

It's not easy being Buprenorphine

Identifying unique substance use patterns associated with buprenorphine

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Disclosures

- Research support from Denver Health and Hospital Authority.

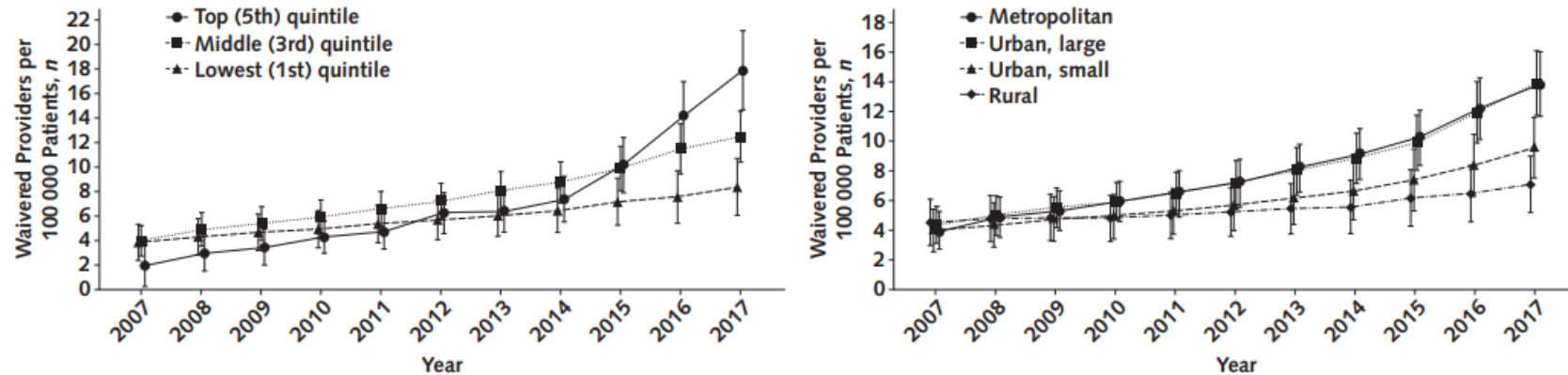
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- There are no conflict of interests to report

Buprenorphine

- Evidence-based treatment for opioid use disorder
 - Continued growth in waived providers

Figure. Waivered providers, by overdose death rate (*left*) and rurality (*right*).



Left. Error bars represent 95% CIs. Quintiles represent rate of opioid overdose deaths per 100 000 persons in the previous year. Estimates are based on conditional standardization from regression analysis, with covariates set to median values within respective quintiles. Right. Estimates are based on conditional standardization from regression analysis, with covariates set to median values within respective rurality classifications.

Buprenorphine

- Evidence-based treatment for opioid use disorder
 - Continued growth in waived providers
 - Waivered doesn't always equate to dispensing

Table. Monthly Patient Census Among Active Clinicians Prescribing Buprenorphine for Opioid Use Disorder From April 2017 to January 2019

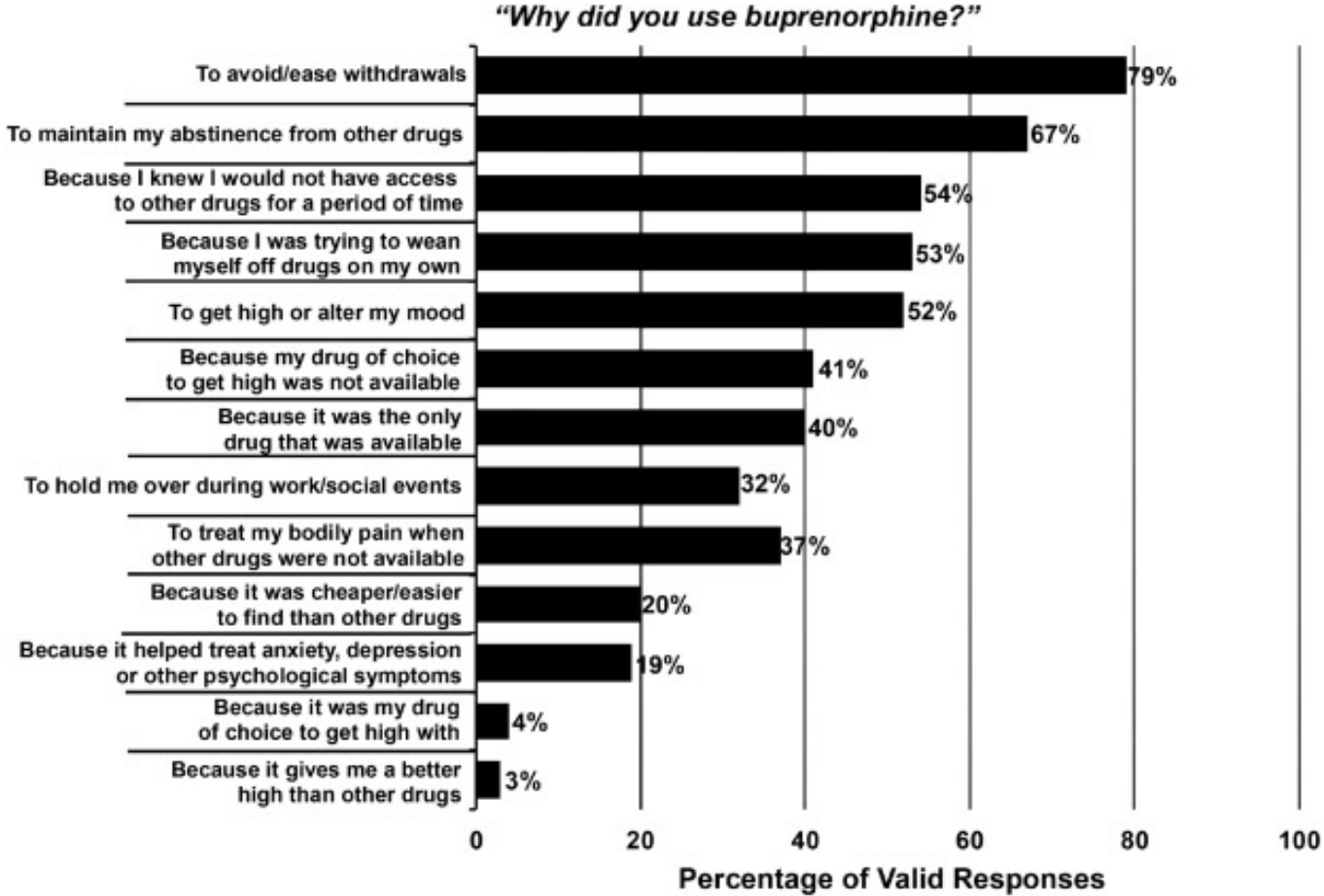
Patient limit	Waivered clinicians, No.	Active clinicians, No. (%)	Monthly patient census, median	Monthly patient census, percentile			
				10th	25th	75th	90th
30	42 508	16 525 (38.9)	3.4	1.0	1.3	9.6	21.6
100	8923	7504 (84.1)	23.9	2.0	7.2	55.4	99.6
275	4507	4419 (98.0)	101.5	16.1	48.3	171.5	257.3
Total clinicians	55 938	28 448 (50.9)	8.3	1.0	2.1	35.9	105.7

Duncan A, Anderman J, Deseran T, Reynolds I, Stein BD. Monthly Patient Volumes of Buprenorphine-Waivered Clinicians in the US. JAMA Netw Open. 2020 Aug 3;3(8):e2014045. doi: 10.1001/jamanetworkopen.2020.14045. PMID: 32833015; PMCID: PMC7445589.

