

COMPLICATIONS AFTER HIP FRACTURE SURGERY - CHALLENGES AND SOLUTIONS

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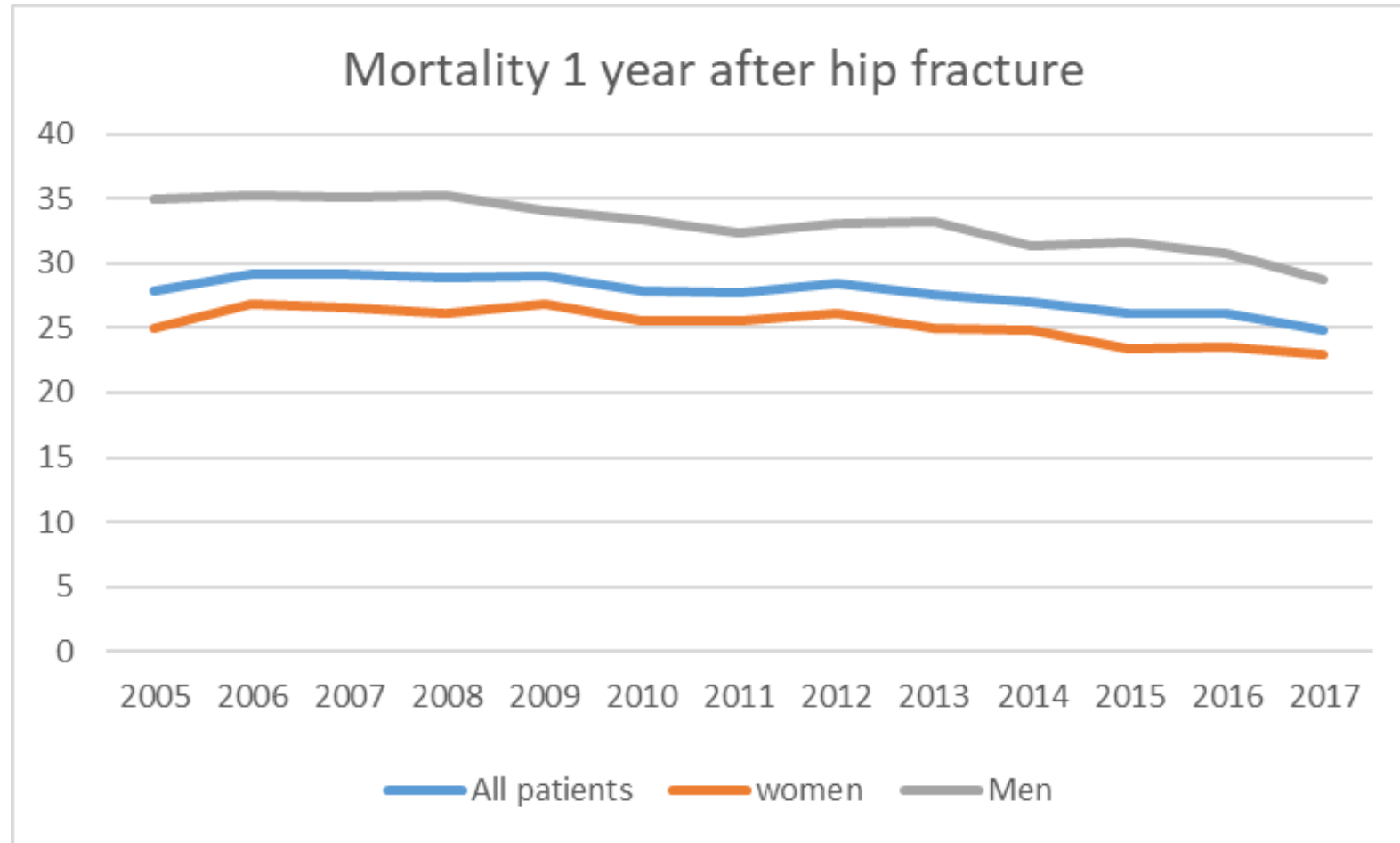
PATIENT CHARACTERISTICS

	1997–2001 <i>n</i> = 30,601	2002–2006 <i>n</i> = 28,270	2007–2012 <i>n</i> = 30,791	2013–2018 <i>n</i> = 26,300
Year	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
Sex				
Female	22,153 (72.4)	20,040 (70.9)	17,336 (56.3)	17,336 (65.9)
Male	8448 (27.6)	8230 (29.1)	13,455 (43.7)	8964 (34.1)
Age				
Median (IQR)	82.3 (75.7, 87.6)	82.3 (75.7, 87.6)	82.4 (74.4, 87.9)	81.9 (73.5, 88.3)
55–64	1892 (6.2)	1892 (6.7)	2837 (9.2)	2328 (8.9)
65–74	5062 (16.5)	5062 (18.0)	5297 (17.2)	5214 (19.8)
75–84	12,229 (39.7)	12,229 (43.5)	10,728 (34.8)	8739 (33.2)
≥85	11,293 (36.6)	10,383 (36.7)	11,929 (38.7)	10,019 (38.1)
CCI-score				
None (CCI=0)	16,958 (55.4)	14,346 (50.7)	15,215 (49.4)	12,739 (48.4)
Medium (CCI=1–2)	10,958 (35.8)	10,734 (38.0)	11,723 (38.1)	9969 (37.9)
High (CCI ≥3)	2666 (8.7)	3190 (11.3)	3853 (12.5)	3592 (13.7)

Mental illness history app. 30%.



