

Supplement to:

The effect of community-acquired bacteraemia on return to workforce, risk of sick leave, permanent disability pension and death: A Danish population-based cohort study

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Supplement, Table 1. DREAM codes (version 28) used in the study.

DREAM category	Subcategory	Transfer payment, examples	DREAM codes
Work-ready	Employed	No transfer payment, leave, apprentice (adult), student support, maternity leave payment	No code if no transfer payment, 121-126, 412-413, 511-522, 611, 651-661, 881
	Unemployed	Unemployment benefit, vocational pre-rehabilitation and rehabilitation benefit	111-113, 130-138, 211-299, 730-738, 750,752-758, 760, 762-768
Sick leave		Sickness absence benefit	890, 892-899
Permanent disability pension		"Flex-job" payment	740-748, 771-774
		Disability pension	781-783

During the study period, Danes who were ≥ 60 years of age could go on voluntary early retirement pension ("efterløn"), and those who were ≥ 65 years of age could go on public retirement pension. Since we studied subjects 20-58 years of age, retirement codes are not detailed here. All DREAM codes are detailed elsewhere

(http://www.dst.dk/da/TilSalg/Forskningservice/Data/Andre_Styrelser.aspx)

Supplement, Table 2. ICD and ATC codes used in the study

Comorbidities (previous)	ICD codes
Myocardial infarction	ICD-8: 410; ICD-10: I21-I23
Cerebrovascular disease	ICD-8: 430-438; ICD-10: I60-I69, G45, G46
Congestive heart failure	ICD-8: 427.09, 427.10, 427.11, 427.19, 428.99, 782.49, ICD-10: I11.0, I13.0, I13.2, I50
Peripheral vascular disease	ICD-8: 440, 441, 442, 443, 444, 445; ICD-10: I70, I71, I72, I73, I74, I77
Hemiplegia	ICD-8: 344; ICD-10: G81, G82
Diabetes	ICD-8: 249.00, 249.06, 249.07, 249.09, 250.00, 250.06, 250.07, 250.09; ICD-10: E10.0, E10.1, E10.9, E11.0, E11.1, E11.9; ATC: A10A, A10B
Diabetes with end-organ damage	ICD-8: 249.01-249.05, 249.08, 250.01-250.05, 250.08; ICD-10: E10.2-E10.8, E11.2-E11.8
Chronic pulmonary disease	ICD-8: 490-493, 515-518; ICD-10: J40-J47, J60-J67, J68.4, J70.1, J70.3, J84.1, J92.0, J96.1, J98.2, J98.3; ATC: R03
Any tumor	ICD-8: 140-194; ICD-10: C00-C75
Leukemia	ICD-8: 204-207; ICD-10: C91-C95
Lymphoma	ICD-8: 200-203, 275.59; ICD-10: C81-C85, C88, C90, C96
Metastatic solid tumor	ICD-8: 195-199; ICD-10: C76-C80
Connective tissue disease	ICD-8: 712, 716, 734, 446, 135.99; ICD-10: M05, M06, M08, M09, M30-M36, D86
Ulcer disease	ICD-8: 530.91, 530.98, 531-534; ICD-10: K22.1, K25-K28
Moderate to severe renal disease	ICD-8: 403, 404, 580-583, 584, 590.09, 593.19, 753.10-753.19, 792; ICD-10: I12, I13, N00-N05, N07, N11, N14, N17-N19, Q61
Mild liver disease	ICD-8: 571, 573.01, 573.04; ICD-10: B18, K70.0-K70.3, K70.9, K71, K73, K74, K76.0
Moderate to severe liver disease	ICD-8: 070.00, 070.02, 070.04, 070.06, 070.08, 573.00, 456.00-456.09; ICD-10: B15.0, B16.0, B16.2, B19.0, K70.4, K72, K76.6, I85

Alcoholism-related disease	ICD-8: 291, 303, 979, 980, 577.10; ICD-10: F.10, K29.2, K.86.0, Z72.1, R78.0, T51; ATC: N07BB01
Dementia	ICD-8: 290.09-290.19, 293.09; ICD-10: F00-F03, F05.1, G30
AIDS	ICD-8: 079.83; ICD-10: B21-B24
Medication use	ATC codes (any previous use unless specified)
Drugs for cardiovascular disease	
Nitrates	C01DA (if ≥ 2 prescriptions are registered).
Diuretics	C03
Beta-blockers	C07
Calcium-channel antagonists	C08
ACE inhibitors	C09 (C02 before 1 January 1996)
Aspirin	B01AC06, N02BA01 (previous 125 days)
Antidiabetics	A10A, A10B
Inhaled drugs for pulmonary disease	R03
Disulfiram	N07BB01
Systemic antibiotics	J01 (past 4 weeks)

Supplement, Table 3. Bacteremia patients' risk for sick leave, permanent disability pension, and mortality by focus of infection compared to blood culture negative controls.

