Trends of opioid agonist therapies and QT prolongation in the Swiss Association for the Medical Management in Substance Users (SAMMSU) cohort 2013-2024

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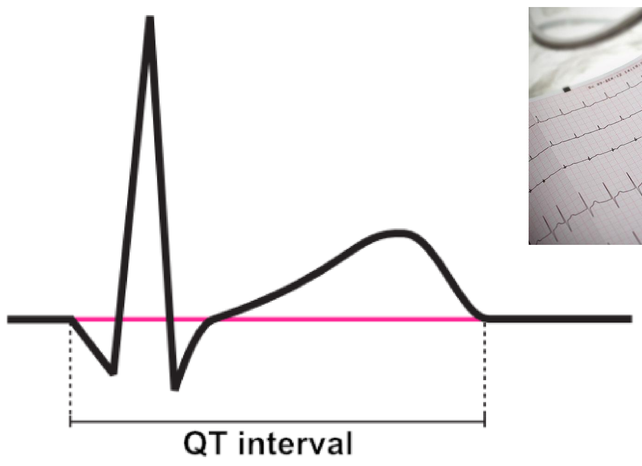
BACKGROUND

- For years, **methadone** with its **well-known risk of QT prolongation** was the **predominant opioid agonist therapy (OAT) in Switzerland**.
- In the past 10 years, OAT diversity has increased, which might have reduced the QT prolongation prevalence.

METHODS

- The SAMMSU-cohort is an open cohort with yearly follow-up, enrolling **>18-year-old patients with current/previous OAT** in eight different centers throughout Switzerland since 2013.
- **By 06/01/2025, 1,500 patients** have been **enrolled** (76% male, median age (at registration): 44 years, 73% ever intravenous drug use, 57% HCV-antibody-positive, 9% HIV-antibody-positive).
- **OAT distribution** was described for all patients who had a visit (registration/follow-up) in the respective year (2013-2024).
- **Prevalence of QT prolongation** (QTc interval >450ms in men and >470ms in women, respectively (Mayet, 2011, Rabkin, 2015)) was determined in all patients who had an electrocardiogram in **the respective year**.



Definition of QT prolongation:

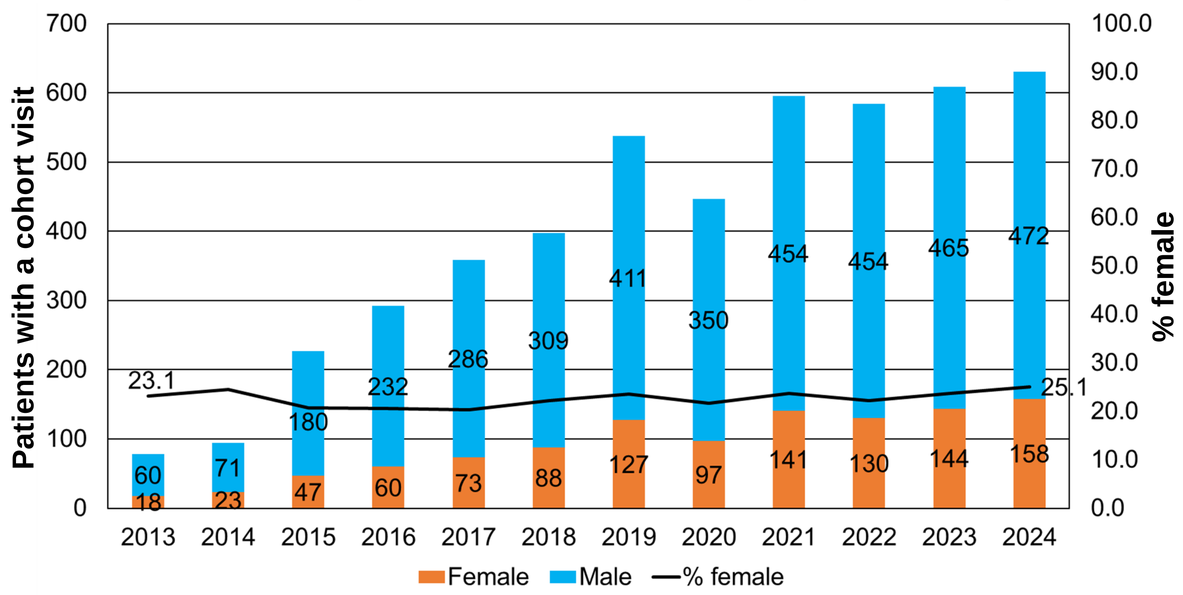
Men: QTc interval **>450ms**

Women: QTc interval **>470ms**

RESULTS (1)

- **Between 2013 and 2024**, the yearly **number of visits** increased from **78 to 630**, with the proportion of **females** remaining **stable at about a quarter**.

