

# analysis-drug-charges

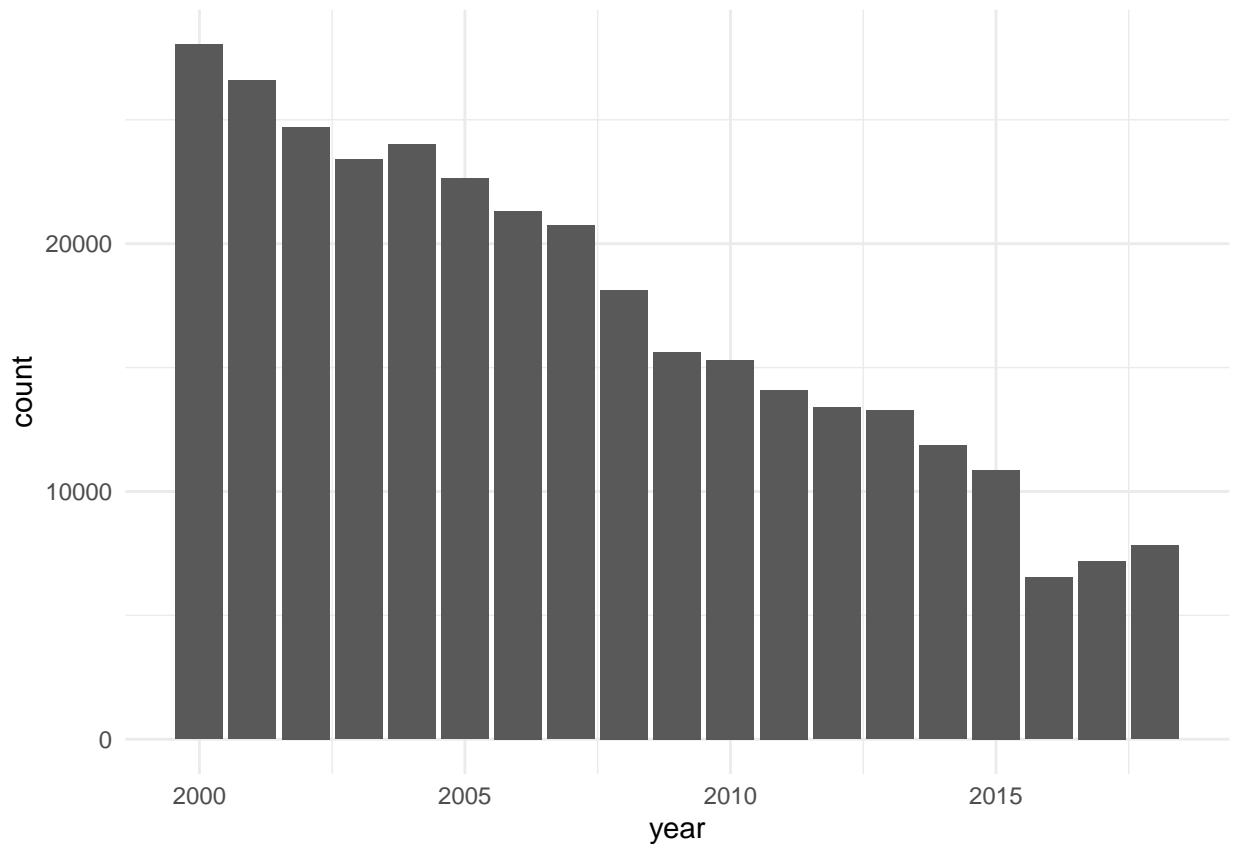
Casey Toner

AUTOFILL

## Analysis of Cook County Drug Charges

Our project aims to examine felony cases that are filed in municipal court but are dismissed before they can proceed to felony division.

Let's begin by counting the possession of a controlled substance cases that have been filed in the municipal division since 2000.



This graph shows a significant decline in felony possession charges over the years, falling from a high of 28040 charges in 2000 to 7815 charges in 2018.