	Respiratory tract infection (N=164)	Urinary tract infection (N=93)	Miscellaneous (N=144)	Unknown or multiple (N=49)
Sick leave, ≥ 4 weeks				
Risk, n (% of N)	66 (40.2)	26 (28.0)	72 (50.0)	17 (34.7)
Adj. RD % (95% CI) ^a	13.6 (6.2-21.2)	2.1 (-7.0-11.2)	24.1 (15.9-32.2)	7.9 (-5.3-21.0)
Adj. RR (95% CI) ^a	1.51 (1.26-1.83)	1.05 (0.76-1.46)	1.87 (1.58-2.21)	1.32 (0.90-1.92)
Sick leave, ≥ 52 weeks				
Risk, n (% of N)	7 (4.3)	1 (1.1)	16 (11.1)	2 (7.1)
Adj. RD % (95% CI) ^a	1.1 (-1.8-4.1)	-2.0 (-2.4--1.6)	8.3 (3.1-13.4)	1.2 (-4.4-6.7)
Adj. RR (95% CI) ^a	1.73 (0.90-3.33)	4.65 (2.62-8.24)	1.33 (0.44-4.07)	2.49 (0.36-17.29)
Disability pension, 1-year				
Risk, n (% of N)	6 (3.7)	2 (2.2)	2 (1.4)	2 (4.1)
Adj. RD % (95% CI) ^a	0.7 (-2.2-3.5)	-1.2 (-4.2-1.8)	-1.6 (-3.5-3.4)	-0.2 (-5.6-5.2)
Adj. RR (95% CI) ^a	1.40 (0.52-3.77)	0.52 (0.11-2.52)	0.63 (0.15-2.70)	1.18 (0.29-4.85)
Mortality, 30-day				
Risk, n (% of N)	3 (1.8)	0 (0)	8 (5.6)	7 (14.3)
Adj. RD % (95% CI) ^a	0.1 (-2.0-2.2)	-1.9 (-2.3--1.4)	3.8 (0.1-7.5)	12.4 (2.6-22.2)
Adj. RR (95% CI) ^a	0.47 (0.09-2.35)	-	3.39 (1.55-7.42)	10.14 (3.82-26.89)
Mortality, 1-year				
Risk, n (% of N)	8 (4.9)	2 (2.2)	15 (10.4)	11 (22.5)
Adj. RD % (95% CI) ^a	-0.1 (-3.2-3.0)	-2.6 (-5.4-3.2)	5.8 (0.9-10.7)	16.0 (4.6-27.5)
Adj. RR (95% CI) ^a	1.26 (0.65-2.44)	0.68 (0.17-2.83)	2.46 (1.53-3.97)	3.66 (1.76-7.64)

Abbreviations: CAB, community-acquired bacteraemia. Adj., adjusted. ^aRisk difference and relative risk pertains to CAB patients versus blood culture negative controls (absolute risk estimates for controls can be found in main manuscript, Table 2). Risk difference and relative risk computed by log-binomial regression (sick leave analyses) and regression analyses based on pseudo-observations (disability pension and mortality analyses). Estimates are adjusted for age, gender, Charlson comorbidity score, and alcoholism-related disease (due to few events, 30 day mortality estimates are adjusted for age and gender only).

