

**Table S1.** ICD-10 codes for diagnosis and therapeutic procedures and pressure ulcers used in this investigation.

ICD-10 codes	
Community-acquired pneumonia *	J12 to J18 as primary diagnosis with a POA indicator of "Y". J12 to J18 in any of the secondary diagnosis fields (2-20) and with a POA indicator of "Y".
No invasive mechanical ventilation	5A09357, 5A09457, 5A09557
Invasive mechanical ventilation	5A1945Z, 5A1955Z, 5A1935Z
<i>Aspergillus</i>	B44.9
<i>Escherichia coli</i>	J15.5
<i>Haemophilus influenzae</i>	J14
<i>Klebsiella pneumoniae</i>	J15
<i>Legionella</i>	A48.1
Non specified <i>Streptococcus</i>	J15.4
Other Gram negative bacteria	J15.6
<i>Influenza virus</i>	J09.X1, J10.00 J10.01, J10.08, J11.0, J11.00, J11.08
Other virus	J12.XX
<i>Pseudomonas aeruginosa</i>	J15.1
<i>Staphylococcus aureus</i>	J15.211 AND J15.212
<i>Streptococcus pneumoniae</i>	J13

\*Each discharge diagnosis has a "Present on Admission (POA)" indicator assigned according to the ICD-10-CM Official Guidelines for Coding and Reporting (<https://icdlist.com/icd-10/guidelines/>). The reporting options and definitions for POA are "Y" (present at admission); "N" (not present at admission); "U" (lack documentation to determine presence at admission); "W" (provider is unable to clinically determine if the condition was present); and unreported/not used.

**Table. S2.** Distribution of pneumonia pathogens in patients with and without T2DM hospitalized with community-acquired pneumonia (CAP) in Spain from 2016 to 2019

		2016	2017	2018	2019	p-value
<i>Aspergillus</i> , n(%)	<b>T2DM</b>	19(0.07)	21(0.06)	25(0.06)	18(0.05)	0.751
	<b>No T2DM</b>	86(0.1)	93(0.1)	99(0.1)	85(0.09)	0.656
<i>Escherichia coli</i> , n(%)	<b>T2DM</b>	123(0.42)	134(0.39)	168(0.43)	163(0.43)	0.776
	<b>No T2DM</b>	391(0.46)	418(0.46)	440(0.43)	423(0.42)	0.568
<i>Haemophilus influenzae</i> , n(%)	<b>T2DM</b>	186(0.64)	255(0.74)	328(0.84)	285(0.75)	0.024
	<b>No T2DM</b>	644(0.75)	736(0.8)	897(0.87)	964(0.97)	<0.001
<i>Influenza pneumoniae</i> , n(%)	<b>T2DM</b>	795(2.73)	879(2.54)	1830(4.7)	1633(4.32)	<0.001
	<b>No T2DM</b>	3321(3.88)	2504(2.73)	5434(5.26)	5074(5.1)	<0.001
<i>Klebsiella pneumoniae</i> , n(%)	<b>T2DM</b>	150(0.51)	159(0.46)	203(0.52)	196(0.52)	0.615
	<b>No T2DM</b>	377(0.44)	474(0.52)	482(0.47)	545(0.55)	0.004
<i>Legionella</i> , n(%)	<b>T2DM</b>	12(0.04)	20(0.06)	29(0.07)	22(0.06)	0.368
	<b>No T2DM</b>	47(0.05)	58(0.06)	90(0.09)	65(0.07)	0.044
Non specified <i>Streptococcus</i> , n(%)	<b>T2DM</b>	66(0.23)	77(0.22)	78(0.2)	105(0.28)	0.151
	<b>No T2DM</b>	224(0.26)	245(0.27)	327(0.32)	299(0.3)	0.073
Other Gram-negative bacteria, n(%)	<b>T2DM</b>	152(0.52)	190(0.55)	187(0.48)	250(0.66)	0.006
	<b>No T2DM</b>	528(0.62)	550(0.6)	580(0.56)	617(0.62)	0.309
Other virus, n (%)	<b>T2DM</b>	175(0.6)	220(0.64)	311(0.8)	425(1.13)	<0.001
	<b>No T2DM</b>	696(0.81)	674(0.73)	1061(1.03)	1185(1.19)	<0.001
<i>Pseudomonas aeruginosa</i> , n(%)	<b>T2DM</b>	309(1.06)	294(0.85)	339(0.87)	362(0.96)	0.022
	<b>No T2DM</b>	960(1.12)	1022(1.11)	1105(1.07)	1083(1.09)	0.690
<i>Staphylococcus aureus</i> , n(%)	<b>T2DM</b>	230(0.79)	299(0.87)	370(0.95)	342(0.91)	0.154
	<b>No T2DM</b>	725(0.85)	724(0.79)	870(0.84)	904(0.91)	0.044
<i>Streptococcus pneumoniae</i> , n(%)	<b>T2DM</b>	1915(6.57)	2542(7.35)	3396(8.72)	3851(10.2)	<0.001
	<b>No T2DM</b>	6584(7.69)	8008(8.72)	10724(10.38)	11402(11.45)	<0.001

T2DM: Type 2 diabetes mellitus;

**Table. S3.** Distribution of pneumonia pathogens in women and men with T2DM hospitalized with community-acquired pneumonia (CAP), in Spain (2016-2019), before and after propensity score matching.

