

# Finerenone Utilization for Chronic Kidney Disease and Diabetes: Multicenter Real-World Study in the United States

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## Background

- 2022 KDIGO guideline recommends ns-MRA for patients with type 2 diabetes and CKD whose eGFR $\geq$ 25ml/min/1.73m<sup>2</sup> and ACR $\geq$ 30mg/g.<sup>1</sup>
- Finerenone is the only ns-MRA with proven cardiorenal benefits evidenced by the Phase 3 FIGARO-DKD<sup>2</sup> and FIDELIO-DKD trials.<sup>3</sup>
- Little is known about the adoption of finerenone in clinical practice.

## Methods

- Data sources:**  
Electronic health record data from three regional US health systems
- Population:**  
Patients with diagnosed diabetes
- Outcome:**  
New prescription of finerenone between July 9, 2021 (FDA approval) up to December 31, 2024
- Analytical approach:**
  - ✓ Trend of new finerenone users: negative binomial regression models
  - ✓ Factors associated with finerenone initiation: multivariable logistic regression within each system and pool the results using random-effects meta-analysis
  - ✓ Compare the baseline CVD and CKD progression risk (i.e., KDIGO risk categories) across patients initiating different medication classes (finerenone, GLP-1RA, SGLT2i, RASi, s-MRA)

