

Modelling the impact of opioid agonist treatment on suicide-related deaths among people with opioid use disorder (OUD)

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Introduction

- **People with OUD 8x risk of suicide vs general population**
- **Suicide prevention strategies do not address OUD population needs**
- Issues of Overdose & Suicide often conflated or misclassified
- **OAT halves suicide in individuals, but no previous studies have estimated the population-level impact**

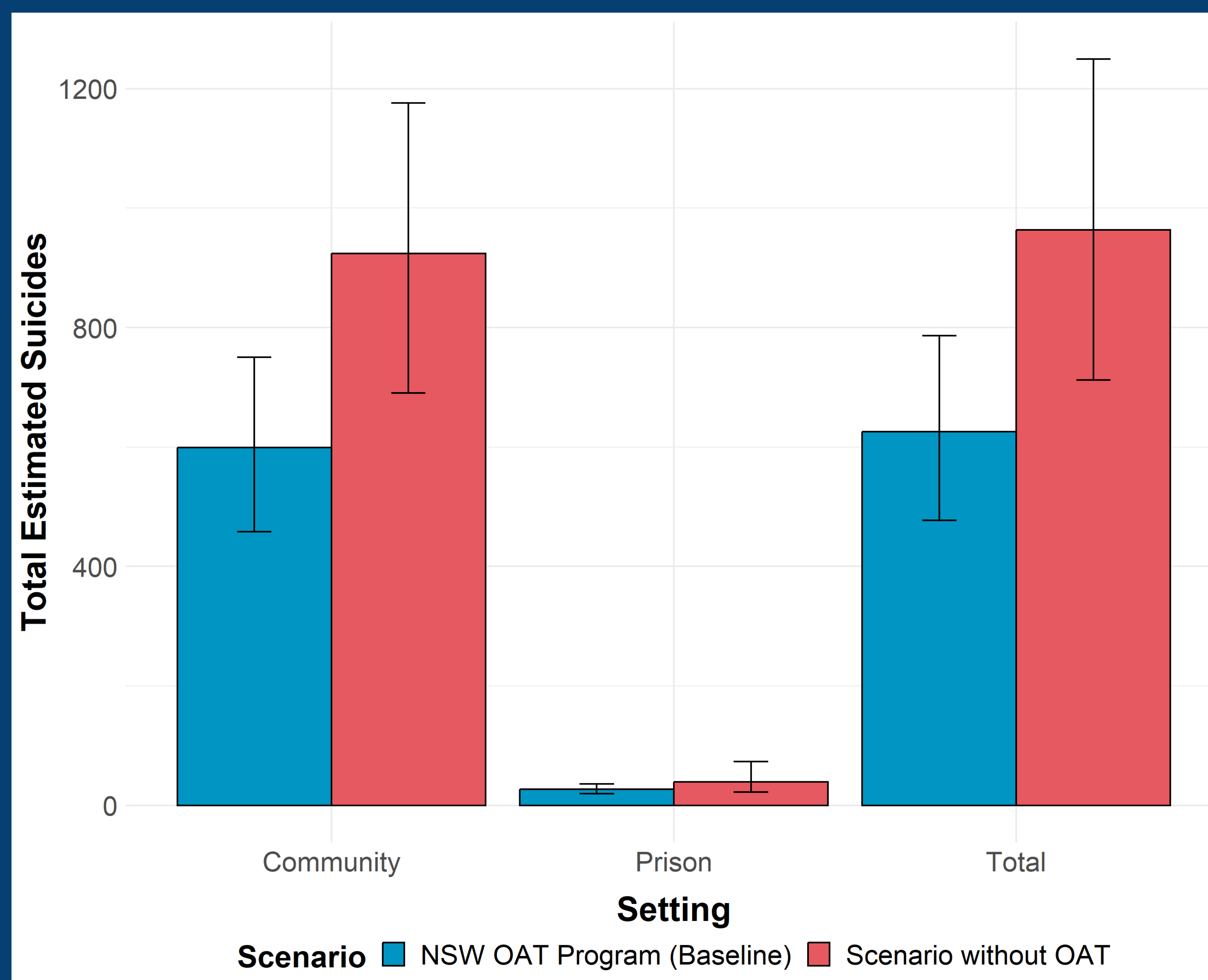
Objective

- Evaluate the NSW OAT program's population level impact on suicide prevention, by comparing real-world outcomes against a scenario without OAT using mathematical modelling

Methods

- **Cohort** : ~ 49,000 individuals who have ever received OAT 2000-2017, via the Opioid Agonist Treatment & Safety (OATS) Cohort
- **Data Sources**: Administrative data from state-wide databases on:
 - Healthcare Utilisation Records: Including detail on each OAT treatment episode
 - Incarceration data
 - Mortality: Date & Cause(s) of Death

The high-coverage Opioid Agonist Treatment Program in New South Wales prevented **338 suicides (35% reduction)** among people with OUD from 2001-2021

