

# Factors associated with MOUD treatment retention in Texas

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## Background

In this study, the authors used data from Texas Targeted Opioid Response treatment services reporting system to identify factors associated with medications for opioid use disorder (MOUD) treatment retention among opioid-related admissions across state-funded treatment services.

## Methods

### Study Population

The authors identified 18,236 admissions among Texas residents with the following criteria:

- Opioid-related service primary diagnosis
- Younger than 65 at first admission
- Length of stay less than or equal to six years
- First admission between June 2010-June 2022

Records with inconsistent data patterns, such as negative age and overlapping admission service dates, were excluded from analyses. To assess reasons for service end for people that left treatment, the authors classified the variable using a combination of the categorical variables included in the data and the free text field “other” variable into treatment completion, discontinuation, death, funding, service changes, hospitalization, incarceration, relocation and other. For admissions where service end reason was missing, the discharge reason was used.

### Statistical Methods

Using Kaplan–Meier survival curves, the authors estimated the overall and stratified treatment retention period for admissions by service type and medication type. Kaplan–Meier survival curves were used to assess the probability of remaining in treatment over time. The Multivariable Cox-proportional hazard model assessed the association between service type and time to treatment discontinuation, adjusting for sex, age at first admission and race and ethnicity.

Figure 1. Service end reasons for people that left treatment

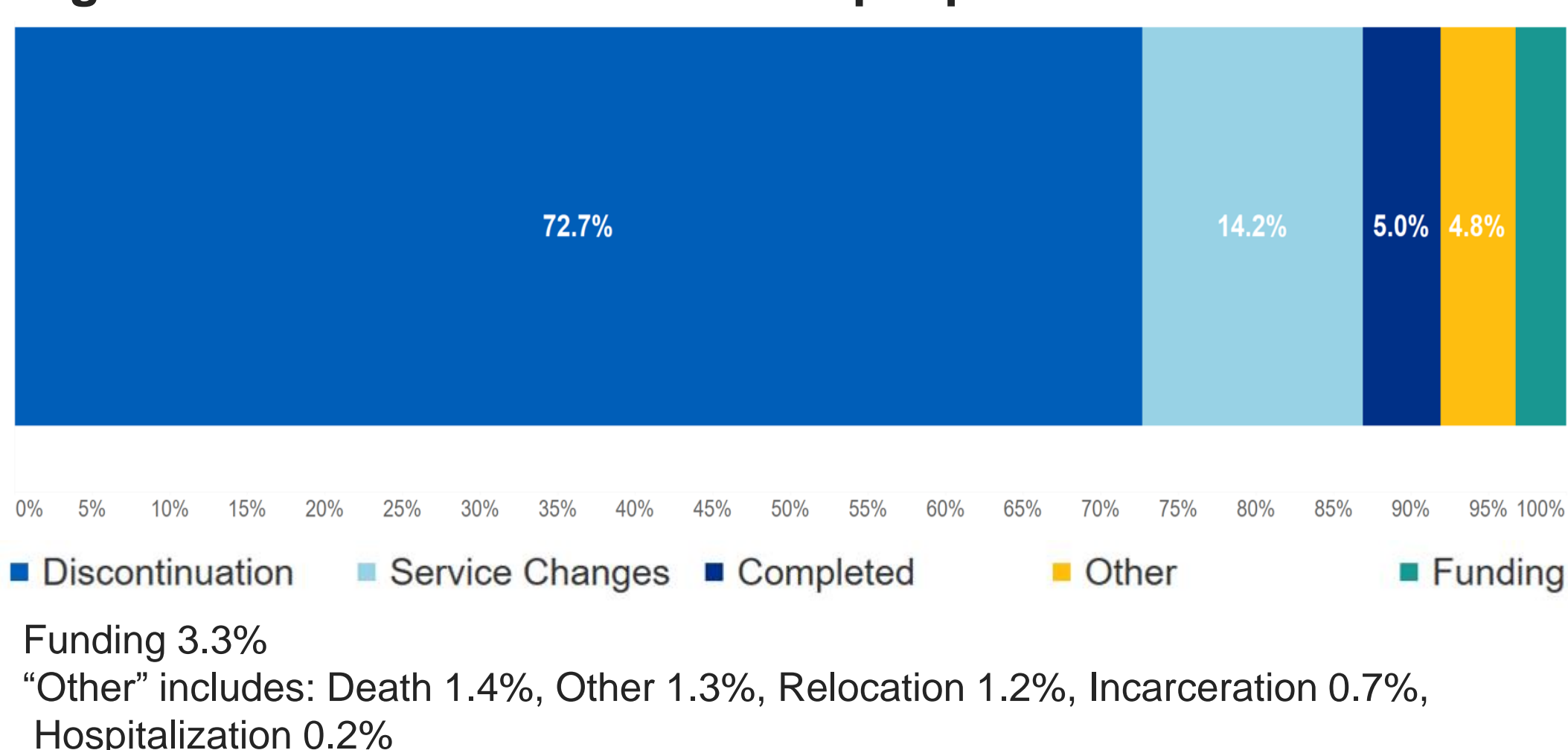


Figure 2. Estimated Probabilities of Treatment Retention

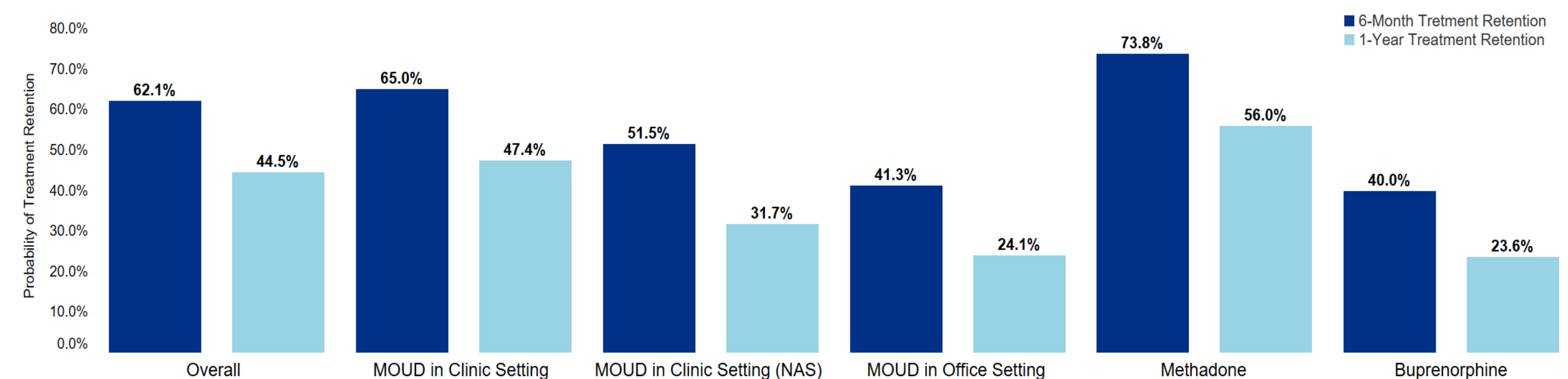


Figure 3. Estimated Probability of Treatment Retention

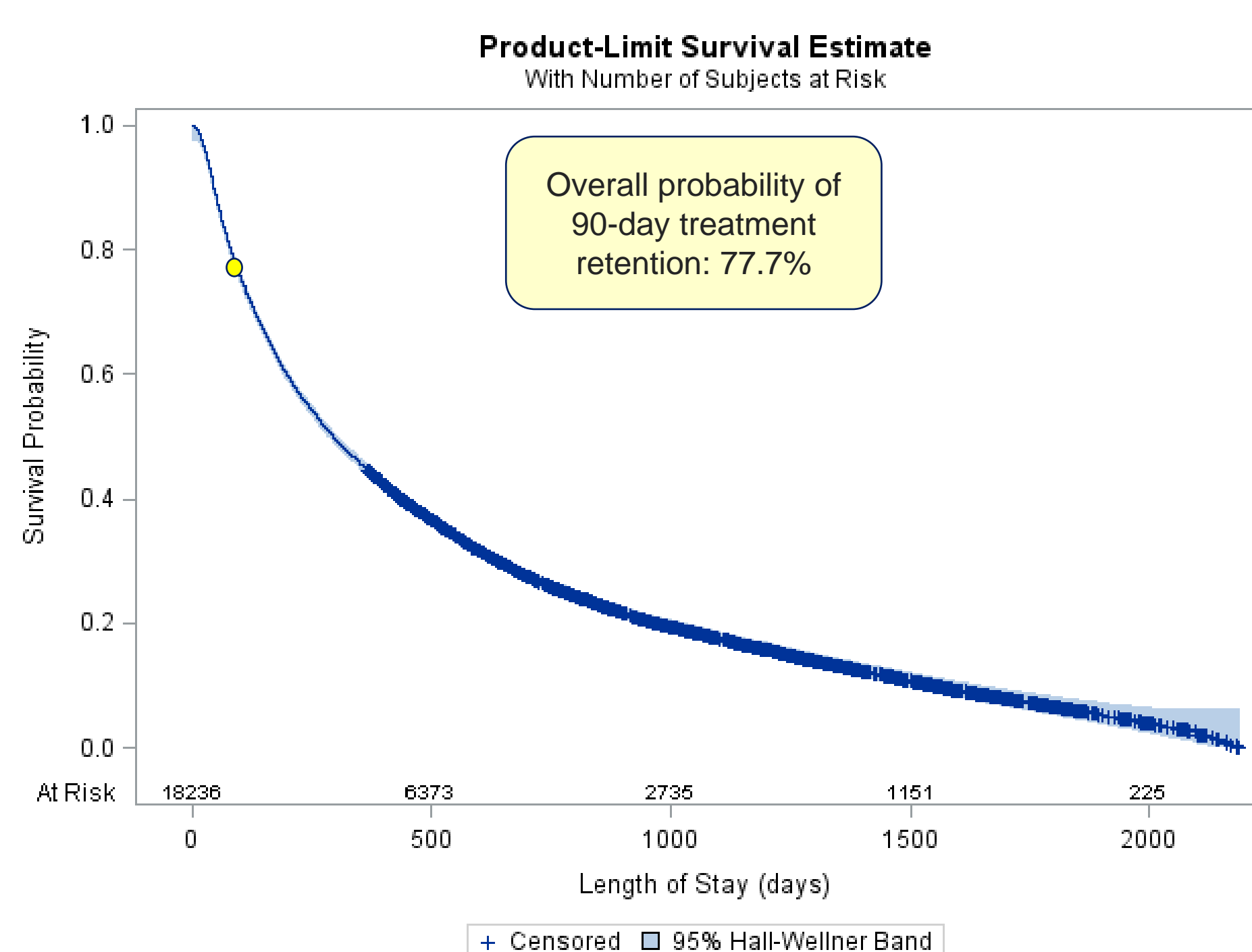


Figure 4. Estimated Probability of Treatment Retention by Service Type

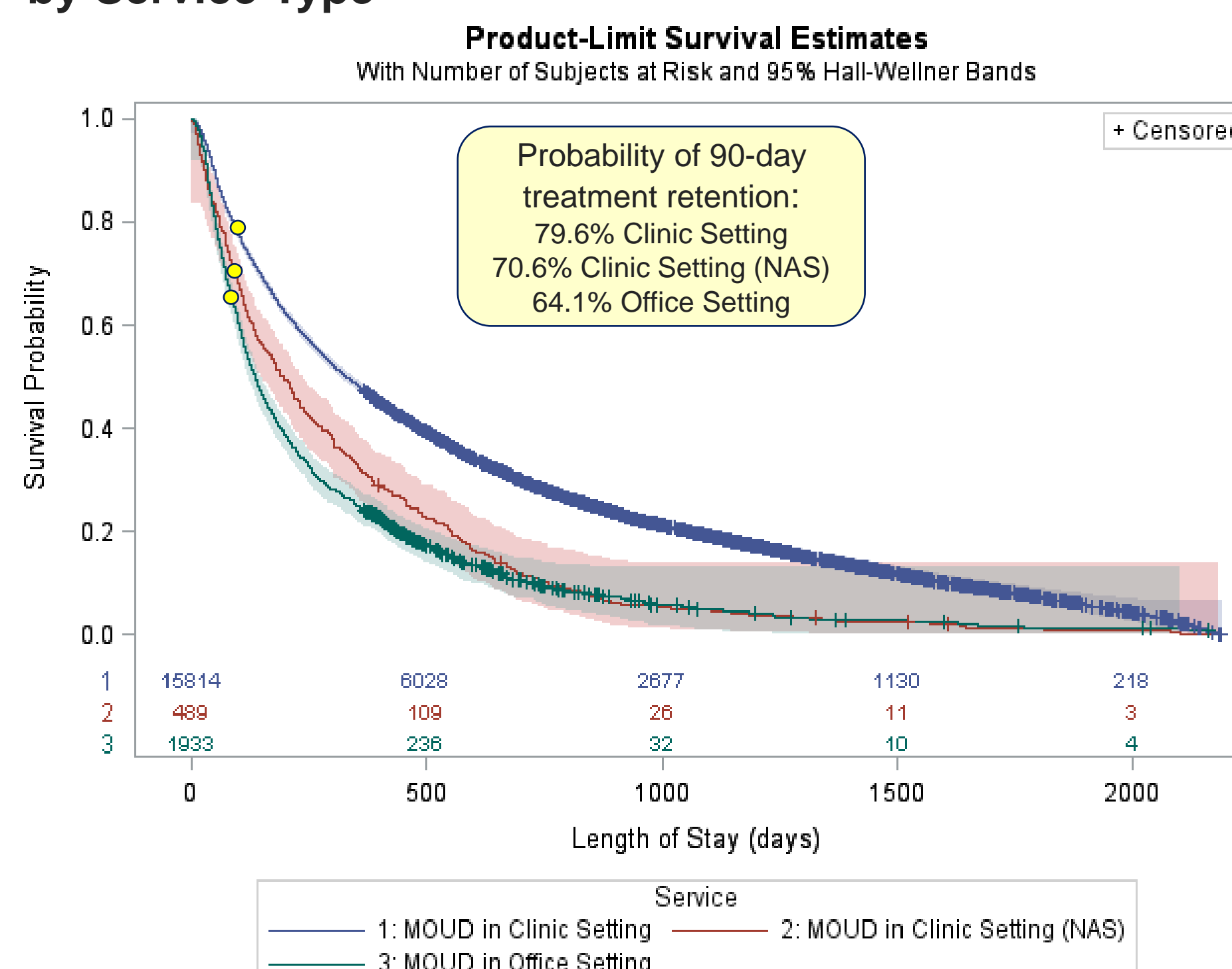


Table 1. Comparison of Hazard Ratios by Risk Factors

Factor	Hazard Ratio	95% Confidence Limits	
<b>Sex</b>			
Female	Ref	Ref	Ref