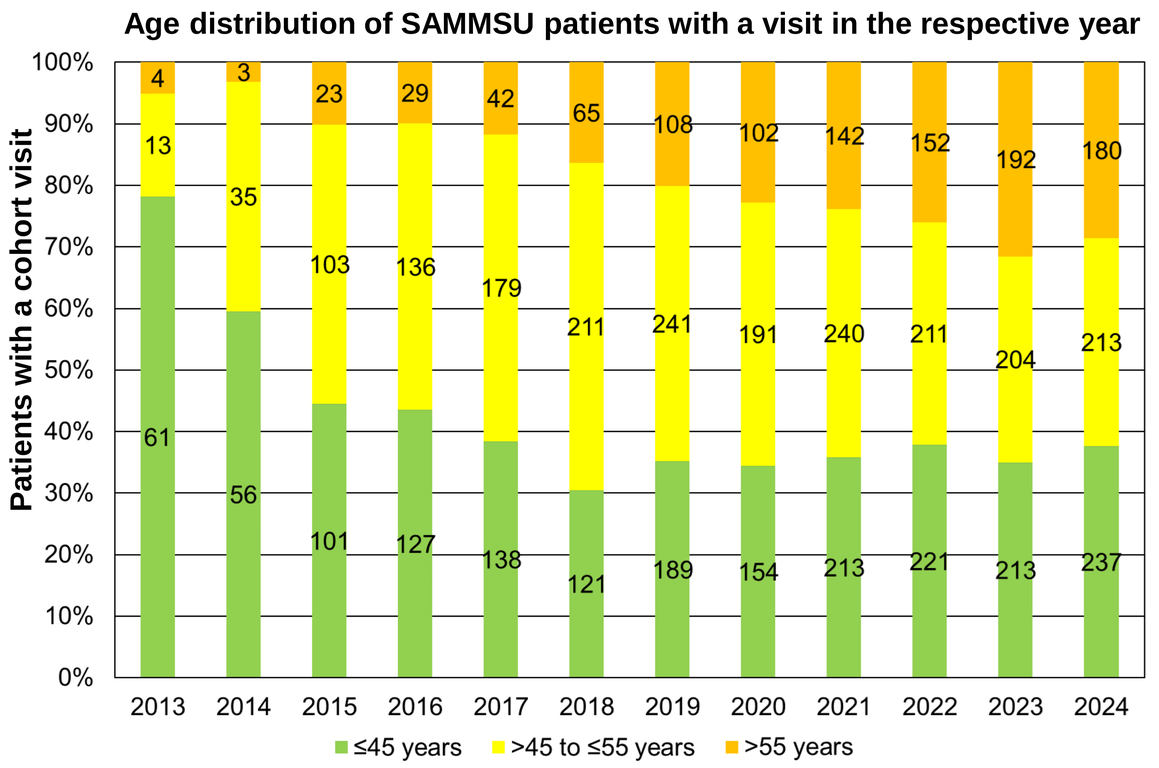
Number of SAMMSU patients with a cohort visit per year according to sex



RESULTS (2)

- The **median age** rose from **39.2** (IQR: 33.8-44.5) in 2013 **to 49.2** (IQR: 39.8-56.1) **years** in 2024, with the **proportion of >55-year-old patients** rising from **5.1% to 28.6%.**

