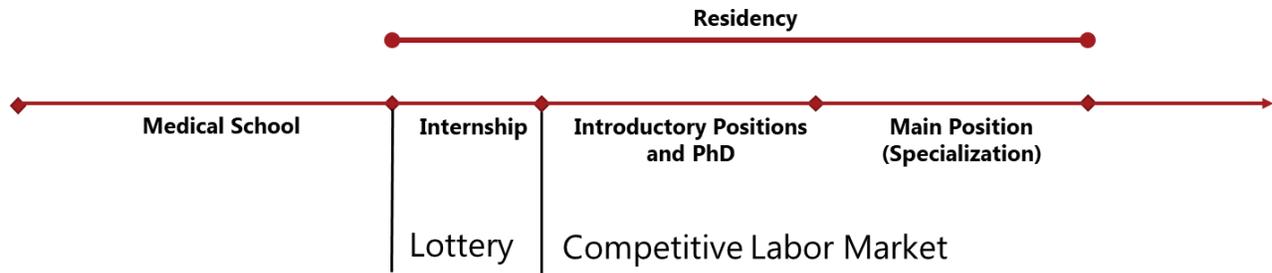# Online Appendix

Appendix A: Danish Physicians' Postgraduate Training

Appendix Figure A.1: Timeline

Notes: This figure summarizes the timeline of Danish physicians' training, which captures the early stages of their careers.

Appendix B: Lottery Verification and Summary Statistics

Appendix Table B.1: Verification of Lottery

	Overall Sample (1)	Males (2)	Females (3)
Gender	0.0074		
	(0.0060)		
Age	0.0004	-0.0008	0.0014
	(0.0013)	(0.0020)	(0.0018)
Partnered	0.0086	0.0084	0.0089
	(0.0063)	(0.0100)	(0.0081)
Number of Children	-0.0030	-0.0039	-0.0033
	(0.0058)	(0.0099)	(0.0073)
GPA Rank	0.0048	0.0025	0.0068
	(0.0104)	(0.0162)	(0.0136)
Observations	10,017	3,939	6,078
R-Squared	0.0004	0.0003	0.0003
F-Statistic	0.74	0.25	0.48
p-Value	0.5959	0.9082	0.7507

Notes: This table tests the validity of the lottery in terms of random assignment. We run specifications that regress the graduating physicians' lottery rank on baseline characteristics available in our data. These include gender, age, an indicator for having a registered partner, number of children in the household, and high school GPA rank. Robust standard errors are reported in parentheses, and we also report the *p*-value of the *F*-test for the joint predictive power of the specifications we run. * $p < .10$, ** $p < .05$, *** $p < .01$

Appendix Table B.2: Analysis Sample Summary Statistics

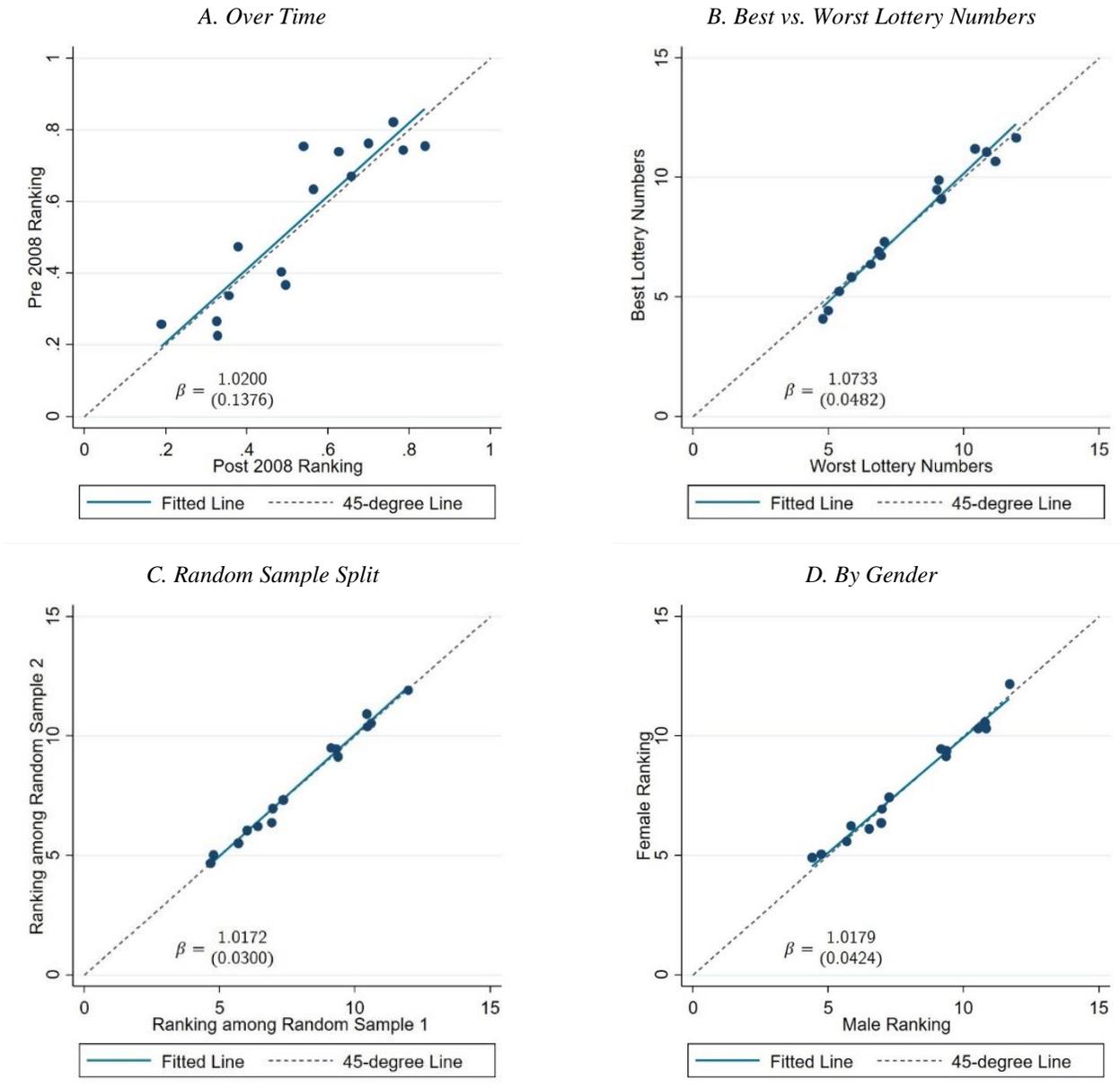|	Control (1)	Treatment (2)	Difference (3)	*p*-value (4)
A. Overall Sample				
Female	0.5999	0.6114	-0.0115	0.3576
Partnered	0.4964	0.5079	-0.0115	0.3700
Age	28.5096	28.5206	-0.0111	0.8606
GPA Rank	0.5021	0.5047	-0.0026	0.7246
Number of Children	0.2669	0.2644	0.0025	0.8694
Number of Individuals	3,024	3,052		
B. Males				
Partnered	0.4636	0.4696	-0.0060	0.7681
Age	28.6455	28.5995	0.0460	0.6665
GPA Rank	0.5052	0.4986	0.0066	0.5871
Number of Children	0.2280	0.2184	0.0096	0.6654
Number of Individuals	1,210	1,186		
C. Females				
Partnered	0.5182	0.5322	-0.0140	0.3964
Age	28.4190	28.4705	-0.0516	0.5047
GPA Rank	0.5000	0.5085	-0.0086	0.3652
Number of Children	0.2928	0.2935	-0.0008	0.9682
Number of Individuals	1,814	1,866		

Notes: This table provides summary statistics for the analysis sample in the year prior to the internship lottery. Panel A provides statistics for the entire sample, and panels B and C split the sample by gender. Characteristics include gender, age, an indicator for having a registered partner (in cohabitation or marriage), number of children in the household, and high school GPA rank. Column 1 displays means for our control group, and column 2 displays means for our treatment group. Column 3 provides the differences between column 1 and column 2. Column 4 reports the *p*-values of the test statistics (*t*-statistics for continuous variables and *z*-statistics for binary variables) of the differences in column 3.