## Results

**Table 1. The baseline characteristics of new finerenone users**

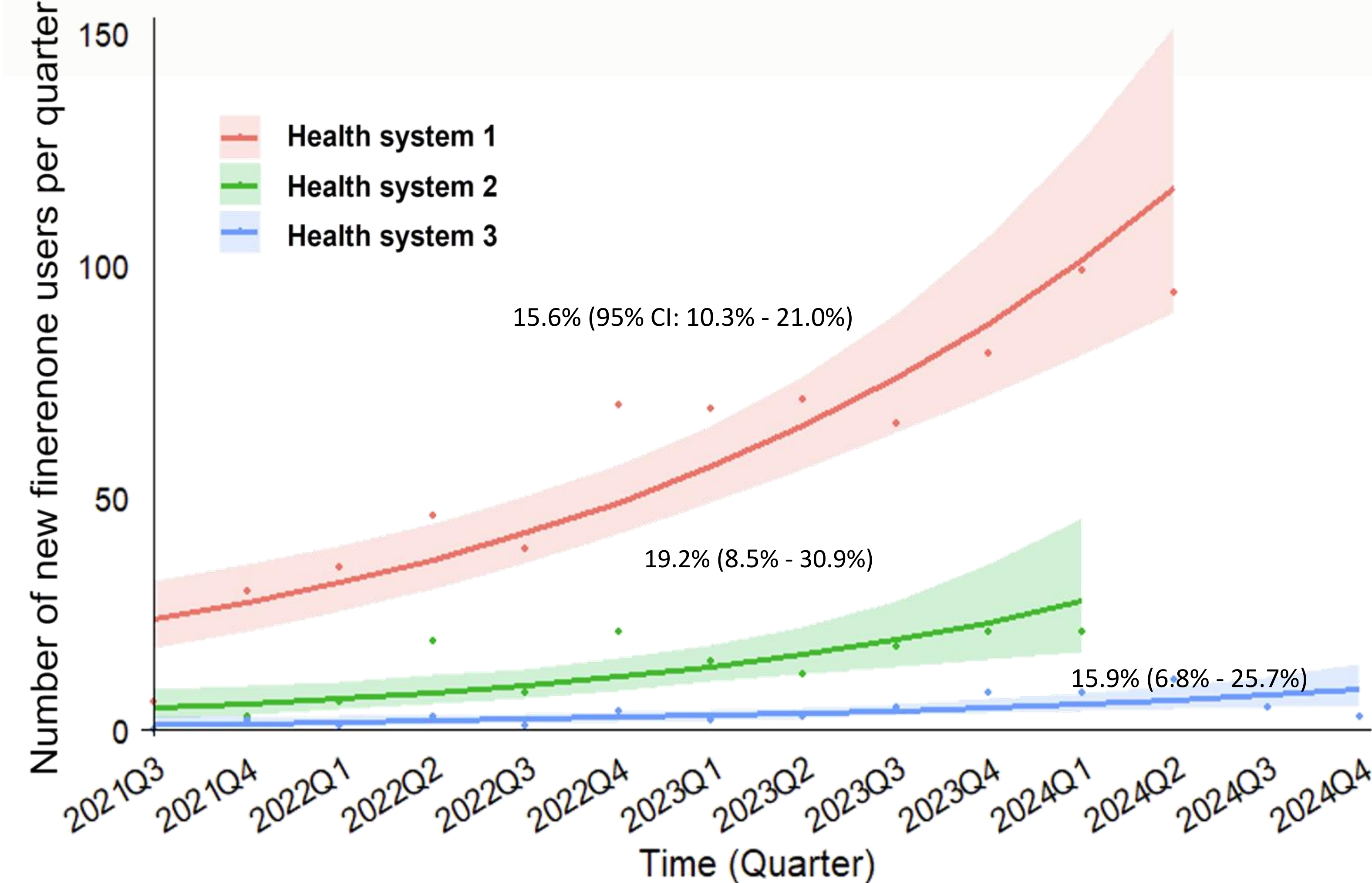
	System 1 (N=717)	System 2 (N=157)	System 3 (N=57)
Age, mean (SD)	69.2 (11.4)	67.3 (11.2)	66.3 (11.3)
Female, n (%)	281 (39.2%)	65 (41.4%)	24 (42.1%)
White, n (%)	346 (48.3%)	138 (87.9%)	23 (40.4%)
Comorbidities, n(%)			
Hypertension	680 (94.8%)	136 (86.6%)	57 (100.0%)
Heart Failure	124 (17.3%)	28 (17.8%)	10 (17.5%)
CKD	578 (80.6%)	121 (95.3%)	54 (96.4%)
Concomitant medications, n (%)			
RAS inhibitor	444 (61.9%)	109 (69.4%)	40 (70.2%)
GLP-1RA	213 (29.7%)	55 (35.0%)	21 (36.8%)
SGLT2 inhibitor	331 (46.2%)	68 (43.3%)	28 (49.1%)
ACR (mg/g), median (IQR)	237 (58-846)	157 (42-733)	591 (134-1316)
<300	252 (35.1%)	63 (40.1%)	17 (29.8%)
$\geq$ 300	219 (30.6%)	44 (28.0%)	35 (61.4%)
Missing	246 (34.3%)	50 (31.9%)	5 (8.8%)
eGFR (ml/min/1.73m <sup>2</sup> ), mean (SD)	53.0 (23.4)	55.7 (24.5)	52.3 (20.6)
$\geq$ 60	204 (28.5%)	47 (29.9%)	15 (26.3%)
45-59	137 (19.1%)	29 (18.5%)	19 (33.3%)
25-44	247 (34.4%)	55 (35.1%)	21 (36.8%)
<25	46 (6.4%)	6 (3.8%)	1 (1.8%)
Missing	83 (11.6%)	20 (12.7%)	1 (1.8%)
Potassium (mmol/L)	4.5 (0.5)	4.5 (0.4)	4.4 (0.5)
SBP (mmHg)	133.2 (18.5)	135.6 (20.2)	134.2 (18.3)

