SUPPLEMENTAL MATERIAL
Table S1. Diagnosis and procedure codes used to identify ESKD

| Comorbid condition | Diagnosis and procedure codes |
|--------------------|-------------------------------|
| ESKD               | ICD-9 codes: 585.6, 996.81, V42.0, V45.1, V56.1, V56.2, V56.3, V56.31, V56.32, V56.8, E879.1 |
|                    | ICD-10 codes: N18.6, T86.10, T86.11, T86.12, T86.13, T86.19, Y84.1, Z48.22, Z49.01, Z49.02, Z49.31, Z49.32, Z94.0 |
|                    | HCPCS codes: 90918-90925, 90935, 90937, 90940, 90945, 90947, 90951-90970, 90989, 90993, 90997, 90999 (only applicable if the place of service is an ESKD treatment facility) |
|                    | DRG codes: 008, 652 (only applicable for inpatient hospital claims) |

Relevant diagnosis and procedure codes for ESKD are listed above. To be classified as non-ESKD, the absence of any billed ESKD diagnosis and procedure code during the 180-day baseline period was required. Individuals with ≥ 1 billed ESKD diagnosis or procedure code during the 180-day baseline period were considered to have ESKD.

Specified three-digit ICD-9 diagnosis code categories included all existing 4th and 5th digit diagnosis codes and specified four-digit ICD-9 diagnosis code categories included all existing 5th digit diagnosis codes. Specified three-digit ICD-10 diagnosis codes include all existing 4th, 5th, 6th and 7th digit diagnosis codes; specified four-digit ICD-10 diagnosis codes include all existing 5th, 6th and 7th digit diagnosis codes; specified five-digit ICD-10 diagnosis codes include all existing 6th and 7th digit diagnosis codes; and specified six-digit ICD-10 diagnosis codes include all existing 7th digit codes.

DRG, diagnosis-related group; ESKD, end-stage kidney disease; HCPCS, Healthcare Common Procedure Coding System; ICD-9, International Classification of Diseases, Ninth Revision; ICD-10, International Classification of Diseases, Tenth Revision.
### Table S2. ICD-9 and ICD-10 diagnosis codes used to identify relevant baseline covariates

| Comorbid condition          | Diagnosis codes                  |
|----------------------------|----------------------------------|
| Arrhythmia                 | ICD-9 code: 427                  |
|                            | ICD-10 codes: I46-I49            |
| Conduction disorder        | ICD-9 code: 426                  |
|                            | ICD-10 codes: I44-I45            |
| Heart failure              | ICD-9 codes: 398.91, 402.x1, 404.x1, 404.x3, 428 |
|                            | ICD-10 codes: I09.81, I11.0, I13.0, I50 |
| Ischemic heart disease     | ICD-9 codes: 410-414             |
|                            | ICD-10 codes: I10-I16            |
| Chronic liver disease      | ICD-9 codes: 571                 |
|                            | ICD-10 codes: K70-K76            |
| Cardiac pacemaker          | ICD-9 codes: V45.01              |
|                            | ICD-10 codes: Z95.0              |
| Implantable cardiac defibrillator | ICD-9 codes: V45.02           |
|                            | ICD-10 codes: Z95.810            |

Specified three-digit ICD-9 diagnosis code categories included all existing 4th and 5th digit diagnosis codes and specified four-digit ICD-9 diagnosis code categories included all existing 5th digit diagnosis codes. Specified three-digit ICD-10 diagnosis codes include all existing 4th, 5th, 6th and 7th digit diagnosis codes; specified four-digit ICD-10 diagnosis codes include all existing 5th, 6th and 7th digit diagnosis codes; specified five-digit ICD-10 diagnosis codes include all existing 6th and 7th digit diagnosis codes; and specified six-digit ICD-10 diagnosis codes include all existing 7th digit codes.

ICD-9, International Classification of Diseases, Ninth Revision; ICD-10, International Classification of Diseases, Tenth Revision.
### Table S3. List of medications with a known, possible, and conditional TdP risk

| **Known TdP risk*** |  |
|---------------------|--------------------------|
| Aclarubicin, amiodarone, anagrelide, arsenic trioxide, astemizole, azithromycin, bepridil, chloroquine, chlorpromazine, cilostazol, ciprofloxacin, cisapride, citalopram, clarithromycin, cocaine, disopyramide, dofetilide, domperidone, donepezil, dronedarone, droperidol, erythromycin, escitalopram, flecainide, fluconazole, gatifloxacin, grepafloxacin, halofantrine, haloperidol, hydroquinidine, ibogaine, ibutilide, levofloxacin, levomepromazine, levomethadyl, levosulpiride, mesoridazine, methadone, moxifloxacin, ondansetron, oxaliplatin, papaverine, pentamidine, pimozone, propranolol, procaainamide, propofol, quinidine, roxithromycin, sevoflurane, sotalol, sparfloxacin, sulpiride, sultopride, terfenadine, terlipressin, terodiline, thioridazine, vandetanib |  |

| **Possible TdP risk†** |  |
|------------------------|--------------------------|
| Abarelix, alfuzosin, alimemazine, apamorphine, aripiprazole, artemether/lumefantrine, artenimol/piperazine, asenapine, atomoxetine, bedaquiline, bendamustine, benperidol, betaxaban, bortezomib, bosutinib, buprenorphine, cabozantinib, capecitabine, ceritinib, clobazamine, clozapine, clotiapine, clozapine, cobimetinib, crizotinib, cyamemazine, dabrafenib, dasatinib, degarelix, delamanid, desipramine, deutetubacin, dexmedetomidine, dextromethorphan/quinidine, dolasetron, efavirenz, eliglustat, enecrafenib, eribulin, ezogabine, felbamate, fingolimod, fluorouracil, flupentixol, gemifloxacin, glitazone, glasdegib, granisetron, hydrocodone ER, iloperidone, imipramine, inotuzumab ozogamicin, isradipine, ivosidenib, ketanserin, lacidipine, lapatinib, lenvatinib, leuprolide, lithium, lofexidine, lopinavir/ritonavir, maprotiline, memantine, mianserin, midostaurin, mifepristone, mirabegron, mirtazapine, moexipril/hydrochlorothiazide, necitumumab, nicardipine, nilotinib, norfloxacin, nortriptyline, nusinersen, ofloxacin, osimertinib, oxytocin, paliperidone, palonosetron, panobinostat, pasireotide, perazopride, perflutren, perilipase, pilasecin, pimavanserin, pipamperone, primaquine, promethazine, prothipendyl, ribociclib, rilpivirine, risperidone, romidespin, saquinavir, sertindole, siperomod, sorafenib, suntilinib, tacroliumus, tamoxifen, telavancin, telithromycin, tetrabenazine, tiapride, tipiracil/trifluridine, tizanidine, tolterodine, toremifene, tramadol, trimipramine, tropisetron, valbenazine, vardenafil, vemurafenib, venlafaxine, vorinostat, zotepine, zuclopenthixol |  |