Appendix C: Labor Market Rankings

Appendix C.1: Labor Market Rankings for Random Sample Split

Local labor markets and the average characteristics of the jobs they offer have aspects that people may agree upon ("vertical" quality, e.g., interning in a teaching hospital) and aspects that could be individual specific ("horizontal" quality whose valuation can differ across individuals, e.g., a county's proximity to family). To investigate the degree to which the rankings of the labor markets are agreed upon among the new physicians (as compared to diverging across them due to individual specific preferences), we compare the rankings of labor markets across a random split of our analysis sample. If students tend to agree on the value of characteristics of labor markets, we would expect the overall average rankings of the two random subsamples to align on the 45-degree line, and, if preferences are completely idiosyncratic (an extreme case), there should be no systematic relationship across the two groups' rankings. Panel C of Appendix Figure C.1 shows that the average rankings of the local labor markets across the two groups line up around the 45-degree line, and we cannot reject the benchmark null of a coefficient of one, which represents ranking comparability. We note that while this finding suggests there is a degree of general agreement over labor market rankings across students, it does not mean there are no components of idiosyncratic preferences (over "horizontal" quality). In fact, the observation that the two groups' rankings do not perfectly align on the 45-degree is, in itself, an indication of the natural presence of individual-specific considerations.

Appendix Figure C.1: Labor Market Rankings

A. Over Time

$$\beta = \frac{1.0200}{(0.1376)}$$

B. Best vs. Worst Lottery Numbers

$$\beta = \frac{1.0733}{(0.0482)}$$

C. Random Sample Split

$$\beta = \frac{1.0172}{(0.0300)}$$

D. By Gender

$$\beta = \frac{1.0179}{(0.0424)}$$

Notes: This figure makes several comparisons of the effective rankings of local labor markets. In panel A, location-based preferences, as revealed through choices, are constructed such that we characterize the desirability of a labor market (i.e., a county) based on the average lottery rank of the interns who choose to sort into it. Panel A compares the average rankings across earlier cohorts and later cohorts. In panels B-D, we use the information we have for earlier cohorts about students' binding pre-placement rankings of all local labor markets, as reported in priority lists. Panel B compares the average rankings of those with the best lottery numbers (the bottom 30 percent) with the average rankings of those with the worst lottery numbers (the top 30 percent). Panel C compares the average rankings of labor markets across a random split of our analysis sample. Panel D compares females' and males' priority rankings over entry-level local labor markets (where the counterpart that uses the market desirability measure appears in panel A of Figure 5). We assign each local labor market its average priority by gender, and we then compare these priority rankings across males and females. In all panels, each dot represents a local labor market. We plot the fitted line, as well as the 45-degree line, which is the benchmark under non-differential rankings by gender. We also report the slope of the fitted line, where the benchmark of non-differential ranking is one.

Appendix D: Internship Period First Stage

Appendix Figure D.1: Distance vs. Quality Tradeoff
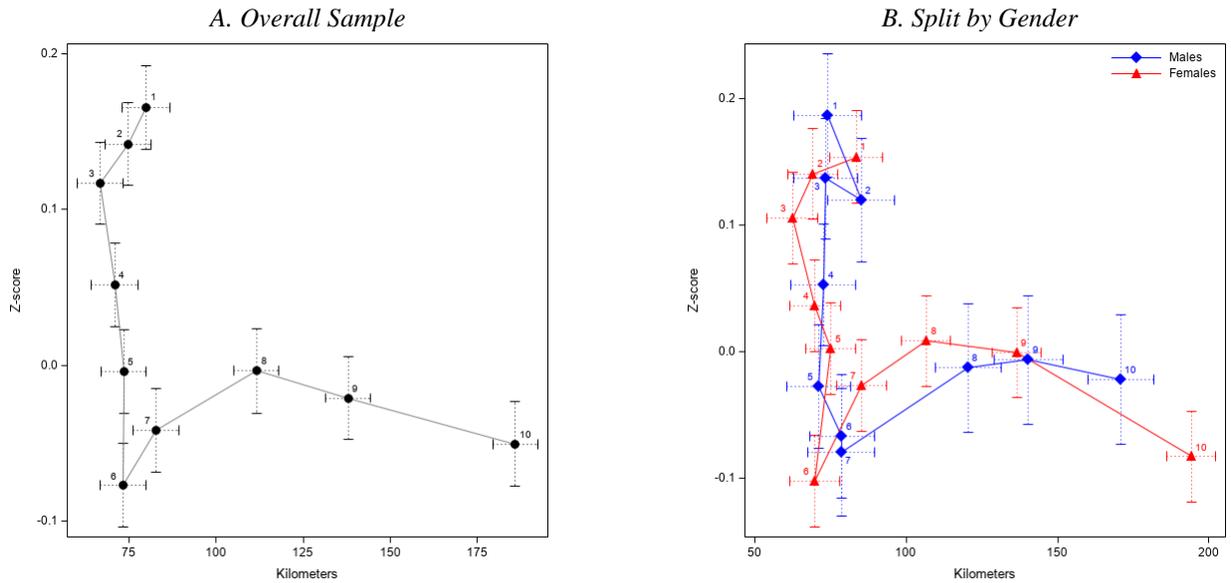
Notes: This figure replicates panels E-F of Figure 1, but we group subjects into ten equal-sized bins based on their lottery ranks. Each dot represents a decile (whose number is displayed in the figure), and it plots the average values within that decile for the internship characteristics of relocation distance (on the x-axis) and a z-score of quality (on the y-axis), along with their corresponding 95-percent confidence intervals.

Appendix D.1: Unpacking the Treatment Bundle

In Section 5.1, we describe how we can shed light on the relative role of different dimensions of the treatment by leveraging comparisons to the middle experimental group of intermediate lottery ranks. This appendix formalizes the intuitive description we provide in the text. A simple way to think of this setting is with the same basic logic as a traditional difference-in-differences setting, as follows. Let us split internships dichotomously on the two dimensions we consider (say, based on their mean values): into internships whose ranked quality (q) is high (1) or low (0) and internships whose distance from the origin (d) is far (1) or close (0). Assume that a long run outcome y_i is determined by these two dimensions, so that:

$$y_i = \beta^q \times \mathbb{I}(q = 0)_i + \beta^d \times \mathbb{I}(d = 1)_i + \epsilon_{it}.$$

For simplicity, further assume that, for individuals in the *control* group ($i \in C$) we have $q = 1$ and $d = 0$, for individuals in the *middle* group ($i \in M$) we have $q = 0$ and $d = 0$, and for individuals in the *treatment* group ($i \in T$) we have $q = 0$ and $d = 1$ (whereas all of these could be made probabilistic in a straightforward way). This structure assumes: (i) additivity, i.e., in practice, there are no economically meaningful complementarities across the two dimensions; (ii) exclusion, i.e., in practice, the composites of ranked quality and distance capture the bulk of the variation relevant for the long run outcomes (or are highly correlated with it). Under these assumptions, this analysis offers a complete decomposition of the total effect, whereas the decomposition would be only partial if these "identifying" assumptions are meaningfully violated.

