nadler, A. (2017) "The intergroup status as helping relations model: Giving, Seeking and receiving help as tools to maintain or challenge social inequality," in van Leeuwen, E. and Zagefka, H. (eds.) *Intergroup helping*. New York: Springer, pp. 205-221.

Harb, C. and Saab, R. (2014) "Social cohesion and intergroup relations: Syrian refugees and Lebanese nationals in the Bekaa and Akkar," *Save the Children Report*. Beirut, Lebanon: American University of Beirut ; London: Save the Children.

Hsu, B., Hackett, C. and Hinkson, L. (2014) "The importance of race and religion in social service providers," *Social Science Quarterly*, 95(2), pp. 393-410.

Janmyr, M. (2017) "UNHCR and the Syrian refugee response: Negotiating status and registration in Lebanon," *The International Journal of Human Rights*, 22(3), pp. 393–419.

Klassen, A., Miler, A., Anderson, N., Shen, J., Schiariti, V. and O'Donnell, M. (2010) "Performance measurement and improvement frameworks in health, education and social services systems: A systematic review," *International Journal for Quality in Healthcare*, 22(1), pp. 44-69.

Lemay-Hébert, N., Marcelin, L. H., Pallage, S. and Cela, T. (2020) "The internal brain drain: foreign aid, hiring practices, and international migration," *Disasters*, 44(4), p. 621-640.

Leonard, K. and Masatu, M. C. (2006) "Outpatient process quality evaluation and the Hawthorne effect," *Social Science and Medicine*, 63, pp. 2330–2340.

Marmot, M. and Wilkinson, R. (eds.) (2005) *Social determinants of health*. Second ed. Oxford: Oxford University Press.

Mohanan, M., Vera-Hernández, M., Das, V., Giardili, S., Goldhaber-Fiebert, J. D., Rabin, T. L., Raj, S. S., Schwartz, J. I. and Seth, A. (2015) "The know-do gap in quality of healthcare for childhood diarrhea and pneumonia in rural India," *JAMA Pediatrics*, 169(4), pp. 349-357.

Monin, B. and Miller, D. T. (2001) "Moral credentials and the expression of prejudice," *Journal of Personality and Social Psychology*, 81(1), pp. 33-43.

Mourad, L. (2017) "'Standoffish' policy-making: Inaction and change in the Lebanese response to the Syrian displacement crisis," *Middle East Law and Governance*, 9(3), pp. 249-266.

Muñoz, J. and Aguilera, A. I. (2016) *Lebanon sampling documentation*. Washington, D.C.: World Bank.

Paluck, E. L., and Green, D. P. (2009) "Prejudice reduction: What works? A review and assessment of research and practice," *Annual Review of Psychology*, 60(1), pp. 339-367.

Parkinson, S. E. and Behrouzan, O. (2015) "Negotiating health and life: Syrian refugees and the politics of access in Lebanon," *Social Science & Medicine,* 146, pp. 324-331.

Sabin, J., Nosek, B. A., Greenwald, A. and Rivara, F. P. (2009) "Physicians' implicit and explicit attitudes about race by MD race, ethnicity, and gender," *Journal of Healthcare for the Poor and Underserved*, 20(3), pp. 896-913.

Saiyed, S. M., Kahler, J. and Kalabani, M. (2018) "Notes from the field: A case of hepatic failure and reflections on current status of healthcare of Syrian refugees in Lebanon," *Conflict and Health*, 12: 14.

Salti, N. and Chaaban, J. (2010) "The role of sectarianism in the allocation of public expenditure in postwar Lebanon," *International Journal of Middle East Studies*, 42(3), pp. 637-655.

Shavers, V. L., Fagan, P., Jones, D., Klein, W. M. P., Boyington, J., Moten, C. and Rorie, E. (2012) "The state of research on racial/ethnic discrimination in the receipt of healthcare," *American Journal of Public Health*, 102(5), pp. 953-966.

Shen, M. J., Peterson, E. B., Costas-Muñiz, R., Hernandez, M. H., Jewell, S. T., Matsoukas, K. and Bylund, C. L. (2018) "The effects of race and racial concordance on patient-physician communication: A systematic review of the literature," *Journal of Racial and Ethnic Health Disparities*, 5(1), pp. 117-140.

Stelfox, H. T. and Straus, S. E. (2013) "Measuring quality of care: Considering measurement frameworks and needs assessment to guide quality indicator development," *Journal of Clinical Epidemiology*, 66(12), pp. 1320-1327.

Stern, D. T. (ed.) (2006) *Measuring medical professionalism*. New York: Oxford University Press.

Stewart, A. L., Nápoles-Springer, A. and Pérez-Stable, E. J. (1999) "Interpersonal processes of care in diverse populations," *The Milbank Quarterly*, 77(3), pp. 305-339.

Swick, H. M. (2000) "Toward a normative definition of medical professionalism," *Academic Medicine* 75(6), pp. 612-616.

Tajfel, H. and Turner, J. (1979) "An integrative theory of intergroup conflict," in Austin, W. G. and Worschel, S. (eds.) *The social psychology of intergroup relations*. Monterey, CA: Brooks/Cole, pp. 7-24.

Tuan, T., Mai Dung, V. T., Neu, W. and Dibley, M. J. (2005) "Comparative quality of private and public health services in rural Vietnam," *Health Policy and Planning*, 20(5), pp. 319-327.

Tumen, S. (2016) "The economic impact of Syrian refugees on host countries: Quasi-experimental evidence from Turkey," *American Economic Review*, 106(5), pp. 456-60.

UNHCR (ed.). (2017a) *Health services for refugees in North Lebanon*.

UNHCR. (2017b) "UNHCR Masterlist of PHCCs in Lebanon," *UNHCR*. Available at: https://data2.unhcr.org/en/documents/details/59325.

van Leeuwen, E., and Zagefka, H. (eds.) (2017) *Intergroup Helping*. New York: Springer.

Wagner, P., Hendrich, J., Moseley, G. and Hudson, V. (2007) "Defining medical professionalism: A qualitative study," *Medical Education*, 41(3), pp. 288-294.

World Bank. (2018) *Lebanon health resilience project*. Washington, D.C: World Bank.

Yitmen, Ş. and Verkuyten, M. (2018) "Positive and negative behavioural intentions towards refugees in Turkey: The roles of national identification, threat, and humanitarian concern," *Journal of Community & Applied Social Psychology*, 28(4), pp. 230-243.

APPENDIX FOR
"EQUITY WITH PREJUDICE:
INTERNATIONAL NGOs AND SERVICE DELIVERY
IN REFUGEE CRISES"

1. Exploring Public Opinion and the Attitudes of Doctors towards Syrian Refugees in Lebanon

1.1. Findings from Public Opinion Surveys

Findings from the Arab Barometer Wave IV, which was fielded in Lebanon shortly before we carried out our data collection, suggest that even highly educated professionals – such as doctors – who face less economic threat from refugees than their less-educated counterparts, harbor prejudice against Syrians. Irrespective of educational background, citizens report that the refugee crisis is a top challenge for the country (Arab Barometer, 2017). Another nationally representative survey also suggests that, regarding specific attitudes towards Syrian refugees, the differences between highly educated Lebanese and less educated Lebanese nationals are minimal: Among those with elementary or less education, 78 percent reported the presence of Syrian refugees is "straining water and energy resources a great deal," while 63 percent of those with higher education endorsed this statement. This finding holds for Lebanese of all major sects: While 90 percent of the Shi'a agree (to some extent or to a great extent) that Syrian refugees strain the country's water and energy resources, 93 percent of Sunnis and 96 percent of Maronites support this claim. Furthermore, an equal percentage of Lebanese citizens with both low and high levels of education – in both cases, 61 percent – report that they would not be comfortable having Syrian refugees as neighbors (Christopherson et al., 2013).

1.2. Doctor Attitudes towards Syrian Patients: A Conjoint Experiment

We first explore whether doctors in our sample exhibit bias or prejudice against Syrians that might affect their clinical practice through a conjoint experiment. This is a notoriously difficult question to study given the strong likelihood of social desirability bias in responses, either because doctors mask their prejudice or harbor unconscious bias. As one among multiple sources of evidence, we report the results of an original conjoint experiment designed to assess doctor preferences regarding distinct attributes of health centers, isolating factors that they find more and less appealing. Evidence from nationally representative surveys in Lebanon, interviews with doctors in the sample, and insights from the public health literature on doctor prejudice against racial minorities complement the experimental data.

1.2.1. Motivation

Conjoint experiments enable researchers to understand which factors drive preferences in complex choices with multiple distinguishing characteristics.[1] The technique is useful for our study because, in the Lebanese primary health network, doctors work in centers on a part-time, quasi-voluntary basis. Self-selection, therefore, plays a large role in determining the overall quality of a center. Thus, understanding the criteria that doctors consider in choosing where to work—and understanding whether the presence of Syrian patients affects their selection—is particularly relevant.

Conjoint experiments also minimize social desirability bias and mimic real-life situations, resulting in improved construct validity (Hainmueller et al., 2015). Based on interviews carried out with health center managers in the MOPH network during a pilot phase of this project and on relevant public health literature (El-Jardali et al., 2014), the attributes in the conjoint experiment and their corresponding values, shown in Table 1.1, are informed by the concerns and priorities of respondents. The main attribute of interest is the national breakdown of a center's patient profile, which indicates whether doctors are more or less likely to choose centers with a majority of Syrian refugee patients.

---

[1] In this technique, respondents are asked to rate hypothetical profiles with diverse attributes. The multiple possible responses and randomized combinations of attributes enable researchers to estimate how each value in a given attribute influences the resulting choice (Hainmueller et al., 2014).

Table 1.1: Attributes in the Conjoint Experiment on Physician Health Center Choice

Attribute (Feature)	Values (Levels)			
Autonomy of practice	"Extensive involvement of the management in how to provide medical care"	"Minimal involvement of the management in how to provide medical care"		
Potential patient base for private practice	"Patients from this center are likely to go to your private practice"	"Patients from this center are not likely to go to your private practice"		
Equipment at center	"Has state-of-the-art medical equipment"	"Has medical equipment in average condition"		
Patient profile by nationality	"The majority of patients are Lebanese"	"The majority of patients are Syrian refugees"	"Patients are a mix of Lebanese and Syrian refugees"	
Financial benefit	"Gives you the opportunity to earn a small amount of additional income"	"Gives you the opportunity to earn a large amount of additional income"		
Gaining professional experience	"The center provides you with opportunity to gain a lot of experience and professional development"	"The center provides with opportunity to gain little experience and professional development"		
Location of center	"Located far from your current place of residence"	"Located near your current place of residence"		
Mission of provider organization	"You agree strongly with the general message of the organization which runs this center"	"You agree partially with the general message of the organization which runs this center"	"You are indifferent to the general message of the organization which runs this center"	
Type of organization running center	"Run by the Ministry of Public Health"	"Run by a non-religious and non-political charity"	"Run by a religious charity"	"Run by a political party"

Respondents were exposed to four different rounds of the experiment, each presenting two side-by-side profiles of hypothetical centers in which doctors might prefer to work. The value for each of the nine attributes was randomly selected, in line with well-established rules of conjoint analysis. The category names of the attributes were not exhibited to avoid revealing the experiment's goals to this pool of respondents. In addition, we used a bullet-point list for each center to describe the health center profiles to mimic a realistic scenario in which professionals might explicitly or implicitly list the characteristics of health centers they are considering as a workplace. The order of attributes was also randomized across respondents but was consistent across profiles within the same round and across rounds within the same survey.