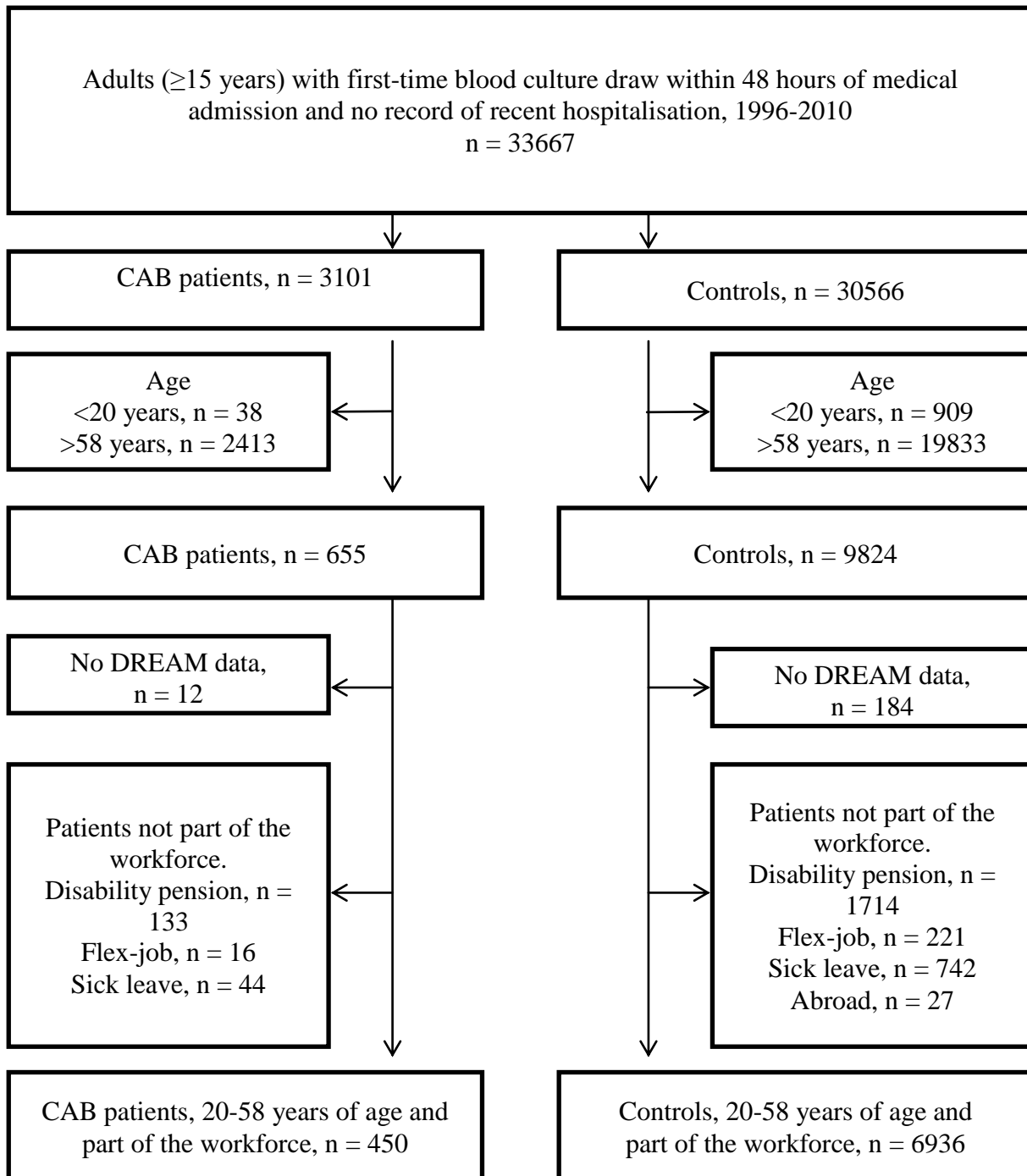
Supplement, Table 4. Risk for sick leave, disability pension, and mortality by age, gender, and employment status for community-acquired bacteraemia patients and blood culture negative controls.