MORTALITY AFTER HIP FRACTURE



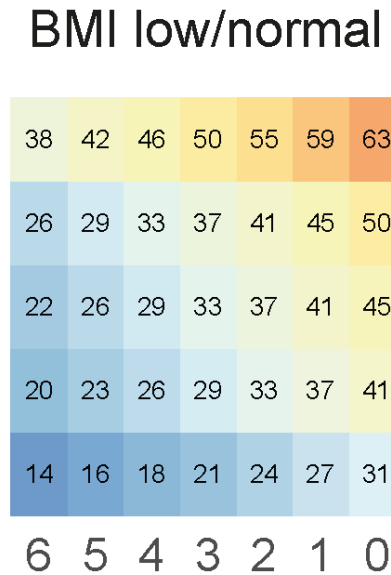
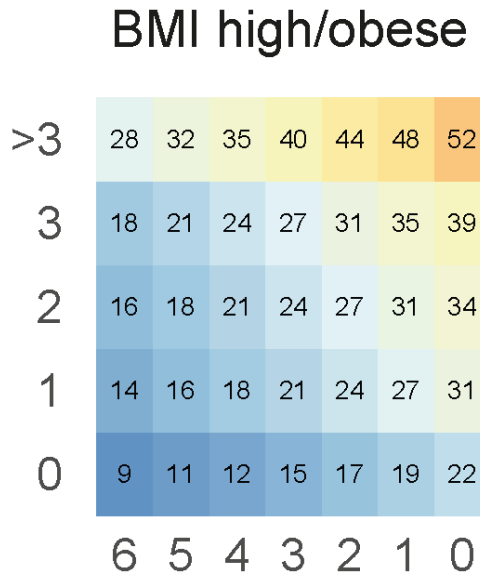
MORTALITY 1 YEAR



Own home

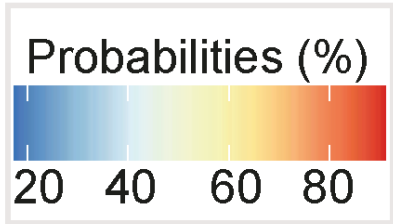
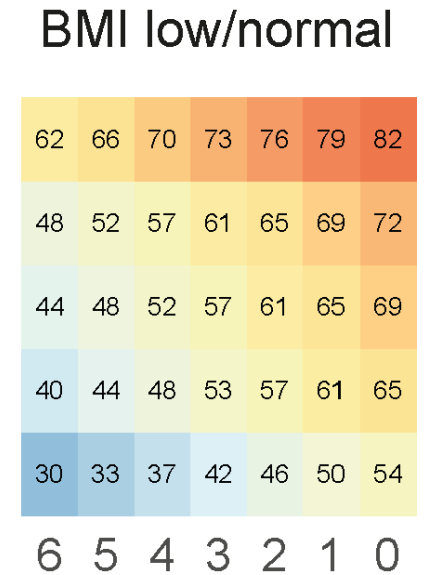
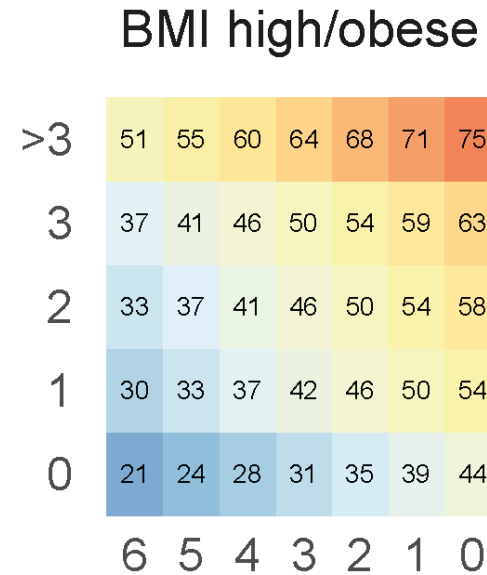
Nursing home

Charlson Comorbidity Index

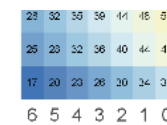
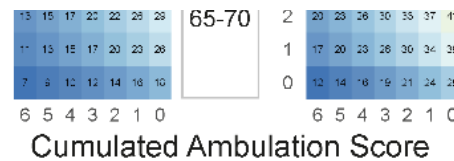
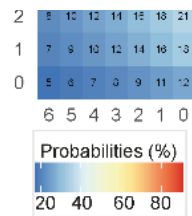


Age

80-85



Cumulated Ambulation Score



Hjelholt JH et al. Age Ageing 2022

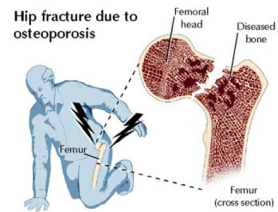
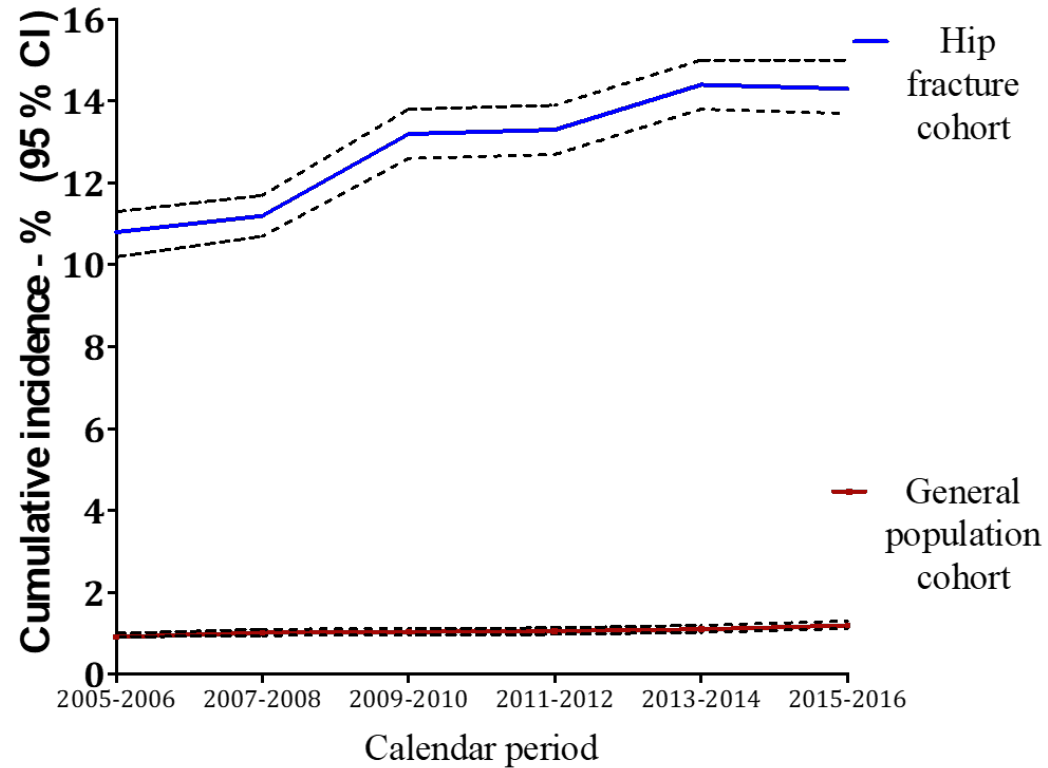
COMMON COMPLICATIONS AFTER HIP FRACTURE

