

Comparison of in-hospital outcomes and processes of care by patient and physician sex: a single-centre retrospective cohort study

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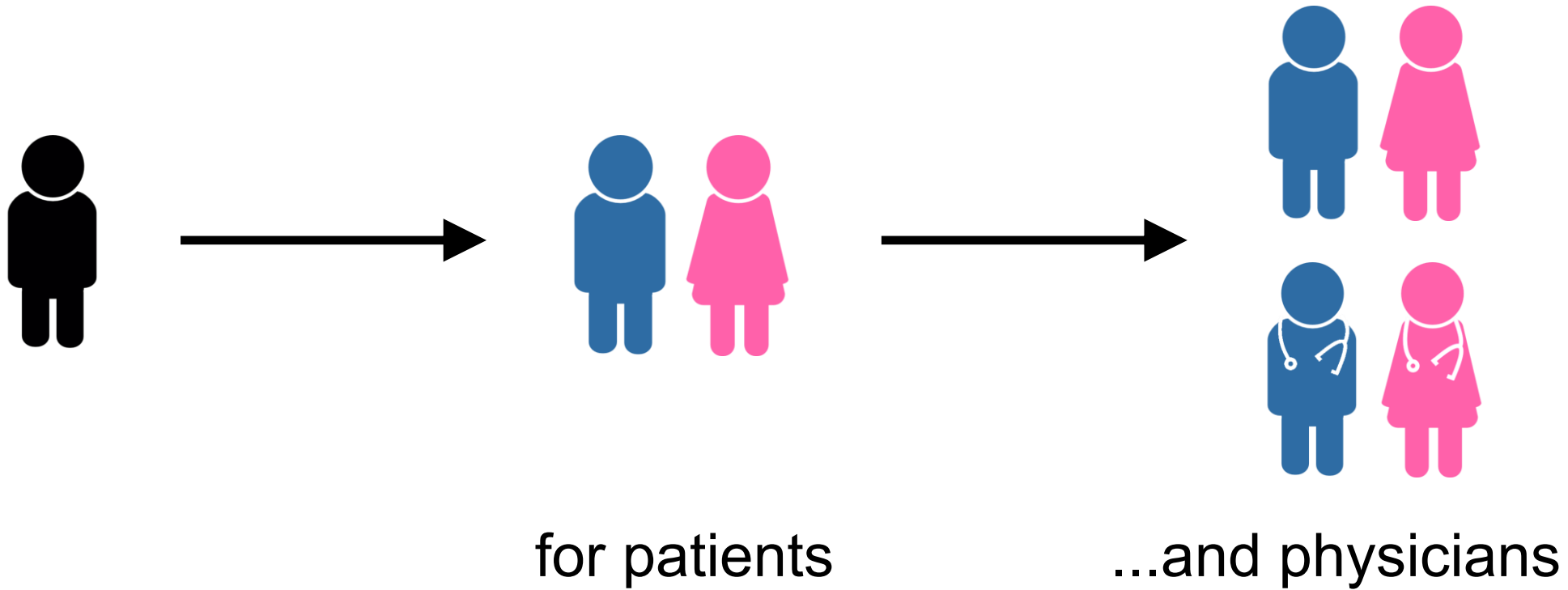
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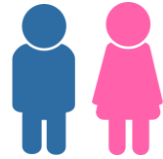
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BACKGROUND

Sex and gender in cardiovascular medicine



METHODS



20,094 inpatient stays

Internal medicine patients ≥ 18 years old
01.01.2014 to 31.07.2024 at CHUV



216 physicians

Chief resident or attending physician
signing the discharge letter



Multilevel mixed-effects regression models with **clustering** by physician
adjusting for patient (*age, insurance, comorbidities, admission year*)
and physician characteristics (*age, nationality*)

RESULTS

	Patient Sex		Physician Sex		Sex Interaction	
	Female vs. Male	P value	Female vs. Male	P value	Patient-Physician	P value
In-Hospital Outcomes						
In-hospital mortality	OR 0.72 (0.59 to 0.89)	0.002	OR 0.93 (0.76 to 1.13)	0.449	OR 0.99 (0.73 to 1.35)	0.965
30-day mortality	OR 0.75 (0.65 to 0.87)	<0.001	OR 0.90 (0.77 to 1.05)	0.165	OR 1.20 (0.97 to 1.49)	0.096
30-day readmission	OR 0.87 (0.77 to 0.99)	0.029	OR 1.01 (0.89 to 1.15)	0.820	OR 1.07 (0.89 to 1.29)	0.459
Processes of Care						
Resource Use						
Cost of stay	-4.26% (-6.08% to -2.41%)	<0.001	-0.67% (-2.97% to 1.69%)	0.575	-0.13% (-2.92% to 2.73%)	0.926
Length of stay	1.54% (-1.08% to 4.21%)	0.252	3.18% (-0.99% to 7.54%)	0.137	-0.23% (-3.99% to 3.68%)	0.906
Number of procedures	-6.44% (-9.76% to -3.01%)	<0.001	-1.43% (-5.86% to 3.21%)	0.540	-3.33% (-8.37% to 1.98%)	0.214
Number of medications	-0.05% (-2.33% to 2.48%)	0.970	-0.26% (-3.11% to 2.67%)	0.859	-1.65% (-5.09% to 1.90%)	0.358
Number of blood tests	-8.95% (-12.98% to -4.73%)	<0.001	0.90% (-8.78% to 11.59%)	0.861	-0.74% (-7.16% to 6.13%)	0.828
Advance Care Planning						
Do-resuscitate order	OR 0.64 (0.58 to 0.71)	<0.001	OR 0.94 (0.84 to 1.04)	0.224	OR 1.14 (0.98 to 1.31)	0.083
Intensive care unit order	OR 0.64 (0.55 to 0.73)	<0.001	OR 0.95 (0.81 to 1.10)	0.459	OR 1.24 (0.99 to 1.54)	0.056
Low-Value Care						
Non-indicated antihypertensives	1.86 (1.38 to 2.51)	<0.001	1.62 (1.18 to 2.23)	0.003	0.68 (0.45 to 1.03)	0.069
Non-indicated NSAIDs	1.36 (1.01 to 1.86)	0.046	0.99 (0.71 to 1.40)	0.990	0.88 (0.55 to 1.40)	0.579
Non-indicated lipid-lowering therapy	0.77 (0.65 to 0.91)	0.002	1.01 (0.83 to 1.23)	0.886	0.96 (0.75 to 1.24)	0.798

CONCLUSIONS

- Lower mortality, readmission, resource use, and fewer life-sustaining advance directives in **female patients**
- Notable sex differences in **low-value care**
- No differences in quality of care by **physician sex** or **patient-physician sex interactions**
- Need for **sex-disaggregated quality monitoring** and for addressing **sex disparities** in research, clinical care and medical education