In conjoint experiments, each attribute is a treatment set in which each value is a treatment. Due to the randomization of values in each profile and resulting orthogonality of each attribute with respect to the others, calculating the average treatment effects is straightforward. The average marginal component effect (AMCE) of each value in an attribute (or "component") on the probability of being selected can be identified non-

parametrically. This can be estimated by regressing the binary outcome variable (in our case, preferred center) on indicator variables for each value of an attribute (Hainmueller et al., 2014). The AMCE of a particular value is interpreted as the difference that value is expected to create compared to the benchmark category.

1.2.2. Results

The conjoint experiment reveals which types of centers doctors in our sample prefer as potential workplaces. When faced with a choice between two centers that differ in at least some of the selected attributes, which centers do the doctors select? Figure 1.1 summarizes the factors affecting doctor choice on aggregate.[2] Panel A shows how the probability of selecting a center changes for each value of an attribute relative to a benchmark value within the same attribute, holding all other attributes at their mean values. Panel B shows how each value of an attribute changes the rating of a center on average, relative to a benchmark value within the same attribute, holding all other attributes in their mean value. Clustering-robust standard errors at the provider level are used to draw confidence intervals around the point estimates in the figure.

---

[2] During data collection, our interviewers encountered four Syrian doctors, who mainly treated Syrian patients, in the total sample of doctors. Lebanese law does not permit Syrians, including doctors, to work in most professions, although some health professionals work on an informal basis (Honein-AbouHaidar et al., 2019). In our analyses, we excluded the four Syrian doctors from the sample.

Figure 1.1: Physician Health Center Choice Based on Conjoint Experiment Responses
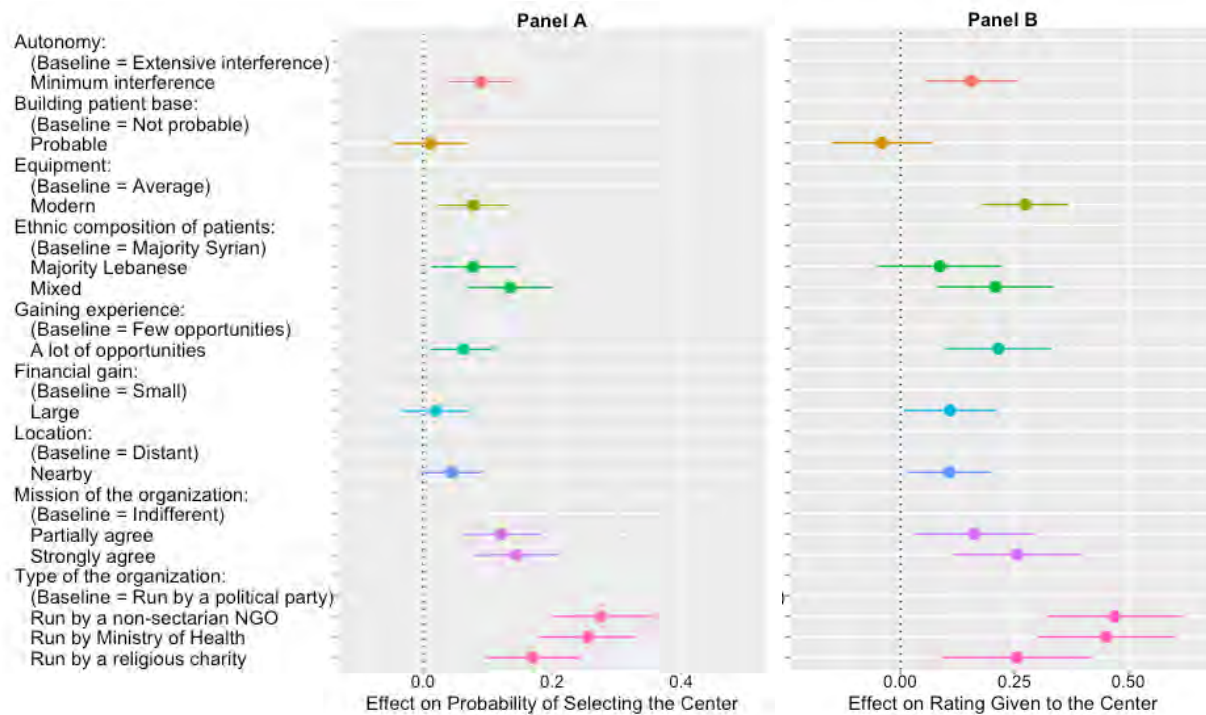
Panel A shows that doctors in the Lebanese primary healthcare network are more averse to working in centers with a majority Syrian patient base. Compared to centers with a mixed patient profile, including both Lebanese and Syrian patients, doctors are on average 14% less likely to select centers with a Syrian majority patient base. Compared to centers with a majority Lebanese patient profile, doctors are 8% less likely to select Syrian majority centers. The average rating of Syrian majority centers is also 0.2 points lower when compared to centers with a more mixed patient composition (Panel B). The results are statistically significant at conventional levels. While the preference for mixed centers rather than Lebanese-majority centers over Syrian-majority centers may seem counterintuitive, this is consistent with our claim about incentives to work in INGO-affiliated centers, an argument on which we elaborate below. Subgroup analyses show that this result largely stems from the choices of doctors who already work primarily with Syrian patients and who are most likely to benefit financially and professionally from the large quantity of these patients. When this group of doctors are excluded from the analyses, both Lebanese-majority and mixed centers outweigh the choice to work in Syrian majority centers. At least in this experimental center choice setting, doctors in the Lebanese primary health care system do not prefer to work with Syrian patients.

Other findings from the conjoint experiment suggest that doctors prefer to work in centers where they can work autonomously, and the equipment is up-to-date, in centers run by networks with missions that they support, and for organizations other than political parties. Even if we assume that social desirability bias affected these choices – compelling doctors to avoid selecting centers promising financial gain or opportunities to expand their patient base – respondents did not shy away from stating their negative attitudes towards working in centers with large numbers of Syrian patients. This bolsters our confidence that the findings reflect a minimum level of bias on the part of doctors against Syrian patients.

1.2.3. Further Considerations on Conjoint Experiment Results: Full and Intersection Datasets

The findings reported above cover the full dataset of doctors who responded to at least one round of the conjoint experiment. However, not all these doctors examined patients in our patient-level dataset. In this section, we present the results of the doctor-level dataset, only including doctors who examined patients in the patient-level dataset, and compare the results in this "intersection" dataset to the results in the full dataset. The comparison indicates that the findings fully hold, as can be seen in Table 1.2.

Table 1.2

	Dependent variable:			
	Overall selection		Overall rating	
	Full dataset	Intersection dataset	Full dataset	Intersection dataset
	(1)	(2)	(3)	(4)
Partially agree with the mission	0.121***	0.134***	0.162**	0.179***
	(0.031)	(0.035)	(0.068)	(0.064)
Strongly agree with the mission	0.145***	0.144***	0.256***	0.289***
	(0.034)	(0.034)	(0.072)	(0.071)
Nearby location	0.045*	0.044	0.108**	0.136***
	(0.027)	(0.028)	(0.047)	(0.049)
Organization: Non-sectarian NGO	0.277***	0.281***	0.469***	0.486***
	(0.039)	(0.039)	(0.076)	(0.068)
Organization: Public	0.255***	0.275***	0.451***	0.465***
	(0.039)	(0.043)	(0.077)	(0.076)
Organization: Religious charity	0.170***	0.187***	0.255***	0.260***
	(0.039)	(0.041)	(0.084)	(0.078)
Modern equipment	0.079***	0.079***	0.274***	0.264***
	(0.028)	(0.028)	(0.048)	(0.047)
Probability of expanding patient base	0.012	0.021	-0.041	-0.030
	(0.030)	(0.031)	(0.056)	(0.052)
Minimum interference	0.090***	0.078***	0.156***	0.146***
	(0.025)	(0.028)	(0.052)	(0.051)
Majority Leb patients	0.078**	0.088***	0.086	0.106
	(0.034)	(0.031)	(0.070)	(0.065)
Mixed Leb-Syr patients	0.135***	0.131***	0.208***	0.206***
	(0.034)	(0.033)	(0.066)	(0.068)
Large financial gain	0.019	0.039	0.109**	0.127**
	(0.028)	(0.027)	(0.052)	(0.051)
A lot of opportunities for experience	0.063**	0.050**	0.215***	0.163***
	(0.027)	(0.025)	(0.060)	(0.050)

Constant	0.012	-0.005	2.557***	2.532***
	(0.043)	(0.046)	(0.113)	(0.098)
Observations	1,264	1,114	1,167	1,021
R²	0.099	0.102	0.119	0.127
Adjusted R²	0.090	0.091	0.109	0.115
Residual Std. Error	0.477 (df = 1250)	0.477 (df = 1100)	0.871 (df = 1153)	0.843 (df = 1007)
F Statistic	10.577*** (df = 13; 1250)	9.614*** (df = 13; 1100)	11.928*** (df = 13; 1153)	11.232*** (df = 13; 1007)

Note: **p<0.1, **p<0.05, ***p<0.01. Clustering-robust standard errors at the provider level are reported in parentheses.

1.2.4. Why Do Mixed Centers Get Selected More Than the Lebanese-Majority Centers?

Suppose negative attitudes towards Syrians among doctors drive the results in the conjoint experiment, as we assert. In that case, one might expect "Lebanese-majority" to be the most preferred type, followed by "mixed" centers. To further explore what is driving these results, we differentiated among doctors who mostly work with Lebanese patients, those who have a mixed patient base, and those who treat mostly Syrian patients, based on information collected directly from patients. Even though we cannot claim our sample was representative of the patient profile for each doctor, we can gain some insight by classifying doctors in this way and recalculating the conjoint experiment results for each of these groups. Among the 150 doctors who participated in the conjoint experiment and whose patients provided information on their nationality, 44 worked mostly with Lebanese nationals (fewer than 25% of their patients were Syrian)**, a**nd 47 worked mostly with Syrians (more than 75%). For the remaining 59 doctors, the observed patient profiles were mixed.