With this structure, the total effect will be identified by a comparison between the treatment group and the control group: $E(y_i|i \in T) - E(y_i|i \in C) = \beta^q + \beta^d$; the first difference between the middle group and the control group would identify the portion attributed to ranked quality: $E(y_i|i \in M) - E(y_i|i \in C) = \beta^q$; and the second difference between the treatment group and the middle group would identify the portion attributed to geographic markets: $E(y_i|i \in T) - E(y_i|i \in M) = \beta^d$.[1]

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[1] In the presence of meaningful interaction terms across dimensions in longer run effects, $E(y_i|i \in M) - E(y_i|i \in C)$ would capture the impact of ranked quality within urban markets, and $E(y_i|i \in T) - E(y_i|i \in M)$ would capture the effect of geographic markets within internships of low-ranked quality.

Appendix E:

Alternative Specifications

Appendix Table E.1: Research Design—Alternative Specifications

A. Sorting into Less Desirable Local Labor Markets

All

				Percentile			
	20	25	30	35	40	Tercile (33)	Linear
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treat	0.0527***	0.0586***	0.0538***	0.0469***	0.0476***	0.0507***	0.0773***
	(0.0149)	(0.0135)	(0.0122)	(0.0114)	(0.0106)	(0.0117)	(0.0164)
Middle	0.0180	0.0076	0.0181	0.0120	0.0165	0.0130	
	(0.0117)	(0.0112)	(0.0111)	(0.0115)	(0.0128)	(0.0112)	
Constant	0.1710***	0.1737***	0.1689***	0.1723***	0.1699***	0.1711***	0.1536***
	(0.0100)	(0.0090)	(0.0082)	(0.0077)	(0.0071)	(0.0079)	(0.0091)
Individuals, incl. middle	7,037	7,037	7,037	7,037	7,037	7,037	7,037
Individuals, excl. middle	2,852	3,557	4,250	4,941	5,642	4,668	

Males

				Percentile			
	20	25	30	35	40	Tercile (33)	Linear
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treat	0.0107	0.0104	0.0152	0.0190	0.0236	0.0021	0.0290
	(0.0229)	(0.0209)	(0.0191)	(0.0179)	(0.0167)	(0.0181)	(0.0257)
Middle	0.0221	-0.0009	0.0069	0.0049	0.0104	0.0164	
	(0.0188)	(0.0182)	(0.0180)	(0.0184)	(0.0205)	(0.0185)	
Constant	0.1805***	0.1934***	0.1883***	0.1876***	0.1841***	0.1926***	0.1811***
	(0.0160)	(0.0147)	(0.0134)	(0.0125)	(0.0115)	(0.0162)	(0.0146)
Individuals, incl. middle	2,798	2,798	2,798	2,798	2,798	2,798	2,798
Individuals, excl. middle	1,138	1,436	1,706	1,948	2,230	1,842	

Females

				Percentile			
	20	25	30	35	40	Tercile (33)	Linear
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treat	0.0812***	0.0918***	0.0802***	0.0653***	0.0634***	0.0734***	0.1096***
	(0.0196)	(0.0176)	(0.0159)	(0.0147)	(0.0136)	(0.0151)	(0.0213)
Middle	0.0155	0.0137	0.0259*	0.0165	0.0203	0.0200	
	(0.0149)	(0.0141)	(0.0140)	(0.0147)	(0.0164)	(0.0143)	
Constant	0.1645***	0.1602***	0.1558***	0.1623***	0.1606***	0.1590***	0.1352***
	(0.0127)	(0.0113)	(0.0103)	(0.0097)	(0.0090)	(0.0099)	(0.0116)
Individuals, incl. middle	4,239	4,239	4,239	4,239	4,239	4,239	4,239
Individuals, excl. middle	1,714	2,121	2,544	2,993	3,412	2,826	

B. Human Capital Investment—Obtaining a Medical PhD

All

	Percentile						
	20	25	30	35	40	Tercile (33)	Linear
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treat	-0.0222*	-0.0186*	-0.0147	-0.0083	-0.0043	-0.0142	-0.0183
	(0.0117)	(0.0103)	(0.0096)	(0.0089)	(0.0083)	(0.0092)	(0.0127)
Middle	-0.0077	0.0021	-0.0038	-0.0006	0.0013	-0.0042	
	(0.0099)	(0.0093)	(0.0091)	(0.0093)	(0.0104)	(0.0092)	
Constant	0.1390***	0.1337***	0.1359***	0.1331***	0.1314***	0.1361***	0.1391***
	(0.0086)	(0.0075)	(0.0069)	(0.0064)	(0.0059)	(0.0066)	(0.0075)
Individuals, incl. middle	6,386	6,386	6,386	6,386	6,386	6,386	6,386
Individuals, excl. middle	2,588	3,224	3,857	4,482	5,124	4,322	

Males

	Percentile						
	20	25	30	35	40	Tercile (33)	Linear
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treat	-0.0021	0.0105	0.0093	0.0174	0.0177	0.0136	0.0115
	(0.0219)	(0.0191)	(0.0177)	(0.0166)	(0.0153)	(0.0170)	(0.0236)
Middle	-0.0094	0.0125	0.0049	0.0034	0.0129	0.0052	
	(0.0179)	(0.0166)	(0.0165)	(0.0168)	(0.0189)	(0.0166)	
Constant	0.1819***	0.1670***	0.1711***	0.1687***	0.1661***	0.1695***	0.1701***
	(0.0155)	(0.0134)	(0.0124)	(0.0114)	(0.0106)	(0.0118)	(0.0136)
Individuals, incl. middle	2,538	2,538	2,538	2,538	2,538	2,538	2,538
Individuals, excl. middle	1,040	1,304	1,551	1,770	2,027	1,674	

Females

	Percentile						
	20	25	30	35	40	Tercile (33)	Linear
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treat	-0.0361***	-0.0397***	-0.0325***	-0.0262***	-0.0195**	-0.0335***	-0.0390***
	(0.0123)	(0.0110)	(0.0104)	(0.0097)	(0.0091)	(0.0100)	(0.0136)
Middle	-0.0056	-0.0035	-0.0085	-0.0046	-0.0077	-0.0112	
	(0.0111)	(0.0106)	(0.0104)	(0.0106)	(0.0117)	(0.0105)	
Constant	0.1095***	0.1106***	0.1121***	0.1095***	0.1083***	0.1139***	0.1185***
	(0.0096)	(0.0087)	(0.0080)	(0.0073)	(0.0067)	(0.0077)	(0.0084)
Individuals, incl. middle	3,848	3,848	3,848	3,848	3,848	3,848	3,848
Individuals, excl. middle	1,548	1,920	2,306	2,712	3,097	2,558	

C. Labor Market Position—Affiliation with a University Hospital

All

	Percentile						
	20	*25*	*30*	*35*	*40*	Tercile (*33*)	Linear
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treat	-0.0328**	-0.0396***	-0.0369***	-0.0381***	-0.0343***	-0.0392***	-0.0551***
	(0.0147)	(0.0131)	(0.0121)	(0.0112)	(0.0104)	(0.0115)	(0.0161)
Middle	-0.0083	-0.0004	-0.0037	0.0010	-0.0049	0.0006	
	(0.0120)	(0.0114)	(0.0113)	(0.0116)	(0.0129)	(0.0114)	
Constant	0.4509***	0.4496***	0.4520***	0.4524***	0.4542***	0.4522***	0.4669***
	(0.0104)	(0.0093)	(0.0085)	(0.0079)	(0.0074)	(0.0082)	(0.0093)
Individuals, incl. middle	7,616	7,616	7,616	7,616	7,616	7,616	7,616
Individuals, excl. middle	3,085	3,850	4,601	5,346	6,107	5,054	

