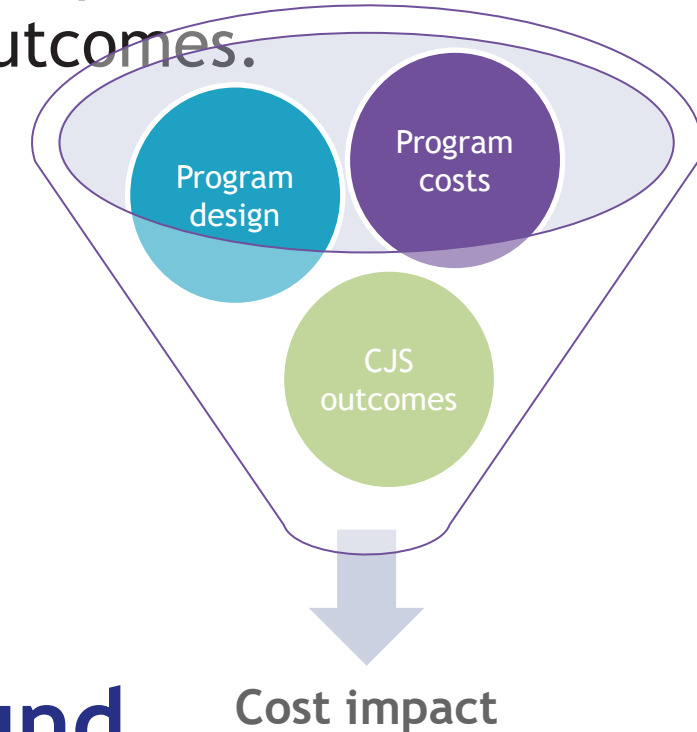


# A novel cost impact analysis framework and model to evaluate medications for opioid use disorder within the US criminal justice system

Danmeng Huang<sup>1</sup> | Courtney Flynn<sup>2</sup> | Chris D Poole<sup>1</sup> | William Mullen<sup>2</sup> | Sabrina Gaiazov<sup>2</sup>  
<sup>1</sup>Xcenda LLC (AmerisourceBergen), Carrollton, TX, USA | <sup>2</sup>Indivior, North Chesterfield, VA, USA

## Objective

To develop a novel model framework to assess the cost impact of implementing a program to supply medications for opioid use disorder (MOUD) within the criminal justice system (CJS), accounting for the majority of likely costs but also plausible cost-offsets attributable to favorable outcomes.



## Background

- Opioid use disorder (OUD) is common among inmates in United States jails and prisons, affecting around one-fifth of such persons<sup>1</sup>.
- However, access to FDA-approved MOUDs is very limited; <1% of these institutions provide such care<sup>2</sup>, despite the documented excess risks:
- People leaving prison without MOUD have a 40-fold higher risk of dying from overdose in the first 2 weeks following their discharge compared to the general population<sup>3,4</sup>
- MOUD in CJS has been shown to positively influence outcomes not only during, but also immediately following incarceration
- Despite these benefits, lack of funding is cited by CJS administrators as the principal barrier to establishing MOUD programs<sup>5</sup>.
- Previous economic evaluations of MOUD in CJS have focused on acquisition costs and maintenance<sup>6,7</sup>, while associated cost-offsets arising from improved outcomes are rarely estimated.