As shown in Figure 1.2, all types of doctors exhibit a similar level of aversion towards Syrian-majority centers: The marginal mean of the selection probability of a center with the Syrian-majority attribute is 42 to 43% for all types of doctors. Doctors who have the highest level of favorability for mixed centers are doctors who already work primarily with Syrians. In other words, unlike other doctors, those who mostly work with Syrians do not want to work in centers with predominantly Lebanese patient bases, and their ideal preference is to work in mixed centers. This suggests that some doctors were hired specifically to cater to the Syrian refugee population and do not want to work in centers where most patients are Lebanese, as such centers would not provide them with job opportunities. More importantly, the choices of these doctors effectively disadvantage Lebanese-majority centers in the larger sample (See Figure 1.1). When the choices of these doctors are not taken into consideration, Syrian-majority centers are equally disfavored in with both Lebanese-majority and mixed centers.[3]

---

[3] For a discussion of why the marginal mean is selected as the quantity for comparisons across subgroups, see Leeper et al. (2019).

Figure 1.2: Physician Health Center Choice with Distinct Patient Profiles Based on Responses to a Conjoint Experiment
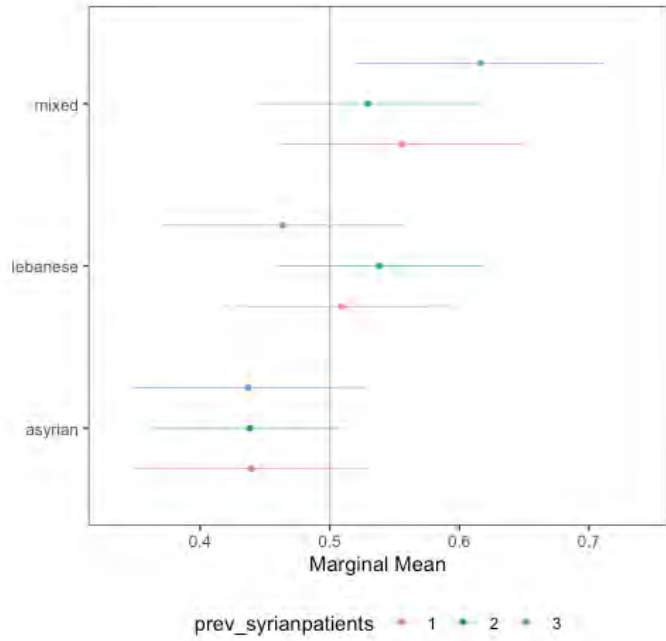
1.2.5. Results of the Conjoint Experiment with the INGO Support (LCRP Partner) Interaction Term

To compare perceptions of Syrian-majority centers across doctors who work in centers with and without international support, we calculate marginal mean probabilities for centers with different values of the nationality attribute in the conjoint experiment. Following Leeper et al. (2019, p. 4), we estimate the marginal mean probabilities, or "the level of favorability toward profiles that have a particular feature level, marginalizing across all other features," rather than the AMCE to describe preferences and compare them across subgroups, as this quantity of interest is not dependent on benchmark value selection.

As Figure 1.3 shows, doctors working in centers with and without INGO support have comparable levels of favorability towards Syrian-majority centers. The marginal mean for both groups hovers around 43 to 44%. The marginal mean for Lebanese-majority centers is slightly lower for doctors working in centers without INGO support than doctors working in centers with the support. Also, the marginal mean for mixed centers is slightly higher for doctors working in centers without INGO support. However, neither of these differences is statistically significant, and they are of secondary importance to our hypothesis, as the favorability levels for Syrian-majority centers are similar across the two subgroups. Thus, levels of negative attitudes towards Syrian-majority centers are similar across centers with and without international partnerships.

A more traditional comparison of subgroups leads to substantially similar results: An interaction term between the attribute capturing the national identity of the patient base in the conjoint survey and the INGO partner indicator variable is not significant – see Table 1.3.

Figure 1.3: Marginal Means of Doctor Attitudes Towards Syrians among Doctors in Centers with and without INGO Support
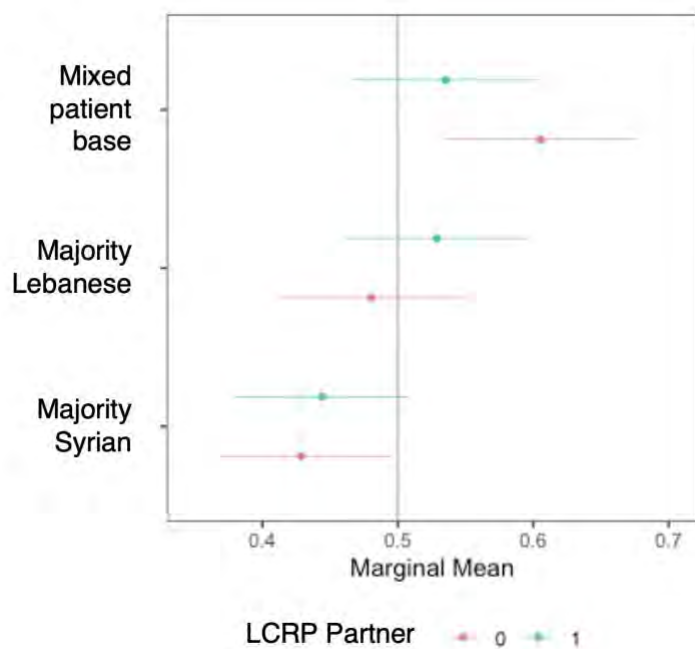
Table 1.3

	Dependent variable:	
	Selection	
	Benchmark model (1)	Model with interaction (2)
Partially agree with the mission	0.121*** (0.031)	0.119*** (0.032)
Strongly agree with the mission	0.145*** (0.034)	0.145*** (0.035)
Nearby location	0.045* (0.027)	0.053* (0.027)
Organization: Non-sectarian NGO	0.277*** (0.039)	0.285*** (0.039)
Organization: Public	0.255*** (0.039)	0.259*** (0.040)
Organization: Religious charity	0.170*** (0.039)	0.185*** (0.039)
Modern equipment	0.079*** (0.028)	0.071** (0.028)
Probability of expanding patient base	0.012 (0.030)	0.019 (0.030)
Minimum interference	0.090*** (0.025)	0.086*** (0.026)
Majority Leb patients	0.078** (0.034)	0.064 (0.050)
Mixed Leb-Syr patients	0.135*** (0.034)	0.185*** (0.052)
LCRP Partner		0.012 (0.039)
Large financial gain	0.019 (0.028)	0.020 (0.028)
A lot of opportunities for experience	0.063** (0.027)	0.062** (0.028)
Majority Leb patients * LCRP partner		0.038 (0.069)
Mixed Leb-Syr patients * LCRP partner		-0.090 (0.071)
Constant	0.012 (0.043)	-0.005 (0.051)
Observations	1,264	1,232
R^2	0.099	0.103
Adjusted R^2	0.090	0.092
Residual Std. Error	0.477 (df = 1250)	0.477 (df = 1215)
F Statistic	10.577*** (df = 13; 1250)	8.767*** (df = 16; 1215)

Note: *p<0.1, **p<0.05, ***p<0.01. Clustering-robust standard errors at the provider level are reported in parentheses.

1.3. Findings from Qualitative Interviews with Doctors

Follow-up interviews with doctors in our sample provide some insights about doctor antipathy towards Syrian patients, bolstering the findings of the conjoint experiment. Many doctors emphasized that the influx of Syrians has placed a great strain on the Lebanese health system (Centers 1013, 7111) and are draining resources that should be devoted to Lebanese citizens (Centers 2309, 2502, 3104, 8402). Some doctors also reported that Syrians have lower cognitive capabilities and, therefore, are less able to understand diagnoses and follow medical advice than Lebanese nationals (Centers 2309, 3104, 3204). Two explicitly depicted Syrians as less hygienic (Centers 2502, 3104) and, as we discuss in more detail below, physicians in 12 out of 15 interviews emphasized that Syrians harbor infectious diseases, which might also suggest they view Syrians as less hygienic than Lebanese patients. Describing the attitudes of other physicians who work in the primary health sector, one doctor commented, "Sadly, a majority of doctors don't consider [Syrians] as humans" (Center 2111), and another openly stated that some doctors do not like Syrians ("Doctors provide this basic right of providing health care even if they personally don't like Syrian patients" (Center 2502)). One interviewee invoked the history of Lebanese-Syrian relations to explain resentment toward Syrian patients: "We have suffered a lot, historically, from Syrians. So, it's understandable that there is some hostility towards them due to this shared history" (Center 7111).

Prejudice is notoriously difficult to demonstrate due to social desirability bias, a tendency amplified in global humanitarian crises when respondents believe that the "world is watching." Collectively, these distinct forms of evidence – from the conjoint experiment, national public opinion data, interview data, and insights from relevant secondary literature – support the claim that at least some doctors harbor conscious or unconscious antipathy towards Syrian refugees. In reality, negative attitudes toward Syrian patients are likely to be even higher than the results reflect.

2. Control Variables in the Multivariate Analyses

In multivariate analyses, we use demographic control variables derived from patient exit interviews, including age, gender, socioeconomic status, religiosity, and the patient's general health. Table 2 in the main paper also shows descriptive statistics for these variables.

- The indicator for socioeconomic status is an additive index based on three questions in the patient exit interview. These include the education level of the respondent (no school = 0, some school but no degree = 0.2, primary school degree = 0.4, middle school degree = 0.6, high school degree = 0.8, university degree = 1), household asset ownership (car, computer, and satellite dish, each item = 0.33), and a general statement about the income of the household (covers the needs well, and able to save = 1, covers the needs adequately = 0.75, does not cover the needs, some difficulties = 0.50, does not cover the needs, great difficulties = 0.25).
- The measure for religiosity is based on the average values of responses to three questions in the patient exit interview asking the respondent whether they pray, attend weekly services, and read or listen to scripture. For each of these questions, "never" is coded as 0, "rarely" is coded as 1, "sometimes" is coded as 2, "most of the time" is coded as 3, "always" is coded as 4.
- The general health of the patient is measured with the following question in the patient exit interview: "On average, how would you (the patient) rate your (his/her) health?" "Very bad" is coded as 1, and "very good" is coded as 5.

To explore the types of centers that Lebanese and Syrian patients choose to visit, we combine centers run by religious charities and political parties as "sectarian" centers, because both religious charities and political parties have well-known affiliations with religious communities and often act as de facto representatives or guardians of those communities. Because we also know the religious affiliations of patients, we further code whether patients visit sectarian centers from "ingroup" or "outgroup" communities. Based on this classification of center affiliations, Table 3.1 depicts the distribution of Syrian and Lebanese patients by center type. As seen in the table, Lebanese patients are more likely to visit public and ingroup sectarian centers, whereas Syrian patients are more likely to visit outgroup sectarian centers and centers run by secular NGOs. A chi-squared test (in which the null hypothesis is no relationship between these two categorical variables) also indicates that the null hypothesis can be rejected (X-squared = 121.65, df = 3, p-value = 2.2e-16). This suggests that Lebanese and Syrian patients tend to choose different types of centers. While most Lebanese patients visit sectarian ingroup centers, followed by public centers, Syrian patients most frequently visit centers affiliated with secular NGOs, followed by outgroup sectarian centers.