INFECTION



INFECTION

Any infection within 30 days: hip fracture surgery vs general population

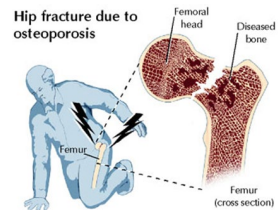


INFECTION

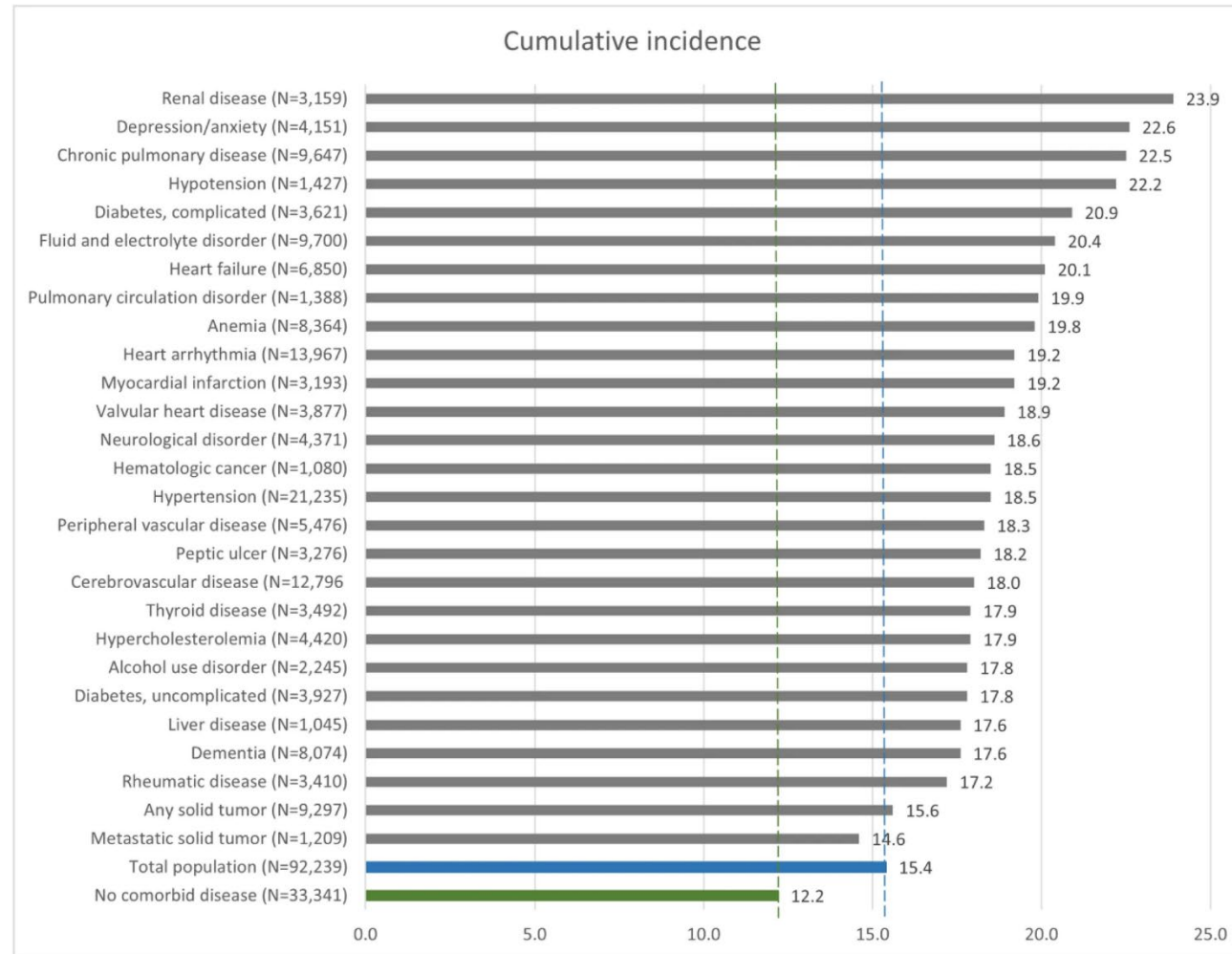
Patients who sustain infection after hip fracture have