## Results

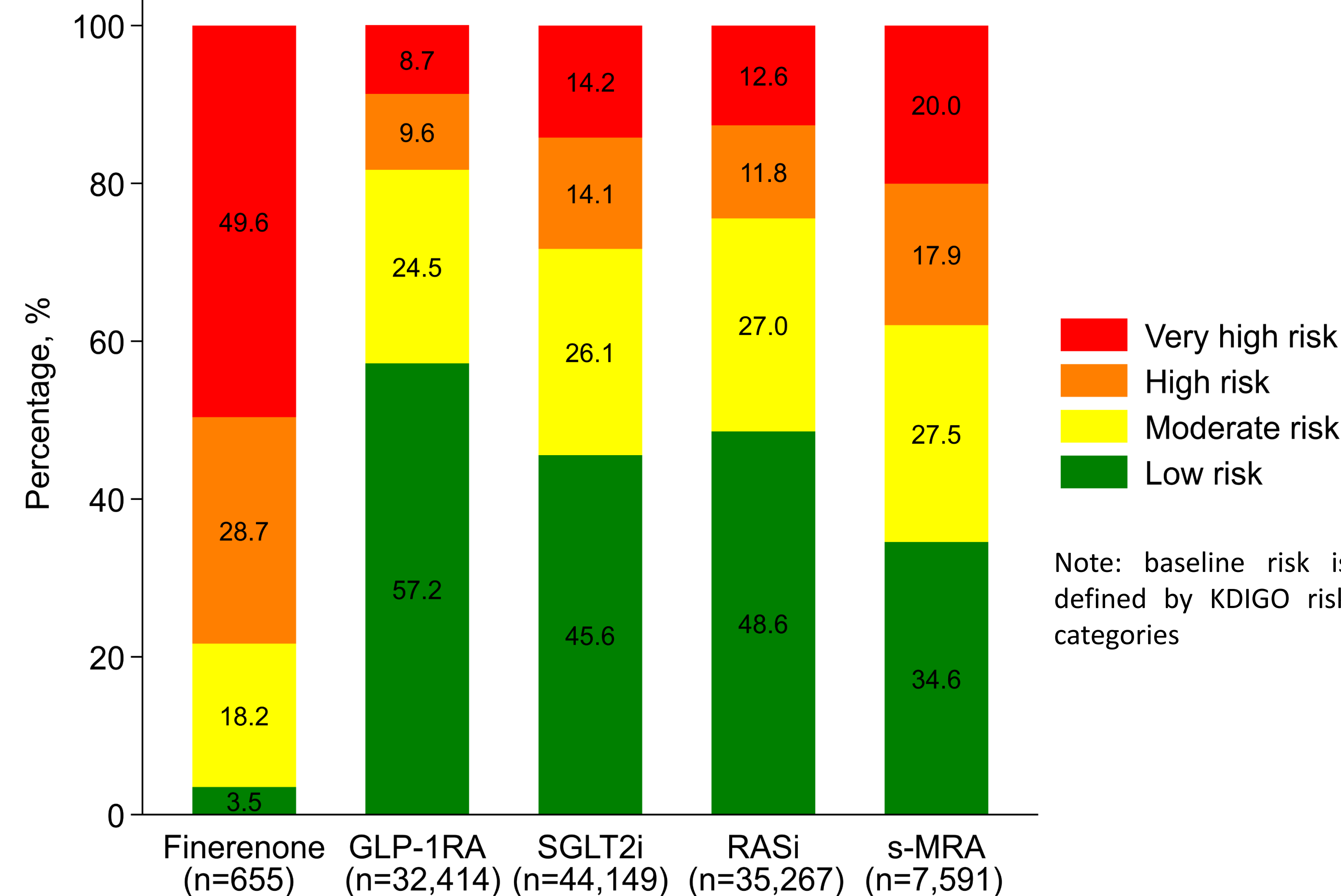
### New finerenone users

- 0.3% (717/245,763), 0.1% (157/205,194), and 0.04% (57/28,212) across three systems
- New users increased over time with per quarter relative increase rates shown in **Figure 1**

**Figure 1. Trend in finerenone new users over time across systems**



**Figure 3. The baseline risk across patients initiating different medication classes**



### Finerenone initiation in eligible patients

- Overall, only 0.6% of patients recommended to initiate finerenone (N=91,084) received a finerenone prescription.
- Factors negatively associated with finerenone initiation: older age, female sex, comorbid heart failure (**Figure 2**).
- Factors positively associated with finerenone initiation: non-White race, use of GDMT (RASi, GLP-1RA or SGLT2i), lower eGFR and ACR  $\geq$ 300 mg/g (**Figure 2**).

### Baseline risk of CVD and CKD progression

- Finerenone initiators were at much higher baseline risk of CVD and CKD progression than other medication users, with consistent patterns across health systems.
- Initiators at high and very high risk (**Figure 3**):
  - ✓ Finerenone: 78.3%
  - ✓ GLP-1RA: 18.3%
  - ✓ SGLT2i: 28.3%
  - ✓ RASi: 24.4%
  - ✓ S-MRA: 37.9%

## Strengths/Limitations

- Enhanced generalizability by leveraging data from three regional health systems covering diverse populations.
- The reasons for prescribing or not prescribing finerenone were unknown.