Males

	Percentile						
	20	*25*	*30*	*35*	*40*	Tercile (*33*)	Linear
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treat	-0.0130	-0.0028	-0.0063	-0.0104	-0.0135	-0.0127	-0.0237
	(0.0234)	(0.0207)	(0.0190)	(0.0177)	(0.0166)	(0.0183)	(0.0256)
Middle	-0.0273	-0.0082	-0.0092	-0.0084	-0.0155	-0.0144	
	(0.0190)	(0.0181)	(0.0180)	(0.0186)	(0.0206)	(0.0182)	
Constant	0.4760***	0.4618***	0.4627***	0.4633***	0.4657***	0.4663***	0.4690***
	(0.0164)	(0.0146)	(0.0134)	(0.0125)	(0.0117)	(0.0129)	(0.0148)
Individuals, incl. middle	3,017	3,017	3,017	3,017	3,017	3,017	3,017
Individuals, excl. middle	1,223	1,540	1,830	2,090	2,401	1,979	

Females

	Percentile						
	20	*25*	*30*	*35*	*40*	Tercile (*33*)	Linear
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treat	-0.0459**	-0.0646***	-0.0577***	-0.0562***	-0.0480***	-0.0565***	-0.0758***
	(0.0188)	(0.0169)	(0.0155)	(0.0143)	(0.0134)	(0.0148)	(0.0206)
Middle	0.0046	0.0050	0.0001	0.0071	0.0021	0.0105	
	(0.0155)	(0.0148)	(0.0145)	(0.0149)	(0.0165)	(0.0147)	
Constant	0.4340***	0.4413***	0.4448***	0.4453***	0.4466***	0.4429***	0.4655***
	(0.0134)	(0.0121)	(0.0111)	(0.0103)	(0.0096)	(0.0106)	(0.0120)
Individuals, incl. middle	4,599	4,599	4,599	4,599	4,599	4,599	4,599
Individuals, excl. middle	1,862	2,310	2,771	3,256	3,706	3,075	

D. Occupational Choice—Gender-Represented Specialty

All

	Percentile						
	20	*25*	*30*	*35*	*40*	Tercile (*33*)	Linear
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treat	0.0224***	0.0222***	0.0193***	0.0182***	0.0172***	0.0198***	0.0274***
	(0.0072)	(0.0066)	(0.0060)	(0.0055)	(0.0052)	(0.0057)	(0.0080)
Middle	0.0149***	0.0073	0.0075	0.0064	0.0074	0.0078	
	(0.0055)	(0.0053)	(0.0053)	(0.0055)	(0.0061)	(0.0054)	
Constant	0.0682***	0.0724***	0.0728***	0.0733***	0.0732***	0.0724***	0.0679***
	(0.0046)	(0.0042)	(0.0039)	(0.0036)	(0.0034)	(0.0037)	(0.0043)
Individuals, incl. middle	7,037	7,037	7,037	7,037	7,037	7,037	7,037
Individuals, excl. middle	2,852	3,557	4,250	4,941	5,642	4,668	

Males

	Percentile						
	20	*25*	*30*	*35*	*40*	Tercile (*33*)	Linear
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treat	0.0093	0.0059	0.0031	0.0117	0.0102	0.0099	0.0103
	(0.0106)	(0.0098)	(0.0086)	(0.0086)	(0.0080)	(0.0088)	(0.0121)
Middle	0.0193**	0.0085	0.0065	0.0084	0.0080	0.0080	
	(0.0087)	(0.0086)	(0.0092)	(0.0089)	(0.0099)	(0.0087)	
Constant	0.0606***	0.0682***	0.0706***	0.0672***	0.0682***	0.0679***	0.0687***
	(0.0072)	(0.0068)	(0.0063)	(0.0058)	(0.0055)	(0.0059)	(0.0069)
Individuals, incl. middle	2,798	2,798	2,798	2,798	2,798	2,798	2,798
Individuals, excl. middle	1,138	1,436	1,706	1,948	2,230	1,842	

Females

	Percentile						
	20	*25*	*30*	*35*	*40*	Tercile (*33*)	Linear
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treat	0.0312***	0.0336***	0.0282***	0.0226***	0.0219***	0.0264***	0.0388***
	(0.0097)	(0.0088)	(0.0079)	(0.0072)	(0.0067)	(0.0075)	(0.0105)
Middle	0.0119*	0.0064	0.0102	0.0052	0.0071	0.0078	
	(0.0071)	(0.0067)	(0.0067)	(0.0070)	(0.0078)	(0.0068)	
Constant	0.0734***	0.0752***	0.0743***	0.0773***	0.0766***	0.0754***	0.0673***
	(0.0060)	(0.0054)	(0.0050)	(0.0046)	(0.0043)	(0.0047)	(0.0056)
Individuals, incl. middle	4,239	4,239	4,239	4,239	4,239	4,239	4,239
Individuals, excl. middle	1,714	2,121	2,544	2,993	3,412	2,826	

E. Probability of Having a Partner among Pre-Lottery Singles

All

	Percentile						
	20	*25*	*30*	*35*	*40*	Tercile (*33*)	Linear
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treat	0.0112	0.0140	0.0070	0.0046	0.0019	-0.0012	0.0018
	(0.0203)	(0.0183)	(0.0168)	(0.0157)	(0.0146)	(0.0163)	(0.0223)
Middle	0.0007	0.0031	-0.0006	0.0135	0.0010	0.0128	
	(0.0167)	(0.0160)	(0.0158)	(0.0162)	(0.0179)	(0.0158)	
Constant	0.7751***	0.7728***	0.7760***	0.7721***	0.7769***	0.7738***	0.7769***
	(0.0144)	(0.0130)	(0.0118)	(0.0110)	(0.0103)	(0.0113)	(0.0128)
Individuals, incl. middle	3,574	3,574	3,574	3,574	3,574	3,574	3,574
Individuals, excl. middle	1,469	1,814	2,144	2,481	2,858	2,337	

Males

	Percentile						
	20	*25*	*30*	*35*	*40*	Tercile (*33*)	Linear
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treat	0.0033	0.0105	-0.0025	-0.0143	-0.0140	-0.0148	-0.0172
	(0.0301)	(0.0265)	(0.0242)	(0.0229)	(0.0215)	(0.0236)	(0.0330)
Middle	-0.0147	-0.0120	-0.0240	-0.0221	-0.0191	-0.0140	
	(0.0245)	(0.0235)	(0.0234)	(0.0243)	(0.0275)	(0.0236)	
Constant	0.7983***	0.7933***	0.8003***	0.8019***	0.7995***	0.7999***	0.7989***
	(0.0209)	(0.0186)	(0.0168)	(0.0157)	(0.0148)	(0.0162)	(0.0187)
Individuals, incl. middle	1,505	1,505	1,505	1,505	1,505	1,505	1,505
Individuals, excl. middle	608	774	917	1,047	1,216	991	