| **Conditional TdP risk‡** |  |
|--------------------------|--------------------------|
| Amantadine, amisulpride, amsacrine, amitriptyline, amphoterin B, atazanavir, bendroflumethiazide, bendrofluazide, chloral hydrate, cimetidine, diphenhydramine, doxepin, esomeprazole, eperisone, famotidine, fluoxetine, fluvoxamine, furosemide, galantamine, garenoxacin, hydrochlorothiazide, hydroxychloroquine, hydroxyzine, indapamide,itraconazole, ivabradine, ketoconazole, lansoprazole, loperamide, metoclopramide, metolazone, metronidazole, nelfinavir, olanzapine, omeprazole, pantoprazole, paroxetine, piperacillin/tazobactam, posaconazole, propafenone, qetapine, quine, ranolazine, sertraline, solifenacin, telaprevir, torsemide, trazodone, voriconazole, ziprasidone |  |

Medication lists were obtained from the CredibleMeds website (www.Crediblemeds.org) on July 10, 2019.

* Medications with known TdP risk are defined as drugs that prolong the QT interval and are clearly associated with a known risk of TdP, even when taken as recommended.

† Medications with possible risk TdP risk are defined as drugs that can cause QT prolongation but currently lack evidence for a risk of TdP when taken as recommended.

‡ Medications with conditional TdP risk are defined as drugs that are associated with TdP only under certain conditions (e.g. excessive dose, in patients with conditions such as hypokalemia, or when taken with interacting drugs) or medications that create conditions that facilitate or induce TdP (e.g. cause an electrolyte disturbance that induces TdP).

TdP, torsades de pointes.
### CYP3A4 Inhibitors

- Amiodarone, amprenavir, aprepitant, atazanavir, chloramphenicol, clarithromycin, conivaptan, cyclosporine, darunavir, dasatinib, delavirdine, diltiazem, erythromycin, fluconazole, fluoxetine, fluvoxamine, fosamprenavir, imatinib, indinavir, isoniazid, itraconazole, ketoconazole, lapatinib, miconazole, nefazodone, nelfinavir, posaconazole, ritonavir, quinupristin, saquinavir, tamoxifen, telithromycin, troleandomycin, verapamil, voriconazole

### CYP2C8 Inhibitors

- Deferasirox, gemfibrozil, lapatinib, trimethoprim

### CYP2C19 Inhibitors

- Chloramphenicol, cimetidine, clopidogrel, delavirdine efavirenz, esomeprazole, felbamate, fluconazole, fluoxetine, fluvoxamine, isoniazid, moclobemide, modafinil, omeprazole, oxcarbazepine, ticlopidine, topiramate, voriconazole

Medication lists were obtained from the Flockhart Table website (https://drug-interactions.medicine.iu.edu/MainTable.aspx) and the Pharmacy Times website (https://www.pharmacytimes.com) on July 10, 2019.

CYP, cytochrome P450.
| Year | All adults | Younger adults | Older adults |
|------|------------|----------------|--------------|
| 2012 | 165,160    | 96,447         | 64,636       |
| 2013 | 173,422    | 100,310        | 68,391       |
| 2014 | 183,252    | 102,786        | 75,523       |
| 2015 | 183,768    | 101,752        | 77,058       |
| 2016 | 184,573    | 100,440        | 79,037       |

We used the USRDS database to construct separate annual cohorts of center-based hemodialysis patients who were ≥ 18 years of age and met study selection criteria on January 1st of each study year (2012 to 2016). We also created annual sub-cohorts of younger (18–64 years of age) and older (≥ 66 years of age) hemodialysis patients for comparison to similarly aged individuals without ESKD.

ESKD, end-stage kidney disease; USRDS, United States Renal Data System.
We used 2 distinct United States-based administrative claims data sources, the Truven Health MarketScan Commercial Claims and Encounters Database and a 20% random sample of Medicare fee-for-service beneficiaries, to facilitate consideration of non-ESKD population comparator cohorts that spanned the adult age range. We generated annual cohorts (2012 to 2016) of younger and older adults without ESKD using Marketscan and Medicare data, respectively. In each study year, we identified adults without ESKD who met age specifications (18–64 years for Marketscan and ≥ 66 years for Medicare) and other study selection criteria on January 1st.

ESKD, end-stage kidney disease.
### Table S7. Use of ≥ 1 prescription QT prolonging medication by the hemodialysis population, 2012–2016

#### Younger adults

| Year | Any TdP risk | Known TdP risk | Possible TdP risk | Conditional TdP risk |
|------|--------------|----------------|-------------------|---------------------|
|      | Crude        | Standardized*  | Crude             | Standardized*       |
|      | Crude        | Standardized*  | Crude             | Standardized*       |
|      | Crude        | Standardized*  | Crude             | Standardized*       |
|      | Crude        | Standardized*  | Crude             | Standardized*       |
|      | Crude        | Standardized*  | Crude             | Standardized*       |
| 2012 | 178.3        | 178.9          | 40.1              | 40.4                |
|      | (176.6, 180.0) | (177.3, 180.6) | (39.3, 40.9)      | (39.6, 41.2)        |
| 2013 | 175.8        | 176.4          | 39.8              | 40.0                |
|      | (174.2, 177.5) | (174.7, 178.0) | (39.0, 40.6)      | (39.2, 40.8)        |
| 2014 | 169.4        | 169.9          | 37.3              | 37.4                |
|      | (167.8, 171.0) | (168.3, 171.5) | (36.5, 38.0)      | (36.7, 38.2)        |
| 2015 | 172.2        | 172.4          | 39.0              | 39.0                |
|      | (170.6, 173.9) | (170.8, 174.1) | (38.2, 39.8)      | (38.3, 39.9)        |
| 2016 | 171.6        | 171.6          | 38.6              | 38.6                |
|      | (170.0, 173.3) | (170.0, 173.3) | (37.8, 39.4)      | (37.8, 39.4)        |