Buprenorphine

- Evidence-based treatment for opioid use disorder
 - Continued growth in waived providers
 - Waivered doesn't always equate to dispensing
 - Accessibility is increasing and will likely continue to do so
 - COVID-related changes
 - Expansion of telemedicine
 - Possible elimination of waiver

Non-therapeutic use of buprenorphine



Cicero TJ, Ellis MS, Chilcoat HD. Understanding the use of diverted buprenorphine. Drug Alcohol Depend. 2018 Dec 1;193:117-123. doi: 10.1016/j.drugalcdep.2018.09.007. Epub 2018 Oct 12. PMID: 30359928.

Questions about buprenorphine

- Has non-therapeutic use changed as buprenorphine in OUD treatment expanded?
- What is the relationship between buprenorphine therapy and non-therapeutic use?
- How is non-therapeutic use of buprenorphine associated with the use of non-opioid substances?

Methods

- Data from two national opioid surveillance programs from substance use treatment centers
 - Survey of Key Informants' Patients (SKIP) Program
 - Opioid Treatment Program (OTP)
 - Treatment Center (TC) Combined



Methods

- SKIP Program
 - ~120 treatment programs for opioid use disorder in 47 states/DC
 - Blend of private, public and treatment modalities
 - 12,198 respondents from 2015-2020



Methods

- OTP Program
 - ~75 medication-assisted opioid treatment programs, predominantly methadone, in 33 states
 - 32,300 respondents from 2015-2020



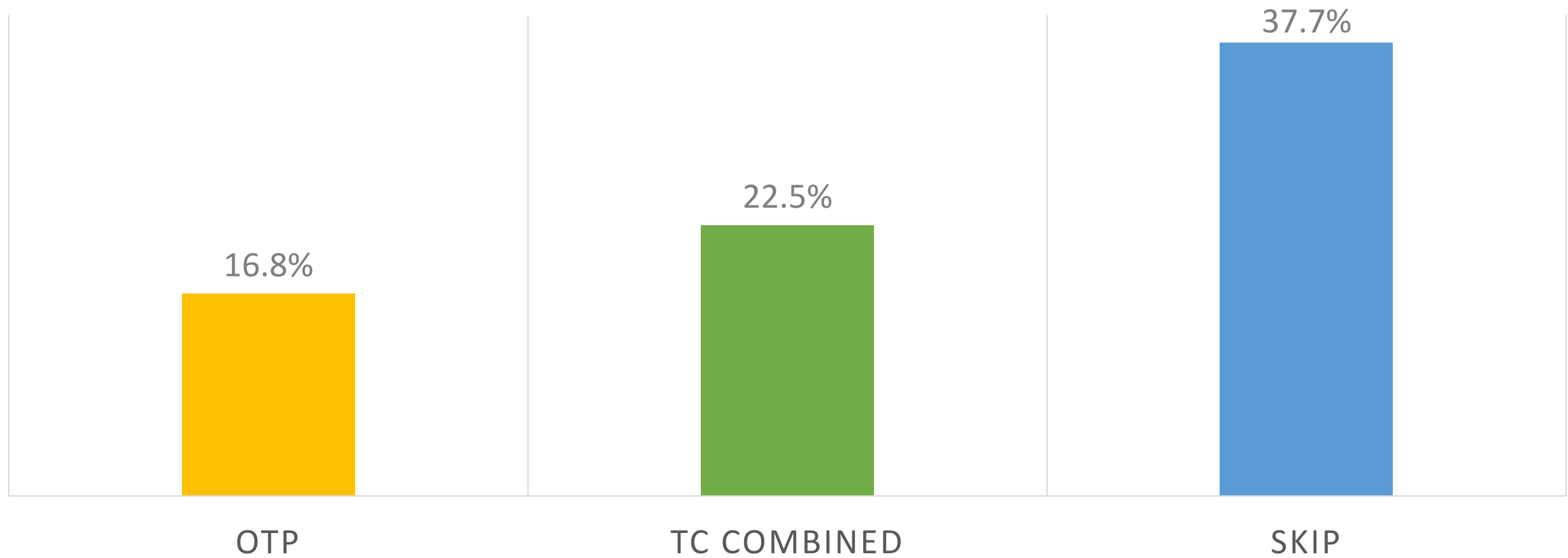
Methods

- Treatment Center (TC) Combined
 - Both SKIP and OTP utilize the same survey
 - 44,498 respondents from 2015-2020