2.7-8.9 times 

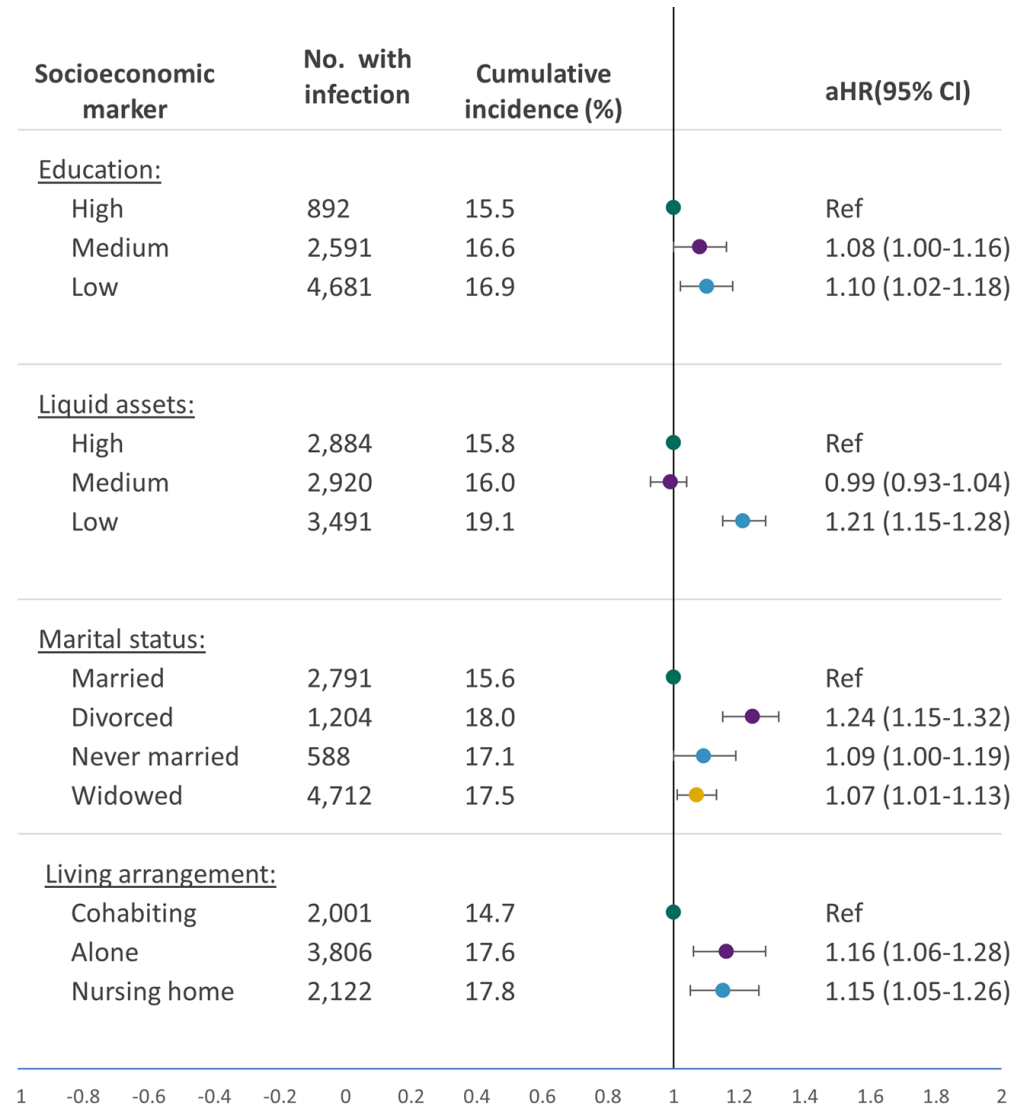
30 days mortality compared to patients without infection



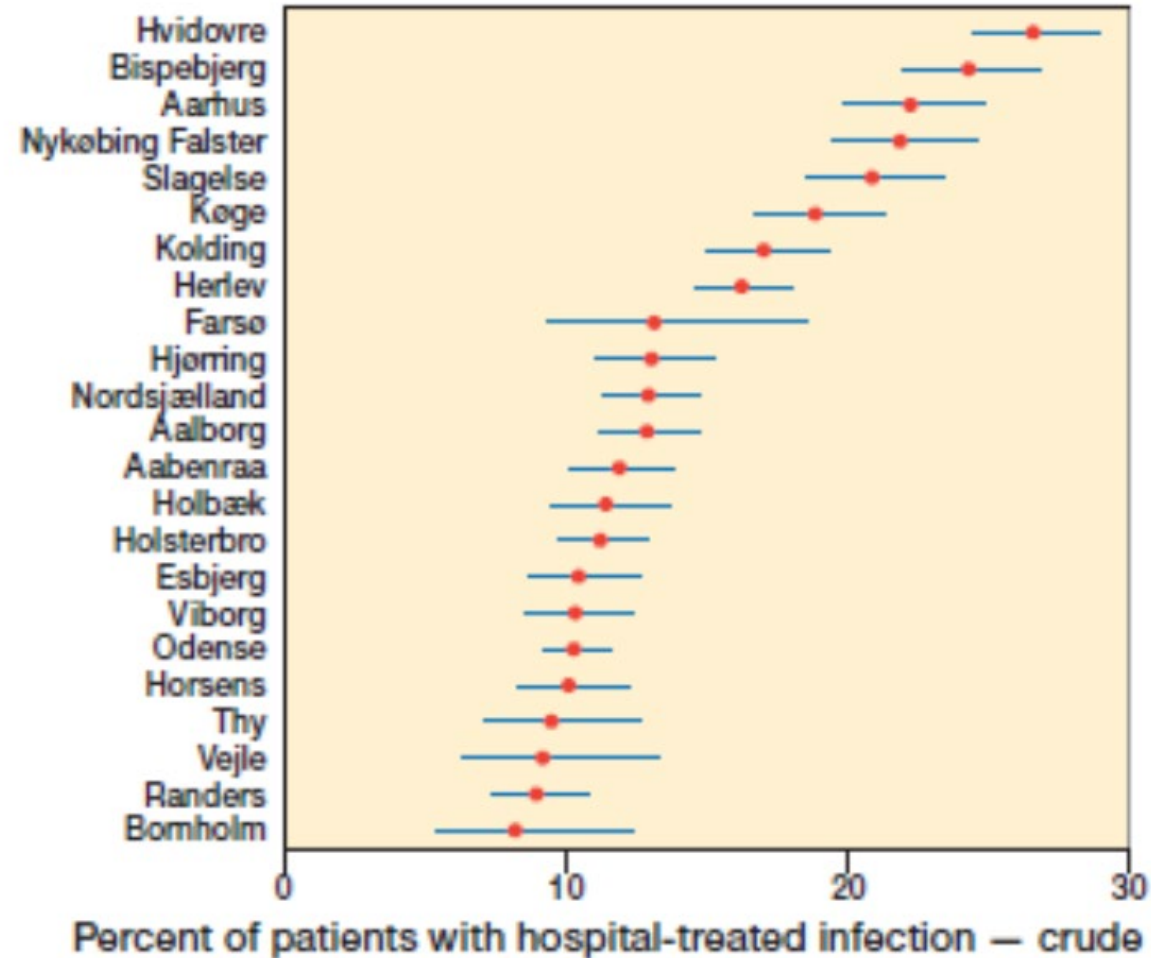
COMORBIDITY AND INFECTION WITHIN 30 DAYS