Table 3.1: Visits by Lebanese and Syrian Patients by Center Type

	Public	Ingroup Sectarian	Outgroup Sectarian	Secular
Lebanese	183	223	41	137
	31.3%	38.2%	7.0%	23.5%
Syrian	94	107	123	222
	17.2%	19.6%	22.5%	40.7%

Based on information collected from direct observations of clinical examinations, we classified the type of each visit or examination, including general checkups, follow-up visits, vaccination, pregnancy, and other. The latter category largely includes administrative exchanges and small procedures such as post-operative removal of stitches. Visit type information is used as a control variable to enhance the comparability of examinations. Table 3.2 shows the distribution of visit types to Lebanese and Syrian patients. A chi-squared test suggests a statistically significant difference between Lebanese and Syrian patients in the distribution of visit types (X-squared = 40.294, df = 4, p-value = 3.763e-08).

Table 3.2: Visit Types of Lebanese and Syrian Patients

	Follow-up	Other	Pregnancy	Primary	Vaccination
Lebanese	86	14	7	347	141
	14.5%	2.4%	1.2%	58.3%	23.7%
Syrian	42	5	34	366	110
	7.5%	0.9%	6.1%	65.7%	19.7%

Lastly, in the analyses, we control for the order of observed examination by the doctor or the numerical order of examinations as observed by our interviewers. This accounts for a potential Hawthorne effect, which arises when physicians who are aware they are being observed exert greater effort in providing care. Leonard and Masatu (2006) find that doctors increase their clinical efforts when observed, but this artificial boost vanishes as the number of observed examinations per doctor increases. The variable takes a value between 1 and 26. The mean value for Lebanese patients is 5.12 and for Syrian patients is 5.09, with no significant difference between them.[4]

---

[4] We use the natural logarithm in the analyses, taking into consideration the more likely functional form between this variable and outcome variables. In Section 3 of this Appendix, we also provide analyses showing that the doctor effort index behaves similarly for Lebanese and Syrian patients with respect to the order of observed examinations.

3. Does the Hawthorne Effect Operate Differently for Lebanese and Syrian Patients?

In the multivariate analyses presented in the paper, we control for the order of observed examinations by the doctor, or the numerical order of examinations attended by our interviewers. We use this control to account for potential Hawthorne effects. Leonard and Masatu (2006) find that doctors increase their efforts in examinations when they are observed, but this artificial boost vanishes as the number of observed examinations per doctor increases. To account for potential Hawthorne effects, we control for the order of examinations. This variable takes a value between 1 and 26, and the mean for Lebanese patients is 5.12 and for Syrian patients is 5.25, with no significant difference between them. We use the natural logarithm in the analyses, taking into consideration the more likely functional form between this variable and outcome variables.

Here we explore whether the Hawthorne effect played out differently for examinations of Lebanese and Syrian patients. Knowing that they are being observed by an enumerator who is part of an international or Western research team, doctors may feel more pressure to supply better care to Syrian patients, especially if they suspect that the research focus is related to the Syrian refugee crisis. Therefore, we present the preferred models with the doctor effort index as the DV here, allowing the Syrian variable to interact with the examination order variable. If the interaction term is significant, this would indicate that the Hawthorne effect operates differently for Syrian and Lebanese patients.

As can be seen in Table 3.1, the interaction terms are not significant. Moreover, Figure 3.1 suggests that the effect of being observed vanished in very similar ways for both Lebanese and Syrian patients. Doctors started by exerting slightly more effort for patients of both nationalities, but their levels of effort soon decreased and flattened largely after the fifth observed examination. In other words, the Hawthorne effect played out exactly in line with the expectations in the literature for both Lebanese and Syrian patients.

Table 3.1

	Dependent variable:		
	Doctor effort index		
	(1)	(2)	(3)
Patient nationality: Syrian	0.169	0.104	0.079
	(0.153)	(0.119)	(0.128)
Patient age	0.003	0.004*	0.004
	(0.003)	(0.003)	(0.003)
Respondent age	0.001	-0.002	-0.002
	(0.004)	(0.003)	(0.003)
Patient gender: Female	-0.046	-0.070	-0.087
	(0.068)	(0.055)	(0.056)
Respondent gender: Female	-0.030	-0.012	0.011
	(0.090)	(0.076)	(0.078)
Socioecon. status	0.120*	0.076	0.056
	(0.061)	(0.048)	(0.050)
Patient general health	-0.124***	-0.106***	-0.074**
	(0.047)	(0.037)	(0.036)
Religiosity	0.090**	-0.007	0.016
	(0.038)	(0.031)	(0.032)
Public center	-0.002	-0.177	-0.031
	(0.158)	(0.329)	(0.321)
Outgroup sectarian center	-0.009	-0.201*	-0.140
	(0.143)	(0.111)	(0.108)
Secular NGO center	-0.277**	-0.626***	-1.425***
	(0.138)	(0.228)	(0.151)
Exam. order (log)	-0.116**	-0.111***	-0.110**
	(0.057)	(0.043)	(0.049)
Syrian * Exam. order (log)	0.020	0.008	-0.011
	(0.081)		
Constant	-0.199	-0.046	0.338
	(0.393)	(0.291)	(0.287)
Visit type f.e.	Y	Y	Y
Center f.e.	N	Y	N
Provider f.e.	N	N	Y
Observations	984	984	984
R²	0.105	0.449	0.653
Adjusted R²	0.089	0.400	0.564
Residual Std. Error	0.940 (df = 966)	0.763 (df = 903)	0.650 (df = 782)
F Statistic	6.652*** (df = 17; 966)	9.185*** (df = 80; 903)	7.322*** (df = 201; 782)

Note: * denotes p-value < 0.1, ** denotes p-value < 0.05 and *** denotes p-value < 0.01.
Cluster-robust standard errors (at the provider level) are presented in parentheses.

Figure 3.1
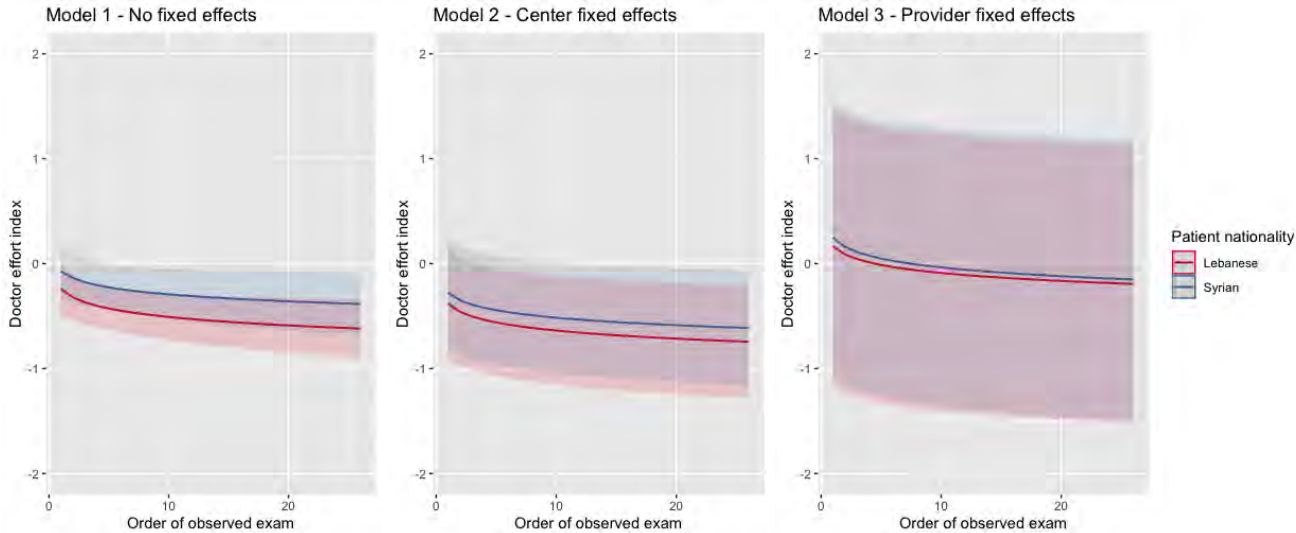
4. Potential Moderators of Higher Effort for Syrian Patients

Altruism
To measure the potential effect of altruism, we use a question in the Physician General Survey asking doctors to specify their reasons for selecting the center in which they currently work. One option in the list of potential factors is "opportunity to help people in need." If a doctor selected this option, we assume that altruism is a motivation in their professional life, coding the respondent as "altruistic." In our sample, 66% of doctors cited the "opportunity to help people in need" as a reason; those doctors treated 67% of patients in our sample.

Professionalism of Doctors
The level of professionalism of doctors may also account for better care for Syrians. To test this hypothesis, we construct a "professional commitment" variable from a question in the Physician General Survey in which doctors are asked to specify their reasons for selecting the center in which they currently work. One option in the list of potential factors is "professional development opportunities." If a doctor selected this option, we assume that professional development is a motivation in their professional life, coding the respondent as "committed to professional development." Among doctors in our sample, 20 percent of doctors cited professional development opportunities as one reason for selecting their current center; 18 percent of patients received examinations from such doctors. Because this is not a perfect indicator for doctor professionalism, we use three other indicators of professionalism in the remainder of this section. All measures lead to similar results.

Financial Incentives
Doctor compensation structures provide varying financial incentives, which in turn might account for improved care for Syrians. A question in the Physician General Survey describes how respondents are compensated for their work: 51 doctors report that they work for a monthly salary, 24 work on an entirely voluntary basis or for symbolic amounts, and 108 doctors work on a fee-per-patient, fee-per-day, or hourly basis. Since the financial earnings of the latter group of doctors depend on a constant flow of patients, doctors compensated on a per patient, day, or hour basis may be incentivized to provide Syrian patients with high-quality care to attract more patients.

Strategic Motivations
Social psychology literature suggests ingroup members might engage in prosocial behavior if they believe such actions might help the image of their own group. Applied to the questions at hand in this paper, centers and doctors who are more concerned about the image of the Lebanese people or of their own organizations (some of which are directly linked to a religious community or political party) might provide better care for outgroup members. We measure concern for ingroup image in two ways. The first measure, "importance attached to organizational mission," is based on a question asking providers to explain the mission of the organization where they work and a follow-up question asking about the importance of the organization's mission in shaping their workplace choice. Responses are measured on a 5-point Likert scale, with the value "4" representing "a lot," and a mean response of 3.1.

A second measure aimed at capturing strategic motivations is based on a question asking doctors why they opted to work in their current health centers. If the doctor selects a "desire to contribute to the institution that runs the center" or the "larger mission of the organization" among the possible responses, we assume a concern about the organization's image and, by extension, the religious or national community. In the sample, 55% of doctors cited at least one of these reasons for choosing their current center.