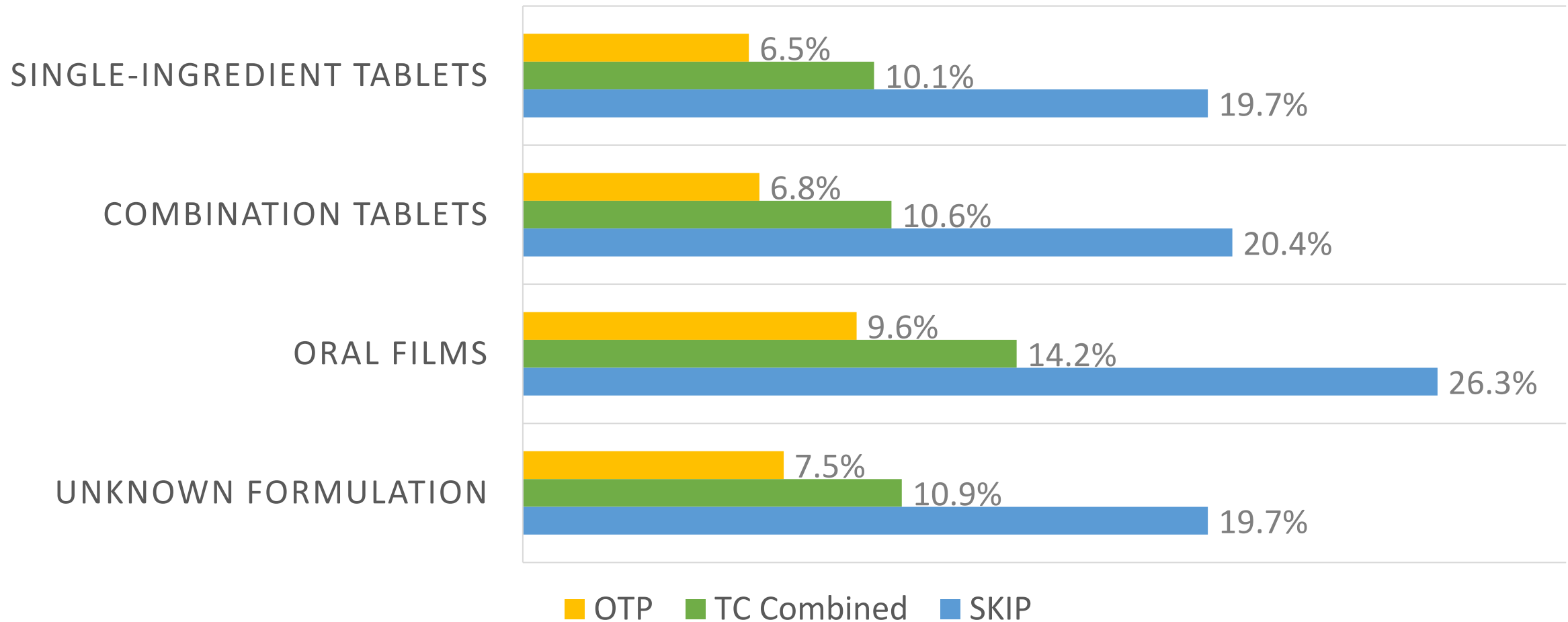


Past month non-therapeutic use of buprenorphine

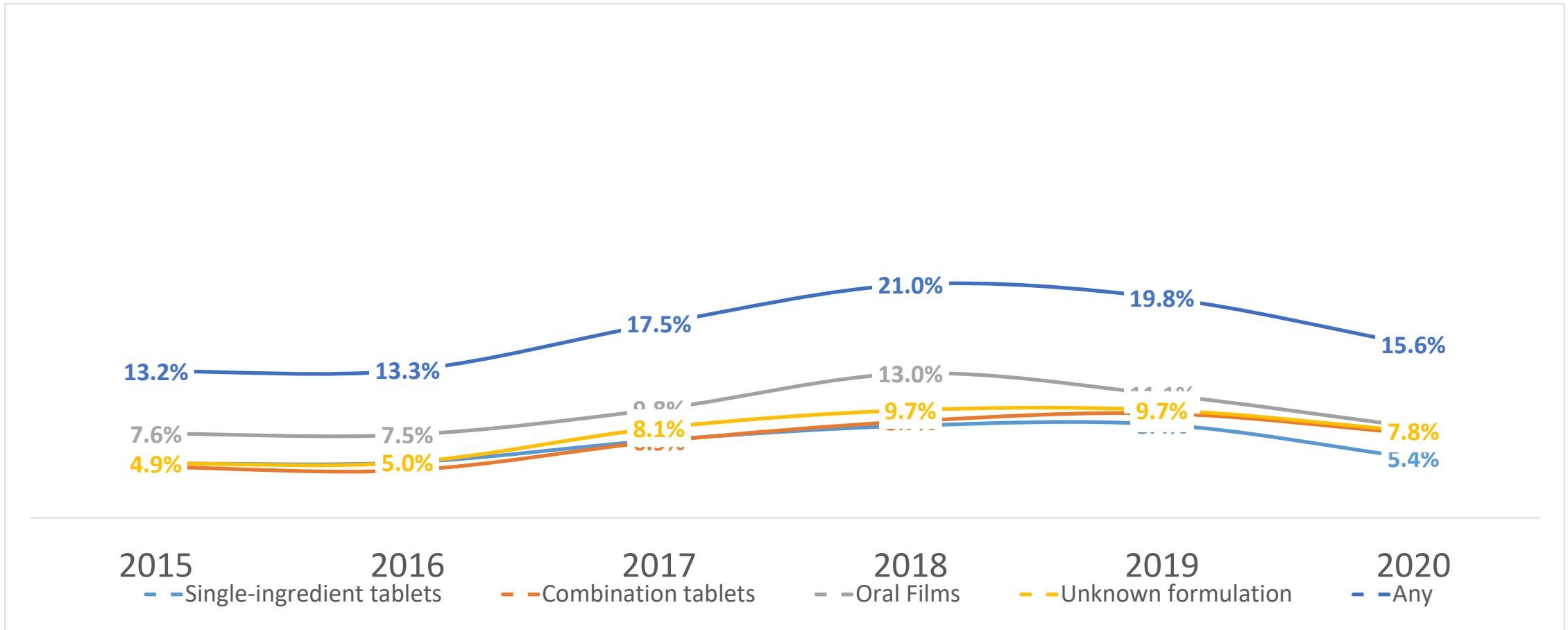
Past month non-therapeutic use of buprenorphine, 2015-2020



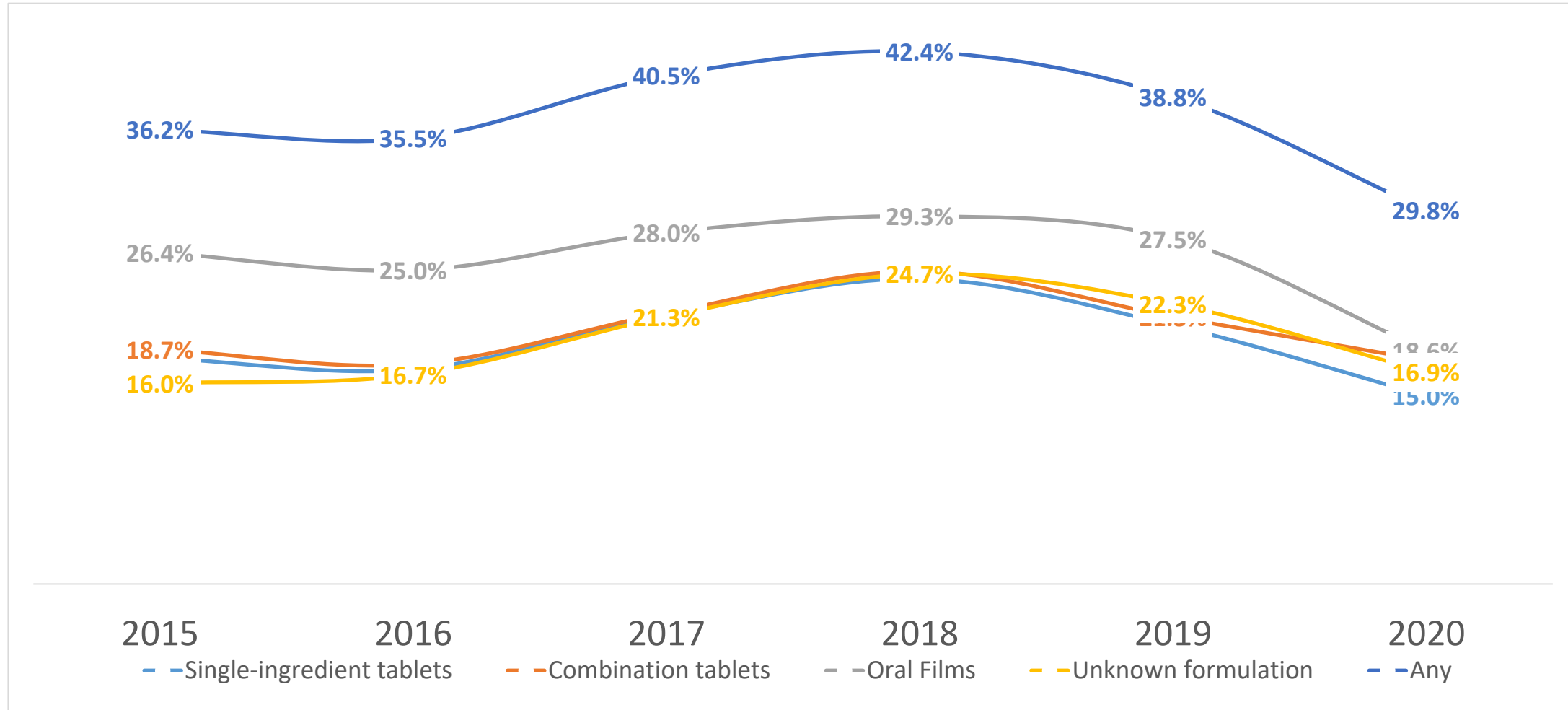
Past month non-therapeutic use of buprenorphine