Females

	Percentile						
	20	*25*	*30*	*35*	*40*	Tercile (*33*)	Linear
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treat	0.0172	0.0165	0.0142	0.0183	0.0139	0.0088	0.0160
	(0.0274)	(0.0251)	(0.0231)	(0.0215)	(0.0199)	(0.0222)	(0.0301)
Middle	0.0121	0.0148	0.0172	0.0394*	0.0162	0.0326	
	(0.0227)	(0.0218)	(0.0213)	(0.0216)	(0.0236)	(0.0213)	
Constant	0.7581***	0.7572***	0.7576***	0.7503***	0.7599***	0.7545***	0.7608***
	(0.0196)	(0.0179)	(0.0163)	(0.0152)	(0.0141)	(0.0156)	(0.0174)
Individuals, incl. middle	2,069	2,069	2,069	2,069	2,069	2,069	2,069
Individuals, excl. middle	861	1,040	1,227	1,434	1,642	1,346	

F. Probability of Having More than One Child among Pre-Lottery Singles

All

	Percentile						
	20	*25*	*30*	*35*	*40*	Tercile (*33*)	Linear
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treat	0.0415*	0.0383*	0.0331*	0.0174	0.0122	0.0234	0.0310
	(0.0235)	(0.0212)	(0.0194)	(0.0181)	(0.0168)	(0.0186)	(0.0258)
Middle	0.0155	0.0212	0.0229	0.0263	0.0138	0.0198	
	(0.0193)	(0.0184)	(0.0181)	(0.0186)	(0.0205)	(0.0183)	
Constant	0.4425***	0.4400***	0.4411***	0.4461***	0.4526***	0.4457***	0.4447***
	(0.0166)	(0.0150)	(0.0138)	(0.0128)	(0.0119)	(0.0132)	(0.0149)
Individuals, incl. middle	3,581	3,581	3,581	3,581	3,581	3,581	3,581
Individuals, excl. middle	1,471	1,816	2,148	2,486	2,864	2,341	

Males

	Percentile						
	20	*25*	*30*	*35*	*40*	Tercile (*33*)	Linear
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treat	0.0086	-0.0050	-0.0165	-0.0298	-0.0373	-0.0250	-0.0328
	(0.0357)	(0.0318)	(0.0290)	(0.0272)	(0.0253)	(0.0279)	(0.0388)
Middle	-0.0102	-0.0070	-0.0000	0.0048	0.0033	0.0047	
	(0.0291)	(0.0279)	(0.0276)	(0.0285)	(0.0318)	(0.0280)	
Constant	0.4254***	0.4259***	0.4262***	0.4302***	0.4356***	0.4278***	0.4375***
	(0.0251)	(0.0226)	(0.0206)	(0.0195)	(0.0182)	(0.0199)	(0.0227)
Individuals, incl. middle	1,508	1,508	1,508	1,508	1,508	1,508	1,508
Individuals, excl. middle	609	775	919	1,050	1,219	993	

Females

	Percentile						
	20	*25*	*30*	*35*	*40*	Tercile (*33*)	Linear
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treat	0.0648**	0.0711**	0.0709***	0.0529**	0.0488**	0.0597**	0.0783**
	(0.0311)	(0.0282)	(0.0260)	(0.0239)	(0.0223)	(0.0248)	(0.0343)
Middle	0.0342	0.0404*	0.0376	0.0412*	0.0193	0.0297	
	(0.0256)	(0.0245)	(0.0240)	(0.0245)	(0.0268)	(0.0242)	
Constant	0.4551***	0.4506***	0.4524***	0.4579***	0.4653***	0.4590***	0.4496***
	(0.0222)	(0.0201)	(0.0185)	(0.0169)	(0.0158)	(0.0175)	(0.0198)
Individuals, incl. middle	2,073	2,073	2,073	2,073	2,073	2,073	2,073
Individuals, excl. middle	862	1,041	1,229	1,436	1,645	1,348	

Notes: These tables investigate the robustness of our design by studying the effects on our main outcomes when we vary the percentiles that define the treatment and control groups. Columns 1-5 report estimates for long-run effects, based on specification (2), for thresholds that vary in five percentage-point increments. Column 3 corresponds to our main specification. Column 6 also reports estimates where the treatment, control, and middle groups are split at the 33rd and 67th percentiles (as a potentially natural benchmark). Column 7 estimates a version of specification (2) that is linear in lottery rank. The two bottom rows in each estimation report sample sizes, depending on whether the estimation includes or excludes the middle group. Robust standard errors, clustered at the individual level, are reported in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$

Appendix Table E.2: Effects of Early Career Choices on Longer Run Outcomes—
Graduation Round Fixed Effects

A. Sorting into Less Desirable Local Labor Markets

	All (1)	Males (2)	Females (3)
Treat	0.0538***	0.0139	0.0801***
	(0.0122)	(0.0190)	(0.0159)
Constant	0.1689***	0.1890***	0.1558***
	(0.0081)	(0.0133)	(0.0102)
Individuals	4,250	1,706	2,544

B. Obtaining a Medical PhD

	All (1)	Males (2)	Females (3)
Treat	-0.0143	0.0101	-0.0312***
	(0.0096)	(0.0177)	(0.0103)
Constant	0.1357***	0.1706***	0.1114***
	(0.0069)	(0.0124)	(0.0079)
Individuals	3,857	1,551	2,306

C. Affiliation with a University Hospital

	All (1)	Males (2)	Females (3)
Treat	-0.0392***	-0.0147	-0.0549***
	(0.0113)	(0.0180)	(0.0145)
Constant	0.4531***	0.4669***	0.4434***
	(0.0079)	(0.0128)	(0.0101)
Individuals	4,601	1,830	2,771

D. Occupational Choice—Gender-Represented Specialty

	All (1)	Males (2)	Females (3)
Treat	0.0190***	0.0062	0.0264***
	(0.0059)	(0.0092)	(0.0077)
Constant	0.0730***	0.0708***	0.0752***
	(0.0039)	(0.0063)	(0.0049)
Individuals	4,250	1,706	2,544

E. Probability of Having a Partner among Pre-Lottery Singles

	All (1)	Males (2)	Females (3)
Treat	0.0068	-0.0105	0.0158
	(0.0167)	(0.0236)	(0.0229)
Constant	0.7761***	0.8043***	0.7568***
	(0.0117)	(0.0162)	(0.0162)
Individuals	2,144	917	1,227

F. Probability of Having More than One Child among Pre-Lottery Singles

|	All (1)	Males (2)	Females (3)
Treat	0.0321*	-0.0244	0.0708***
	(0.0193)	(0.0288)	(0.0257)
Constant	0.4416***	0.4302***	0.4524***
	(0.0136)	(0.0202)	(0.0183)
Individuals	2,148	919	1,229

Notes: These tables investigate the robustness of the results for our main long-run outcomes to the inclusion of graduation round fixed effects based on specification (2). Robust standard errors, clustered at the individual level, are reported in parentheses. * p < .10, ** p < .05, *** p < .01