Results

Results presented in Table 4.1 suggest that none of these characteristics account for better care for Syrian patients. In most of the models, the coefficient for the Syrian patient variable remains positive and statistically significant, suggesting the interaction term in the model does not explain the surplus we observe for Syrian patients. Only in the model with the altruistic doctor variables does the Syrian variable coefficient lose some of its substantial and statistical significance. However, the interaction term in that model is literally zero, suggesting altruistic doctors provide better care for <u>all</u> patients. Moreover, the negative coefficient of the interaction term of professional commitment and Syrian patient suggests extrinsic rather than intrinsic motivations play a role in generating better care for Syrian patients.

Table 4.1

			Dependent variable:			
			Doctor effort index			
	(1)	(2)	(3)	(4)	(5)	(6)
Patient nationality: Syrian	0.196*	0.184	0.265**	0.254	0.350**	0.268**
	(0.103)	(0.154)	(0.109)	(0.155)	(0.138)	(0.133)
Altruistic doc		0.266*				
		(0.159)				
Doc's comm. prof. dev.			0.535***			
			(0.157)			
Doc's pay per patient/day/hr				0.061		
				(0.167)		
Importance attached to org. mission					0.310**	
					(0.152)	
Desire to contr. to mission of the org.						0.308**
						(0.147)
Altruistic * Syrian		-0.003				
		(0.185)				
Prof. com. * Syrian			-0.209			
			(0.236)			
Pay per patient/day/hr * Syrian				0.006		
				(0.190)		
Org. mission * Syrian					-0.192	
					(0.187)	
Contr. to mission * Syrian						-0.138
						(0.186)
Constant	-0.212	-0.285	-0.296	-0.452	-0.367	-0.297
	(0.379)	(0.396)	(0.383)	(0.411)	(0.434)	(0.394)
Demographic controls	Y	Y	Y	Y	Y	Y
Relation to center controls	Y	Y	Y	Y	Y	Y
Visit type f.e. and exam order control	Y	Y	Y	Y	Y	Y
Observations	984	919	919	787	876	919
R^2	0.105	0.119	0.132	0.116	0.114	0.119
Adjusted R^2	0.090	0.101	0.115	0.095	0.095	0.101
Residual Std. Error	0.939 (df = 967)	0.944 (df = 900)	0.937 (df = 900)	0.941 (df = 768)	0.947 (df = 857)	0.944 (df = 900)
F Statistic	7.071*** (df = 16; 967)	6.732*** (df = 18; 900)	7.633*** (df = 18; 900)	5.580*** (df = 18; 768)	6.100*** (df = 18; 857)	6.741*** (df = 18; 900)

Note: * denotes p-value < 0.1, ** denotes p-value < 0.05 and *** denotes p-value < 0.01.

Cluster-robust standard errors (at the provider level) are presented in parentheses.

Alternative indicators of professionalism

Other measures of professionalism included in the model as robustness checks include:

- Professional pride: Respondents were asked how much they agreed with the statement, "I am proud to be a doctor," based on the assumption that doctors with more professional pride are more likely to have internalized the values of medical professionalism. Because we would expect practicing doctors to select the highest level of professional pride, we recode this as an indicator variable in which "1" is the highest level of pride and "0" denotes all other levels.

- Professional satisfaction: Respondents were asked about their level of satisfaction with their profession. Doctors who suggested that they are very satisfied are coded as "1," while all others are coded as "0".

- Participation in professional development activities in the last year: Doctors were asked how many professional development activities they undertook in the previous year. Professional development activities include (a) workshops or medical conferences, (b) observation visits to other centers, (c) discussions with peers on how to improve medical care, (d) individual or collaborative research, and (e) reading professional literature.

The results with alternative measures are provided below.

Table 4.2

	Dependent variable:		
	Doctor's effort index		
	(1)	(2)	(3)
Patient nationality: Syrian	0.365*	0.365**	0.370
	(0.205)	(0.144)	(0.275)
Prof. pride	0.033		
	(0.209)		
Prof. satisfaction		0.220	
		(0.151)	
Prof. development act.			-0.017
			(0.067)
Prof. pride * Syrian	-0.194		
	(0.216)		
Prof. satisfaction * Syrian		-0.274	
		(0.184)	
Prof. development act. * Syrian			-0.048
			(0.075)
Constant	-0.324	-0.353	-0.177
	(0.417)	(0.399)	(0.445)
Demographic controls	Y	Y	Y
Relation to center controls	Y	Y	Y
Visit type f.e. and exam order control	Y	Y	Y
Observations	921	926	926
R^2	0.110	0.112	0.108
Adjusted R^2	0.092	0.095	0.091
Residual Std. Error	0.948 (df = 902)	0.950 (df = 907)	0.952 (df = 907)
F Statistic	6.195*** (df = 18; 902)	6.364*** (df = 18; 907)	6.114*** (df = 18; 907)

Note: * denotes p-value < 0.1, ** denotes p-value < 0.05 and *** denotes p-value < 0.01.
Cluster-robust standard errors (at the provider level) are presented in parentheses.

5. The Effect of INGO Support on Subjective Quality of Care for Syrian Patients

In this section, we explore whether the INGO support in some of the primary healthcare centers led to better subjective quality outcomes for Syrian patients. The subjective quality indicators and their descriptive statistics are presented in Table 5.1. All questions were asked in the patient exit interview with 1 to 5 Likert scale response categories, with "1" indicating "totally disagree" and "5" indicating "totally agree."

Table 5.1

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
Doctor listened	1,154	4.762	0.539	1.000	5.000	5.000	5.000
Doctor respected	1,155	4.795	0.469	1.000	5.000	5.000	5.000
Doctor explain	1,148	4.713	0.590	1.000	5.000	5.000	5.000
Doctor satisfaction	1,144	4.626	0.629	1.000	4.000	5.000	5.000

As in the analysis for objective quality indicators in the main paper, we use subjective quality indicators as dependent variables and explore whether there are significant interaction term effects (between the Syrian dummy variable and INGO partnership dummy variable) or of the Syrian dummy variable in different values of the INGO partnership variable. We use the same set of control variables used in analyses with objective quality variables as the dependent variables as well as cluster-robust standard errors. Table 5.2 summarizes the results.

Table 5.2

	Interactive model interaction term			Average marginal effect of Syrian variable when there is no INGO partnership			Average marginal effect of Syrian variable when there is INGO support		
	Coefficient	S.E.	p-value	AME	S.E.	p-value	AME	S.E.	p-value
Doctor listened	0.219**	0.087	<0.05	-0.099	0.070	0.161	0.120*	0.061	0.051
Doctor explained	0.163*	0.095	<0.10	-0.099	0.079	0.215	0.065	0.063	0.301
Doctor respected	0.142*	0.077	<0.10	-0.044	0.062	0.477	0.098*	0.051	0.054
Doctor satisfaction	0.179*	0.090	<0.10	-0.207**	0.081	0.011	-0.028	0.060	>0.10

These results show that the Syrian patients exhibit a subjective quality difference vis-à-vis Lebanese patients at centers supported by INGO partnerships. At INGO-partnered centers, Syrian patients are more likely than Lebanese patients to report that the doctor listened to them or respected them. Moreover, the gap in overall satisfaction with doctors in centers with no INGO partnership totally disappears in centers with INGO support. The graphs in Figure 5.1 show the predicted values of distinct subjective quality indicators with and without INGO partnership.

Figure 5.1
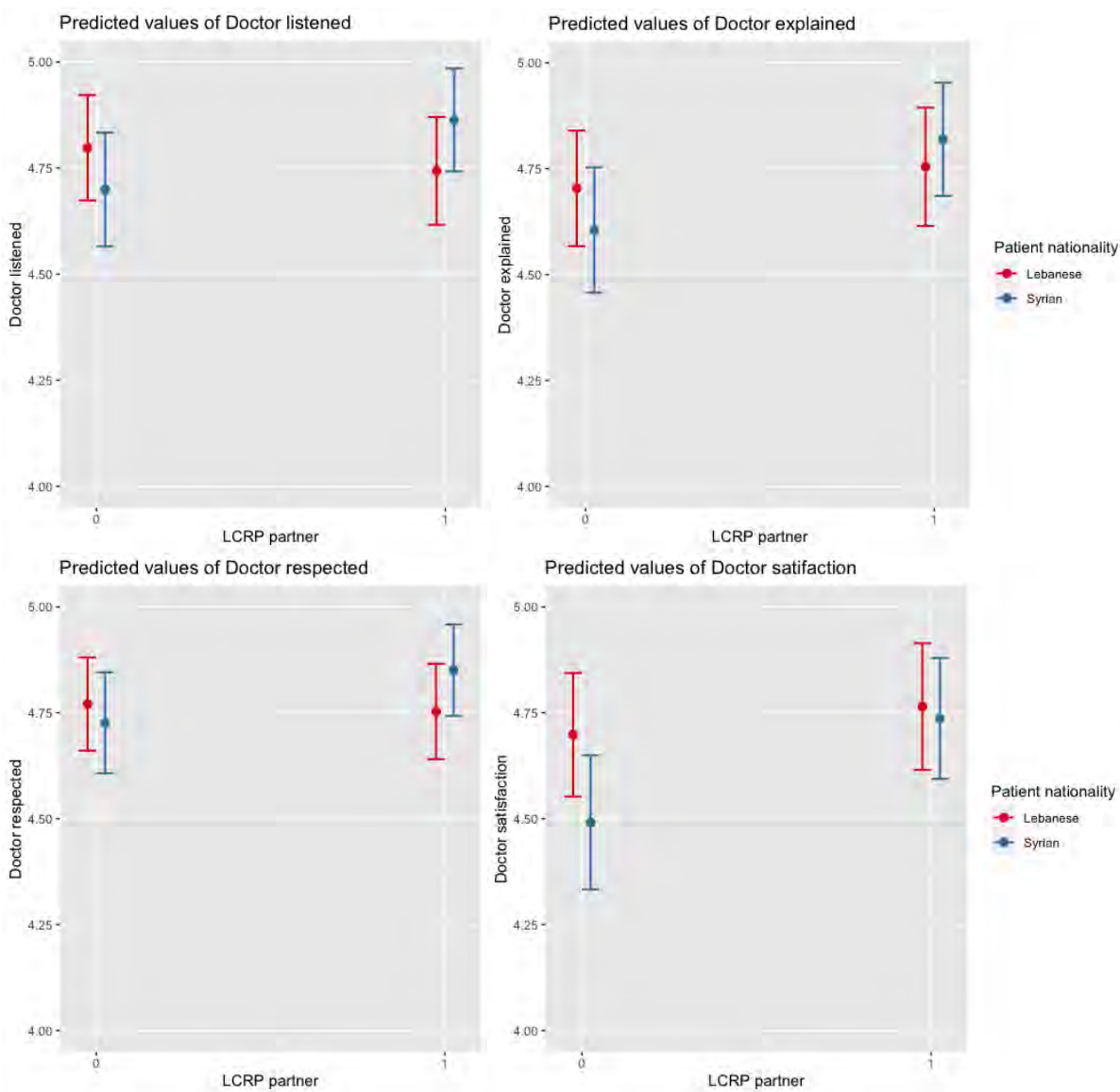
6. Follow-Up Interviews with Physicians

To probe the underlying factors that potentially drive the main findings, we commissioned and trained one of the original enumerators for the project to conduct in-depth interviews with a random sample of physicians from centers in our sample. Below we describe the interviewee sampling procedures and provide the protocol guiding the interviews.