Male	1.09 <sup>†</sup>	1.05	1.12
<b>Race and Ethnicity</b>			
Non-Hispanic White	Ref	Ref	Ref
Non-Hispanic Black	1.21 <sup>†</sup>	1.14	1.29
Hispanic	1.01	0.98	1.05
Non-Hispanic Other <sup>*</sup>	1.18 <sup>†</sup>	1.05	1.33
<b>Service Type</b>			
MOUD in Clinic Setting	Ref	Ref	Ref
MOUD in Clinic Setting (NAS)	1.54 <sup>†</sup>	1.40	1.69
MOUD in Office Setting	1.88 <sup>†</sup>	1.78	1.97

\* Non-Hispanic Other includes American Indian or Alaska Native, Asian, Native Hawaiian or other Pacific Islander, Multiple Race and Multiracial – Unspecified racial ethnic groups  
<sup>†</sup> Denotes significance at the 0.05 level

## Results

Overall, people included in the analysis were predominantly male (54.7%) and non-Hispanic White (59.4%), with an average age of 36. The authors found that most people’s service ended due to discontinuation, which included people that were not compliant with the service requirements, followed by service changes.

Compared to females, males were 9.0% more likely to discontinue treatment sooner. Non-Hispanic Black people and non-Hispanic Other people were respectively 21% and 18% more likely to discontinue treatment compared to non-Hispanic White individuals. Compared to those receiving treatment in a clinic setting, those in office-based treatment services were 88.0% more likely to leave treatment, while those in Neonatal Abstinence Syndrome therapy services had a 54.0% greater likelihood to leave treatment.

## Conclusions

The findings suggest that overall, one-year treatment retention was low, with the lowest retention rates among non-Hispanic Black, non-Hispanic Other people and those receiving office-setting treatment. Findings highlight the need to ensure equitable access to services to address racial and ethnic differences in treatment outcomes and prioritizing engagement in office-based services.

Additionally, 40% of people had discordant service end and discharge reasons. Further review of the data entry procedures among the different providers is advisable to identify gaps that merit additional training on standardized systems and procedures. These efforts may help improve accurate recordkeeping and facilitate more robust analyses.

For more information visit [txopioidresponse.org](https://txopioidresponse.org)



Texas Department of State Health Services