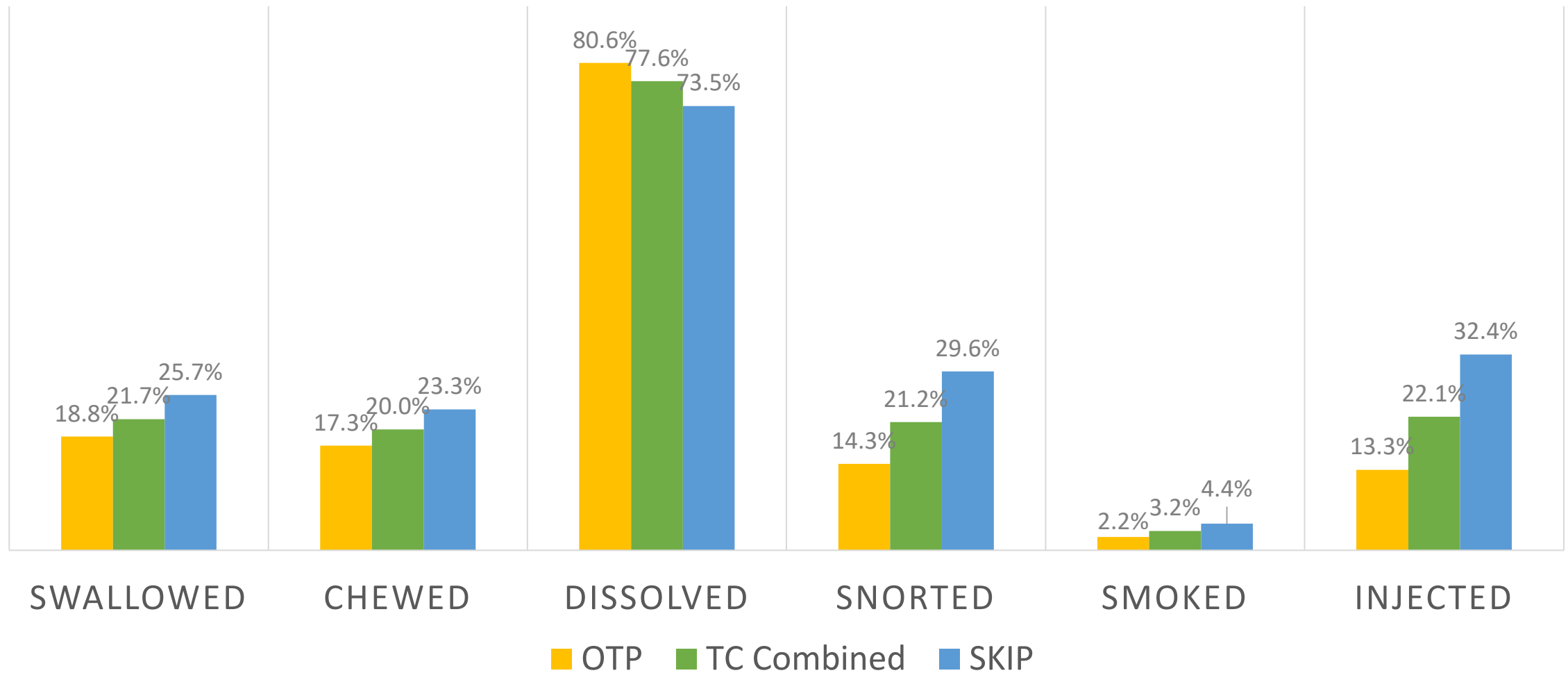
Past month non-therapeutic use of buprenorphine, OTP



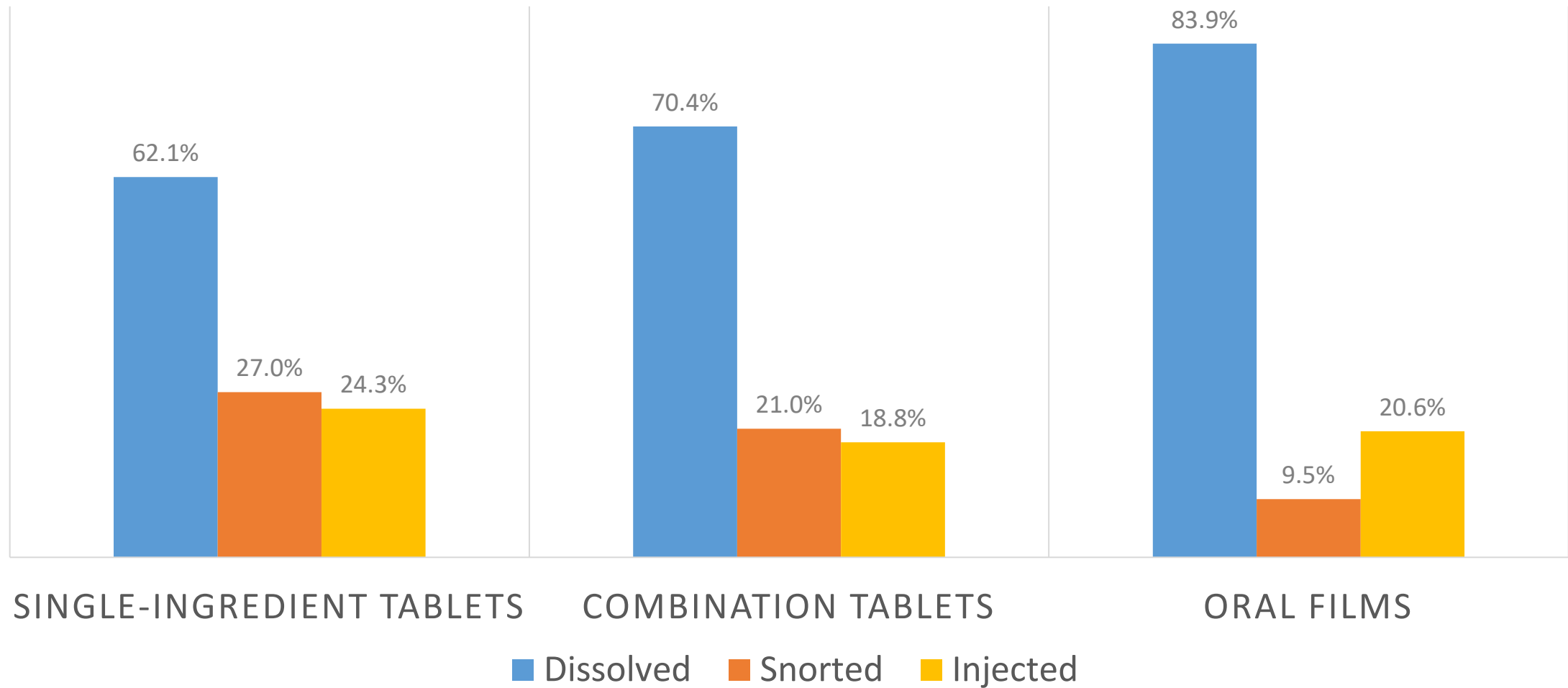
Past month non-therapeutic use of buprenorphine, SKIP