#### Older adults

| Year | Any TdP risk | Known TdP risk | Possible TdP risk | Conditional TdP risk |
|------|--------------|----------------|-------------------|---------------------|
|      | Crude        | Standardized†  | Crude             | Standardized†       |
|      | Crude        | Standardized†  | Crude             | Standardized†       |
|      | Crude        | Standardized†  | Crude             | Standardized†       |
|      | Crude        | Standardized†  | Crude             | Standardized†       |
| 2012 | 205.5        | 204.5          | 60.7              | 60.4                |
|      | (203.2, 207.8) | (202.5, 206.6) | (59.5, 62.0)      | (59.3, 61.5)        |
| 2013 | 205.2        | 204.3          | 60.5              | 60.3                |
|      | (203.0, 207.4) | (202.3, 206.4) | (59.4, 61.8)      | (59.1, 61.4)        |
| 2014 | 199.4        | 198.9          | 58.4              | 58.2                |
|      | (197.4, 201.5) | (196.9, 201.0) | (57.3, 59.5)      | (57.1, 59.3)        |
| 2015 | 201.5        | 201.3          | 59.3              | 59.2                |
|      | (199.5, 203.6) | (199.2, 203.3) | (58.2, 60.4)      | (58.1, 60.3)        |
| 2016 | 201.1        | 201.1          | 58.3              | 58.3                |
|      | (199.1, 203.1) | (199.1, 203.1) | (57.2, 59.4)      | (57.2, 59.4)        |

#### All adults

| Year | Any TdP risk | Known TdP risk | Possible TdP risk | Conditional TdP risk |
|------|--------------|----------------|-------------------|---------------------|
|      | Crude        | Standardized‡  | Crude             | Standardized‡       |
|      | Crude        | Standardized‡  | Crude             | Standardized‡       |
|      | Crude        | Standardized‡  | Crude             | Standardized‡       |
|      | Crude        | Standardized‡  | Crude             | Standardized‡       |
| 2012 | 189.0        | 189.9          | 48.2              | 49.0                |
|      | (187.6, 190.3) | (188.6, 191.2) | (47.5, 48.9)      | (48.3, 49.6)        |
| 2013 | 35.5         | 35.3           | (34.9, 36.1)      | (34.8, 35.9)        |
| 2014 | 160.1        | 160.8          | (158.0, 161.3)    | (159.6, 161.9)      |

Assimon et al. 13
| Year | 2013 | 2014 | 2015 | 2016 |
|------|------|------|------|------|
| Rate (95% CI) | 47.9 (47.3, 48.6) | 47.7 (45.7, 47.0) | 47.1 (46.4, 47.7) | 47.1 (46.4, 47.7) |
| Rate (95% CI) | 35.5 (35.0, 36.1) | 35.2 (34.6, 35.8) | 35.9 (35.3, 36.4) | 35.9 (35.3, 36.4) |
| Rate (95% CI) | 158.1 (156.9, 159.3) | 154.6 (153.4, 155.7) | 154.1 (153.0, 155.3) | 154.1 (153.0, 155.3) |

Values presented are crude and standardized rates (95% CIs) of exposure to ≥ 1 QT prolonging medication expressed as the number of days exposed per person-year. The observed 95% CIs are very precise (i.e. narrow) due to the large sample size. CredibleMeds classifies medications that can prolong the QT interval as having a known, possible, or conditional TdP risk. Corresponding definitions are provided in Table 1. Supplemental Table S3 lists medications in each category. Medications with any TdP risk are those in any of the 3 CredibleMeds classes.

* To facilitate comparisons between the younger (18-64 years of age) hemodialysis and non-ESKD cohorts across time, we age- and sex-standardized rate estimates. The 2016 younger hemodialysis cohort was the referent population.

† To facilitate comparisons between the older (≥ 66 years of age) hemodialysis and non-ESKD cohorts across time, we age- and sex-standardized rate estimates. The 2016 older hemodialysis cohort was the referent population.

‡ To facilitate comparisons within the adult (≥ 18 years of age) hemodialysis population across time, we age- and sex-standardized rate estimates. The 2016 adult hemodialysis cohort was the referent population.

CI, confidence interval; ESKD, end-stage kidney disease; TdP, torsades de pointes.
Table S8. Use of ≥ 1 prescription QT prolonging medication by the younger non-ESKD population, 2012–2016

| Year | Any TdP risk |                  | Known TdP risk |                  | Possible TdP risk |                  | Conditional TdP risk |                  |
|------|--------------|-----------------|----------------|-----------------|------------------|-------------------|----------------------|------------------|
|      | Crude        | Standardized*   | Crude          | Standardized*   | Crude            | Standardized*     | Crude                | Standardized*     |
| 2012 | 65.4         | (65.3, 65.4)    | 12.7           | (12.7, 12.8)    | 10.5             | (10.4, 10.5)      | 50.6                 | (50.6, 50.7)      |
|      | (83.7)       | (82.6, 84.8)    | 14.0           | (13.5, 14.5)    | 12.3             | (11.8, 12.7)      | (68.4)               | (67.4, 69.4)      |
| 2013 | 66.1         | (66.1, 66.2)    | 13.0           | (12.9, 13.0)    | 10.8             | (10.7, 10.8)      | 51.1                 | (51.0, 51.1)      |
|      | (84.6)       | (83.4, 85.7)    | 14.2           | (13.8, 14.7)    | 12.6             | (12.2, 13.1)      | 69.9                 | (67.9, 69.9)      |
| 2014 | 67.0         | (66.9, 67.1)    | 13.4           | (13.3, 13.4)    | 10.9             | (10.9, 11.0)      | 51.6                 | (51.5, 51.7)      |
|      | (85.59)      | (84.5, 86.7)    | 14.7           | (14.2, 15.1)    | 12.8             | (12.3, 13.2)      | 69.6                 | (68.6, 70.6)      |
| 2015 | 69.7         | (69.6, 69.8)    | 14.0           | (13.3, 13.4)    | 11.4             | (11.3, 11.4)      | 53.9                 | (53.8, 54.0)      |
|      | (88.1)       | (86.9, 89.3)    | 15.3           | (14.8, 15.7)    | 13.2             | (12.8, 13.7)      | 71.7                 | (70.7, 72.7)      |
| 2016 | 70.1         | (70.2, 70.2)    | 14.2           | (14.0, 14.0)    | 11.5             | (11.3, 11.4)      | 54.1                 | (54.0, 54.1)      |
|      | (88.2)       | (87.0, 89.4)    | 15.4           | (14.8, 15.7)    | 13.4             | (12.9, 13.8)      | 71.5                 | (70.5, 72.6)      |

Values presented are crude and standardized rates (95% CIs) of exposure to ≥ 1 QT prolonging medication expressed as the number of days exposed per person-year. The observed 95% CIs are very precise (i.e. narrow) due to the large sample size. CredibleMeds classifies medications that can prolong the QT interval as having a known, possible, or conditional TdP risk. Corresponding definitions are provided in Table 1. Supplemental Table S3 lists medications in each category. Medications with any TdP risk are those in any of the 3 CredibleMeds classes.