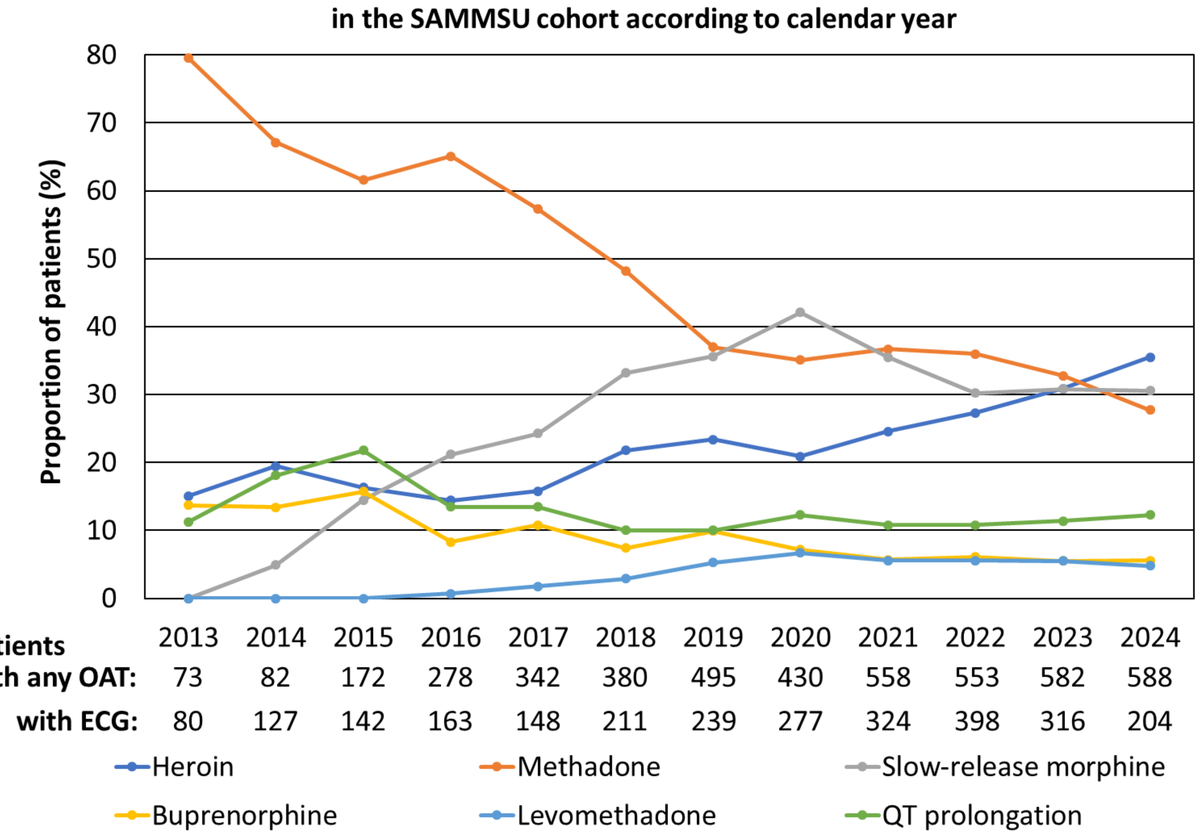
Age distribution of SAMMSU patients with a visit in the respective year



RESULTS (3)

- The proportion of patients with **methadone** as OAT **decreased** from **79.5%** (58/73) **to 27.7%** (163/588) (p<0.001), while the proportion with **diacetylmorphine/heroin and slow-release morphine increased** from **15.1%** (11/73) **to 35.5%** (209/588) **and 0% to 30.6%** (180/588), respectively.
- **Buprenorphine** as OAT decreased (**13.7% to 5.6%**), whereas **levomethadone** increased (**0% to 4.8%**).
- **Excluding patients on diacetylmorphine/heroin**, the development was as follows: methadone: 82.3% (51/62) to 40.4% (153/379), slow-release morphine: 0% to 42.7% (162/379), buprenorphine: 16.1% (10/62) to 8.7% (33/379), and levomethadone: 0% to 6.3% (24/379).
- The proportion of patients with a **QT prolongation** decreased from maximal **21.8%** (31/142) in 2015 **to 12.3%** (25/204) in 2024 (p=0.017).

Opioid agonist therapy (OAT) distribution and proportion with QT prolongation in the SAMMSU cohort according to calendar year



CONCLUSIONS

- In the SAMMSU-cohort 2013-2024, **methadone** as OAT-drug **decreased by 65%** in favour of slow-release morphine and diacetylmorphine/heroin.
- Since 2015, the **proportion with QT prolongation** has approximately **halved**.

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