Online Supplementary Material

Observed differences between males and females in surgically treated carpal tunnel syndrome among non-manual workers: a sensitivity-analysis of findings from a large population study. Supplementary material.

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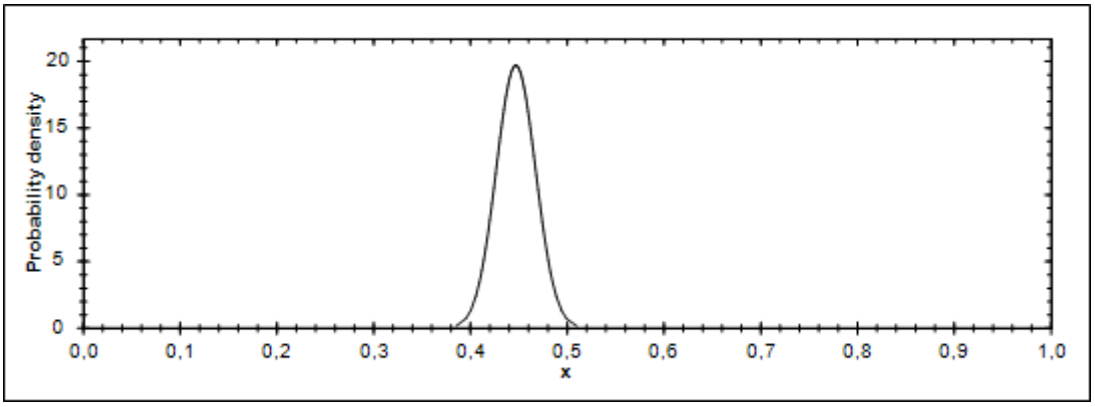
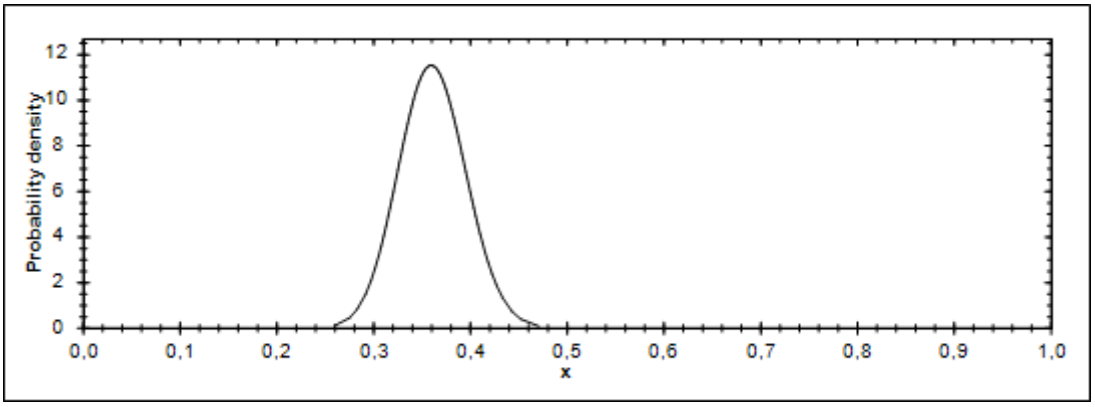
Supplementary Table 1. Classification of non-manual and manual workers based on available information.

	Tuscany discharge records	**ISTAT-2001 Classification of Occupations**
Non-manual workers	Managers	Legislators, senior officials and managers
	Self-employed professionals	Professionals
	Entrepreneurs	Technicians and associate professionals
	Clerical workers	Clerks
	Associated professionals	
Manual workers	Skilled/unskilled manual workers	Service and sales workers
	Service workers	Craft, trades and agricultural skilled workers
	Home-based workers	Plant and machine operators and assemblers
	Self-employed manual workers	Elementary occupations

Supplementary Figure 1. Probability of receiving surgery after carpal tunnel syndrome diagnosis among women. Beta distribution (parameter α = 269.55, parameter β = 333.45) solved based on observed data (Pr 44.7%, 95% confidence intervals 40.7%–48.8%).