## Conclusions

- Finerenone prescription was low across three health systems but targeted towards patients with higher risk of CVD and CKD progression.
- Improving access and accumulating evidence supporting favorable risk-benefit ratios may increase the adoption of finerenone.

### Abbreviations:

GDMT: guideline-directed medical therapy; ns-MRA: Nonsteroidal mineralocorticoid receptor antagonist; s-MRA: steroidal mineralocorticoid receptor antagonist; RASi: renin-angiotensin-system inhibitors; GLP-1RA: glucagon like peptide-1 receptor agonists; SGLT2i:and sodium-glucose cotransporter-2 inhibitors

**Figure 2. Factors associated with finerenone initiation among finerenone eligible patients**

Variable	System	aOR (95% CI)	Weight
Age (10 yrs)	system 1	0.88 (0.80, 0.96)	70.10%
	system 2	0.95 (0.80, 1.13)	19.10%
	system 3	0.95 (0.75, 1.19)	10.80%
	<b>Total</b>	<b>0.90 (0.84, 0.97)</b>	<b>100.00%</b>
Female	system 1	0.70 (0.56, 0.87)	70.90%
	system 2	0.82 (0.54, 1.25)	19.70%
	system 3	0.77 (0.42, 1.41)	9.40%
	<b>Total</b>	<b>0.73 (0.61, 0.88)</b>	<b>100.00%</b>
Non White	system 1	1.21 (0.98, 1.49)	83.10%
	system 2	1.34 (0.70, 2.57)	8.60%
	system 3	1.53 (0.81, 2.88)	8.30%
	<b>Total</b>	<b>1.26 (1.04, 1.52)</b>	<b>100.00%</b>
Heart Failure	system 1	0.69 (0.50, 0.95)	73.80%
	system 2	0.53 (0.29, 1.00)	19.40%
	system 3	0.43 (0.18, 1.05)	6.90%
	<b>Total</b>	<b>0.63 (0.42, 0.86)</b>	<b>100.00%</b>
1 GDMT	system 1	1.80 (1.33, 2.44)	68.00%
	system 2	1.24 (0.71, 2.17)	20.40%
	system 3	1.50 (0.72, 3.14)	11.60%
	<b>Total</b>	<b>1.66 (1.29, 2.13)</b>	<b>100.00%</b>
$\geq$ 2 GDMTs	system 1	3.87 (2.86, 5.24)	68.70%
	system 2	3.69 (2.12, 6.42)	20.60%
	system 3	3.74 (1.73, 8.08)	10.70%
	<b>Total</b>	<b>3.82 (2.97, 4.91)</b>	<b>100.00%</b>
eGFR 45-60 (vs $\geq$ 60ml/min/1.73m <sup>2</sup> )	system 1	2.72 (2.07, 3.58)	74.80%
	system 2	1.40 (0.76, 2.60)	15.20%
	system 3	2.52 (1.23, 5.28)	10.10%
	<b>Total</b>	<b>2.30 (1.59, 3.31)</b>	<b>100.00%</b>
eGFR 25-45 (vs $\geq$ 60ml/min/1.73m <sup>2</sup> )	system 1	4.07 (3.11, 5.33)	73.70%
	system 2	2.92 (1.70, 5.02)	18.30%
	system 3	1.91 (0.85, 4.32)	8.10%
	<b>Total</b>	<b>3.30 (2.24, 4.84)</b>	<b>100.00%</b>
ACR $\geq$ 300mg/g (vs <300mg/g)	system 1	2.95 (2.38, 3.66)	74.40%
	system 2	3.45 (2.22, 5.36)	17.70%
	system 3	8.81 (4.55, 17.06)	7.90%
	<b>Total</b>	<b>3.91 (2.47, 6.19)</b>	<b>100.00%</b>
K <sup>+</sup> $\geq$ 4.8 mmol/L (vs <4.8mmol/L)	system 1	0.79 (0.63, 1.00)	74.70%
	system 2	1.33 (0.84, 2.11)	18.90%
	system 3	0.75 (0.34, 1.65)	6.40%
	<b>Total</b>	<b>0.93 (0.64, 1.34)</b>	<b>100.00%</b>

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