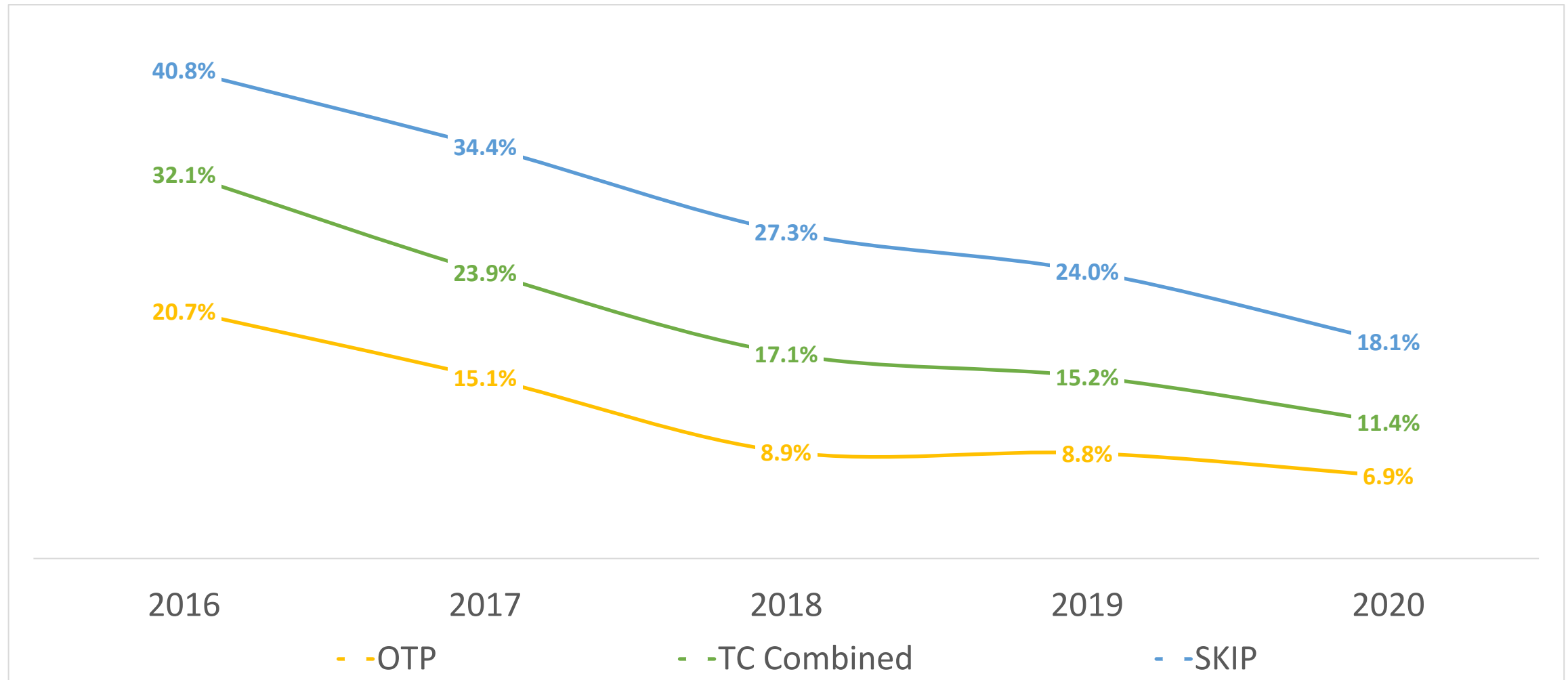
Past month non-therapeutic use of buprenorphine



