

Supplementary Material

Trends of Antidiabetic Drug Use and Safety of Metformin in Diabetic Patients with Varying Degrees of Chronic Kidney Disease from 2010 to 2021 in Korea: Retrospective Cohort Study by Using the Common Data Model

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Table S1. Yearly trends of prescribing antidiabetic drugs in patients with chronic kidney disease (CKD) over the study period by CKD stages: A, mild CKD (i.e., stages 1 to 2); B, CKD stage 3a; C, CKD stages 3b to 5.^a

A. Mild CKD (i.e., stages 1 to 2)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	P-value ^b
MET	1,436 (40.6)	335 (34.5)	332 (32.4)	290 (28.4)	319 (29.8)	398 (29.0)	408 (29.4)	473 (31.0)	523 (32.8)	656 (33.0)	442 (34.4)	91 (30.8)	0.493
SUs	919 (26.0)	195 (20.1)	220 (21.5)	172 (16.9)	193 (18.0)	209 (15.2)	222 (16.0)	237 (15.6)	225 (14.1)	294 (14.8)	179 (14.0)	49 (16.6)	0.01
Insulin	377 (10.7)	156 (16.0)	125 (12.2)	145 (14.2)	113 (10.5)	132 (9.6)	130 (9.4)	152 (10.0)	190 (11.9)	207 (10.4)	136 (10.6)	48 (16.3)	0.868
DPP4is	304 (8.6)	210 (21.6)	258 (25.2)	295 (28.9)	360 (33.6)	405 (29.5)	379 (27.4)	415 (27.2)	426 (26.7)	483 (24.4)	317 (24.7)	71 (24.1)	0.122
TZDs	331 (9.4)	13 (1.3)	52 (5.1)	104 (10.2)	79 (7.4)	77 (5.6)	59 (4.3)	50 (3.3)	55 (3.4)	64 (3.2)	37 (2.9)	4 (1.4)	0.008
SGLT2is	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	147 (10.7)	178 (12.8)	192 (12.6)	176 (11.0)	276 (13.9)	170 (13.2)	32 (10.8)	< 0.001
Glinide	117 (3.2)	40 (4.0)	30 (2.8)	15 (1.4)	7 (0.6)	16 (1.2)	19 (1.4)	14 (0.9)	7 (0.4)	4 (0.2)	5 (0.4)	0 (0.0)	0.270
AGIs	168 (4.8)	63 (6.5)	38 (3.7)	14 (1.4)	8 (0.7)	3 (0.2)	9 (0.6)	4 (0.3)	0 (0.0)	3 (0.2)	2 (0.2)	0 (0.0)	< 0.001

B. CKD stage 3a

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	P-value ^b
MET	276 (37.6)	47 (26.6)	44 (25.6)	48 (27.8)	48 (28.7)	35 (27.3)	40 (26.5)	44 (24.4)	48 (32.6)	55 (27.8)	42 (33.9)	9 (34.6)	0.644
SUs	219 (29.9)	33 (18.6)	35 (20.4)	34 (19.7)	26 (15.6)	14 (10.9)	26 (17.2)	27 (15.0)	20 (13.6)	25 (12.6)	20 (16.1)	2 (7.7)	0.009
Insulin	91 (12.4)	44 (24.9)	33 (19.2)	23 (13.3)	25 (15.0)	21 (16.4)	22 (14.6)	20 (11.1)	22 (15.0)	22 (11.1)	9 (7.3)	5 (19.2)	0.072
DPP4is	50 (6.8)	39 (22.0)	39 (22.7)	44 (25.4)	45 (27.0)	44 (34.4)	49 (32.4)	67 (37.2)	38 (25.8)	66 (33.3)	36 (29.0)	6 (23.1)	< 0.001
TZDs	53 (7.2)	4 (2.3)	13 (7.6)	20 (11.6)	18 (10.8)	9 (7.0)	8 (5.3)	7 (3.9)	9 (6.1)	6 (3.0)	5 (4.0)	0 (0.0)	0.017
SGLT2is	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	5 (3.9)	6 (4.0)	14 (7.8)	10 (6.8)	23 (11.6)	9 (7.3)	4 (15.4)	< 0.001
Glinide	43 (5.5)	16 (8.3)	8 (4.4)	5 (2.8)	3 (1.8)	6 (4.5)	5 (3.2)	2 (1.1)	1 (0.7)	0 (0.0)	0 (0.0)	0 (0.0)	0.002
AGIs	44 (6.0)	10 (5.6)	8 (4.6)	4 (2.3)	5 (3.0)	0 (0.0)	0 (0.0)	1 (0.6)	0 (0.0)	1 (0.5)	3 (2.4)	0 (0.0)	0.009

C. CKD stage 3b to 5

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	P-value ^b
MET	332 (30.1)	51 (20.8)	53 (20.0)	45 (19.6)	47 (20.4)	39 (18.5)	41 (22.2)	25 (16.9)	23 (16.9)	29 (17.6)	11 (20.4)	0 (0.0)	< 0.001
SUs	293 (26.6)	48 (19.6)	61 (23.0)	35 (15.2)	43 (18.6)	35 (16.6)	32 (17.3)	30 (20.3)	22 (16.2)	22 (13.3)	9 (16.7)	5 (20.0)	0.59
Insulin	285 (25.8)	79 (32.2)	73 (27.8)	58 (25.2)	52 (22.5)	44 (20.8)	38 (20.5)	29 (19.6)	30 (22.1)	34 (20.6)	8 (14.8)	7 (29.0)	0.30
DPP4is	56 (5.1)	44 (18.0)	46 (17.4)	56 (24.4)	66 (28.6)	68 (32.2)	49 (26.5)	47 (31.8)	47 (34.6)	52 (31.5)	19 (35.2)	9 (36.0)	< 0.001
TZDs	60 (5.4)	6 (2.4)	19 (7.2)	28 (12.2)	17 (7.4)	16 (7.6)	15 (8.1)	7 (4.7)	8 (5.9)	12 (7.3)	3 (5.6)	0 (0.0)	0.11
SGLT2is	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	5 (2.4)	7 (3.8)	10 (6.8)	4 (2.9)	14 (8.5)	4 (7.4)	4 (16.0)	< 0.001
Glinide	110 (9.1)	33 (11.9)	24 (8.3)	17 (6.9)	10 (4.2)	11 (5.0)	7 (3.7)	5 (3.3)	4 (2.9)	5 (2.9)	1 (1.8)	2 (7.4)	0.06
AGIs	77 (7.0)	17 (6.9)	13 (4.9)	8 (3.5)	6 (2.6)	4 (1.9)	3 (1.6)	0 (0.0)	2 (1.5)	2 (1.2)	0 (0.0)	0 (0.0)	0.01

^a Data are presented as count (%).

^b P-value from the Cochrane-Armitage test to assess the presence of time trend

Abbreviations: MET, metformin; SUs, sulfonylureas; DPP4is, dipeptidyl peptidase-4 inhibitors; TZDs, thiazolidinediones; SGLT2is, sodium-glucose cotransporter-2 inhibitors; Glinide, meglitinide; AGIs, alpha-glucosidase inhibitors.