6.1. Interviewee Sampling Procedures

- From the 68 centers in the full sample where surveys were executed, 30 centers (with replacements) were randomly selected for follow-up in-depth interviews with physicians. The interviewer conducted 15 interviews from the final sample of centers participating in this phase of the research.
- Centers were selected to capture variation in patient base and quality of care delivered to both types of patients. The sampling procedures were based on the following criteria:
    - 3 centers with a low Syrian patient base (i.e., <25%)
    - 3 centers that predominantly serve Syrians (i.e., 75% or more)
    - 9 centers with a mixed base, from which three provide superior care to Syrians, 3 provide equal care, and 3 provide inferior care to Syrians vis-à-vis Lebanese.
- Within each center, the interviewer was instructed to interview one available doctor from each center (ideally, the doctor who sees the most patients, if the center has more than one doctor on staff). If possible, she also aimed to interview the most experienced doctor in the center—i.e., the doctor who works the most hours and/or has been working there the longest.
- Centers were contacted to arrange interviews in the order given for each category.
- Centers were skipped only after three separate attempts on three different days were made to contact the center, or if the center firmly rejected the invitation to take part in the study.
- In the end, only one center declined to be interviewed, yielding a 97% response rate for the qualitative phase of the research.

6.2. Interview Protocol
Introduction and Informed Consent
Hello. My name is [INTERVIEWER NAME] and I'm working with researchers from [INSTITUTION] to understand how the Lebanese health system has coped with the difficulties in meeting the demands for care from many different populations.

Your center has been selected randomly for this interview among the centers in which there was detailed data collection in 2017. I would like to ask you some questions about how your center has coped with the difficulties in meeting the demands from many different populations. Please respond as openly as possible. I am not going to take any voice recordings, will only take some written notes for my own report to the researchers at [INSTITUTION].

What you say will be brought together with data from more than 15 doctors across Lebanon and in different centers. They will be analyzed together at an aggregated level, not at the individual level. We will always protect your identity and never report your name.

Here is more information about the research, and the contact details of researchers, including mine. [Distribute the informed consent form]. *Please feel free to contact us if you have any further questions in the future.*

Can we now begin the interview? [If yes, start the interview.]

Doctor Background
First, I'd like to ask you about your professional background.

- How long have you been a medical doctor or when did you start practicing medicine?
- How long have you worked in this center?
- Why did you decide to work in it?
- Do you practice medicine elsewhere? If so, where and how frequently or how many hours per week?

Meeting Refugee Health Needs

As you know, Lebanon is hosting a large population of Syrian refugees and, in fact, has the highest number of refugees per capita in the world. We are trying to understand how the health sector has coped with demands from the refugee crisis.

- Has your center faced a lot of demand for health services from Syrians?
- Has your center hired one or more additional doctors or other health professionals in response to serve Syrian patients?
- Do Syrians exhibit different health problems than Lebanese? Is it more challenging to treat Syrians or is there no real difference?
- Does your center receive support specifically aimed at providing financial or other kinds of support health care for Syrian patients?
- Do you think the Lebanese health system is serving Syrian refugees effectively? Do you think Syrians are receiving the care that they need?
- Does your center take specific measures to ensure that Syrians get the care that they need? For example, are there special guidelines for working with Syrians, or some other set of procedures or requirements?

Feedback on Survey Findings

As you may know, [INSTITUTION] and [INSTITUTION] recently ran a nationally representative study of primary health centers in Lebanon. I'd like to share some of the findings with you to get your impressions of them. These findings are not about this center, but rather are based on an average of responses from doctors at almost 70 health centers across the country.

- It seems that, on average, doctors who work in the Lebanese primary health network do not like to work in centers that mostly serve Syrian patients. Why do you think this is the case?
- At the same time, on average, doctors in the primary health network seem to prefer to work in centers with a relatively equal mix of Lebanese and Syrian patients. Why do you think this is the case?
- Ultimately, we find that, on average, doctors provide the same quality of care to Syrians as they do to their Lebanese patients. This is impressive given the enormous strain that the Syrian refugee crisis has posed for the Lebanese health system and economy. How do you think the primary health care network in Lebanon has achieved this?

7. Doctors in Centers with and without INGO Support

7.1. Statistical Analyses

In this section, we explore whether the doctors in centers with and without INGO support differ with respect to altruism or professionalism. In Table 7.1, simple bivariate regressions find no differences in doctors across different centers regarding these qualities. However, levels of job satisfaction vary across the two center types. Doctors working in INGO-affiliated facilities express greater job satisfaction, a finding consistent with the argument developed in the main paper about employment incentives in the INGO sector. Information on the dependent variables is available in Section 4 of this Appendix.

Table 7.1

	Dependent variable:					
	Altruism	Commitment to professional dev.	Prof. pride	Prof. satisfaction	Prof. development act.	Job satisfaction
	(1)	(2)	(3)	(4)	(5)	(6)
LCRP partner	0.045	-0.046	0.058	0.055	0.162	0.206**
	(0.066)	(0.056)	(0.061)	(0.069)	(0.159)	(0.100)
Constant	0.635***	0.221***	0.718***	0.524***	3.362***	4.245***
	(0.047)	(0.039)	(0.043)	(0.049)	(0.112)	(0.070)
Observations	207	207	206	207	208	204
R^2	0.002	0.003	0.004	0.003	0.005	0.021
Adjusted R^2	-0.003	-0.001	-0.0004	-0.002	0.0002	0.016
Residual Std. Error	0.476 (df = 205)	0.400 (df = 205)	0.436 (df = 204)	0.499 (df = 205)	1.145 (df = 206)	0.711 (df = 202)
F Statistic	0.461 (df = 1; 205)	0.697 (df = 1; 205)	0.921 (df = 1; 204)	0.620 (df = 1; 205)	1.046 (df = 1; 206)	4.276** (df = 1; 202)

Note: * denotes p-value < 0.1, ** denotes p-value < 0.05 and *** denotes p-value < 0.01.

7.2. Qualitative Evidence

Evidence from the qualitative interviews support the finding that doctors in INGO-affiliated centers face incentives to exert more efforts in treating Syrian patients. For example, one interviewee noted, "Centers that help a lot of Syrian patients are prospering, leading to the subsequent advancement of the center. As a result, they are contributing to increasing the influx of patients to the center" (Center 2502). Similarly, another interviewee noted,

> [D]octors took advantage of this situation and saw it as an opportunity. The displacement period was refreshing for primary health care centers: Some centers got support and echography machines that they couldn't get before. Other centers got specialist doctors hired and other benefits . . . . [I]t is a motivating factor to see more patients (Center 6019).

Conversely, another interviewee emphasized that a subsequent decrease in INGO support for some centers has been associated with reduced quality of care: "When international organizations stopped helping primary health centers with Syrian patients, like they used to at first, the level of care dropped. The Lebanese health care system cannot help Syrian patients on its own" (Center 3204).

Enumerators made similar observations during fieldwork, as recorded in data collection reports. In their interactions with medical professionals in some centers, interviewers noticed the overall patient load of a center seemed related to the relative appeal of centers for refugees. For instance, in one report (Center 5105), interviewers observed:

Other centers in the region, such as 5102 and 5109, mentioned that they don't have a large patient load since they don't offer the vast range of services nor financial assistance for Syrian refugees like this center does. This health center has support from international organizations such as the International Medical Corps (IMC) to offer affordable healthcare services to the Syrian refugees. Since February 2017, the IMC has helped the center. One of the nurses that works at this center is sent (and remunerated) by the IMC to help out in healthcare services offered to Syrian refugees.

Similarly, in notes from another visit (Center 7312), interviewers commented: "The patient load in the center … was high. Most of the patients were Syrian since it is the only center in the region that has a contract with the UNCHR. The CMO mentioned that, [after signing] this contract, the numbers of the Lebanese patients visiting the center decreased." These and similar insights shared from the field suggest that, for at least some centers, ensuring a high flow of patients motivated efforts to attract refugees through partnerships with INGOs. In some cases, this might have led to an exodus of Lebanese patients, or a lower quality of treatment for Lebanese patients, as our findings suggest.

8. Monitoring in Centers with and without INGO Support

To assess whether levels of monitoring in primary health care centers systematically differ across centers with and without INGO support, we use three different measures:

- Reward practices: The source of this measure is the Chief Medical Officer (CMO) Survey. In this survey, CMOs were asked whether they reward their medical staff for (a) consistent attendance, (b) timeliness, (c) consistent performance and (d) performing to or above expectations. CMOs were asked to respond yes or no to each of these questions. Based on their answers, we constructed an additive index, ranging from 0 to 4. Out of 69 centers, 26 had no reward policies, 9 had rewards for one performance indicator, 9 had rewards for two indicators, 3 distributed rewards for three indicators, and 22 provided rewards for all four indicators.
- Penalty practices: Similarly, CMOs were asked whether they implement penalties for (a) unexcused absences, (b) recurring tardiness, (c) recurring early departure, and (d) performing below expectations. A similar additive index was constructed. 20 centers did not have any penalty policies, 8 centers had penalties for one performance indicator, 4 had penalties for two indicators, 12 had penalties for three, and 25 hahadve penalties for all four.
- Clinical guideline implementation: In the CMO Survey, we asked CMOs whether their center has clinical guidelines, and which practices they use to monitor adherence to these guidelines. Potential actions included trainings, clinical observations, patient clinical record audits, and other methods, which were then specified. If the center did not have any clinical guidelines, the variable had a value of "0." If clinical guidelines were adopted but no action was taken to monitor implementation, the value was "1." All additional actions were incorporated in an additive index. As a result, 3 centers had the value "0," 3 centers had "1," 18 had have "2," 29 centers had "3," 15 centers had "4," and 1 center had "5."

The results indicate no significant variation in any types of monitoring policies or practices across INGO-affiliated and non-affiliated centers.

Table 8.1

	Dependent variable:		
	Reward policies	Penalty policies	Clinicial guideline implementation
	(1)	(2)	(3)
LCRP partner	0.700*	-0.214	0.242
	(0.414)	(0.417)	(0.257)
Constant	1.429***	2.343***	2.629***
	(0.284)	(0.286)	(0.176)
Observations	66	66	66
R^2	0.043	0.004	0.014
Adjusted R^2	0.028	-0.011	-0.002
Residual Std. Error (df = 64)	1.677	1.693	1.043
F Statistic (df = 1; 64)	2.867*	0.262	0.887

Note: * denotes p-value < 0.1, ** denotes p-value < 0.05 and *** denotes p-value < 0.01.