* To facilitate comparisons between the younger (18-64 years of age) hemodialysis and non-ESKD cohorts across time, we age- and sex-standardized rate estimates. The 2016 younger hemodialysis cohort was the referent population.

CI, confidence interval; ESKD, end-stage kidney disease; torsades de pointes.
| Year | Any TdP risk | Known TdP risk | Possible TdP risk | Conditional TdP risk |
|------|--------------|----------------|------------------|----------------------|
|      | Crude        | Crude          | Crude            | Crude               |
|      | Standardized* | Standardized*  | Standardized*    | Standardized*       |
| 2012 | 197.4        | 44.7           | 35.8             | 171.2               |
|      | (197.0, 197.7)| (44.5, 44.9)   | (35.6, 35.9)     | (170.9, 171.5)      |
|      | 190.8        | 41.9           | 33.0             | 165.6               |
|      | (188.9, 192.7)| (41.1, 42.8)   | (32.2, 33.8)     | (163.9, 167.4)      |
| 2013 | 197.7        | 44.4           | 35.7             | 171.4               |
|      | (197.4, 198.0)| (44.2, 44.5)   | (35.5, 35.8)     | (171.0, 171.7)      |
|      | 192.0        | 42.0           | 33.3             | 166.5               |
|      | (190.1, 193.9)| (41.1, 42.9)   | (32.5, 34.1)     | (164.8, 168.3)      |
| 2014 | 196.6        | 43.5           | 35.2             | 170.1               |
|      | (196.3, 197.0)| (43.4, 43.7)   | (35.1, 35.4)     | (169.8, 170.4)      |
|      | 191.9        | 41.6           | 33.2             | 166.1               |
|      | (190.1, 193.8)| (40.7, 42.5)   | (32.5, 34.0)     | (164.4, 167.9)      |
| 2015 | 195.4        | 43.5           | 34.9             | 168.1               |
|      | (195.0, 195.7)| (43.4, 43.7)   | (34.8, 35.1)     | (167.8, 168.4)      |
|      | 191.3        | 41.9           | 33.2             | 164.7               |
|      | (189.4, 193.2)| (41.1, 42.8)   | (32.4, 34.0)     | (162.9, 166.4)      |
| 2016 | 194.1        | 43.3           | 35.7             | 166.2               |
|      | (193.8, 194.4)| (43.2, 43.5)   | (35.6, 35.8)     | (166.0, 166.5)      |
|      | 190.7        | 42.0           | 34.2             | 163.4               |
|      | (188.8, 192.5)| (41.1, 42.9)   | (33.4, 35.0)     | (161.6, 165.1)      |

Values presented are crude and standardized rates (95% CIs) of exposure to ≥ 1 QT prolonging medication expressed as the number of days exposed per person-year. The observed 95% CIs are very precise (i.e. narrow) due to the large sample size. CredibleMeds classifies medications that can prolong the QT interval as having a known, possible, or conditional TdP risk. Corresponding definitions are provided in Table 1. Supplemental Table S3 lists medications in each category. Medications with any TdP risk are those in any of the 3 CredibleMeds classes.

* To facilitate comparisons between the older (≥ 66 years of age) hemodialysis and non-ESKD cohorts across time, we age- and sex-standardized rate estimates. The 2016 older hemodialysis cohort was the referent population.

Cl, confidence interval; ESKD, end-stage kidney disease; TdP, torsades de pointes.
Table S10. Use of ≥ 1 prescription QT prolonging medication by the hemodialysis population excluding thiazide/thiazide-like diuretics

| Year | Any TdP risk | Known TdP risk | Possible TdP risk | Conditional TdP risk |
|------|-------------|----------------|-------------------|---------------------|
|      | Crude       | Standardized*  | Crude             | Standardized*       |
|      | Crude       | Standardized†  | Crude             | Standardized‡       |
|      | Crude       | Standardized‡  | Crude             | Standardized‡       |
|      | Crude       | Standardized   | Crude             | Standardized‡       |
| 2012 | 177.3       | (175.6, 179.0) | 40.1 (39.3, 40.9) | 34.8 (34.0, 35.5) |
|      | 177.9       | (176.3, 179.6) | 40.4 (39.6, 41.2) | 34.7 (33.9, 35.4) |
| 2013 | 174.7       | (173.0, 176.3) | 39.8 (39.0, 40.6) | 34.3 (33.6, 35.0) |
|      | 175.19      | (173.6, 176.9) | 40.0 (39.2, 40.8) | 34.3 (33.5, 35.0) |
| 2014 | 168.2       | (166.6, 169.8) | 37.3 (36.5, 38.0) | 32.4 (31.7, 33.1) |
|      | 168.65      | (167.0, 170.3) | 37.4 (36.7, 38.2) | 32.6 (31.7, 33.1) |
| 2015 | 171.2       | (169.6, 172.9) | 39.0 (38.2, 39.8) | 33.6 (32.9, 34.3) |
|      | 171.42      | (169.8, 173.1) | 39.0 (38.3, 39.9) | 33.6 (32.9, 34.3) |
| 2016 | 170.7       | (169.0, 172.3) | 38.6 (37.8, 39.4) | 34.4 (33.6, 35.1) |
|      | 170.7       | (169.0, 172.3) | 38.6 (37.8, 39.4) | 34.4 (33.6, 35.1) |

