

Table S1. Cause of hospital admission for 1703 patients with diabetes included in the REPOSI registry

Cause of hospital admission	N (%)
Heart diseases	
Heart failure	178 (10.5)
Atrial fibrillation	32 (1.9)
Symptoms, signs, and ill-defined conditions	
Dyspnea	171 (10.0)
Syncope	140 (8.2)
Diarrhea, nausea and vomiting	23 (1.4)
Abdominal pain	51 (3.0)
Diabetes	
Diabetes	73 (4.3)
Hypoglycemia	17 (1.0)
Pneumonia	
Bacterial pneumonia	60 (3.5)
Pneumonia (organism unspecified)	24 (1.4)
Bronchopneumonia	20 (1.2)
Other Respiratory diseases	54 (3.2)
COPD	36 (2.1)
Blood diseases	
Anemia	70 (4.1)
Iron deficiency anemia	36 (2.1)
Cerebrovascular diseases	
TIA	23 (1.4)
Cerebral thrombosis	22 (1.3)
Other	673 (39.5)

COPD: Chronic Obstructive Pulmonary Disease; TIA: Transient Ischemic Attack.

ICD-9-CM code for assessing cause of hospital admission: Heart Failure: 428; Atrial fibrillation: 427; Dyspnea: 786; Syncope: 780; Diarrhea, nausea and vomiting: 787; Abdominal pain: 789; Diabetes: 250; Hypoglycemia: 251; Bacterial pneumonia: 482; Pneumonia (organism unspecified): 486; Bronchopneumonia: 485; Other respiratory diseases: 518; COPD: 491; Anemia: 285; Iron deficiency anemia: 280; TIA: 435; Cerebral Thrombosis: 434; Other included specific conditions with a prevalence less than 2%

Table S2. Prevalence of patients treated or not with different antidiabetic drugs as monotherapy or combination at admission by years

	2010	2012	2014	2016	2017	2018	2019
	N=324	N=336	N=269	N=175	N=224	N=161	N=214
Untreated, n (%)	46 (14.2)	56 (16.7)	32 (11.9)	22 (12.6)	37 (16.5)	36 (22.4)	41 (19.1)
Insulin monotherapy	85 (26.2)	85 (25.3)	85 (31.6)	54 (30.9)	72 (32.1)	40 (24.8)	61 (28.5)
Metformin monotherapy	51 (15.7)	58 (17.3)	59 (33.7)	38 (21.7)	41 (18.3)	33 (20.5)	48 (22.4)
Sulfonylureas monotherapy	34 (10.5)	26 (7.7)	17 (9.7)	11 (6.3)	9 (4.0)	8 (5.0)	7 (3.3)
Repaglinides monotherapy	21 (6.5)	35 (10.4)	12 (4.5)	11 (6.3)	15 (6.7)	7 (4.3)	6 (2.8)
Other antidiabetic drugs excl. Insulins monotherapy ¹	1 (0.3)	3 (0.9)	2 (0.7)	4 (2.3)	4 (1.8)	3 (1.9)	8 (3.7)
Fixed combination of antidiabetic drugs ²	32 (9.9)	18 (5.3)	11 (4.1)	6 (3.4)	5 (2.2)	5 (3.1)	3 (1.4)
Insulins+Other antidiabetic drugs	17 (5.2)	12 (3.5)	14 (5.2)	10 (5.7)	11 (4.9)	1 (0.6)	12 (5.6)
Insulins+Metformin	10 (3.1)	12 (3.6)	6 (2.2)	7 (4.0)	8 (3.6)	8 (5.0)	13 (6.1)
Metformin+Sulfonylureas	11 (3.4)	15 (4.5)	14 (5.2)	2 (1.1)	7 (3.1)	10 (6.2)	5 (2.3)
Metformin+Repaglinide	8 (2.5)	7 (2.1)	8 (3.0)	6 (3.4)	5 (2.3)	3 (1.9)	2 (0.9)
Other combination of antidiabetic drugs excl. Insulins	8 (2.5)	9 (2.7)	9 (3.3)	4 (2.3)	10 (4.5)	7 (4.3)	8 (3.7)

¹ Includes: Alpha glucosidase inhibitors, Dipeptidyl Peptidase (DPP-4), Sodium-glucose co-transporter 2 (SGLT2) inhibitors, Thiazolidinediones, Glucagon-like peptide-1 (GLP-1) analogues² Includes: metformin and sulfonylureas; metformin and sitagliptin; metformin and vildagliptin; phenformin and sulfonylureas; metformin and pioglitazone; glimepiride and pioglitazone

Table S3. Prevalence of patients treated or not with different antidiabetic drugs as monotherapy or combination at discharge by years