	Age group, years			Gender		Employment status, 4 weeks before blood culture draw		
	20-34	35-49	50-58	Female	Male	Employed ^a	Unemployed ^b	Sick leave ^c
Sick leave \geq 4 weeks								
Risk, CAB pts.	28/85 (32.9)	67/178 (37.6)	86/187 (46.0)	79/224 (35.3)	102/226 (45.1)	98/281 (34.9)	28/107 (26.2)	55/62 (88.7)
Risk, Controls	335/2338 (14.3)	721/2676 (26.9)	602/1922 (31.3)	707/3100 (22.8)	951/3836 (24.8)	843/4624 (18.2)	200/1384 (14.5)	615/928 (66.3)
Adj. RR (CI) ^d	2.29 (1.68-3.13)	1.39 (1.14-1.70)	1.47 (1.24-1.74)	1.33 (1.11-1.61)	1.66 (1.42-1.93)	1.71 (1.44-2.03)	1.81 (1.37-2.40)	1.23 (1.12-1.36)
Sick leave \geq 52 weeks								
Risk, CAB pts.	6/85 (7.1)	5/178 (2.8)	15/187 (8.0)	11/224 (4.9)	15/226 (6.6)	11/281 (3.9)	6/107 (5.6)	9/62 (14.5)
Risk, Controls	29/2338 (1.2)	80/2676 (3.0)	72/1922 (3.8)	77/3100 (2.5)	104/3836 (2.7)	78/4624 (1.7)	29/1384 (2.1)	74/928 (8.0)
Adj. RR (CI) ^d	5.69 (2.43-3.34)	0.94 (0.38-2.28)	2.16 (1.27-3.70)	1.76 (0.95-3.27)	2.17 (1.28-2.67)	1.97 (1.06-3.68)	2.33 (0.99-5.49)	1.74 (0.91-3.32)
1-year disability pension								
Risk, CAB pts.	0/85 (0)	5/178 (2.8)	7/187 (3.7)	4/224 (1.8)	8/226 (3.5)	6/281 (2.1)	5/107 (4.7)	1/62 (1.6)
Risk, Controls	20/2338 (0.9)	69/2676 (2.6)	94/1922 (4.9)	81/3100 (2.6)	102/3836 (2.7)	69/4624 (1.5)	102/1384 (7.4)	12/928 (1.3)
Adj. RR (CI) ^d	-	0.85 (0.22-3.34)	0.97 (0.42-2.23)	0.44 (0.13-1.51)	1.45 (0.65-3.21)	1.52 (0.52-4.35)	0.54 (0.17-1.74)	1.25 ^e (0.16-9.45)
30-day mortality								
Risk, CAB pts.	1/85 (1.2)	7/178 (3.9)	10/187 (5.4)	8/224 (3.6)	10/226 (4.4)	10/281 (3.6)	7/107 (6.5)	1/62 (1.6)
Risk, Controls	9/2338	36/2676	54/1922	44/3100	55/3836	55/4624	30/1384	14/928

	(0.4)	(1.4)	(2.8)	(1.4)	(1.4)	(1.2)	(2.2)	(1.5)
Adj. RR (CI) ^d	3.01 ^e (0.39-23.9)	2.36 (0.82-6.81)	1.87 (0.88-4.03)	1.82 (0.61-5.40)	2.53 (1.00-6.43)	1.95 (0.89-4.28)	2.63 (1.09-6.36)	1.07 ^e (0.14-8.00)
1-year mortality								
Risk, CAB pts.	2/85 (2.4)	11/178 (6.2)	23/187 (12.3)	16/224 (7.1)	20/226 (8.8)	19/281 (6.8)	12/107 (11.2)	5/62 (8.1)
Risk, Controls	25/2338 (1.1)	100/2676 (3.7)	146/1922 (7.6)	99/3100 (3.2)	172/3836 (4.5)	139/4624 (3.0)	76/1384 (5.5)	56/928 (6.0)
Adj. RR (CI) ^d	2.19 ^e (0.53-9.1)	1.66 (0.86-3.20)	1.59 (1.03-2.46)	1.52 (0.93-2.49)	1.73 (0.99-3.02)	1.81 (1.06-3.08)	1.59 (0.86-2.93)	1.12 (0.42-3.00)

Abbreviations: Adj., adjusted. RR, relative risk. CI, confidence interval. ^aSubjects who were registered as employed and actively working during all 4 weeks before admission. ^bSubjects who spent all 4 weeks as unemployed (84.7%) and subjects who were employed/unemployed (15.3%). ^cSubjects who were on sick leave for a maximum of 3 weeks in the previous 4 weeks, and otherwise employed or unemployed. Absolute risk estimates “Risk” are n/N (%). ^dRelative risk estimates with 95% confidence intervals pertain to CAB patients versus blood culture negative controls, and are adjusted for age, gender, and Charlson comorbidity score. ^eUnadjusted estimates presented due to few events.

Supplement, Figure 1. Flow chart of hospitalised medical study subjects with first-time blood cultures, North Denmark, 1996-2010.



Abbreviations: CAB, community-acquired bacteraemia. Each CAB patient was matched to 10 population controls who had no recent hospital admission (previous 30 days) on year of birth, gender, and calendar-time (population controls had to be alive on the date of blood culture draw). Of these 4500 population controls some were excluded because of previous blood culture draw (n=132), age of 59 years (n=35), no DREAM data (n=99), or for not being part of the workforce in the previous four weeks (disability pension [n=336], long-term sick leave [88], abroad [55]) which left 3765 population controls for analysis.

Supplement, Figure 2. Cumulative mortality in workforce CAB patients, blood culture negative controls, and population controls, North Denmark, 1996-2011.