Older adults

| Year | Any TdP risk | Known TdP risk | Possible TdP risk | Conditional TdP risk |
|------|-------------|----------------|-------------------|---------------------|
|      | Crude       | Standardized†  | Crude             | Standardized‡       |
|      | Crude       | Standardized‡  | Crude             | Standardized‡       |
|      | Crude       | Standardized   | Crude             | Standardized‡       |
|      | Crude       | Standardized‡  | Crude             | Standardized‡       |
| 2012 | 204.1       | (201.9, 206.4) | 60.7 (59.5, 62.0) | 36.7 (35.8, 37.7) |
|      | 203.2       | (201.1, 205.2) | 60.4 (59.3, 61.5) | 36.3 (35.5, 37.2) |
| 2013 | 203.7       | (201.5, 205.9) | 60.5 (59.4, 61.8) | 37.6 (36.6, 38.5) |
|      | 202.9       | (200.8, 204.9) | 60.3 (59.1, 61.4) | 37.2 (36.4, 38.1) |
| 2014 | 198.1       | (196.0, 200.2) | 58.4 (57.3, 59.5) | 36.8 (35.9, 37.7) |
|      | 197.6       | (195.6, 199.6) | 58.0 (57.1, 59.3) | 36.2 (35.7, 37.5) |
| 2015 | 200.2       | (198.1, 202.2) | 59.3 (58.2, 60.4) | 37.5 (36.6, 38.4) |
|      | 199.9       | (197.8, 201.9) | 59.2 (58.1, 60.3) | 37.4 (36.5, 38.3) |
| 2016 | 199.8       | (197.8, 201.9) | 58.3 (57.2, 59.4) | 38.0 (37.2, 38.9) |
|      | 199.8       | (197.8, 201.9) | 58.3 (57.2, 59.4) | 38.0 (37.2, 38.9) |

All adults

| Year | Any TdP risk | Known TdP risk | Possible TdP risk | Conditional TdP risk |
|------|-------------|----------------|-------------------|---------------------|
|      | Crude       | Standardized‡  | Crude             | Standardized‡       |
|      | Crude       | Standardized‡  | Crude             | Standardized‡       |
|      | Crude       | Standardized‡  | Crude             | Standardized‡       |
|      | Crude       | Standardized‡  | Crude             | Standardized‡       |
| 2012 | 170.1       | (168.0, 172.2) | 36.7 (35.8, 37.7) | 170.1 (168.0, 172.2) |
|      | 169.2       | (167.3, 171.1) | 36.3 (35.5, 37.2) | 169.2 (167.3, 171.1) |
| 2013 | 169.1       | (167.1, 171.1) | 37.2 (36.4, 38.1) | 169.1 (167.1, 171.1) |
|      | 168.3       | (166.4, 170.2) | 37.3 (36.6, 38.4) | 168.3 (166.4, 170.2) |
| 2014 | 163.8       | (161.9, 165.6) | 36.6 (35.7, 37.5) | 163.8 (161.9, 165.6) |
|      | 163.3       | (161.5, 165.2) | 36.0 (35.3, 37.4) | 163.3 (161.5, 165.2) |
| 2015 | 165.3       | (163.4, 167.2) | 37.4 (36.5, 38.3) | 165.3 (163.4, 167.2) |
|      | 165.0       | (163.2, 166.9) | 37.4 (36.5, 38.3) | 165.0 (163.2, 166.9) |
| 2016 | 165.1       | (163.2, 166.9) | 37.9 (37.2, 38.9) | 165.1 (163.2, 166.9) |
| Year | 2012 | 2013 | 2014 | 2015 | 2016 |
|------|------|------|------|------|------|
|      | Value | Value | Value | Value | Value |
|      | (95% CI) | (95% CI) | (95% CI) | (95% CI) | (95% CI) |
|      | (186.5, 189.2) | (184.9, 187.5) | (179.5, 182.0) | (182.1, 184.7) | (182.1, 184.6) |
|      | (187.5, 190.0) | (185.8, 188.3) | (179.9, 182.4) | (182.4, 184.9) | (182.1, 184.6) |
|      | (187.8, 188.8) | (186.2, 187.0) | (180.7, 181.2) | (183.4, 183.6) | (183.3, 183.3) |
|      | (188.3, 190.3) | (184.9, 187.5) | (182.0, 182.4) | (182.4, 184.9) | (182.1, 184.6) |
|      | (48.2, 49.0) | (47.9, 48.6) | (46.0, 46.4) | (47.5, 48.2) | (47.1, 47.1) |
|      | (48.3, 49.6) | (48.0, 49.2) | (45.4, 46.7) | (47.0, 48.3) | (46.4, 47.7) |
|      | (35.5, 35.3) | (35.5, 35.5) | (34.2, 34.2) | (35.2, 35.2) | (35.9, 35.9) |
|      | (34.8, 35.9) | (34.8, 35.9) | (33.7, 34.8) | (34.6, 35.8) | (35.3, 36.4) |
|      | (158.7, 159.3) | (156.4, 157.2) | (151.5, 151.9) | (153.13, 153.3) | (152.8, 152.8) |
|      | (157.5, 159.9) | (155.4, 157.8) | (150.4, 152.7) | (152.0, 154.3) | (151.7, 154.0) |
|      | (158.2, 160.5) | (156.0, 158.3) | (150.7, 153.0) | (152.2, 154.5) | (151.7, 154.0) |

Thiazide and thiazide-like diuretics were excluded from this analysis. Values presented are crude and standardized rates (95% CIs) of exposure to ≥ 1 QT prolonging medication expressed as the number of days exposed per person-year. The observed 95% CIs are very precise (i.e. narrow) due to the large sample size. CredibleMeds classifies medications that can prolong the QT interval as having a known, possible, or conditional TdP risk. Corresponding definitions are provided in Table 1. Supplemental Table S3 lists medications in each category. Medications with any TdP risk are those in any of the 3 CredibleMeds classes.

* To facilitate comparisons between the younger (18-64 years of age) hemodialysis and non-ESKD cohorts across time, we age- and sex-standardized rate estimates. The 2016 younger hemodialysis cohort was the referent population.

† To facilitate comparisons between the older (≥ 66 years of age) hemodialysis and non-ESKD cohorts across time, we age- and sex-standardized rate estimates. The 2016 older hemodialysis cohort was the referent population.

‡ To facilitate comparisons within the adult (≥ 18 years of age) hemodialysis population across time, we age- and sex-standardized rate estimates. The 2016 adult hemodialysis cohort was the referent population.

