

Persistent opioid use after trauma in New Zealand

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Introduction

Opioids are routinely prescribed for acute pain management after trauma, but it may lead to adverse outcomes such as persistent opioid use (POU), the use of opioids beyond 90 days after hospital discharge.¹ Patients admitted to hospital with trauma have shown to have increased risk of POU.²

There is a paucity of data in New Zealand (NZ) on opioid utilisation and adverse outcomes after trauma.

Our study aims to determine the rates and predictors of persistent opioid use after hospital discharge due to trauma in NZ.

Methods

Retrospective cohort study, using linked national Ministry of Health databases between 2007 to 2019. Five databases were used including the National Minimum Dataset (hospitalisation), Pharmaceutical Collection (medication), National Health Index (identifier), Primary Health Organisation (sociodemographic), National Non-Admitted Patient Collection (acute care) and Mortality Collection (death).

The index date was the date of hospital discharge after admission for trauma. Patients were followed up for a maximum of 365 days.

Primary outcome: POU= subsequent dispensing of any opioids between 91-365 days.

All patients included were dispensed opioids within seven days of hospital discharge. We excluded patients if they had recurrent trauma or died during follow up. We also excluded patients if they had opioid exposure and previous opioid misuse up to 365 days preceding the index date.

Multivariable regression including sociodemographic, clinical, baseline comorbidities, baseline medication use and discharge variables was used to assess predictors. Analysis was

undertaken via SPSS v28.