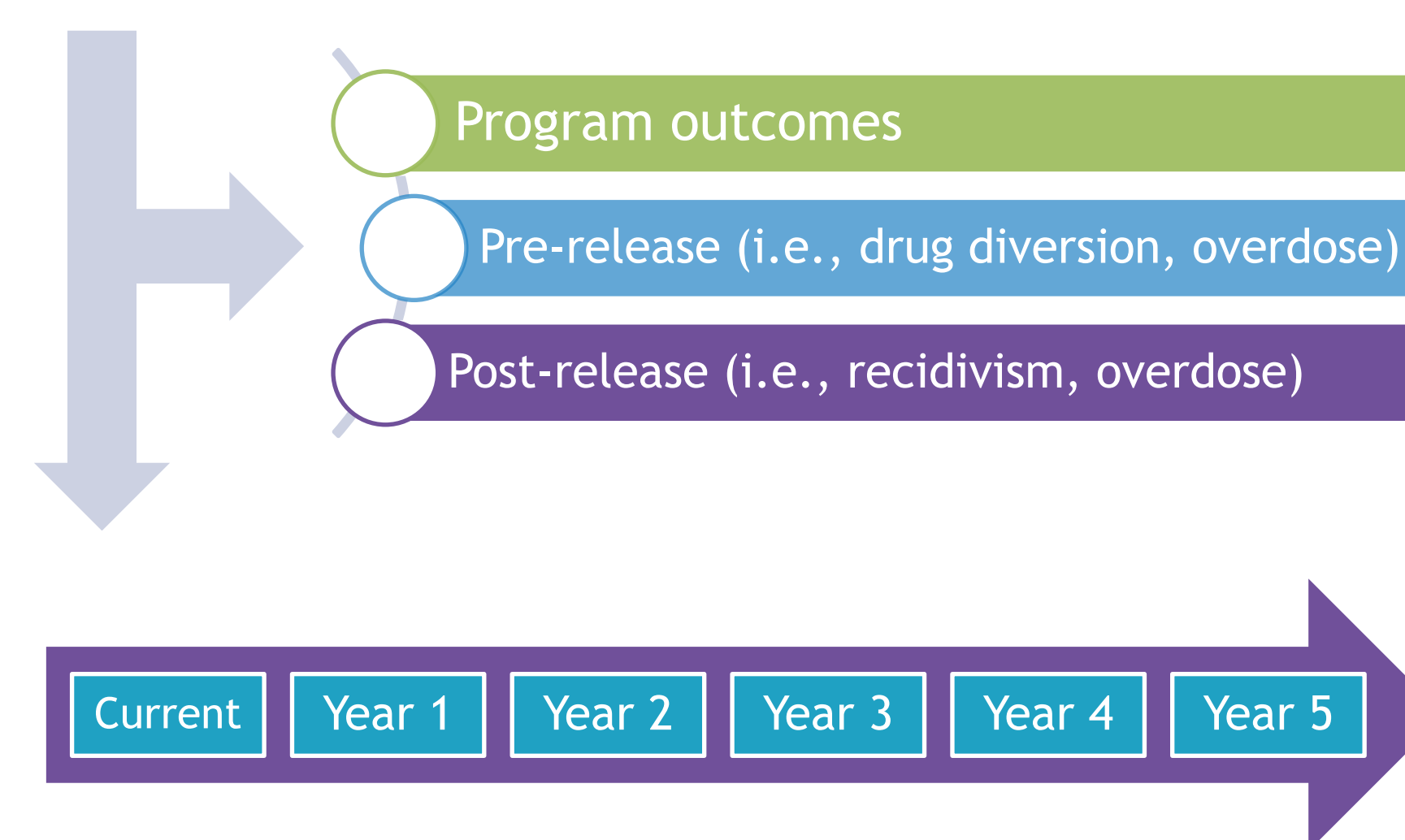
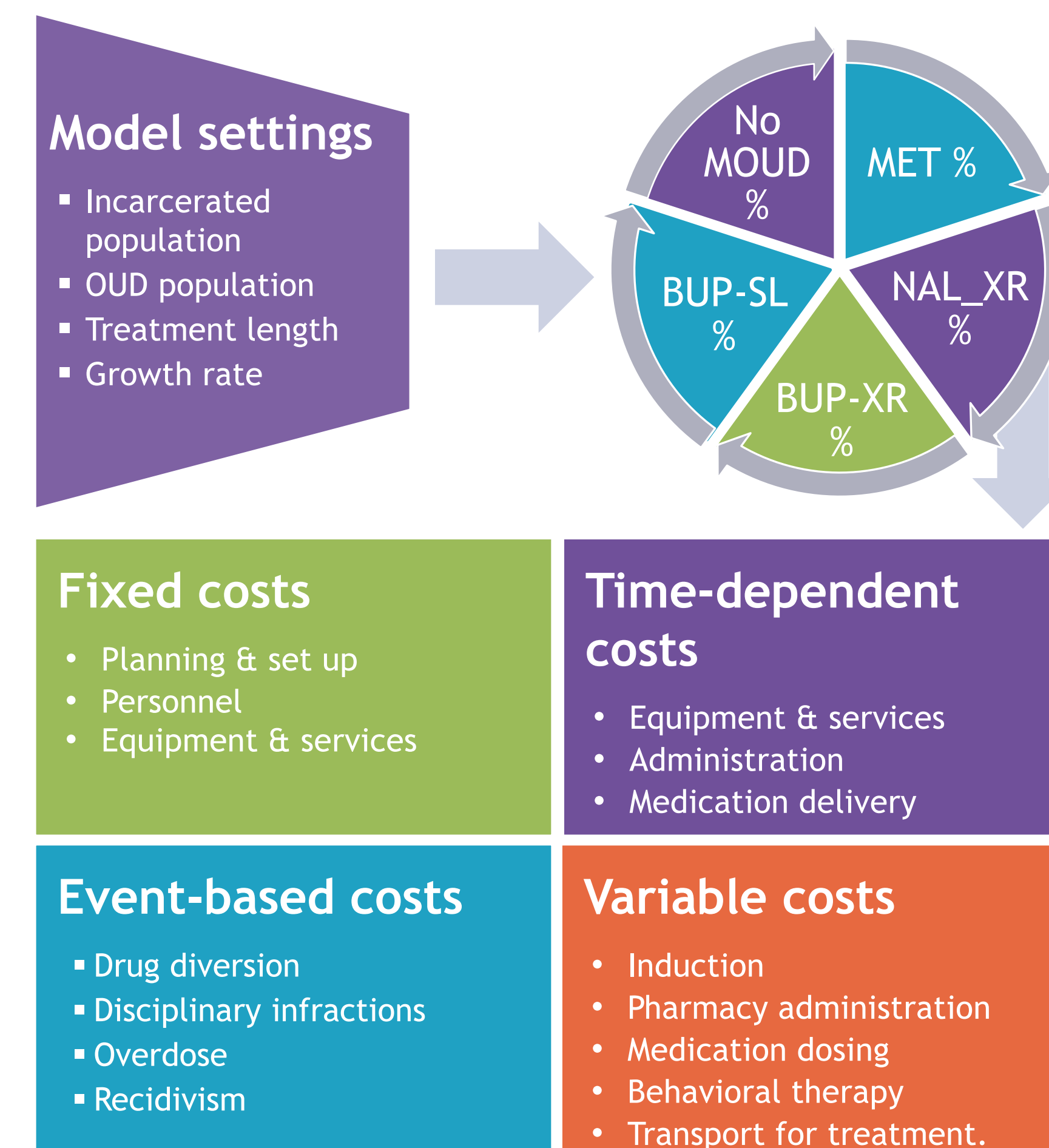
## Methodology