CI, confidence interval; ESKD, end-stage kidney disease; TdP, torsades de pointes.
| Year | Any TdP risk | Known TdP risk | Possible TdP risk | Conditional TdP risk |
|------|--------------|----------------|-----------------|---------------------|
|      | Crude | Standardized* | Crude | Standardized* | Crude | Year | Crude | Standardized* |
| 2012 | 49.9  | (49.9, 50.0)  | 12.7  | (12.7, 12.8)  | 10.5  | 12.3 | 33.5  | (33.4, 33.5) |
|      | 60.0  | (59.1, 61.0)  | 14.0  | (13.5, 14.5)  | (10.4, 10.5) | (11.8, 12.7) | (42.2) | (41.4, 43.0) |
| 2013 | 50.9  | (50.8, 50.9)  | 13.0  | (12.9, 13.0)  | 10.8  | 12.6 | 34.1  | (34.0, 34.1) |
|      | 61.0  | (60.1, 62.0)  | 14.2  | (13.8, 14.7)  | (10.7, 10.8) | (12.2, 13.1) | (42.9) | (42.1, 43.7) |
| 2014 | 51.8  | (51.7, 51.9)  | 13.4  | (13.3, 13.4)  | 10.9  | 12.8 | 34.6  | (34.6, 34.7) |
|      | 62.1  | (61.2, 63.1)  | 14.7  | (14.2, 15.1)  | (10.9, 11.0) | (12.3, 13.2) | (43.7) | (42.8, 44.5) |
| 2015 | 53.9  | (53.9, 54.0)  | 14.0  | (14.0, 14.0)  | 11.4  | 13.2 | 36.3  | (36.2, 36.3) |
|      | 64.1  | (63.2, 65.1)  | 15.3  | (14.8, 15.7)  | (11.3, 11.4) | (12.8, 13.7) | (45.1) | (44.3, 46.0) |
| 2016 | 54.3  | (54.3, 54.4)  | 14.2  | (14.2, 14.2)  | 11.5  | 13.4 | 36.4  | (36.3, 36.4) |
|      | 64.2  | (63.2, 65.2)  | 15.4  | (15.0, 15.9)  | (11.5, 11.6) | (12.9, 13.8) | (44.9) | (44.1, 45.7) |

Values presented are crude and standardized rates (95% CIs) of exposure to ≥ 1 QT prolonging medication expressed as the number of days exposed per person-year. The observed 95% CIs are very precise (i.e. narrow) due to the large sample size. CredibleMeds classifies medications that can prolong the QT interval as having a known, possible, or conditional TdP risk. Corresponding definitions are provided in Table 1. Supplemental Table S3 lists medications in each category. Medications with any TdP risk are those in any of the three CredibleMeds classes.

* To facilitate comparisons between the younger (18-64 years of age) hemodialysis and non-ESKD cohorts across time, we age- and sex-standardized rate estimates. The 2016 younger hemodialysis cohort was the referent population.

CI, confidence interval; ESKD, end-stage kidney disease; torsades de pointes.
Table S12. Use of ≥ 1 prescription QT prolonging medication by the older non-ESKD population excluding thiazide/thiazide-like diuretics

| Year | Any TdP risk | Known TdP risk | Possible TdP risk | Conditional TdP risk |
|------|--------------|----------------|-------------------|---------------------|
|      | Crude        | Standardized*  | Crude             | Standardized*       | Crude            | Standardized*   |
| 2012 | 154.2        | 147.8          | 44.7              | 41.9                | 35.8             | 33.0            | 121.3           | 116.3 |
|      | (153.9, 154.6)| (146.1, 149.4)| (44.5, 44.9)      | (41.1, 42.8)        | (35.6, 35.9)     | (32.2, 33.8)    | (121.1, 121.6) | (114.8, 117.7) |
| 2013 | 155.4        | 149.8          | 44.4              | 42.0                | 35.7             | 33.3            | 122.4           | 118.0 |
|      | (155.1, 155.7)| (148.1, 151.5)| (44.2, 44.5)      | (41.1, 42.9)        | (35.5, 35.8)     | (32.5, 34.1)    | (122.1, 122.6) | (116.5, 119.5) |
| 2014 | 154.9        | 150.3          | 43.5              | 41.6                | 35.2             | 33.2            | 121.8           | 118.1 |
|      | (154.7, 155.2)| (148.6, 151.9)| (43.4, 43.7)      | (40.7, 42.5)        | (35.1, 35.4)     | (32.5, 34.0)    | (121.5, 122.0) | (116.6, 119.6) |
| 2015 | 154.6        | 150.6          | 43.5              | 41.9                | 34.9             | 33.2            | 120.8           | 117.7 |
|      | (154.3, 154.9)| (148.9, 152.2)| (43.4, 43.7)      | (41.1, 42.8)        | (34.8, 35.1)     | (32.4, 34.0)    | (120.6, 121.1) | (116.2, 119.2) |
| 2016 | 153.9        | 150.6          | 43.3              | 42.0                | 35.7             | 34.2            | 119.6           | 117.0 |
|      | (153.7, 154.2)| (148.9, 152.3)| (43.2, 43.5)      | (41.1, 42.9)        | (35.6, 35.8)     | (33.4, 35.0)    | (119.4, 119.8) | (115.6, 118.5) |

Values presented are crude and standardized rates (95% CIs) of exposure to ≥ 1 QT prolonging medication expressed as the number of days exposed per person-year. The observed 95% CIs are very precise (i.e. narrow) due to the large sample size. CredibleMeds classifies medications that can prolong the QT interval as having a known, possible, or conditional TdP risk. Corresponding definitions are provided in Table 1. Supplemental Table S3 lists medications in each category. Medications with any TdP risk are those in any of the three CredibleMeds classes.

* To facilitate comparisons between the older (≥ 66 years of age) hemodialysis and non-ESKD cohorts across time, we age- and sex-standardized rate estimates. The 2016 older hemodialysis cohort was the referent population.

CI, confidence interval; ESKD, end-stage kidney disease; TdP, torsades de pointes.
Table S13. Top 5 medications in each CredibleMeds class used by the hemodialysis and non-ESKD populations in 2016

| Younger adults | Older adults | All adults |
|----------------|--------------|------------|
| Hemodialysis  | Non-ESKD     | Hemodialysis | Non-ESKD | Hemodialysis | Non-ESKD |
| n = 100,440   | n = 13,992,738 | n = 79,037 | n = 3,134,842 | n = 184,573 | n = 3,134,842 |
| 1) Citalopram  | 1) Escitalopram | 1) Amiodarone | 1) Citalopram | 1) Amiodarone |
| 9.1 (9.1, 9.1) | 5.9 (5.9, 5.9) | 16.5 (16.5, 16.6) | 10.9 (10.9, 10.9) | 11.1 (11.1, 11.1) |
| 2) Escitalopram | 2) Citalopram | 2) Citalopram | 2) Donepezil | 2) Citalopram |
| 7.4 (7.3, 7.4) | 4.6 (4.6, 4.6) | 10.6 (10.6, 10.6) | 10.7 (10.7, 10.7) | 9.8 (9.7, 9.8) |
| 3) Amiodarone  | 3) Azithromycin | 3) Donepezil | 3) Escitalopram | 3) Escitalopram |
| 6.9 (6.9, 6.9) | 0.9 (0.9, 0.9) | 10.1 (10.1, 10.2) | 9.4 (9.4, 9.4) | 8.4 (8.3, 8.4) |
| 4) Ondansetron | 4) Ondansetron | 4) Escitalopram | 4) Amiodarone | 4) Ondansetron |
| 5.3 (5.2, 5.3) | 0.6 (0.6, 0.6) | 9.7 (9.7, 9.7) | 3.7 (3.7, 3.7) | 4.9 (4.9, 4.9) |
| 5) Levofloxacin | 5) Ciprofloxacin | 5) Ondansetron | 5) Sotalol | 5) Donepezil |
| 2.1 (2.1, 2.1) | 0.5 (0.5, 0.5) | 4.5 (4.5, 4.5) | 2.4 (2.4, 2.4) | 4.9 (4.9, 4.9) |