Appendix Figure E.1: Baseline Dynamics in Marriage Market Choices

*A. Household Formation—Change in Partnership Status*
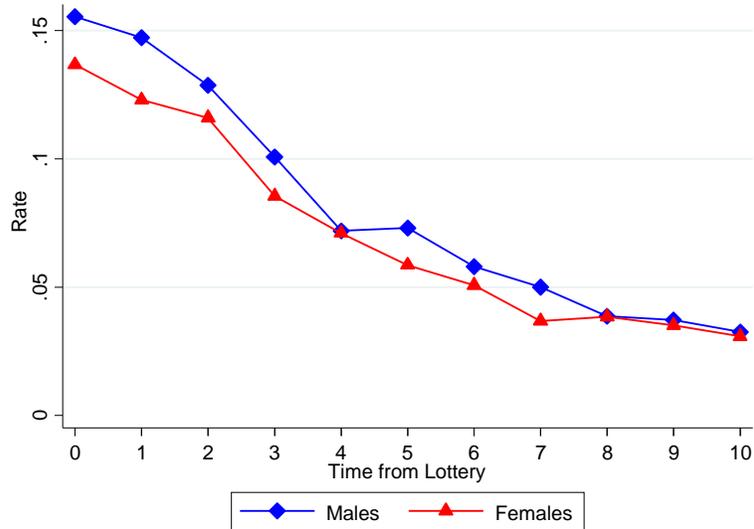
B. Fertility—Change in Number of Children
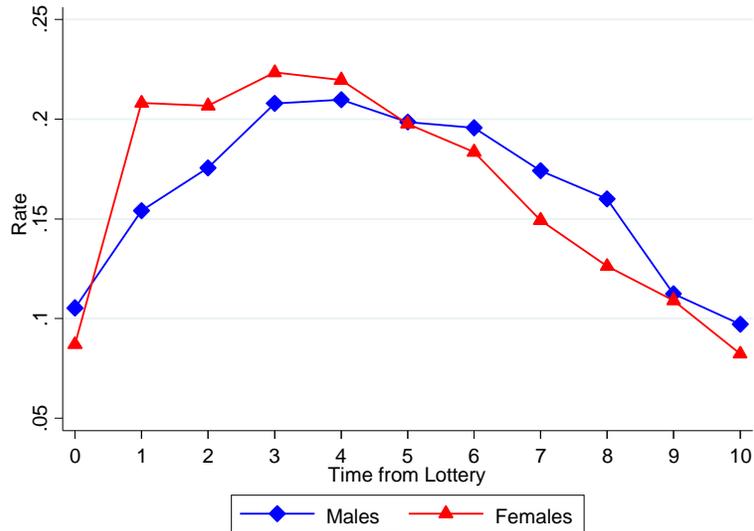
Notes: These figures illustrate how partnership rates and fertility evolve among physicians after graduation from medical school. Panel A displays the change in partnership status. It plots averages of a dummy variable that assumes the value of 1 if a physician's partnership status changed from the previous year (in either the direction of starting or ending a registered partnership), and it assumes the value of 0 otherwise. Panel B displays the change in number of children across consecutive years.

Appendix Figure E.2: Family vs. Career—Baseline Dynamics in Physicians' Labor Market Specialization
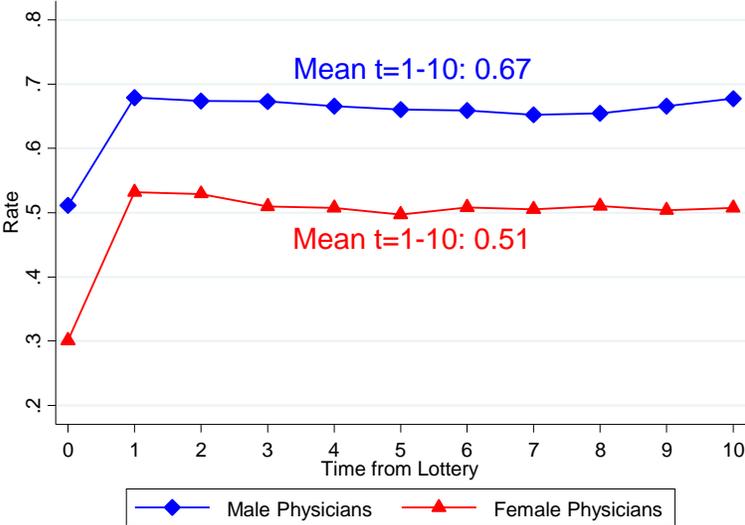
Notes: This figure plots, among physicians who are partnered in a given period, the relative earnings of the physicians out of their households' overall earnings as a proxy for labor market vs. household production specialization.

Appendix F: Specialty Grouping

Appendix Table F.1

Specialty	Specialty Group
Panel A: Male-Represented	
Thorax Surgery	Surgery
Orthopedic Surgery	Surgery
General Surgery	Surgery
Neurosurgery	Surgery
Internal Medicine	Internal medicine
Clinical Biochemistry	Transverse specialties
Otorhinolaryngology	Surgery
Internal Medicine: Cardiology	Internal medicine
Ophthalmology	Surgery
Vascular Surgery	Surgery
Anesthesiology	Transverse specialties
Internal Medicine: Gastroenterology and Hepatology	Internal medicine
Urology	Surgery
Panel B: Female-Represented	
Internal Medicine: Hematology	Internal medicine
Clinical Microbiology	Transverse specialties
Neuro Medicine	Other
Clinical Immunology	Transverse specialties
Clinical Physiology and Nuclear Medicine	Transverse specialties
Occupational Medicine	Other
General Medicine	General medicine
Internal Medicine: Rheumatology	Internal medicine
Internal Medicine: Pulmonary Diseases	Internal medicine
Radiology	Transverse specialties
Internal Medicine: Endocrinology	Internal medicine
Plastic Surgery	Surgery
Psychiatry	Psychiatry
Internal Medicine: Nephrology	Internal medicine
Dermato-Venerology	Other
Clinical Pharmacology	Transverse specialties
Internal Medicine: Infectious Diseases	Internal medicine
Gynecology and Obstetrics	Surgery
Pathological Anatomy and Cytology	Transverse specialties
Public Medicine	Other
Pediatrics	Other
Clinical Oncology	Other
Internal Medicine: Geriatrics	Internal medicine
Forensic medicine	Other
Clinical Genetics	Transverse specialties
Child and Youth Psychiatry	Psychiatry

Notes: This table classifies medical specialties by gender representativeness based on the share of females within a specialty relative to their overall proportion. "Female-represented specialties" are specialties with a female share that is higher than this proportion, and "male-represented specialties" are specialties with a female share that is lower than this proportion.

Appendix G: Exit Surveys

Appendix G.1: Exit Surveys—Details

This appendix provides background information on the exit surveys. The questions in the surveys are grouped into seven overall categories. The survey questions changed in 2016, but the seven categories remained similar. The average responses for each of the seven categories for each hospital department are reported on the public website www.evaluer.dk, and they are available for students to obtain information on the quality of their future workplaces.

Appendix Tables G.1 and G.2 show the groupings of the individual questions from the old and new questionnaires into the seven overall categories. The individual questions are provided in Appendix Tables G.3-G.6 in Danish (original) and English (translated). To provide numerical scoring of a department, interns also report the names of their supervisors: the assigned mentor and the head of the educational program. We use these names to deduct the gender of the supervisors. To do so, we construct an algorithm based on first names, which works as follows. We construct a gender probability using the first names of all doctors in the authorization register, which includes their names and gender. A first name is defined as "male" if more than 70 percent of the individuals with the given first name are males, and, accordingly, a first name is defined as "female" if less than 30 percent of the individuals with the given first name are males. We extract the first names of the supervisors from the exit surveys and match their first names to the gender proxy constructed from the authorization register.

Appendix Table G.1: Evaluation Categories in Evaluations until 2015

Group	English (translated)	Danish (original)	Questions
1	Introduction	Introduktion	1-2
2	Supervision	Uddannelsesprogram	3-6
3	Daily guidance	Vejleder (Praksistutor)	7-11
4	Work organization	Arbejdstilrettelæggelse	12-17
5	Education	Øvrige forhold	18-22
6	Education	Samlet vurdering	23
7	Overall Assessment	Samlet vurdering	24

Notes: The evaluation scales range from 1 to 9. The individual questions are reported in Appendix Tables G.3 and G.4.