- A literature review was conducted using Ovid MEDLINE, Emcare (via Ovid), Embase, Econlit, and EBM Reviews databases.
- Upon completion, 8 economic evaluations on MOUD programs within CJS were used.
- Correctional medical directors, clinical advisors and researchers were also engaged to provide input on model components, MOUD coverage and usability.
- Select inputs are modifiable to allow the user to tailor the model to their specific jail or prison.
- Outputs of the model include a summary of the cost impact of their selected MOUD program including total cost, per treated patient per month (PTPPM) and per incarcerated person per month (PPPM).
- Impact on drug diversion, violence, recidivism, and overdose over the selected time horizon are also included.

## Model limitations

- The comparative clinical effectiveness of MOUD comparators are currently naïve since comprehensive bias-adjusted indirect treatment comparisons are unavailable in the CJS setting.
- Assumptions on the thresholds for step-fixed costs require validation by IDI's.
- The model framework is assumed to apply equally to the entirety of the incarcerated population and may not be sensitive to different facility types.
- The model framework is not yet equipped to extrapolate baseline characteristic drivers of CJS outcomes such as ethno-demography.

## Model flow



## Future model applications

This cost impact analysis framework and model capture core components to comprehensively assess the economic impact of implementing different MOUD programs within CJS. Future research will consider a broader societal perspective including costs associated with lost productivity and premature mortality.

## Disclosure

This study was designed and conducted by Xcenda, in collaboration with the sponsor, Indivior.

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