Past month non-therapeutic use of buprenorphine

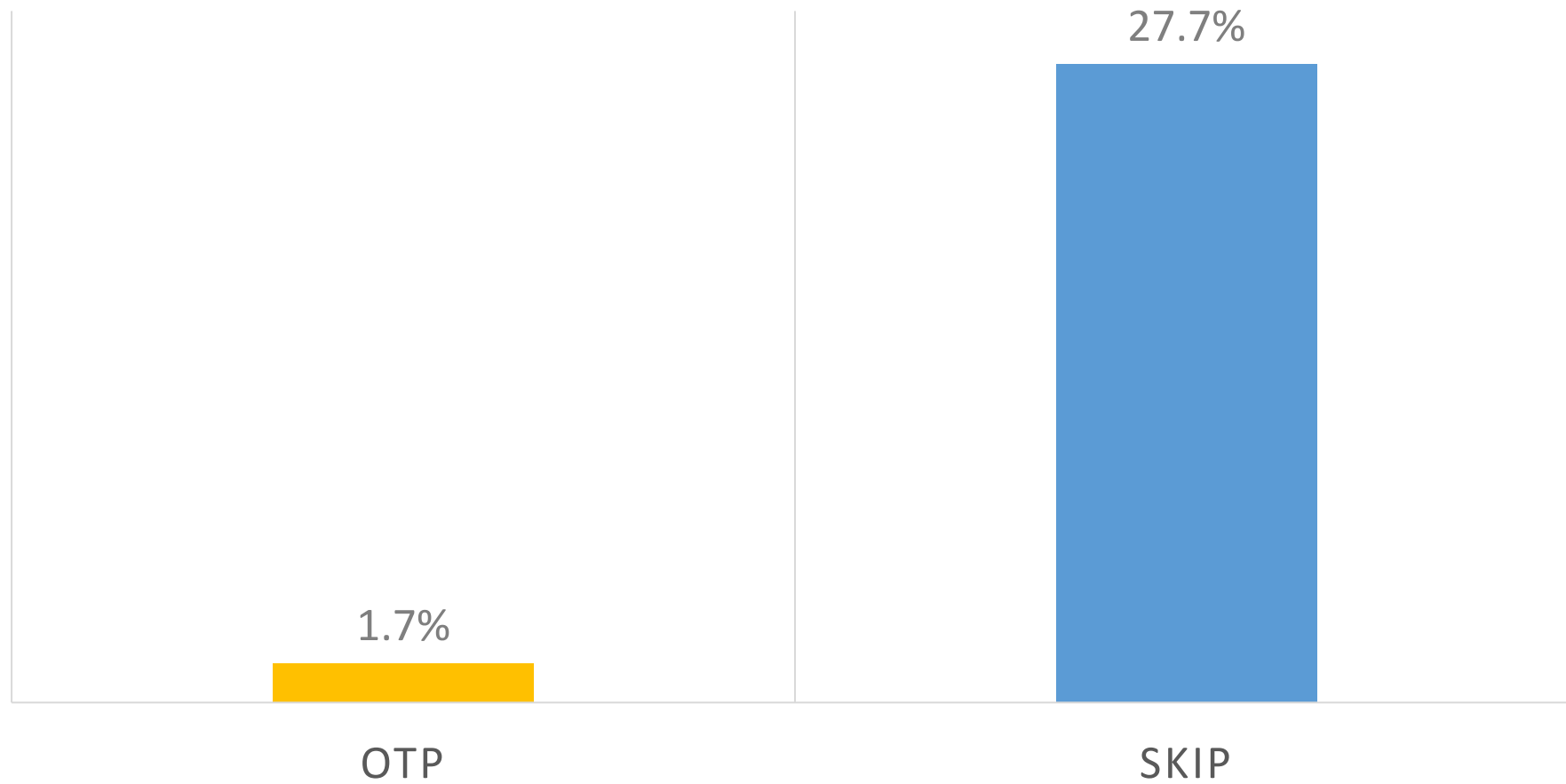


Past month injection use of buprenorphine

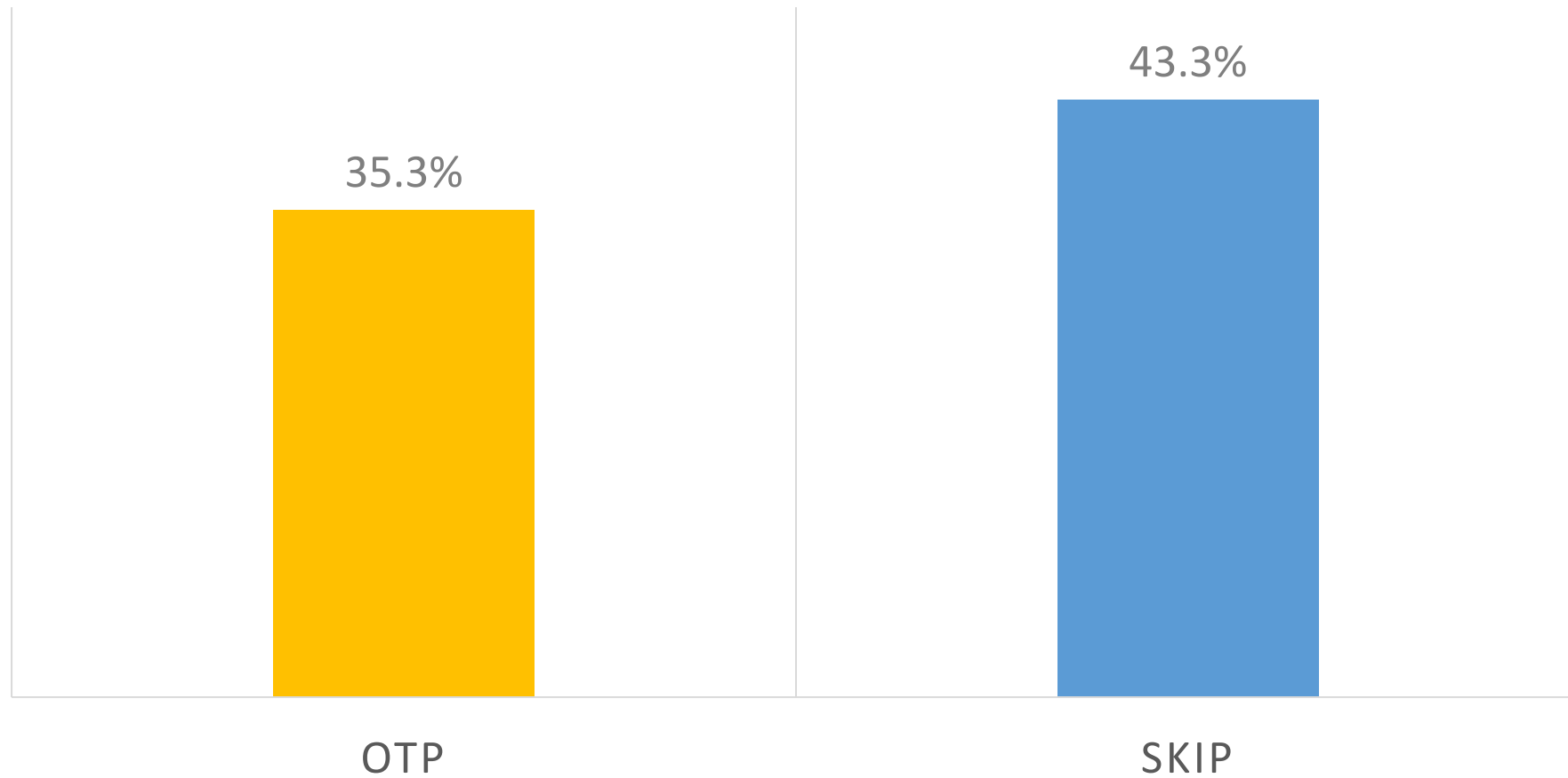


Buprenorphine therapy + non-therapeutic use

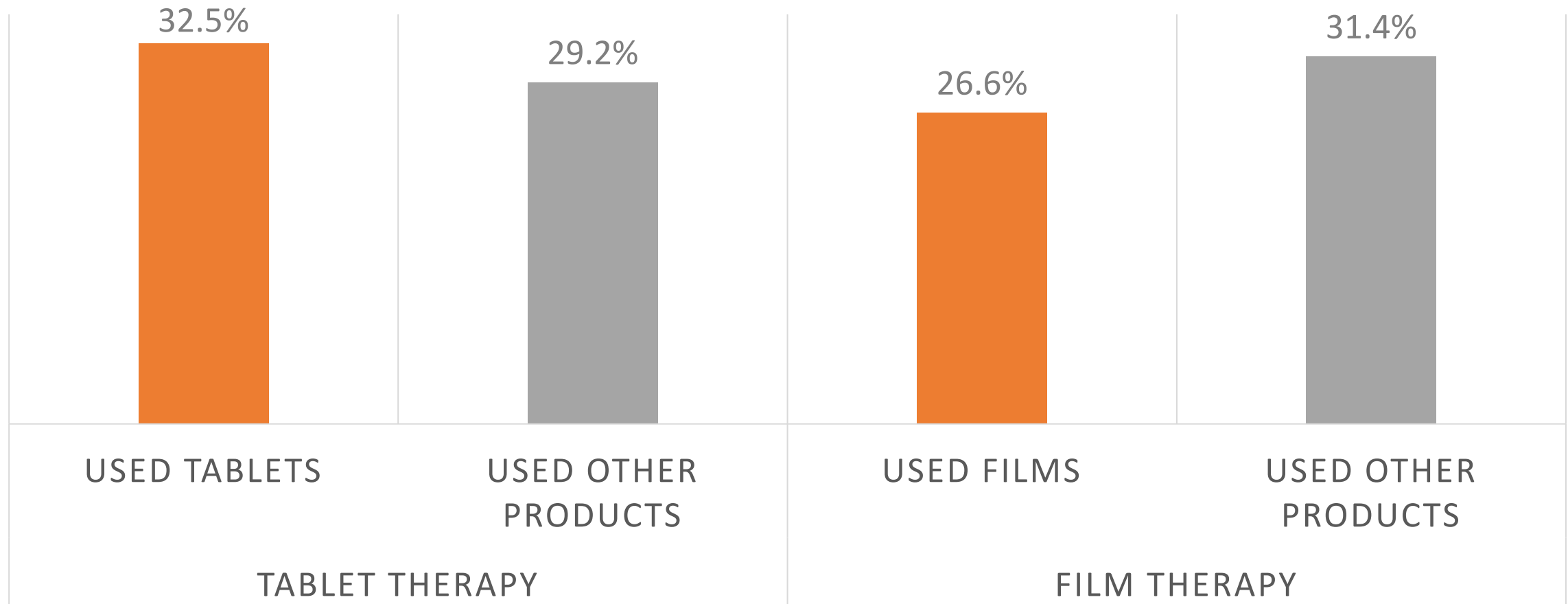
Receipt of buprenorphine therapy in current treatment program