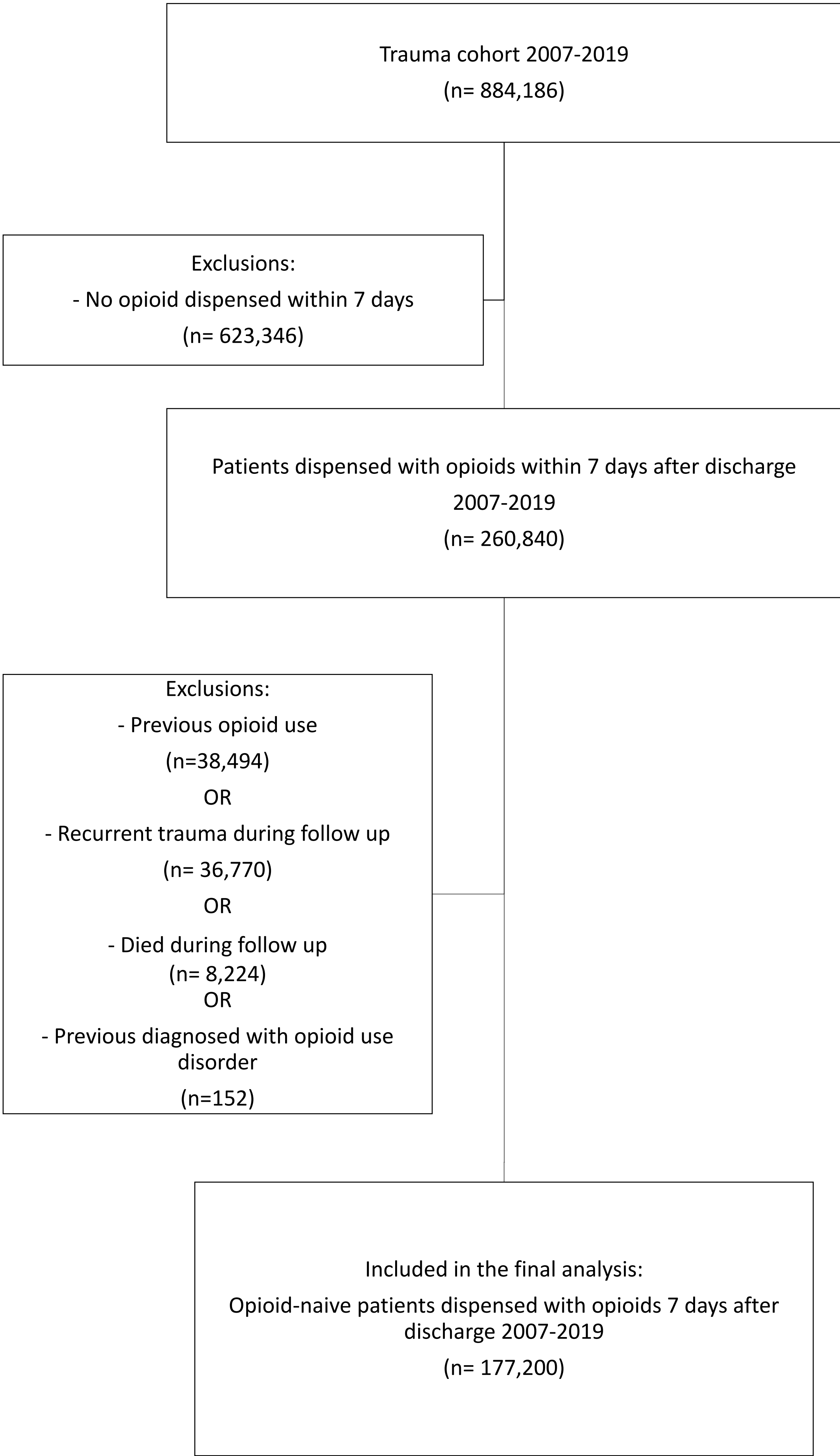


Figure. 1 Patient selection

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Results

260,840 (29.5%) of all trauma patients received opioids within seven days of discharge, of these 177,200 patients were included for analysis, and 27,060 (15.3%) met our criteria for POU (fig 2).

The key predictors included the following discharge-related variables: switching opioid types before 91 days, opioid type, and slow-release opioid formulation. Other variables included pre-trauma non-opioid analgesic use, pre-trauma hypnotic use, higher comorbidity, smoking, and site of injuries. Undergoing surgical treatment during admission reduced the odds of POU.