| Possible TdP risk |
|-------------------|
| Hemodialysis      | Non-ESKD |
| n = 100,440       | n = 13,992,738 |
| 1) Tramadol       | 1) Venlafaxine |
| 10.2 (10.2, 10.2) | 3.5 (3.5, 3.5) |
| 2) Mirtazapine    | 2) Venlafaxine |
| 5.3 (5.3, 5.3)    | 4.0 (4.0, 4.0) |
| 3) Promethazine   | 3) Aripiprazole |
| 4.6 (4.5, 4.6)    | 0.8 (0.8, 0.8) |
| 4) Venlafaxine    | 5) Norvalpine |
| 3.4 (3.4, 3.4)    | 0.6 (0.6, 0.6) |
| 5) Tizanidine     | 5) Risperidone |
| 2.8 (2.8, 2.8)    | 2.3 (2.3, 2.4) |

| Conditional TdP risk |
|---------------------|
| Hemodialysis        | Non-ESKD |
| n = 100,440         | n = 13,992,738 |
| 1) Omeprazole       | 1) Hydrochlorothiazide |
| 44.1 (44.0, 44.1)   | 22.6 (22.6, 22.6) |
| 2) Pantoprazole     | 2) Omeprazole |
| 29.2 (29.2, 29.2)   | 39.4 (39.3, 39.4) |
| 3) Furosemide       | 3) Furosemide |
| 25.2 (25.2, 25.2)   | 35.1 (35.0, 35.1) |
| 4) Sertraline       | 4) Sertraline |
| 14.8 (14.8, 14.8)   | 4.5 (4.5, 4.5) |
| 5) Esomeprazole     | 5) Fluoxetine |
| 13.8 (13.8, 13.9)   | 4.3 (4.3, 4.3) |
| 1) Omeprazole       | 1) Hydrochlorothiazide |
| 51.1 (51.7, 51.8)   | 67.2 (67.2, 67.2) |
| 2) Pantoprazole     | 2) Omeprazole |
| 39.4 (39.3, 39.4)   | 39.3 (39.3, 39.3) |
| 3) Furosemide       | 3) Furosemide |
| 35.1 (35.0, 35.1)   | 31.5 (31.5, 31.6) |
| 4) Pantoprazole     | 4) Pantoprazole |
| 18.3 (18.2, 18.3)   | 17.1 (17.1, 17.1) |
| 5) Famotidine       | 5) Sertraline |
| 12.5 (12.5, 12.6)   | 13.2 (13.2, 13.2) |

Values presented are crude rates (95% CIs) of exposure to a given medication in 2016 and are expressed as the number of days exposed per person-year. The observed 95% CIs are very precise (i.e. narrow) due to the large sample sizes. CredibleMeds classifies medications that can prolong the QT interval as having a known, possible, or conditional TdP risk. Corresponding definitions are provided in Table 1.

ESKD, end-stage kidney disease; TdP, torsades de pointes.
Table S14. Use of ≥ 1 prescription medication with known TdP risk by hemodialysis patients with and without risk factors for drug-induced QT prolongation in 2016

| Subgroup                               | Crude rate (95% CI) | Standardized rate (95% CI) |
|----------------------------------------|---------------------|-----------------------------|
| **All medications with known TdP risk** |                     |                             |
| Advanced age*                          |                     |                             |
| Yes                                    | 57.6 (56.6, 58.7)   | 57.2 (56.5, 57.9)           |
| No                                     | 38.6 (37.8, 39.4)   | 39.1 (38.6, 39.7)           |
| Sex†                                   |                     |                             |
| Female                                 | 53.1 (52.1, 54.1)   | 52.0 (51.4, 52.7)           |
| Male                                   | 42.0 (41.2, 42.9)   | 43.1 (42.5, 43.8)           |
| Arrhythmia‡                            |                     |                             |
| Yes                                    | 84.3 (82.3, 86.4)   | 80.2 (79.4, 81.1)           |
| No                                     | 39.1 (38.5, 39.9)   | 39.9 (39.3, 40.4)           |
| Conduction disorder‡                   |                     |                             |
| Yes                                    | 70.6 (66.6, 74.8)   | 68.9 (68.1, 69.7)           |
| No                                     | 46.2 (45.5, 46.8)   | 46.3 (45.7, 46.9)           |
| Ischemic heart disease‡                 |                     |                             |
| Yes                                    | 64.7 (63.4, 66.1)   | 62.1 (61.3, 62.9)           |
| No                                     | 39.9 (39.2, 40.6)   | 40.9 (40.3, 41.5)           |
| Heart failure‡                         |                     |                             |
| Yes                                    | 65.7 (64.2, 67.2)   | 63.2 (62.4, 63.9)           |
| No                                     | 40.4 (39.7, 41.1)   | 41.2 (40.7, 41.8)           |
| Liver disease‡                         |                     |                             |
| Yes                                    | 50.3 (47.6, 53.1)   | 50.4 (49.8, 51.1)           |
| No                                     | 46.9 (46.2, 47.5)   | 46.8 (46.2, 47.5)           |

| Subgroup                               | Crude rate (95% CI) | Standardized rate (95% CI) |
|----------------------------------------|---------------------|-----------------------------|
| **Non-antiarrhythmic medications with known TdP risk** |                     |                             |
| Advanced age*                          |                     |                             |
| Yes                                    | 42.1 (41.2, 43.0)   | 41.6 (40.9, 42.2)           |
| No                                     | 31.8 (31.1, 32.5)   | 32.4 (31.9, 32.9)           |
| Sex†                                   |                     |                             |
| Female                                 | 43.0 (42.2, 44.0)   | 42.5 (42.0, 43.1)           |
| Male                                   | 30.8 (30.1, 31.5)   | 31.4 (30.9, 31.9)           |
| Arrhythmia‡                            |                     |                             |
| Yes                                    | 44.0 (42.5, 45.5)   | 42.6 (42.0, 43.2)           |
| No                                     | 34.8 (34.2, 35.4)   | 35.3 (34.7, 35.8)           |
| Conduction disorder‡                   |                     |                             |
| Yes                                    | 46.8 (43.6, 50.2)   | 46.7 (46.1, 47.4)           |
| Condition                  | Yes       | No        | 95% CI          |
|----------------------------|-----------|-----------|-----------------|
| Ischemic heart disease‡    | 64.7 (63.4, 66.1) | 39.9 (39.2, 40.6) | 62.1 (61.3, 62.9) | 40.9 (40.3, 41.5) |
| Heart failure‡             | 46.7 (45.5, 48.0) | 32.7 (32.1, 33.3) | 45.3 (44.7, 46.0) | 33.3 (32.7, 33.8) |
| Liver disease‡             | 38.3 (36.0, 40.7) | 36.3 (35.7, 36.9) | 38.4 (37.8, 39.0) | 36.2 (35.7, 36.8) |