Past month non-therapeutic use of buprenorphine among those receiving buprenorphine therapy

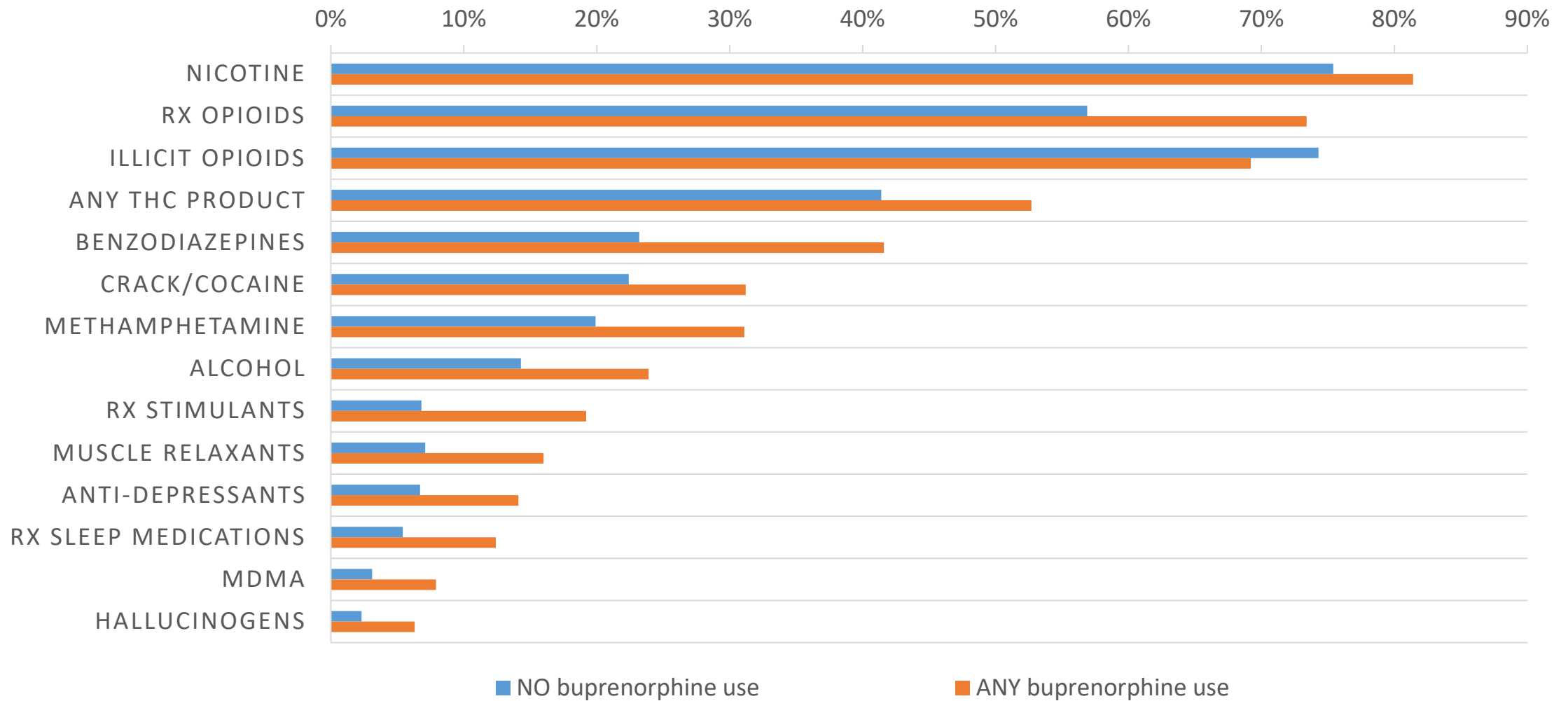


Past month non-therapeutic use of buprenorphine among those receiving buprenorphine therapy