	Before PSM			After PSM		
	T2DM Men	T2DM Women	p-value	T2DM Men	T2DM Women	p-value
<i>Aspergillus</i> , n(%)	57(0.07)	26(0.05)	0.203	24(0.04)	26(0.05)	0.777
<i>Escherichia coli</i> , n(%)	430(0.49)	158(0.3)	<0.001	218(0.41)	158(0.3)	0.002
<i>Haemophilus influenzae</i> , n(%)	719(0.83)	335(0.63)	<0.001	361(0.67)	335(0.63)	0.323
<i>Influenza pneumoniae</i> , n(%)	2948(3.39)	2189(4.09)	<0.001	1901(3.55)	2189(4.09)	<0.001
<i>Klebsiella pneumoniae</i> , n(%)	509(0.59)	199(0.37)	<0.001	261(0.49)	199(0.37)	0.004
<i>Legionella</i> , n(%)	65(0.07)	18(0.03)	0.002	45(0.08)	18(0.03)	0.001
Non specified <i>Streptococcus</i> , n(%)	247(0.28)	79(0.15)	<0.001	140(0.26)	79(0.15)	<0.001
Other Gram-negative bacteria, n(%)	589(0.68)	190(0.36)	<0.001	286(0.53)	190(0.36)	<0.001
Other virus, n(%)	609(0.7)	522(0.98)	<0.001	374(0.7)	522(0.98)	<0.001
<i>Pseudomonas aeruginosa</i> , n(%)	959(1.1)	345(0.64)	<0.001	414(0.77)	345(0.64)	0.012
<i>Staphylococcus aureus</i> , n(%)	856(0.98)	385(0.72)	<0.001	478(0.89)	385(0.72)	0.001
<i>Streptococcus pneumoniae</i> , n(%)	7311(8.41)	4393(8.21)	0.183	4466(8.35)	4393(8.21)	0.418

**Table S4.** Univariable analysis of factors associated with in-hospital mortality during admissions for community-acquired pneumonia (CAP), among T2DM patients according to sex.

	<b>MEN</b>	<b>WOMEN</b>	<b>BOTH</b>
Variables	<b>OR (95%CI)</b>	<b>OR (95%CI)</b>	<b>OR (95%CI)</b>
18-49 years	1	1	1
50-64 years	1.82(1.40-2.25)	1.49(1.08-2.12)	1.60(1.12-2.31)
65-79 years	2.97(2.33-3.59)	3.03(2.14-4.43)	3.14(2.19-4.34)
≥ 80 years	5.54(4.25-7.12)	7.28(5.71-9.34)	6.89(4.76-9.05)
Myocardial infarction	1.23(1.11-1.37)	1.59(1.42-1.78)	1.47 (1.29-1.56)
Congestive heart failure	1.42(1.36-1.55)	1.60(1.51-1.70)	1.53 (1.32-1.61)
Peripheral vascular disease	1.20(1.06-1.37)	1.37(1.21-1.54)	1.29(1.18-1.42)
Cerebrovascular disease	1.58(1.47-1.70)	1.69(1.51-1.89)	1.63(1.51-1.76)
Dementia	2.18(2.07-2.20)	1.97(1.82-2.14)	1.97(1.80-2.15)
COPD	0.91(0.84-0.98)	0.88(0.82-0.96)	0.83(0.78-0.89)
Rheumatoid disease	1.17(1.01-1.35)	1.10(0.94-1.28)	1.12(0.97-1.26)
Peptic ulcer	0.88(0.75-1.03)	1.02(0.84-1.23)	0.97(0.81-1.15)
Mild liver disease	0.91(0.86-0.99)	0.83(0.74-0.93)	0.90(0.79-1.01)
Hemiplegia or paraplegia	2.37(1.92-2.83)	2.51(1.95-3.27)	2.39(2.01-2.80)
Renal disease	1.26(1.20-1.32)	1.56(1.47-1.66)	1.37(1.30-1.45)
Cancer	2.16(2.01-2.34)	1.99(1.83-2.16)	2.05(1.90-2.22)
Moderate/severe liver disease,	3.46(3.01-3.99)	2.88(2.35-3.43)	3.04 (2.63-3.46)
Metastatic cancer	6.37(5.87-6.88)	5.89(5.12-6.79)	6.12(5.69-6.57)
AIDS	2.02(0.97-3.08)	1.25(0.79-1.77)	1.80(0.72-2.89)
Non-Invasive Mechanical ventilation,	3.33(3.01-3.65)	2.84(2.49-3.27)	3.23(2.98-3.50)
Invasive Mechanical ventilation	11.12(8.99-13.34)	9.16(8.03-10.19)	10.11(9.23-12.17)
2017	0.93(0.86-0.99)	0.92(0.85-0.99)	0.90(0.84-0.98)
2018	0.90(0.84-0.97)	0.84(0.79-0.91)	0.85(0.80-0.91)
2019	0.87(0.81-0.94)	0.80(0.72-0.89)	0.82(0.75-0.90)
Male sex			1.12 (1.07-1.17)

OR: Odds Ratios. T2DM: Type 2 diabetes mellitus; COPD: chronic obstructive pulmonary disease;

AIDS: acquired immune deficiency syndrome