	2010	2012	2014	2016	2017	2018	2019
	N=324	N=336	N=269	N=175	N=224	N=161	N=214
Untreated, n (%)	46 (14.2)	68 (20.2)	61 (22.7)	52 (29.7)	61 (27.2)	48 (29.8)	58 (27.1)
Insulin monotherapy	107 (33.0)	107 (31.8)	99 (36.8)	63 (36.0)	89 (39.7)	52 (32.3)	72 (33.6)
Metformin monotherapy	48 (14.8)	49 (14.6)	40 (14.9)	30 (17.1)	29 (12.9)	27 (16.8)	34 (15.9)
Sulfonylureas monotherapy	28 (8.6)	16 (4.8)	9 (3.3)	5 (2.9)	4 (1.8)	4 (2.5)	3 (1.4)
Repaglinides monotherapy	23 (7.1)	35 (10.4)	18 (6.7)	5 (2.9)	11 (4.9)	7 (4.3)	2 (0.9)
Other antidiabetic drugs excl. Insulins monotherapy ¹	1 (0.3)	3 (0.9)	3 (1.1)	2 (1.1)	4 (1.8)	3 (1.9)	7 (3.3)
Fixed combination of antidiabetic drugs ²	17 (5.2)	7 (2.1)	6 (2.2)	2 (1.1)	3 (1.3)	2 (1.2)	1 (0.5)
Insulins+Other antidiabetic drugs	18 (5.6)	13 (3.8)	12 (4.5)	7 (4.0)	5 (2.3)	2 (1.2)	14 (6.5)
Insulins+Metformin	14 (4.3)	12 (3.6)	7 (2.6)	5 (2.9)	7 (3.1)	7 (4.3)	11 (5.1)
Metformin+Sulfonylureas	11 (3.4)	9 (2.7)	10 (3.7)	0	4 (1.8)	5 (3.2)	3 (1.4)
Metformin+Repaglinide	7 (2.2)	10 (3.0)	3 (1.1)	3 (1.7)	2 (0.9)	0	1 (0.5)
Other combination of antidiabetic drugs excl. Insulins	4 (1.3)	7 (2.1)	1 (0.4)	1 (0.6)	5 (2.3)	4 (2.5)	8 (3.8)

¹ Includes: Alpha glucosidase inhibitors, Dipeptidyl Peptidase (DPP-4), Sodium-glucose co-transporter 2 (SGLT2) inhibitors, Thiazolidinediones, Glucagon-like peptide-1 (GLP-1) analogues

² Includes: metformin and sulfonylureas; metformin and sitagliptin; metformin and vildagliptin; phenformin and sulfonylureas; metformin and pioglitazone; glimepiride and pioglitazone

Table S4. Prevalence of treated patients with diabetes using or not cardiovascular drugs at admission by years

Cardiovascular drugs	2010 N=278	2012 N=280	2014 N=237	2016 N=153	2017 N=187	2018 N=125	2019 N=173
Not treated, n (%)	62 (22.3)	50 (17.9)	44 (18.6)	25 (16.3)	23 (12.3)	23 (18.4)	33 (19.1)
ACE-I/ARBs (C09), n (%)	45 (16.2)	62 (22.1)	46 (19.4)	22 (14.4)	27 (14.4)	25 (20.0)	35 (20.2)
Lipid-lowering drugs (C10), n (%)	14 (5.0)	18 (6.4)	8 (3.4)	10 (6.5)	13 (6.9)	6 (4.8)	18 (10.4)
Antiplatelet (B01AC), n (%)	18 (6.5)	24 (8.6)	18 (7.6)	12 (7.8)	19 (10.2)	10 (8.0)	10 (5.8)
ACE-I (C09) + Lipid-lowering drugs (C10), n (%)	34 (12.2)	15 (5.4)	25 (10.5)	19 (13.9)	26 (13.9)	20 (16.0)	23 (13.3)
ACE-I/ARBs (C09) + Antiplatelet (B01AC), n (%)	43 (15.5)	44 (15.7)	28 (11.8)	23 (15.0)	21 (11.2)	11 (8.8)	11 (6.4)
Lipid-lowering drugs (C10) + Antiplatelet (B01AC), n (%)	14 (5.0)	13 (4.4)	14 (5.9)	19 (12.4)	15 (8.0)	12 (9.6)	16 (9.2)
All three, n (%)	48 (17.3)	54 (19.3)	54 (22.8)	23 (15.0)	43 (23.0)	18 (14.4)	27 (15.6)

Table S5. Prevalence of treated patients with diabetes using or not cardiovascular drugs at discharge by years

Cardiovascular drugs	2010 N=278	2012 N=280	2014 N=237	2016 N=153	2017 N=187	2018 N=125	2019 N=173
Not treated, n (%)	55 (19.8)	50 (18.7)	39 (18.8)	20 (16.3)	23 (14.1)	24 (21.2)	35 (22.4)
ACE-I/ARBs (C09), n (%)	42 (15.1)	51 (19.0)	31 (14.9)	13 (10.6)	24 (14.7)	23 (20.3)	28 (17.9)
Lipid-lowering drugs (C10), n (%)	14 (5.0)	18 (6.7)	10 (4.8)	11 (8.9)	14 (8.6)	7 (6.2)	14 (9.0)
Antiplatelet (B01AC), n (%)	21 (7.6)	24 (9.0)	19 (9.1)	11 (8.9)	11 (6.7)	4 (3.5)	9 (5.8)
ACE-I (C09) + Lipid-lowering drugs (C10), n (%)	29 (10.4)	20 (7.5)	22 (10.6)	15 (12.2)	23 (14.1)	16 (14.2)	23 (14.7)
ACE-I/ARBs (C09) + Antiplatelet (B01AC), n (%)	47 (16.9)	37 (13.8)	26 (12.5)	19 (15.5)	13 (8.0)	10 (8.9)	6 (3.8)
Lipid-lowering drugs (C10) + Antiplatelet (B01AC), n (%)	19 (6.8)	11 (4.1)	17 (8.2)	12 (9.8)	10 (6.1)	14 (12.4)	16 (10.3)
All three, n (%)	51 (18.4)	57 (21.3)	44 (21.1)	22 (17.9)	45 (27.6)	15 (13.3)	25 (16.0)