SOCIAL INEQUALITY IN INFECTION RISK



HOSPITAL VARIATION IN INFECTION RISK



ACUTE KIDNEY INJURY (AKI)

ACUTE KIDNEY INJURY (AKI)

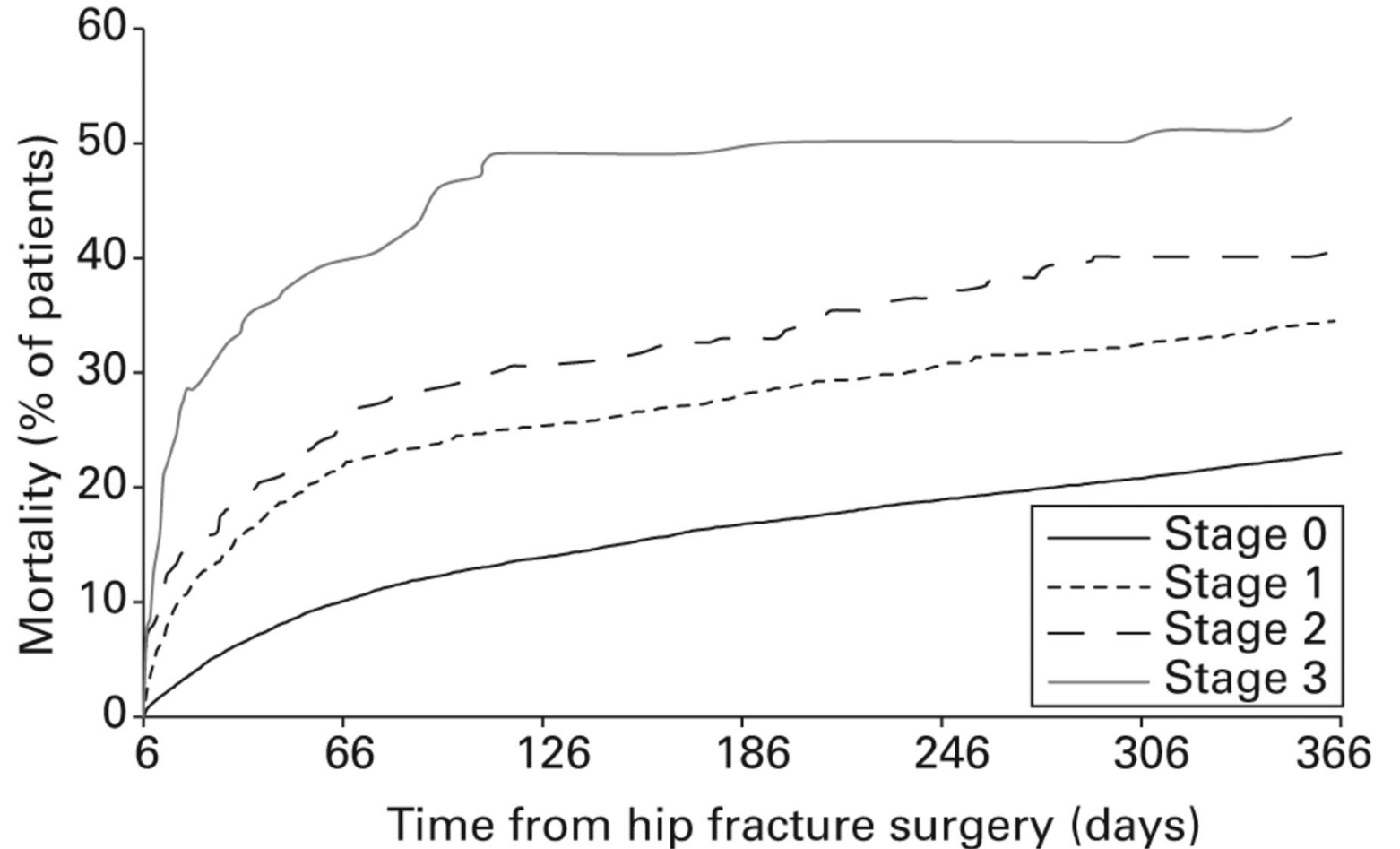
Risk of AKI 5 days after hip fracture surgery

