Figure S1. Flowcharts

BIFAP
DATABASE

DOACs (dabigatran, apixaban, ribaroxaban) USE ≥18 years, 2008-2015 (n =25799)

DOAC prescription in the preceding 365 days (n= 822)

New DOAC users (n=24977)

No atrial fibrillation ±3months around the index date (n=10056). DX valvular atrial fibrillation (n=760).

MAIN ANALYSIS
NEW DOAC USERs with NVAF DIAGNOSIS
(n = 14161)

Other approved indications than NVAF ever before or until 3 months after the index date (n= 442)

SENSITIVITY ANALYSIS
NEW DOAC users with NVAF, excluding those with other approved DOAC indication than NVAF (n= 13719)

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                          │     DNR     │
                          │  DATABASE   │
                          ╰─────────────╯
                                 │
                                 ▼
                    ┌────────────────────────────┐
                    │ DOACs (dabigatran, apixaban,│
                    │  ribaroxaban) USE 2008-2015 │
                    │        (n =98411ᵃ)          │
                    └────────────────────────────┘
                                 │
  ┌─────────────────────────┐    │
  │ Exclusion criteria:     │    │
  │ < 1 year registered in  │    │
  │ Database before date of │┈┈┈┈┤
  │ first DOAC prescription (n=│  │
  │ 1075), Age < 18 (n= 11) │    │
  └─────────────────────────┘    │
                                 ▼
                    ┌────────────────────────────┐
                    │        DOAC users          │
                    │        (n=97325)           │
                    └────────────────────────────┘
                                 │
  ┌─────────────────────────┐    │
  │ DOAC use in the preceding│┈┈┈┤
  │ year  (n=0ᵇ).           │    │
  └─────────────────────────┘    │
                                 ▼
                    ┌────────────────────────────┐
                    │    New DOAC users age      │
                    │        (n=97325)           │
                    └────────────────────────────┘
                                 │
  ┌─────────────────────────┐    │
  │ No NVAF ever before or  │    │
  │ after the index date. Dx│┈┈┈┤
  │ valvualr atrial fibrillation│ │
  │ (n=52449)               │    │
  └─────────────────────────┘    │
                                 ▼
                    ┌────────────────────────────┐
                    │       MAIN ANALYSIS        │
                    │  NEW DOAC USERs with NVAF  │
                    │         DIAGNOSIS          │
                    │       (n = 44876)          │
                    └────────────────────────────┘
                                 │
  ┌─────────────────────────┐    │
  │ Other approval indications│   │
  │ than NVAF ±3  months    │┈┈┈┤
  │ around the index date   │    │
  │ (n=3168).               │    │
  └─────────────────────────┘    │
                                 ▼
                    ┌────────────────────────────┐
                    │    SENSITIVITY ANALYSIS    │
                    │  NEW DOAC users with NVAF, excluding│
                    │  those with other approved DOAC│
                    │  indications than NVAF  (n = 41708)│
                    └────────────────────────────┘
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ᵃInitial 98846 DOAC users of which early users (n=8), users with more than one drug on index date (n=12), non-residents (n=409), and users with error in migration data (n=6) were excluded. ᵇAll are new users.

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                          │   MONDRIAAN     │
                          │   DATABASE      │
                          ╰─────────────────╯
                                   │
                                   ▼
                     ┌───────────────────────────────┐
                     │  DOACs (dabigatran, apixaban,  │
                     │  ribaroxaban) USE 2012-2015 (n =832)│
                     └───────────────────────────────┘
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Exclusion criteria:
< 1 year registered in Database
before date of first DOAC
prescription (n= 0)
Age < 18 (n= 0)

┌───────────────────────────────┐
│   DOAC users   │
│   (n=832)   │
└───────────────────────────────┘

DOAC use in the preceding year
(n= 0)

┌───────────────────────────────┐
│   New DOAC users age ≥18   │
│   (n=832)   │
└───────────────────────────────┘

No NVAF ±3months around the
index date (n=372).
DX valvular atrial fibrillation (n=0).

┌───────────────────────────────┐
│   MAIN ANALYSIS   │
│ NEW DOAC USERs with NVAF DIAGNOSIS │
│   (n = 460)   │
└───────────────────────────────┘

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│ Sensitivity analysis not applicable, none of the patients have any other indication than NVAF. │
└──┘

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                         ┌─────────────┐
                         │   SIIDIAP   │
                         │  DATABASE   │
                         └──────┬──────┘
                                │
                                ▼
                  ┌──────────────────────────────┐
                  │ DOACs (dabigatran, apixaban,  │
                  │  ribaroxaban) USE 2009-2015   │
                  │          (n =30914)           │
                  └──────────────┬────────────────┘
                                 │
   ┌─────────────────────────┐   │
   │ Exclusion criteria:      │   │
   │ < 1 year registered in   │   │
   │ Database before date of  ┆ ─ ┤
   │ first DOAC prescription (n= │
   │ 201)                     │   │
   │ Age < 18 (n= 45)         │   │
   └─────────────────────────┘   ▼
                  ┌──────────────────────────────┐
                  │         DOAC users            │
                  │         (n=30668)             │
                  └──────────────┬────────────────┘
                                 │
   ┌─────────────────────────┐   │
   │ DOAC use in the preceding┆ ─ ┤
   │ year (n= 237)            │   │
   └─────────────────────────┘   ▼
                  ┌──────────────────────────────┐
                  │   New DOAC users age ≥18      │
                  │         (n=30431)             │
                  └──────────────┬────────────────┘
                                 │
   ┌─────────────────────────┐   │
   │ No NVAF ±3 months        │   │
   │ around the index date    │   │
   │ (n=14446).               │   │
   │ DX valvular atrial       │   │
   │ fibrillation (n=2075).   ┆ ─ ┤
   │ Duplicate prescription of│   │
   │ different DOAC in the    │   │
   │ same prescription date (n=│  │
   │ 4)                       │   │
   └─────────────────────────┘   ▼
                  ┌──────────────────────────────┐
                  │ New DOAC users prescriptions  │
                  │          (n=13906)            │
                  └──────────────┬────────────────┘
                                 │       ┌──────────────────────────────┐
                                 ┆ ─ ─ ─ │ Patients with DOACs prescriptions│
                                 │       │ but without any refill* (n = 1944)│
                                 ▼       └──────────────────────────────┘
                  ┌──────────────────────────────┐
                  │        MAIN ANALYSIS          │
                  │  NEW DOAC USERs with NVAF     │
                  │         DIAGNOSIS             │
                  │        (n = 11962)            │
                  └──────────────┬────────────────┘
                                 │
   ┌─────────────────────────┐   │
   │ Other approved indications│  │
   │ than ±3 months around    ┆ ─ ┤
   │ the index date (n= 1675) │   │
   └─────────────────────────┘   ▼
                  ┌──────────────────────────────┐
                  │     SENSITIVITY ANALYSIS      │
                  │  NEW DOAC users with NVAF,    │
                  │  excluding those with other   │
                  │  approved DOAC indication than│
                  │       NVAF (n= 10287)         │
                  └──────────────────────────────┘
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*Patients who received a prescription but not go to pick up the medication