Supplementary material for:

Association Between Antibiotic Resistance in ICU-Acquired Infections and Excess Resource Utilization: Evidence fromSpain, Italy, and Portugal

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**Figure S1.** Propensity score Kernel density distributions, before and after matching.

Chart

Description automatically generated

*Notes*: panel a) presents the full sample propensity score distribution before matching. Panel b) presents the propensity score distribution after 1:1 genetic matching.

**Figure S2.** Quantitative balance plots.Table

Description automatically generated

*Notes:* The figure presents the absolute standardized mean difference before and after matching. The full sample presents a mean standardized distance around 0.55, while after matching this distance has been reduced below 0.1.

**Figure S3.** Unobservable selection and

Chart, diagram

Description automatically generated with medium confidence

*Notes:* panel a) presents gamma’s values as a function of maximum R2 that would be required to drive the estimates towards the null. Panel b) presents the estimate (beta) values that would result from a maximum R2 with a gamma value of 1.

**Table S1.** Regression results by number of resistant organisms present at infection.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| N of resistant organisms | a) | b) | c) | d) | e) |
|  |  |  |  |  |  |
| 1 | 2.920\*\*\* | 2.933\*\*\* | 2.838\*\*\* | 2.689\*\*\* | 2.222\*\*\* |
|  | (1.946, 3.895) | (1.959, 3.908) | (1.743, 3.934) | (1.578, 3.800) | (1.447, 2.997) |
| 2 | 13.337\*\*\* | 13.339\*\*\* | 12.307\*\*\* | 8.095\*\*\* | 5.787\*\*\* |
|  | (11.918, 14.755) | (11.920, 14.758) | (10.750, 13.864) | (6.509, 9.681) | (4.548, 7.025) |
| 3 or more | 26.212\*\*\* | 26.191\*\*\* | 25.247\*\*\* | 17.140\*\*\* | 15.249\*\*\* |
|  | (23.381, 29.042) | (23.361, 29.021) | (22.300, 28.195) | (14.144, 20.136) | (12.911, 17.587) |
| Control variables |  |  |  |  |  |
| Age |  | ● | ● | ● | ● |
| Gender |  | ● | ● | ● | ● |
| Bacteria FE |  |  | ● | ● | ● |
| Hospital-ICU FE |  |  |  | ● | ● |
| Infection Site |  |  |  | ● | ● |
| Procedures |  |  |  | ● | ● |
| Time to Infection |  |  |  |  | ● |
|  |  |  |  |  |  |

Significance: \*\*\* 1%, \*\* 5%, \*10%. Abbreviations: 95%CI: 95% confidence interval, FE: fixed effects.