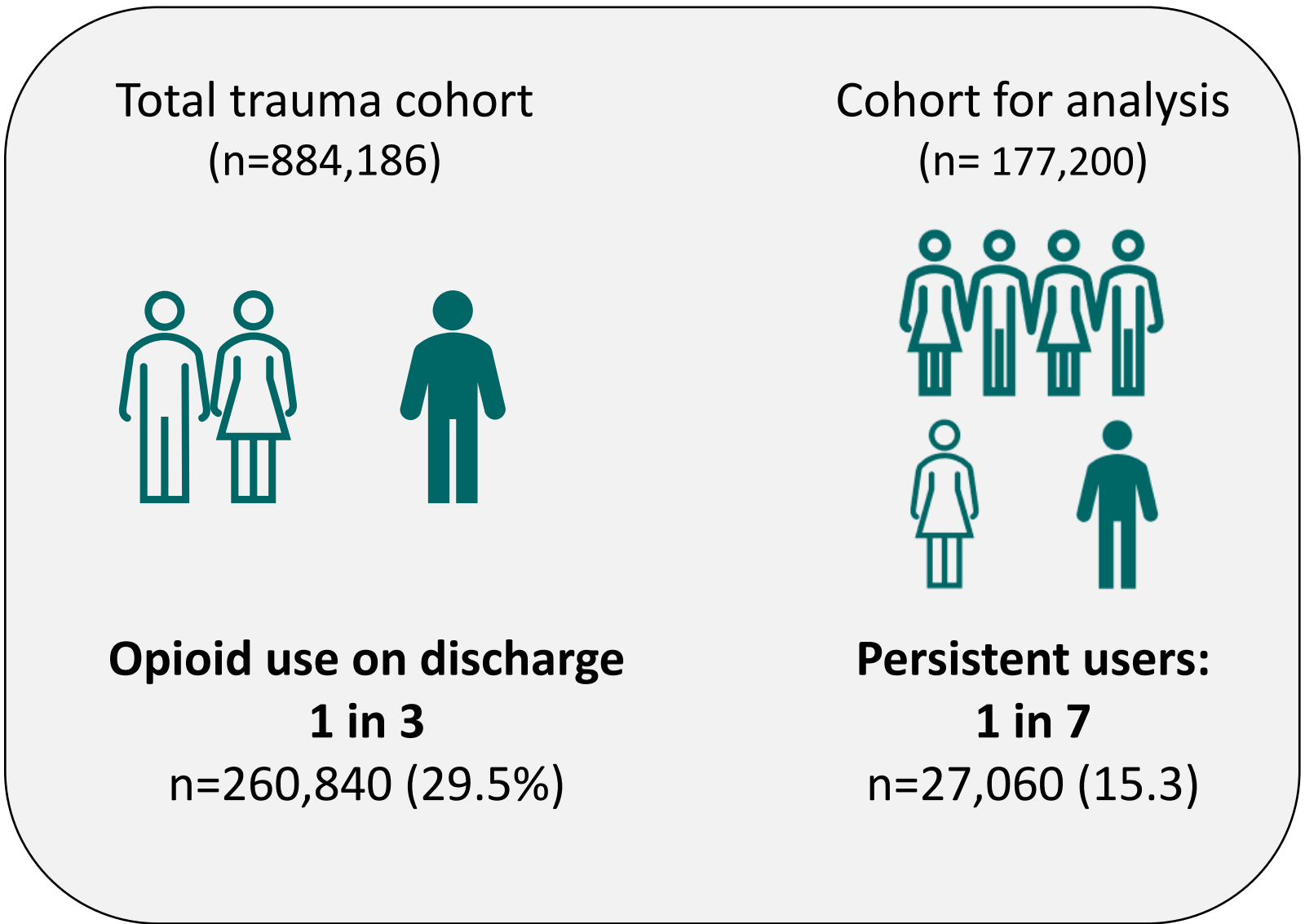


Figure 2. Visual summary of opioid use after trauma

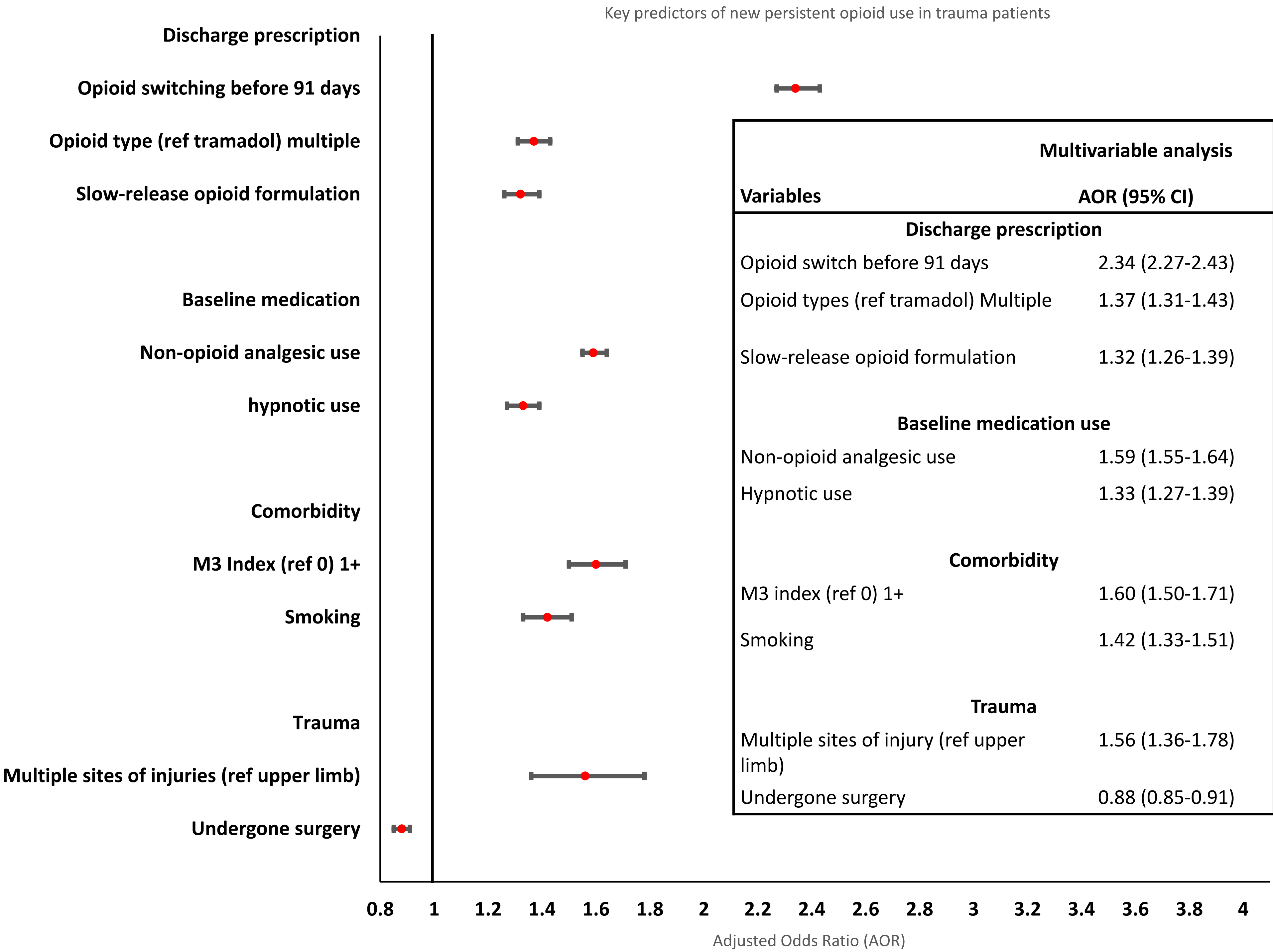


Figure 3. Forest plot of key predictors (P<0.001) of AOR and 95% CI in trauma (n= 177,200)

Conclusion

One in seven opioid-naïve patients prescribed opioids after trauma may develop POU. Avoiding unnecessary switching, multiple opioids and slow-release opioid formulation on discharge may reduce the risk of POU. We support discussing with trauma patients the risk of POU if continuing opioids on discharge.