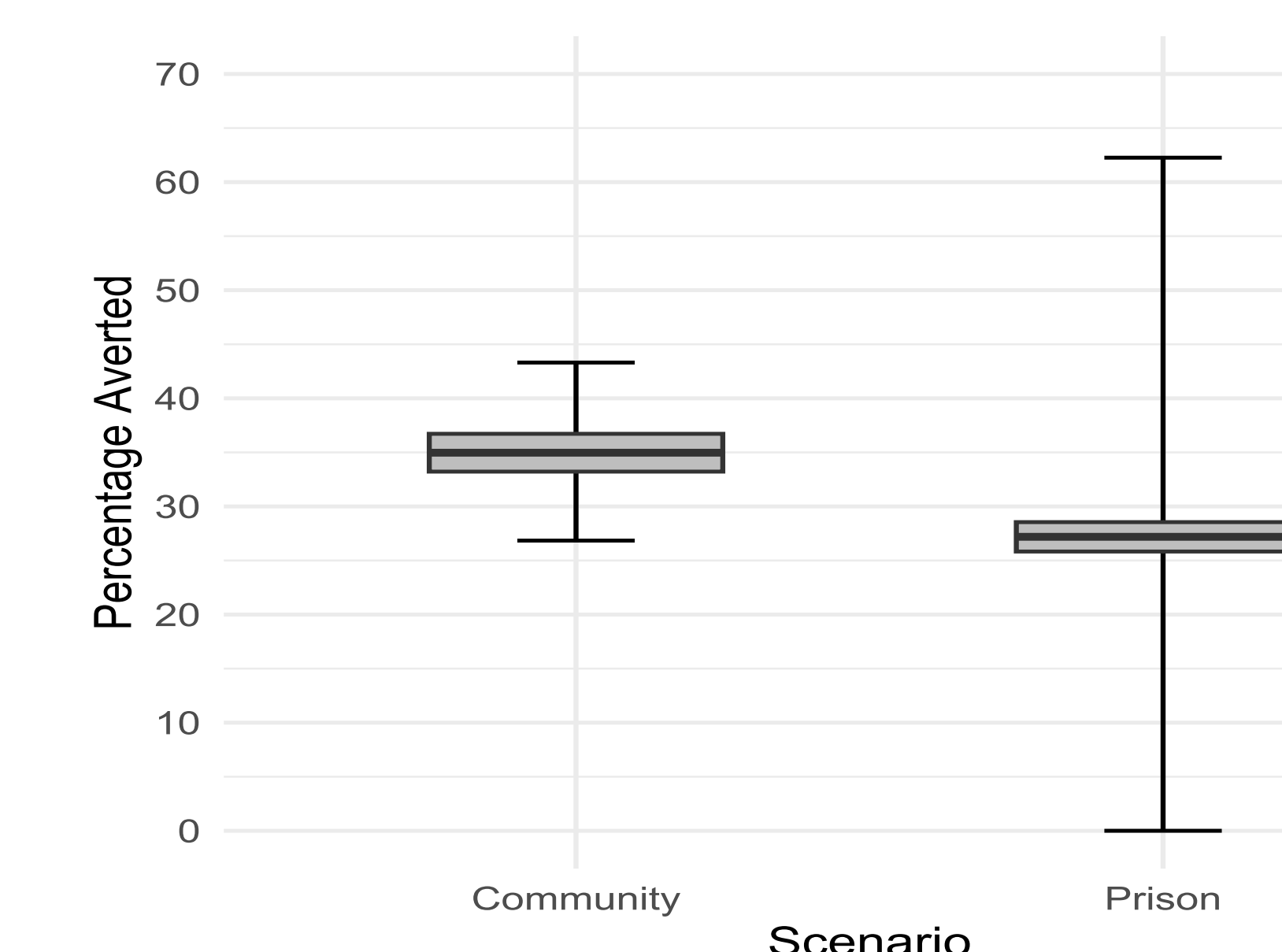


Dynamic Mathematical Modelling

- Analyzed OATS data for key model parameters (e.g. suicide risk while on versus off OAT in community./prison)
- Expanded our model the impact of the NSW OAT program on overdose related death
- Simulated the ongoing OAT program (baseline/status quo) from 2001-2020, estimating suicides by OAT status/setting. Compared to projected number of suicides in No OAT Scenario

Results

- **The OAT program in NSW averted 338 suicides from 2001 to 2020, reducing the total from 963 (without OAT) to 626 (with OAT)**



Conclusions

- **The NSW OAT program reduced suicides among people with OUD by 35%, 2001 to 2020, contributing to a 2% reduction for NSW population & 7% towards the UN & WHO's 2030 suicide reduction targets for this setting**
- Given low coverage of OAT globally, **results support expanding OAT access** for people with OUD as part of global suicide prevention strategies

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