Supplementary Figure 2. Probability of receiving surgery after carpal tunnel syndrome diagnosis among men. Beta distribution (parameter α = 69.64, parameter β = 123.36) solved based on observed data (Pr 36.1%, 95% confidence intervals 29.3%–43.3%).



Supplementary Appendix 1. Stata code written for the Monte Carlo simulation.

```
* Getting standard errors from observed data *
poisson cases b1.gender i.age, exposure(population)
global se_obs_gender=_se[0.gender]
global se_obs_age2=_se[2.age]
global se_obs_age3=_se[3.age]
global se_obs_age4=_se[4.age]
global se_obs_age5=_se[5.age]
global se_obs_age6=_se[6.age]
global se_obs_age7=_se[7.age]

* Stata program for Monte Carlo simulation *
capture program drop sim
program define sim, rclass
	preserve
	tempvar cases_adj
	gen `cases_adj'=round((1/rbeta(269.55,333.45)))*cases if gender==0
	replace `cases_adj'=round((1/rbeta(69.64,123.36)))*cases if gender==1
	poisson `cases_adj' b1.gender i.age, exposure(population)
	local adj_gender=exp(_b[0.gender]-invnorm(uniform())*$se_obs_gender)
	local adj_age2=exp(_b[2.age]-invnorm(uniform())*$se_obs_age2)
	local adj_age3=exp(_b[3.age]-invnorm(uniform())*$se_obs_age3)
	local adj_age4=exp(_b[4.age]-invnorm(uniform())*$se_obs_age4)
	local adj_age5=exp(_b[5.age]-invnorm(uniform())*$se_obs_age5)
	local adj_age6=exp(_b[6.age]-invnorm(uniform())*$se_obs_age6)
	local adj_age7=exp(_b[7.age]-invnorm(uniform())*$se_obs_age7)
	local HAL=rnormal(0.1327,0.0408)
	local HAL_max=0.2127
	local delta2=((_b[0.gender]-invnorm(uniform())*$se_obs_gender)-ln(2))/`HAL'
	local delta2_HAL_max=((_b[0.gender]-invnorm(uniform())*$se_obs_gender)- /*
	*/ ln(2))/`HAL_max'
	local delta1=((_b[0.gender]-invnorm(uniform())*$se_obs_gender)-ln(1))/`HAL'
	local delta1_HAL_max=((_b[0.gender]-invnorm(uniform())*$se_obs_gender)- /*
	*/ ln(1))/`HAL_max'
	return scalar adj_gender=`adj_gender'
	return scalar adj_age2=`adj_age2'
	return scalar adj_age3=`adj_age3'
	return scalar adj_age4=`adj_age4'
	return scalar adj_age5=`adj_age5'
	return scalar adj_age6=`adj_age6'
	return scalar adj_age7=`adj_age7'
	return scalar delta2=`delta2'
	return scalar delta1=`delta1'
	return scalar delta2_HAL_max=`delta2_HAL_max'
	return scalar delta1_HAL_max=`delta1_HAL_max'
	restore
end

* Monte Carlo simulation *
simulate adj_gender=r(adj_gender) adj_age2=r(adj_age2) adj_age3=r(adj_age3) /*
*/ adj_age4=r(adj_age4) adj_age5=r(adj_age5) adj_age6=r(adj_age6) adj_age7=r(adj_age7) /*
*/ delta1=r(delta1) delta1_HAL_max=r(delta1_HAL_max) delta2=r(delta2) /*
*/ delta2_HAL_max=r(delta2_HAL_max), reps(100000): sim

* Showing adjusted estimates and delta HAL *
foreach var in adj_gender adj_age2 adj_age3 adj_age4 adj_age5 adj_age6 adj_age7 delta1 /*
*/ delta1_HAL_max delta2 delta2_HAL_max{
	centile `var', centile(50 2.5 97.5)
}
```