9. Main Models with Enumerator Fixed Effects

In this section, we present the main models in the paper with enumerator fixed effects. As we explain in the paper, objective quality indicators are measured by trained observers who were in the room during clinical examinations and recorded the number of questions asked, physical examinations conducted, and minutes spent during the examination. Although the co-authors personally trained the enumerators during an intensive, two-week process to ensure that they approached the clinical observations systematically and uniformly, it is impossible to fully eliminate potential biases at the individual-level or in the interactions between observers and observed, as decades of survey research and ethnographic research on positionality demonstrate. To correct for these potential sources of bias, researchers introduce enumerator fixed effects to models. In this section, we present the main models of the paper recalculated with enumerator fixed effects. As Table 9.1 shows, our findings hold.

Table 9.1 (Table 2 in the main paper recalculated with enumerator fixed effects)

	Dependent variable:											
	Questions by the doctor (log)			Physical examinations			Min. of examination (log)			Doctor effort index		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Patient nationality: Syrian	0.121**	0.041	0.050	0.036	0.072	0.089	0.124**	0.054	0.028	0.183*	0.080	0.067
	(0.060)	(0.055)	(0.061)	(0.158)	(0.118)	(0.119)	(0.056)	(0.046)	(0.053)	(0.099)	(0.076)	(0.083)
Patient age	0.003	0.005***	0.005*	-0.021***	-0.016***	-0.008	0.004**	0.006***	0.004**	0.001	0.005*	0.005
	(0.002)	(0.002)	(0.003)	(0.005)	(0.004)	(0.005)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)
Respondent age	-0.003	-0.005**	-0.005*	0.015***	0.016***	0.007	-0.001	-0.003*	-0.001	0.001	-0.002	-0.002
	(0.003)	(0.002)	(0.003)	(0.006)	(0.004)	(0.005)	(0.002)	(0.002)	(0.002)	(0.004)	(0.003)	(0.003)
Patient gender: Female	-0.017	-0.010	0.005	-0.229**	-0.196**	-0.244**	-0.018	-0.025	-0.039	-0.072	-0.066	-0.081
	(0.042)	(0.039)	(0.040)	(0.108)	(0.095)	(0.100)	(0.037)	(0.034)	(0.037)	(0.063)	(0.055)	(0.056)
Respondent gender: Female	-0.029	-0.035	-0.042	0.060	0.055	0.106	0.007	-0.005	0.009	-0.007	-0.019	-0.002
	(0.053)	(0.052)	(0.055)	(0.132)	(0.120)	(0.131)	(0.049)	(0.046)	(0.047)	(0.083)	(0.076)	(0.078)
Socioecon. status	0.062	0.044	0.050	0.102	0.051	0.007	0.053*	0.035	0.033	0.105*	0.066	0.057
	(0.038)	(0.036)	(0.038)	(0.084)	(0.074)	(0.083)	(0.032)	(0.027)	(0.030)	(0.057)	(0.048)	(0.050)
Patient general health	-0.100***	-0.075***	-0.065**	-0.124*	-0.044	-0.002	-0.087***	-0.058***	-0.040*	-0.159***	-0.103***	-0.072**
	(0.029)	(0.026)	(0.028)	(0.063)	(0.063)	(0.060)	(0.021)	(0.021)	(0.022)	(0.039)	(0.037)	(0.037)
Religiosity	0.010	-0.013	0.008	0.018	0.015	0.030	0.021	-0.001	0.009	0.026	-0.007	0.017
	(0.026)	(0.023)	(0.025)	(0.050)	(0.045)	(0.048)	(0.019)	(0.018)	(0.018)	(0.033)	(0.031)	(0.032)
Public center	-0.133	-0.087	-0.096	-0.087	-1.177**	0.787	-0.031	-0.162	-0.243	-0.135	-0.433	-0.102
	(0.093)	(0.349)	(0.357)	(0.242)	(0.487)	(0.696)	(0.078)	(0.220)	(0.265)	(0.139)	(0.345)	(0.483)
Outgroup sectarian center	-0.051	-0.007	0.008	-0.157	-0.132	-0.267	-0.148**	-0.131**	-0.096	-0.195	-0.146	-0.144
	(0.085)	(0.073)	(0.079)	(0.224)	(0.200)	(0.210)	(0.068)	(0.061)	(0.073)	(0.129)	(0.102)	(0.108)
Secular NGO center	-0.111	-0.246*	-0.952***	-0.189	-0.855**	-0.345	-0.215***	-0.310***	-0.887***	-0.293**	-0.593***	-1.425***
	(0.091)	(0.144)	(0.110)	(0.203)	(0.375)	(0.256)	(0.078)	(0.102)	(0.091)	(0.139)	(0.224)	(0.135)
Exam. order (log)	-0.096***	-0.081***	-0.089***	-0.104*	-0.103*	-0.149**	-0.058**	-0.037	-0.029	-0.132***	-0.107***	-0.113***
	(0.028)	(0.027)	(0.029)	(0.059)	(0.055)	(0.064)	(0.024)	(0.023)	(0.025)	(0.038)	(0.037)	(0.039)

29

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Constant	2.731***	2.939***	3.258***	1.381**	0.989*	-0.576	2.051***	1.992***	2.273***	0.095	0.090	0.213
	(0.251)	(0.303)	(0.241)	(0.605)	(0.570)	(0.630)	(0.205)	(0.174)	(0.185)	(0.375)	(0.337)	(0.316)
Visit type f.e.	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Center f.e.	N	Y	N	N	Y	N	N	Y	N	N	Y	N
Provider f.e.	N	N	Y	N	N	Y	N	N	Y	N	N	Y
Enumerator f.e.	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Observations	987	987	987	987	987	987	984	984	984	984	984	984
R^2	0.314	0.470	0.662	0.292	0.512	0.667	0.224	0.435	0.622	0.231	0.459	0.655
Adjusted R^2	0.295	0.419	0.573	0.272	0.465	0.579	0.202	0.381	0.521	0.210	0.408	0.564
Residual Std. Error	0.624 (df = 960)	0.566 (df = 900)	0.486 (df = 780)	1.360 (df = 960)	1.166 (df = 900)	1.034 (df = 780)	0.524 (df = 957)	0.462 (df = 897)	0.406 (df = 777)	0.875 (df = 957)	0.758 (df = 897)	0.650 (df = 777)
F Statistic	16.884*** (df = 26; 960)	9.264*** (df = 86; 900)	7.414*** (df = 206; 780)	15.192*** (df = 26; 960)	10.979*** (df = 86; 900)	7.596*** (df = 206; 780)	10.594*** (df = 26; 957)	8.040*** (df = 86; 897)	6.197*** (df = 206; 777)	11.068*** (df = 26; 957)	8.866*** (df = 86; 897)	7.176*** (df = 206; 777)

Note: * denotes p-value < 0.1, ** denotes p-value < 0.05 and *** denotes p-value < 0.01.

Cluster-robust standard errors (at the provider level) are presented in parentheses.

In models with enumerator fixed effects (Model 2 in Table 9.2), the average marginal effect of being Syrian (instead of Lebanese) in centers with an international partner is 0.254 (with cluster-robust standard errors at 0.122, p-value at 0.038, and statistically significant at the 5%-level).

Table 9.2 (Table 3 in the main paper recalculated with enumerator fixed effects)

	Dependent variable:	
	Doctor effort index	
	(1)	(2)
Patient nationality: Syrian	0.183*	0.060
	(0.099)	(0.146)
LCRP partner		-0.108
		(0.147)
LCRP partner * Syrian		0.195
		(0.177)
Constant	0.095	0.153
	(0.375)	(0.386)
Demographic controls	Y	Y
Relation to center controls	Y	Y
Visit type f.e. and exam order control	Y	Y
Enumerator f.e.	Y	Y
Observations	984	936
R²	0.231	0.227
Adjusted R²	0.210	0.203
Residual Std. Error	0.875 (df = 957)	0.885 (df = 907)
F Statistic	11.068*** (df = 26; 957)	9.516*** (df = 28; 907)

Note:	* denotes p-value < 0.1, ** denotes p-value < 0.05 and *** denotes p-value < 0.01.
	Cluster-robust standard errors (at the provider level) are presented in parentheses.

The average marginal effect of being Syrian (instead of Lebanese) in centers without an international partner and in patients with a dermatological/rash symptom:

- Model 1 in Table 9.3: 0.472 (cluster-robust s.e. 0.296, p-value 0.111)
- Model 2 in Table 9.3: 0.589 (cluster-robust s.e. 0.276, p-value 0.033)
- Model 3 in Table 9.3: 0.361 (cluster-robust s.e. 0.386, p-value 0.350)

Table 9.3 (Table 4 in the main paper recalculated with enumerator fixed effects)

	Dependent variable:		
	Doctor effort index		
	(1)	(2)	(3)
Patient nationality: Syrian	0.083	0.125	0.089
	(0.145)	(0.136)	(0.140)
Symptom: Dermatological or rash	-0.280	-0.386*	-0.294
	(0.229)	(0.226)	(0.264)
Syrian * Symptom: Dermatological or rash	0.389	0.464	0.272
	(0.310)		
Constant	-0.038	-0.373	0.172
	(0.485)	(0.594)	(0.536)
Demographic controls	Y	Y	Y
Relation to center controls	Y	Y	Y
Visit type f.e. and exam order control	Y	Y	Y
Center f.e.	N	Y	N
Provider f.e.	N	N	Y
Enumerator f.e.	Y	Y	Y
Observations	365	365	365
R²	0.383	0.472	0.728
Adjusted R²	0.334	0.384	0.614
Residual Std. Error	0.846 (df = 337)	0.813 (df = 312)	0.644 (df = 257)
F Statistic	7.756*** (df = 27; 337)	5.368*** (df = 52; 312)	6.413*** (df = 107; 257)

Note: * denotes p-value < 0.1, ** denotes p-value < 0.05 and *** denotes p-value < 0.01.

Cluster-robust standard errors (at the provider level) are presented in parentheses.

10. Main Model with Symptom Indicators

In this section, we present the main model of the paper with symptom indicators instead of self-reported health status as a control variable. Dummy variables regarding the symptoms indicate whether a specific symptom was mentioned in the examination. This data comes from the direct observations (i.e., from trained enumerators sitting in the room during the examination). First, we present descriptive statistics of these variables, and then reproduce Table 2 in the main paper with the alternative variables added to the models.