Appendix Table G.2: Evaluation Categories in Evaluations from 2016

Group	English (translated)	Danish (original)	Questions
1	Introduction	Introduktion	1-3
2	Supervision	Uddannelsesvejledning	1-7
3	Daily guidance	Daglig vejledning	8-13
4	Work organization	Arbejdstilrettelæggelse	12-17
5	Education	Konference/undervisning	18-20
6	Work climate	Arbejdsklima	21-24
7	Overall Assessment	Øvrige	25-26

Notes: The evaluation scales range from 1 to 6. The individual questions are reported in Appendix Tables G.5 and G.6.

Appendix Table G.3: Questions in Evaluations until 2015, Danish

1	Hvordan vurderer du kvaliteten af introduktionen på uddannelsesstedet?
2	Fulgte du introduktionsprogrammet?
3	Hvordan vurderer du kvaliteten af uddannelsesprogrammet?
4	Svarer indholdet til målbeskrivelsens krav?
5	Svarede uddannelsesforløbet til uddannelsesprogrammet?
6	Har du indfriet checklistens delpunkter?
7	Hvordan var kvaliteten af vejlederens indsats i forhold til din uddannelse?
8	Anvendtes samtaleindholdet (og uddannelsesplanen) i praksis?
9	Hvordan var graden af supervision?
10	Var vejlederen tilstede i tilstrækkeligt omfang?
11	Anviste vejlederen dig uddannelsesrelevante arbejdsområder?
12	Hvordan vurderer du graden af selvstændighed i det kliniske arbejde?
13	Hvordan vurderer du arbejdsbyrden?
14	Var arbejdet tilrettelagt med rimeligt hensyntagen til uddannelsen?
15	Hvordan var vagthyppigheden i forhold til vagtens uddannelsesværdi?
16	Hvordan vurderer du uddannelsesværdien af vagtarbejdet?
17	Hvordan vurderer du uddannelsesværdien af dagarbejdet?
18	Deltog du i forskning/kvalitetsudviklingsarbejde?
19	Deltog du i administrativt arbejde?
20	Deltog du i afdelingens formaliserede undervisning?
21	Underviste du selv?
22	Hvordan vurderer du afdelingens uddannelsesmiljø/prioritering?
23	Hvordan vurderer du uddannelsesstedets samlede uddannelsesindsats?
24	Hvordan vurderer du dit samlede uddannelsesudbytte under ansættelsen?
Text	Vejleder
Text	Uddannelsesansvarlig

Appendix Table G.4: Questions in Evaluations until 2015, English

1	How do you assess the quality of the introduction at the place of education?
2	Did you follow the introductory program?
3	How do you rate the quality of the training program?
4	Does the content correspond to the requirements of the goal description?
5	Did the training course correspond to the training program?
6	Have you met the checklist sub-items?
7	How was the quality of the supervisor's efforts in relation to your education?
8	Was the interview content (and the training plan) used in practice?
9	How was the degree of supervision?
10	Was the supervisor present to a sufficient extent?
11	Did the supervisor instruct you in training-relevant work areas?
12	How do you assess the degree of independence in the clinical work?
13	How do you assess the workload?
14	Was the work organized with reasonable consideration for the education?
15	How was the shift frequency in relation to the shift's educational value?
16	How do you assess the educational value of the shift work?
17	How do you assess the educational value of day work?
18	Did you participate in research/quality development work?
19	Did you participate in administrative work?
20	Did you participate in the department's formalized teaching?
21	Did you teach yourself?
22	How do you assess the department's educational environment/priorities?
23	How do you assess the educational institution's overall educational efforts?
24	How do you assess your overall educational output during employment?
Text	Mentor
Text	Head of Educational Program

Appendix Table G.5: Questions in Evaluations from 2016, Danish

1	Uddannelsesstedet og jeg har afstemt forventninger til uddannelseselementet ved introduktionen.
2	Jeg blev introduceret til de opgaver, jeg skulle varetage.
3	Min hovedvejleder og jeg samarbejdede om at udarbejde min individuelle uddannelsesplan.
4	Mit behov for uddannelsesvejledning er blevet opfyldt.
5	De planlagte kompetencevurderinger er blevet gennemført.
6	Kompetencevurderinger er blevet efterfulgt af feedback.
7	Jeg er blevet tilbudt karrierevejledning svarende til mit behov.
8	Jeg har fået feedback i forhold til min evne til at samarbejde med sundhedsprofessionelle.
9	Jeg har fået feedback i forhold til min evne til at agere professionelt.
10	Jeg har fået feedback i forhold til min evne til at kommunikere.
11	Jeg har fået mulighed for at udvikle mig som leder/administrator og organisator.
12	Jeg har fået supervision svarende til mit behov i det daglige arbejde.
13	De daglige læringsmuligheder er blevet udnyttet.
14	De daglige vejledere har været til at få fat på, når jeg havde behov for det.
15	Arbejdstilrettelæggelsen har tilgodeset, at jeg også har varetaget opgaver, der er relevante for, at jeg har kunnet opnå kompetencerne som angivet i uddannelsesprogrammet.
16	I arbejdstilrettelæggelsen er det blevet prioriteret, at der har været progression i min kompetenceudvikling.
17	I arbejdstilrettelæggelsen er vejledersamtaler blevet prioriteret.
18	Jeg har fået mulighed for at udvikle mig som underviser.
19	Jeg har haft mulighed for at deltage i uddannelsesstedets undervisningstilbud.
20	Jeg har haft udbytte af uddannelsesstedets konferencer.
21	Jeg har oplevet, at der er en gensidigt respektfuld omgangstone på uddannelsesstedet.
22	Jeg har været tryg ved at stille spørgsmål til kollegaer.
23	Jeg har kunnet diskutere svære problemstillinger med mine kollegaer.
24	Jeg har oplevet, at jeg har arbejdet som del af et arbejdsfællesskab.
25	Samlet set har uddannelsesstedets indsats været tilfredsstillende.
26	Mit samlede uddannelsesmæssige udbytte har været tilfredsstillende.
Text	Vejleder
Text	Uddannelsesansvarlig

Appendix Table G.6: Questions in Evaluations from 2016, English

1	The place of education and I have reconciled expectations of the educational element at the time of the introduction.
2	I was introduced to the tasks I had to undertake.
3	My main supervisor and I collaborated on preparing my individual education plan.
4	My need for educational guidance has been met.
5	The planned competency assessments have been carried out.
6	Competence assessments have been followed by feedback.
7	I have been offered career guidance according to my needs.
8	I have received feedback regarding my ability to collaborate with health professionals.
9	I have received feedback in relation to my ability to act professionally.
10	I have received feedback in relation to my ability to communicate.
11	I have had the opportunity to develop as a leader / administrator and organizer.
12	I have received supervision according to my needs in the daily work.
13	The daily learning opportunities have been utilized.
14	The daily tutors have been available when I needed it.
15	The work organization has taken into account that I have also handled tasks that are relevant for me to have been able to achieve the competencies as stated in the training program.
16	In the work organization, it has been prioritized that there has been progression in my competence development.
17	In the work organization, supervisor feedback has been prioritized.
18	I have had the opportunity to develop as a teacher.
19	I have had the opportunity to participate in the educational offer of the educational institution.
20	I have benefited from the conferences of the educational institution.
21	I have experienced that there is a mutually respectful tone of voice at the place of education.
22	I have been comfortable asking questions to colleagues.
23	I have been able to discuss difficult issues with my colleagues.
24	I have experienced that I have worked as part of a working community.
25	Overall, the educational institution's efforts have been satisfactory.
26	My overall educational output has been satisfactory.
Text	Mentor
Text	Head of Educational Program

**Appendix G.2: Exit Surveys and Inspector Evaluations**

In Section 5.1, we refer to data from external inspections that the National Health Authority (NHA) conducts to assess the quality of the educational programs in hospital departments. In this appendix, we provide details about these assessments and study their correlation with the exit-survey rankings.