Overall=13%

AKI stage 1= 9%

AKI stage 2= 3%

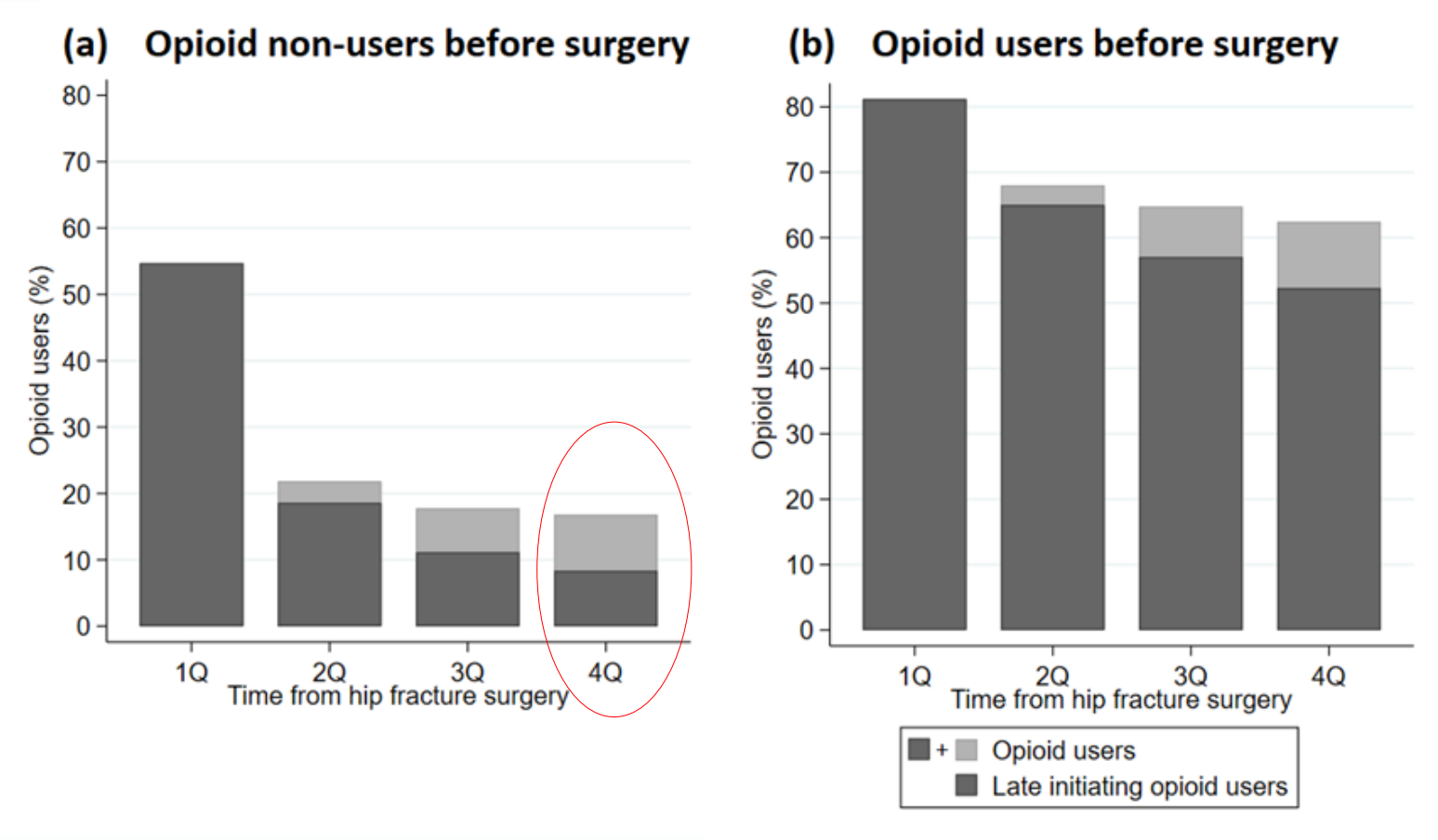
AKI stage 3= 1%



OPIOID USE



OPIOID USE

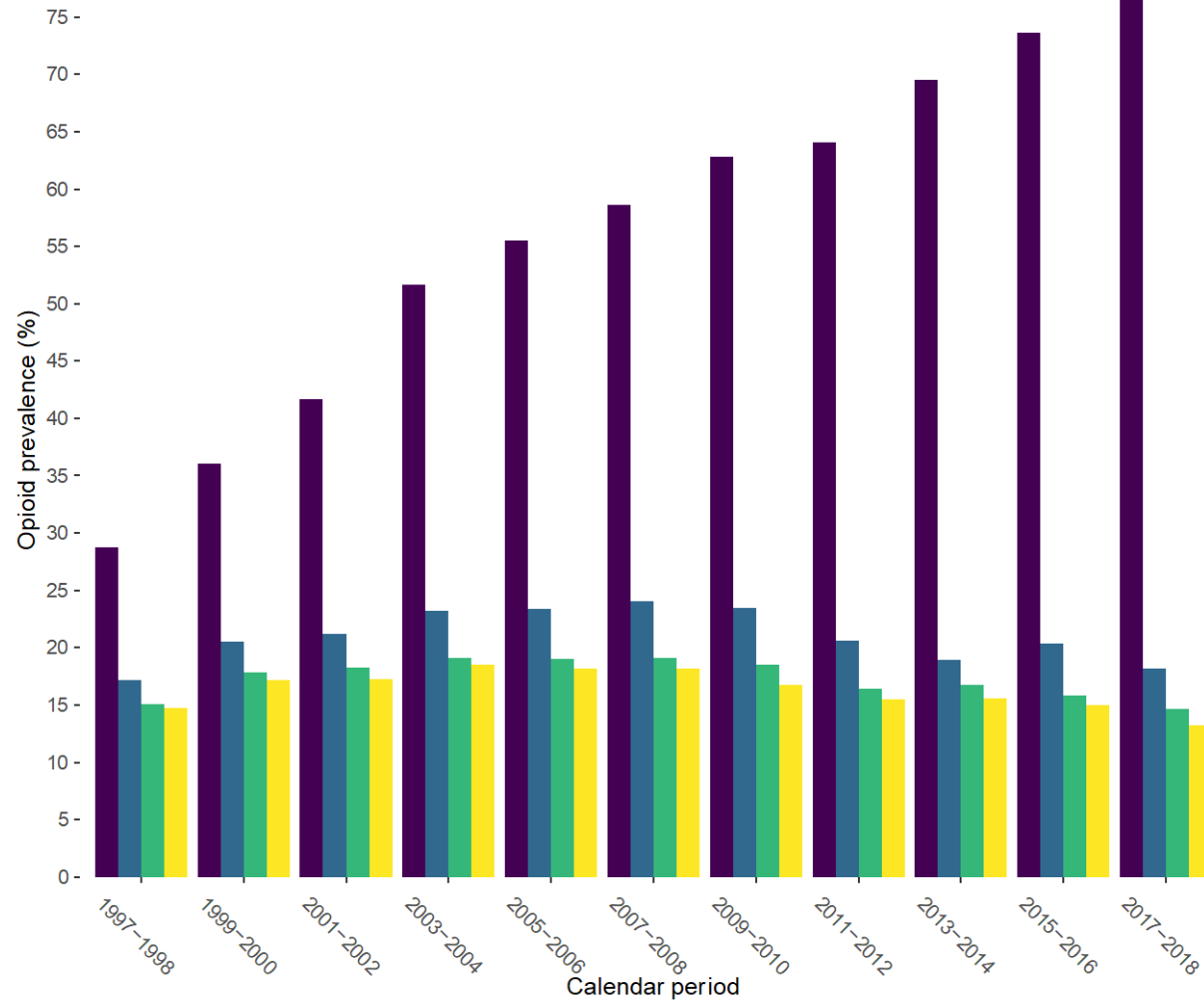


INITIAL OPIOID TYPE AND CHRONIC OPIOID USE

Opioid type	Proportion with long-term opioid use		Multivariable analysis	
	n	%	aOR	95% CI
2005–2015 (n=21,255)				
Morphine	270	(9%)	Ref	Ref
Oxycodone	852	(14%)	1.76	[1.52–2.03]
Fentanyl	56	(29%)	4.37	[3.12–6.12]
Codeine	59	(13%)	1.55	[1.14–2.09]
Tramadol	994	(13%)	1.56	[1.35–1.80]
Buprenorphine	115	(33%)	5.36	[4.14–6.94]
Other opioids	10	(8%)	0.93	[0.48–1.80]
>1 type	857	(27%)	3.83	[3.31–4.44]