Table 10.1

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max	Diff of means (Syr-Leb)
Fever	935	0.181	0.385	0	0	0	1	0.067***
Cold or cough	935	0.179	0.383	0	0	0	1	0.055**
Diarrhea	935	0.088	0.283	0	0	0	1	0.039**
Injury	935	0.01	0.098	0	0	0	1	-0.01
Vomit	935	0.091	0.288	0	0	0	1	0.024
Dermatological	935	0.04	0.195	0	0	0	1	-0.021*
Pregnancy	935	0.05	0.219	0	0	0	1	0.073***
Pain	935	0.307	0.461	0	0	1	1	-0.016
Rash	935	0.051	0.221	0	0	0	1	-0.002
Other	935	0.66	0.474	0	0	1	1	-0.065**

Table 10.2

	Dependent variable:											
	Questions by the doctor (log)			Physical examinations			Min. of examination (log)			Doctor effort index		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Patient nationality: Syrian	0.119	0.049	0.006	0.018	0.129	0.117	0.164**	0.049	0.018	0.209*	0.090	0.033
	(0.076)	(0.053)	(0.054)	(0.152)	(0.129)	(0.127)	(0.064)	(0.051)	(0.059)	(0.107)	(0.078)	(0.080)
Patient age	0.007***	0.006***	0.007**	-0.012**	-0.009**	-0.003	0.007***	0.007***	0.006***	0.008**	0.008***	0.008**
	(0.003)	(0.002)	(0.003)	(0.005)	(0.004)	(0.006)	(0.002)	(0.002)	(0.002)	(0.004)	(0.003)	(0.004)
Respondent age	-0.006*	-0.006**	-0.007***	0.006	0.011**	0.002	-0.001	-0.004**	-0.002	-0.003	-0.004	-0.006*
	(0.003)	(0.003)	(0.003)	(0.006)	(0.005)	(0.005)	(0.003)	(0.002)	(0.002)	(0.004)	(0.003)	(0.003)
Patient gender: Female	-0.017	-0.052	-0.004	-0.147	-0.142	-0.159	0.0004	-0.024	-0.019	-0.040	-0.081	-0.051
	(0.050)	(0.042)	(0.041)	(0.129)	(0.097)	(0.100)	(0.041)	(0.039)	(0.042)	(0.070)	(0.060)	(0.060)
Respondent gender: Female	-0.052	-0.021	-0.070	-0.036	-0.021	-0.069	0.028	-0.033	-0.025	-0.026	-0.049	-0.086
	(0.069)	(0.055)	(0.059)	(0.167)	(0.131)	(0.135)	(0.056)	(0.050)	(0.055)	(0.099)	(0.083)	(0.085)
Socioecon. status	0.017	0.025	0.004	-0.028	0.028	-0.003	0.088**	0.021	0.018	0.078	0.037	0.012
	(0.045)	(0.034)	(0.036)	(0.101)	(0.078)	(0.088)	(0.036)	(0.030)	(0.033)	(0.064)	(0.048)	(0.051)
Symptom: Fever	0.128*	0.050	0.112**	0.574***	0.470***	0.353***	0.126**	0.091**	0.133***	0.310***	0.209***	0.260***
	(0.066)	(0.054)	(0.055)	(0.133)	(0.112)	(0.129)	(0.053)	(0.046)	(0.051)	(0.085)	(0.072)	(0.075)
Symptom: Cold/cough	0.091	0.099*	0.102	0.427***	0.432***	0.346***	0.056	0.089**	0.088**	0.190**	0.223***	0.206***
	(0.074)	(0.059)	(0.063)	(0.137)	(0.119)	(0.131)	(0.053)	(0.041)	(0.044)	(0.097)	(0.072)	(0.077)
Symptom: Diarrhea	0.063	-0.007	-0.035	0.537***	0.429***	0.297*	0.195***	0.114**	0.083	0.301**	0.171**	0.097
	(0.089)	(0.065)	(0.071)	(0.179)	(0.139)	(0.157)	(0.072)	(0.050)	(0.058)	(0.120)	(0.084)	(0.098)
Symptom: Injury	-0.093	-0.083	-0.073	0.137	0.245	0.194	0.390	0.269	0.231	0.281	0.215	0.181
	(0.304)	(0.274)	(0.304)	(0.537)	(0.512)	(0.598)	(0.297)	(0.217)	(0.216)	(0.482)	(0.364)	(0.391)
Symptom: Vomit	0.174*	0.221***	0.222***	0.154	0.097	0.188	0.024	0.064	0.080	0.178	0.227***	0.263***
	(0.094)	(0.069)	(0.067)	(0.178)	(0.135)	(0.151)	(0.069)	(0.048)	(0.054)	(0.126)	(0.087)	(0.094)
Symptom: Dermatological	-0.041	-0.045	0.052	-0.441**	-0.375*	-0.437	0.073	0.040	0.115	-0.065	-0.078	0.037
	(0.156)	(0.113)	(0.129)	(0.217)	(0.213)	(0.289)	(0.104)	(0.084)	(0.098)	(0.186)	(0.146)	(0.179)
Symptom; Pregnancy	0.069	0.172	0.203	-0.597**	-0.354	-0.022	0.157	0.271**	0.262*	0.045	0.258	0.336
	(0.143)	(0.153)	(0.179)	(0.262)	(0.308)	(0.281)	(0.134)	(0.109)	(0.139)	(0.154)	(0.171)	(0.214)
Symptom: Pain	-0.006	0.019	0.055	0.040	-0.004	-0.037	0.032	0.053	0.035	0.031	0.055	0.055
	(0.062)	(0.048)	(0.054)	(0.143)	(0.111)	(0.119)	(0.052)	(0.039)	(0.043)	(0.091)	(0.066)	(0.075)
Symptom: Other	0.191**	0.198***	0.149***	0.276**	0.290**	0.174	0.211***	0.214***	0.172***	0.352***	0.360***	0.270***
	(0.078)	(0.056)	(0.056)	(0.116)	(0.118)	(0.134)	(0.057)	(0.047)	(0.049)	(0.099)	(0.078)	(0.078)
Symptom: Rash	0.062	0.100	0.136	0.207	0.063	-0.127	0.048	0.077	0.090	0.121	0.136	0.135
	(0.121)	(0.098)	(0.108)	(0.189)	(0.185)	(0.210)	(0.103)	(0.079)	(0.088)	(0.159)	(0.130)	(0.146)
Religiosity	0.071**	-0.033	0.00000	0.101*	0.038	0.063	0.033	0.0004	0.013	0.092**	-0.013	0.023
	(0.030)	(0.023)	(0.026)	(0.053)	(0.045)	(0.051)	(0.022)	(0.019)	(0.020)	(0.040)	(0.032)	(0.033)
Public center	-0.003	0.635	1.692***	-0.038	-2.083***	0.216	0.090	-0.014	0.490**	0.061	-0.041	1.549***
	(0.123)	(0.492)	(0.237)	(0.252)	(0.516)	(0.486)	(0.096)	(0.248)	(0.234)	(0.165)	(0.571)	(0.333)
Outgroup sectarian center	0.057	-0.003	0.027	-0.370*	-0.228	-0.338	0.002	-0.154**	-0.092	-0.044	-0.185	-0.144
	(0.107)	(0.084)	(0.086)	(0.206)	(0.192)	(0.215)	(0.079)	(0.070)	(0.084)	(0.143)	(0.118)	(0.125)

Secular NGO center	-0.145	-0.226**	-0.514**	-0.361*	-1.133***	-0.466	-0.131	-0.339***	-0.534***	-0.282*	-0.664***	-0.877***
	(0.102)	(0.115)	(0.211)	(0.207)	(0.405)	(0.426)	(0.084)	(0.080)	(0.169)	(0.146)	(0.207)	(0.268)
Exam. order (log)	-0.061*	-0.072**	-0.090***	-0.080	-0.103*	-0.141**	-0.020	-0.038	-0.029	-0.075*	-0.102***	-0.114***
	(0.037)	(0.028)	(0.031)	(0.065)	(0.060)	(0.069)	(0.025)	(0.025)	(0.026)	(0.044)	(0.039)	(0.042)
Constant	2.197***	2.156***	2.400***	1.400***	1.584***	0.979	1.261***	1.528***	1.575***	-0.892**	-0.656**	-0.581
	(0.224)	(0.192)	(0.263)	(0.540)	(0.482)	(0.648)	(0.210)	(0.158)	(0.228)	(0.353)	(0.288)	(0.383)
Visit type f.e.	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Center f.e.	N	Y	N	N	Y	N	N	Y	N	N	Y	N
Provider f.e.	N	N	Y	N	N	Y	N	N	Y	N	N	Y
Observations	867	867	867	867	867	867	865	865	865	865	865	865
R^2	0.120	0.473	0.692	0.227	0.510	0.671	0.118	0.463	0.655	0.119	0.480	0.685
Adjusted R^2	0.093	0.413	0.595	0.204	0.455	0.568	0.092	0.402	0.546	0.093	0.421	0.586
Residual Std. Error	0.682 (df = 841)	0.548 (df = 778)	0.456 (df = 659)	1.392 (df = 841)	1.152 (df = 778)	1.026 (df = 659)	0.569 (df = 839)	0.462 (df = 776)	0.402 (df = 657)	0.934 (df = 839)	0.746 (df = 776)	0.632 (df = 657)
F Statistic	4.571*** (df = 25; 841)	7.933*** (df = 88; 778)	7.147*** (df = 207; 659)	9.883*** (df = 25; 841)	9.211*** (df = 88; 778)	6.498*** (df = 207; 659)	4.500*** (df = 25; 839)	7.609*** (df = 88; 776)	6.023*** (df = 207; 657)	4.535*** (df = 25; 839)	8.152*** (df = 88; 776)	6.899*** (df = 207; 657)

Note: * denotes p-value < 0.1, ** denotes p-value < 0.05 and *** denotes p-value < 0.01.

Cluster-robust standard errors (at the provider level) are presented in parentheses.

References

El-Jardali, F., Hemadeh, R., Jaafar, M., Sagherian, L., El-Skaff, R., Mdeihly, R., Jamal, D. and Ataya, N. (2014) "The impact of accreditation of primary healthcare centers: Successes, challenges and policy implications as perceived by healthcare providers and directors in Lebanon," *BMC Health Services Research*, 14(86). doi: 10.1186/1472-6963-14-86.

Hainmueller, J., Hangartner, D. and Yamamoto, T. (2015) "Validating vignette and conjoint survey experiments against real-world behavior," *Proceedings of the National Academy of Sciences*, 112(8), pp. 2395-2400. doi: 10.1073/pnas.1416587112.

Hainmueller, J., Hopkins, D. J. and Yamamoto, T. (2014) "Causal inference in conjoint analysis: Understanding multidimensional choices via stated preference experiments," *Political Analysis*, 22 (1), pp.1–30.

Honein-AbouHaidar, G., Noubani, A., El Arnaout, N., Ismail, S., Nimer, H., Menassa, M., Coutts, A.P., Rayes, D., Jomaa, L., Saleh, S. and Fouad, F. M. (2019) "Informal healthcare provision in Lebanon: An adaptive mechanism among displaced Syrian health professionals in a protracted crisis." *Conflict and Health,* 13(40). doi: 10.1186/s13031-019-0224-y.

Leeper, T. J., Hobolt, S. B. and Tilley, J. (2019) "Measuring subgroup preferences in conjoint experiments," *Political Analysis*, 28(2), pp. 207-221.

Leonard, K. and Masatu, M. C. (2006) "Outpatient process quality evaluation and the Hawthorne Effect." *Social Science and Medicine*, 63(9), pp. 2330–40.