Values presented are crude and standardized rates (95% CIs) of exposure to ≥ 1 medication with known TdP risk expressed as the number of days exposed per person-year. The observed 95% CIs are very precise (i.e. narrow) due to the large sample size. Medications with known TdP risk are listed in Supplemental Table S3. Advanced age was defined as ≥ 65 years of age.³

* To facilitate comparisons within the age subgroups, we sex-standardized rate estimates. The 2016 adult hemodialysis cohort was the referent population.
† To facilitate comparisons within the sex subgroups, we age-standardized rate estimates. The 2016 adult hemodialysis cohort was the referent population.
‡ To facilitate comparisons within the comorbidity subgroups, we age- and sex-standardized rate estimates. The 2016 adult hemodialysis cohort was the referent population.

CI, confidence interval; TdP, torsades de pointes.
Table S15. Concurrent use of medications with known TdP risk by the 2016 hemodialysis population

| Medication combinations      | Crude rate (95% CI) |
|------------------------------|---------------------|
| Amiodarone + citalopram     | 0.3 (0.3, 0.3)      |
| Amiodarone + escitalopram   | 0.4 (0.3, 0.4)      |
| Amiodarone + ondansetron    | 0.2 (0.2, 0.2)      |
| Amiodarone + donepezil       | 0.2 (0.2, 0.2)      |
| Citalopram + escitalopram   | 0.0 (0.0, 0.1)      |
| Citalopram + ondansetron    | 0.2 (0.2, 0.2)      |
| Citalopram + donepezil       | 0.3 (0.3, 0.3)      |
| Escitalopram + ondansetron  | 0.2 (0.2, 0.2)      |
| Escitalopram + donepezil     | 0.3 (0.3, 0.3)      |
| Ondansetron + donepezil      | 0.1 (0.1, 0.1)      |

Values presented are crude rates (95% CIs) of exposure to a given medication combination expressed as the number of days exposed per person-year. The observed 95% CIs are very precise (i.e. narrow) due to the large sample size. CI, confidence interval; TdP, torsades de pointes.
Table S16. Concurrent use of CYP metabolized medications with known risk TdP risk and relevant metabolic inhibitors by the 2016 hemodialysis population

| Medication combinations                        | Crude rate (95% CI) |
|-----------------------------------------------|---------------------|
| Amiodarone + CYP 2C8 inhibitor                | 0.6 (0.5, 0.6)      |
| Citalopram + CYP 3A4 inhibitor                | 0.9 (0.9, 0.9)      |
| Citalopram + CYP 2C19 inhibitor              | 4.2 (4.2, 4.2)      |
| Escitalopram + CYP 3A4 inhibitor              | 0.9 (0.9, 0.9)      |
| Escitalopram + CYP 2C19 inhibitor             | 3.6 (3.6, 3.6)      |
| Ondansetron + CYP 3A4 inhibitor               | 0.7 (0.7, 0.7)      |

Values presented are crude rates (95% CIs) of exposure to a given medication combination expressed as the number of days exposed per person-year. The observed 95% CIs are very precise (i.e. narrow) due to the large sample size. CYP inhibitors are listed in Supplemental Table S4.

CI, confidence interval; CYP, cytochrome P450; TdP, torsades de pointes.
We conducted a drug utilization study to describe the magnitude of prescription QT prolonging medication use by hemodialysis patients relative to individuals without ESKD on an annual basis from 2012 to 2016. In each study year, we tracked QT prolonging medication use on a daily basis starting from January 1\textsuperscript{st} (the index date) until December 31\textsuperscript{st}. We defined the baseline period as the 180 days prior to January 1\textsuperscript{st}.

ESKD, end-stage kidney disease.
Figure S2. Assembly of the hemodialysis cohorts, 2016

382,858 patients ≥ 18 years of age receiving center-based hemodialysis on 1/1/2016 & during the baseline period

- Dialysis vintage ≤ 90 days at the start of the baseline period
  - 19,886 patients excluded

- Did not have continuous insurance enrollment during the baseline period
  - 177,700 patients excluded

- Received hospice care during the baseline period
  - 699 patients excluded

184,573 hemodialysis patients
≥ 18 years of age included in the 2016 cohort

- 100,440 hemodialysis patients
  18–64 years of age

- 79,037 hemodialysis patients
  ≥ 66 years of age

We used the USRDS database to generate the 2016 hemodialysis cohorts.

USRDS, United States Renal Data System.
We used the MarketScan Commercial Claims and Encounters Database to generate the 2016 non-ESKD cohort comprised of younger individuals.

ESKD, end-stage kidney disease.
We used the Medicare database (a 20% random sample of fee-for-service beneficiaries) to generate the 2016 non-ESKD cohort comprised of older individuals.

ESKD, end-stage kidney disease.
Figure S5. Use of ≥ 1 QT prolonging medication by the hemodialysis and non-ESKD populations excluding thiazide/thiazide-like diuretics

Thiazide and thiazide-like diuretics were excluded from this analysis. Panels A and B depict annual standardized rates of exposure to ≥ 1 QT prolonging medication in the younger hemodialysis and non-ESKD populations respectively. Panels C and D depict analogous annual rates of QT prolonging medication exposure in the older hemodialysis and non-ESKD populations. CredibleMeds classifies medications that can prolong the QT interval as having a known, possible, or conditional TdP risk. Corresponding definitions are provided in Table 1 and lists of medications falling into each category are provided in Supplemental Table S3. Medications classified as having any TdP risk are those falling into any of the 3 CredibleMeds categories.

ESKD, end-stage kidney disease; TdP, torsades de pointes.