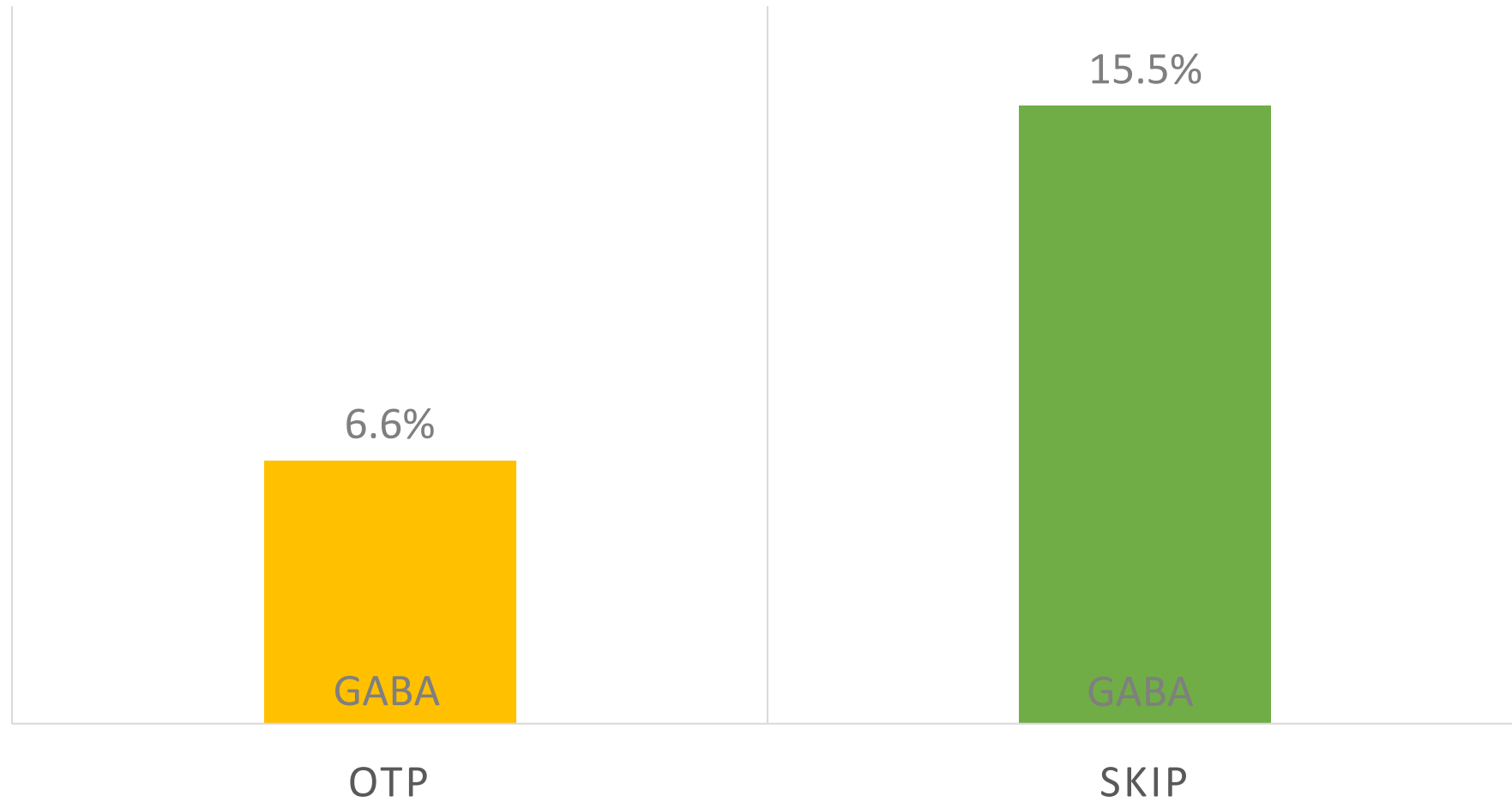
Polysubstance use

Past month polysubstance use

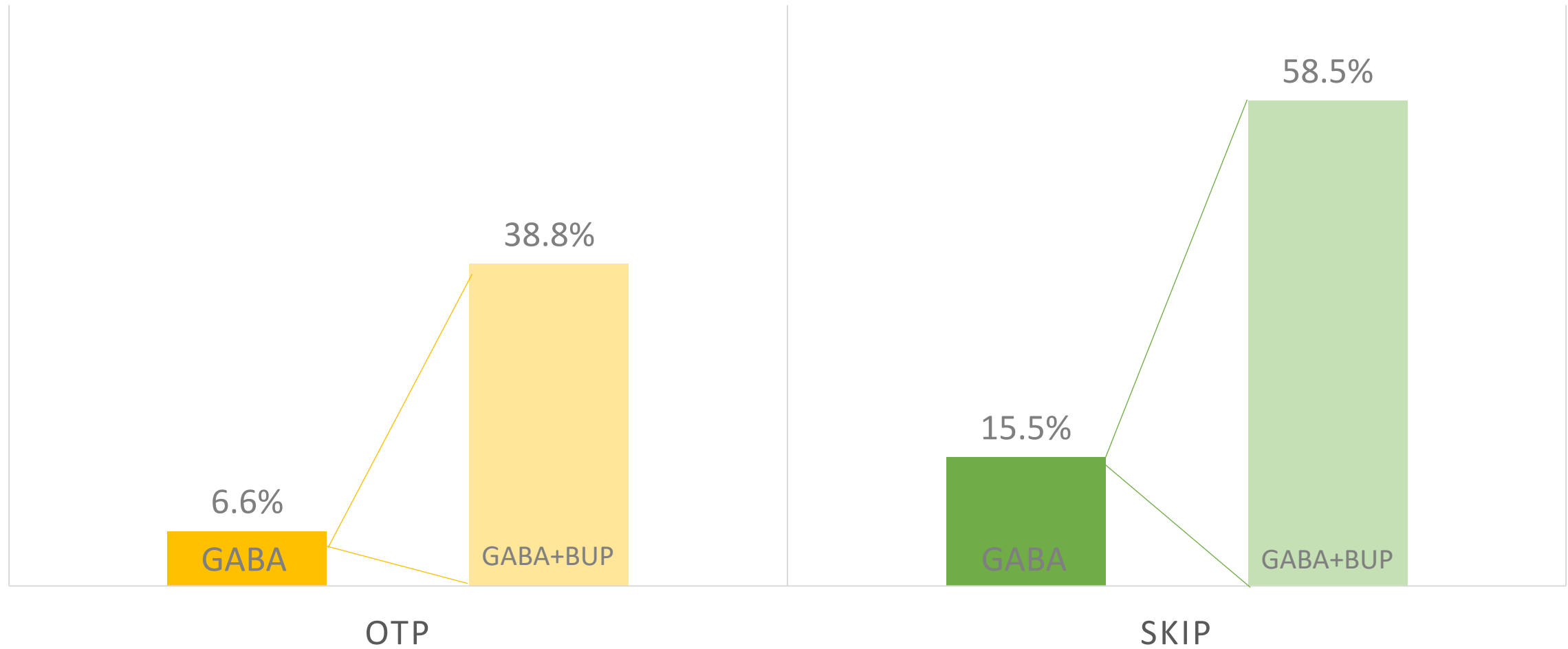


Buprenorphine + GABA

Past month non-therapeutic use of gabapentin



Past month non-therapeutic use of gabapentin



Conclusions

- Non-therapeutic use of buprenorphine
 - Reported by nearly a quarter of the treatment center sample
 - Similar across formulations, with oral film slightly higher
 - Slight increases in reports among OTP respondents, decreases among SKIP respondents
- Non-oral use of buprenorphine
 - Snorting reported by 21.2%
 - Injecting reported by 22.1%
 - Injecting consistent across formulations
 - Significant decreases in injection over time
 - Observed across all formulations; may no longer be worth the effort with increases in other injectable drugs (e.g., methamphetamine and fentanyl)

Conclusions

- Of those receiving buprenorphine therapy
 - Non-therapeutic buprenorphine use reported by 39.2%
 - Use not restricted to therapy formulation
 - Of those on tablet therapy, 32.5% reported tablet use, 29.2% used other buprenorphine formulations
 - Of those on oral film therapy, 26.6% reported film use, 31.4% used other buprenorphine formulations
 - May suggest both substantial misuse of buprenorphine, as well as use seeking out other diverted formulations of buprenorphine

Conclusions

- Polysubstance use
 - Those reporting buprenorphine use had greater polysubstance use among non-opioid substances
 - Unclear if buprenorphine use is higher due to more severe use or increased accessibility
- Buprenorphine + GABA
 - Those reporting non-therapeutic use of GABA had substantial reports of co-occurring use of buprenorphine products
 - Need to understand whether this is treatment-driven or diverted use to amplify effects of buprenorphine

THANK YOU

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