PREVALENCE OF OPIOID USE AFTER HIP FRACTURE

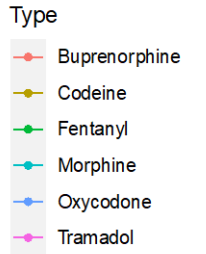
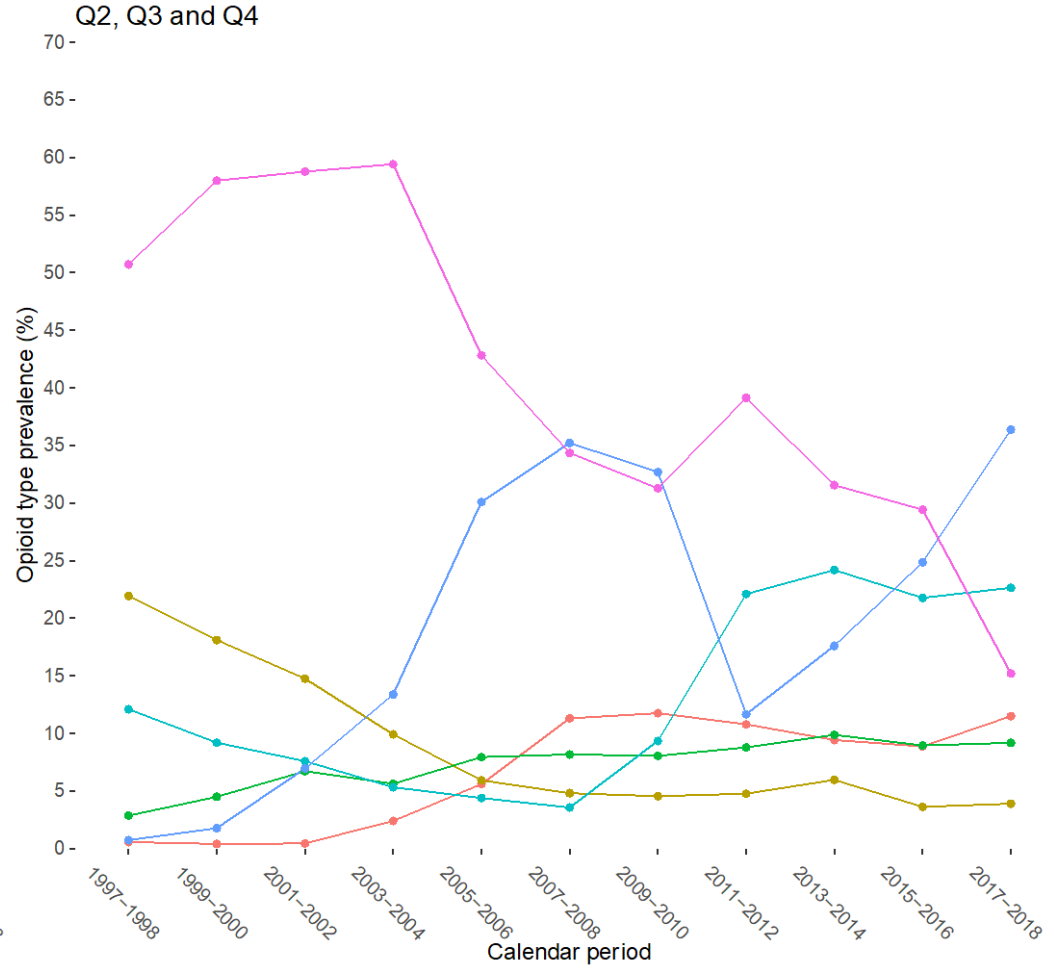
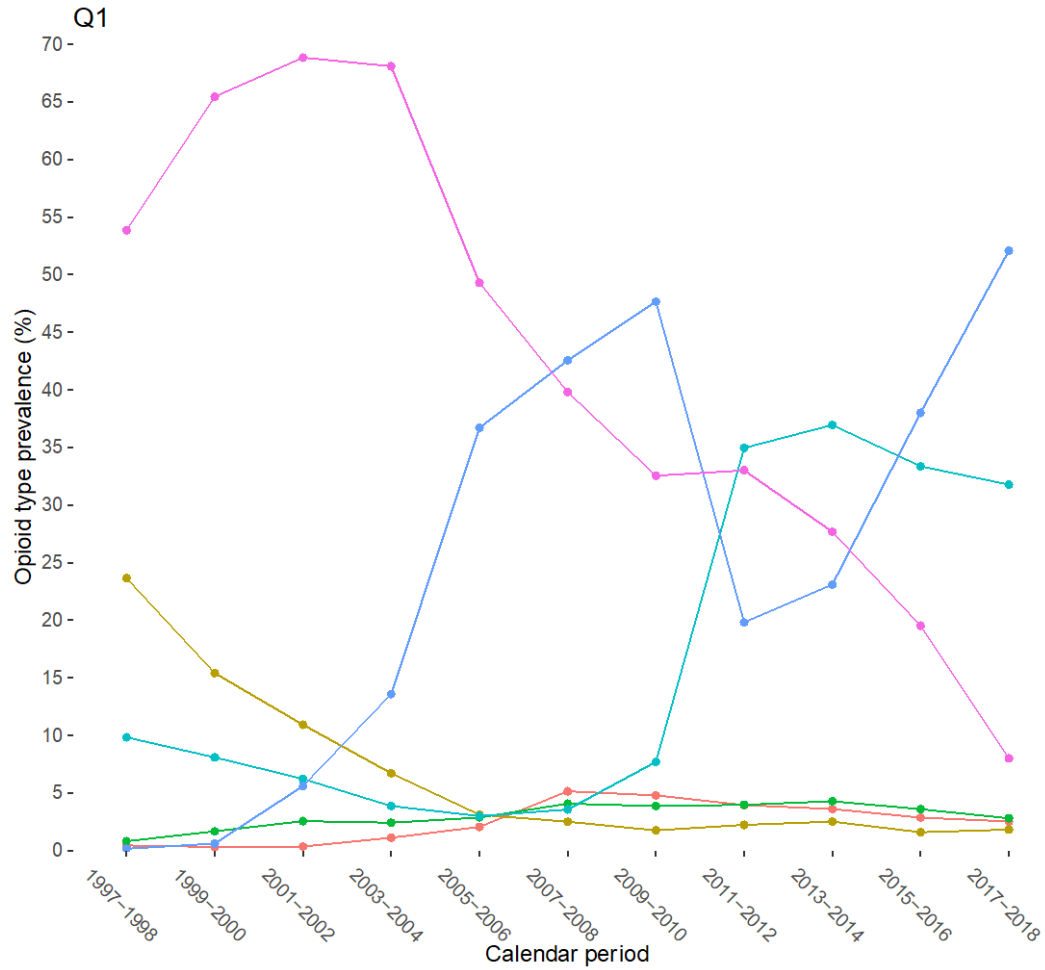