The NHA has been conducting external inspections since 1997. Appointed by the NHA, the group of inspectors consists of impartial senior and junior physicians. The inspectors score the hospital department's performance in 16 categories (see panel A of Appendix Table G.7), and each category is scored on a 4-point scale (see panel B of Appendix Table G.7). For our purposes, we use inspectors' overall assessments of a hospital department's internship by summing over all categories. For more details, see: Inspektorordningen Håndbog, Sundhedsstyrelsen, 2016, https://www.sst.dk/da/Udgivelser/2016/Inspektorordningen-Haandbog.

The reports are publicly available on the NHA's website: https://www.sst.dk/da/inspektorrapporter. The NHA servers include inspections from 2013-2022 (where data from 1997-2012 have been erroneously deleted). We hand-code the hospital department IDs for each inspector report in order to link them to our data on the ranked quality from the interns' exit surveys. This provides us with inspector quality assessments of 202 hospital departments (61% of the internship positions).

In Appendix Figure G.1, we study the degree to which inspection assessments are predictive of how interns rank the quality of their internships in the exit surveys. We split the sample into 20 equal-sized bins based on the z-score of the external inspections, where the mean z-score of each bin is displayed on the x-axis. We then plot the average survey-exit ranked quality for each bin (on the y-axis), split by gender.

Appendix Figure G.1: Associations between Exit-Survey and Inspector Evaluations
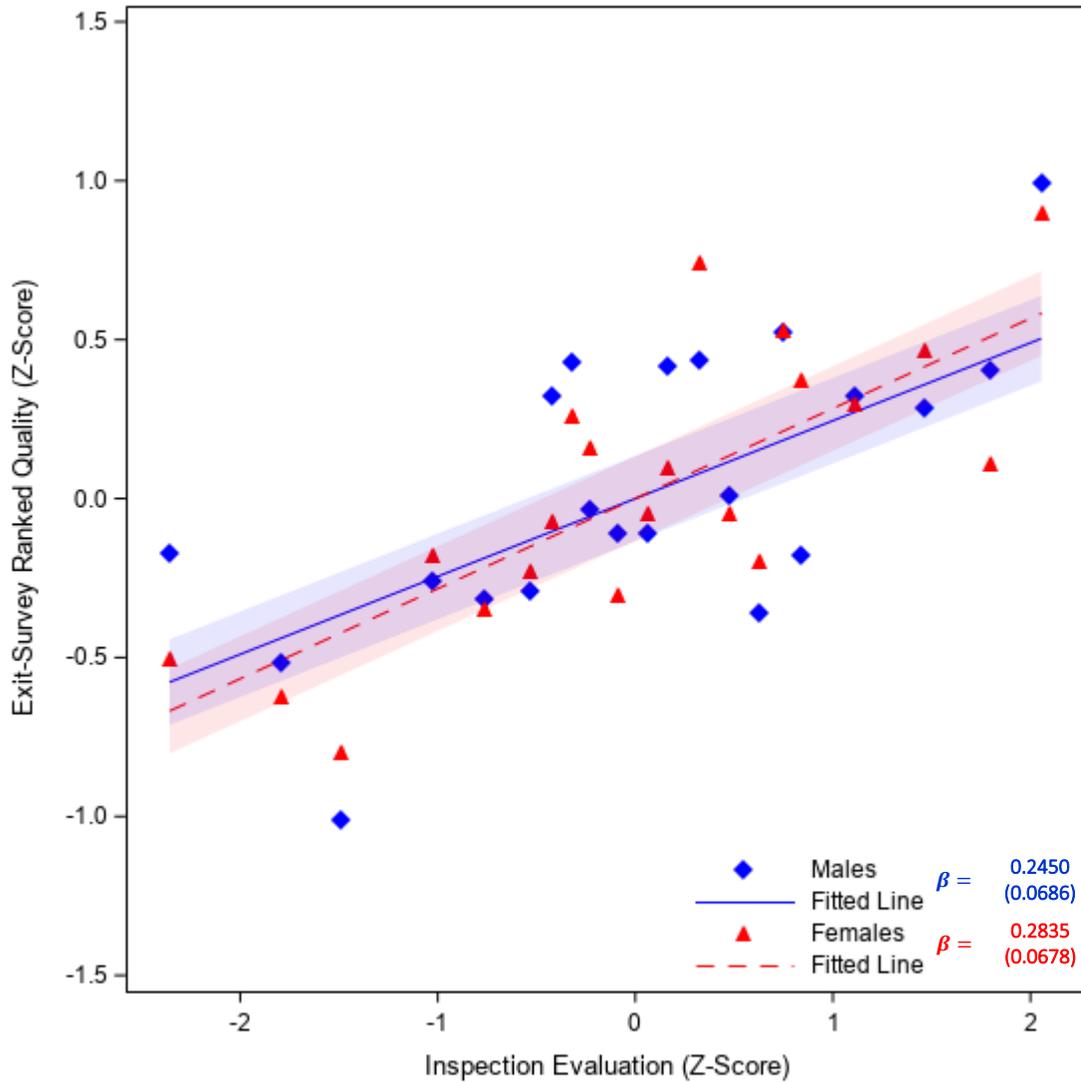
Notes: This table displays the association between inspection assessments and interns' ranked quality of their internships. We split the sample into 20 equal-sized bins based on the z-score of the external inspections, where the mean z-score of each bin is displayed on the x-axis. We then plot the average survey-exit ranked quality for each bin (on the y-axis), split by gender. We also plot the fitted lines along with 95-percent confidence intervals and report their slopes.

Appendix Table G.7: Structure of Inspector Evaluations

A. Performance Categories for Inspector Assessment

Category	Danish (original)	English (translated)
1	Introduktion til afdelingen	Introduction to the department
2	Uddannelsesprogram	Educational program
3	Uddannelsesplan	Education plan
4	Medicinsk ekspert - Læring i rollen som medicinsk ekspert	Medical expert - Learning the physician's role as a medical expert
5	Kommunikator - Læring i rollen kommunikator	Communicator - Learning the physician's role as a communicator
6	Samarbejder - Læring i rollen som samarbejder	Collaborator - Learning the physician's role as a collaborator
7	Leder/administrator - Læring i rollen som leder/administrator	Leader/administrator - Learning the physician's role as a leader/administrator
8	Sundhedsfremmer - Læring i rollen som sundhedsfremmer	Health promoter - Learning the physician's role as a health promoter
9	Akademiker - Læring i rollen som akademiker	Academic - Learning the physician's role as an academic
10	Professionel - Læring i rollen som professionel	Professional - Learning the physician's role as a professional
11	Forskning - Uddannelsessøgende lægers deltagelse i forskning	Research - Participation in research
12	Undervisning - som afdelingen giver	Teaching - provided by the department
13	Konferencernes - læringsværdi	The learning value of morning reports
14	Læring og kompetencevurdering	Learning and competence assessment
15	Arbejdstilrettelæggelse - Tilrettelæggelsen tager hensyn til videreuddannelsen af læger	Work organization - The organization takes postgraduate training of doctors into account
16	Læringsmiljøet på afdelingen	The learning environment in the department

B. Assessment Scoring Scale

Score	Danish (original)	English (translated)
1	Særdeles problematisk	Extremely problematic
2	Utilstrækkelig	Inadequate
3	Tilstrækkelig	Adequate
4	Særdeles god	Extremely good