Q1
Prevalence rate ratio
= 2.7

Q2-Q4
Prevalence rate ratio
≈ 1.0

Adjusted for age, sex and comorbidity

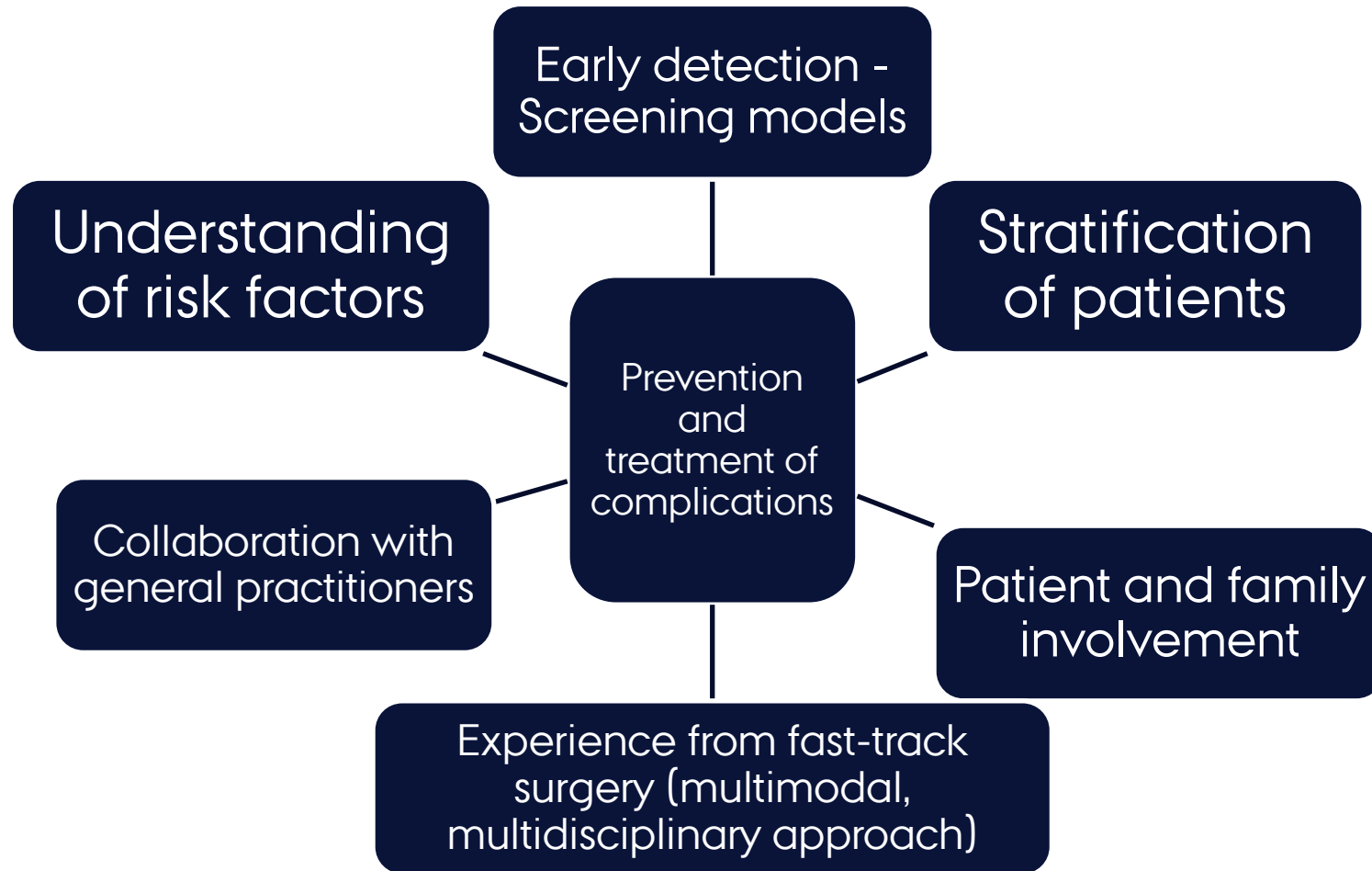
PREVALENCE STRATIFIED ON OPIOID TYPE



CONCLUSION AND PERSPECTIVES

- Hip fracture patients are highly susceptible for postoperative complications
- Improvement of prevention and treatment of complications

CONCLUSION AND PERSPECTIVES



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