### Present cases

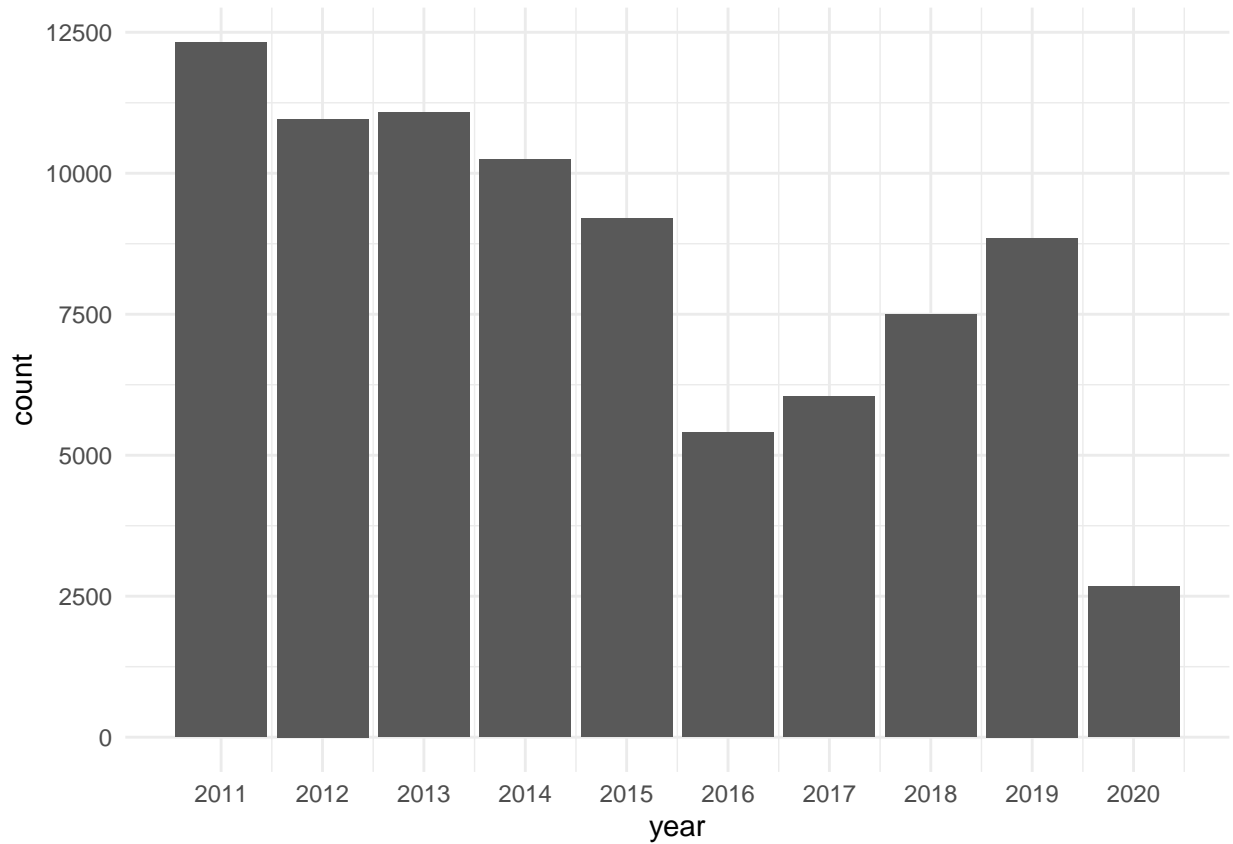
Using data from the Cook County state's attorney's office, we can see possession cases that were filed as recently as September 2020. Unfortunately, the state's attorney's data does not allow us to determine in

which phase the case was filed so we cannot isolate cases filed in the municipal division as easily. It just gives us total numbers. Here are cases since 2011, leading into the present.

```
##
## -- Column specification -----
## cols(
##   year = col_double(),
##   count = col_double()
## )
```

Table 1: Cook County State's Attorney possession cases

year	count
2020	2674
2019	8849
2018	7490
2017	6038
2016	5404
2015	9202
2014	10242
2013	11077
2012	10964
2011	12321



## Possession charges in criminal division

Within 30 days of a possession of a controlled substance case being filed, a judge must find probable cause for it to proceed from the municipal division to the criminal division, barring grand jury indictments that accomplish the same feat. Determining the number of possession of controlled substance cases that are filed in the criminal division every year compared to municipal division will paint a rough picture of how many cases proceed.

Roughly 35.74 % of felony drug cases proceed from municipal division to criminal division.

## Case procession

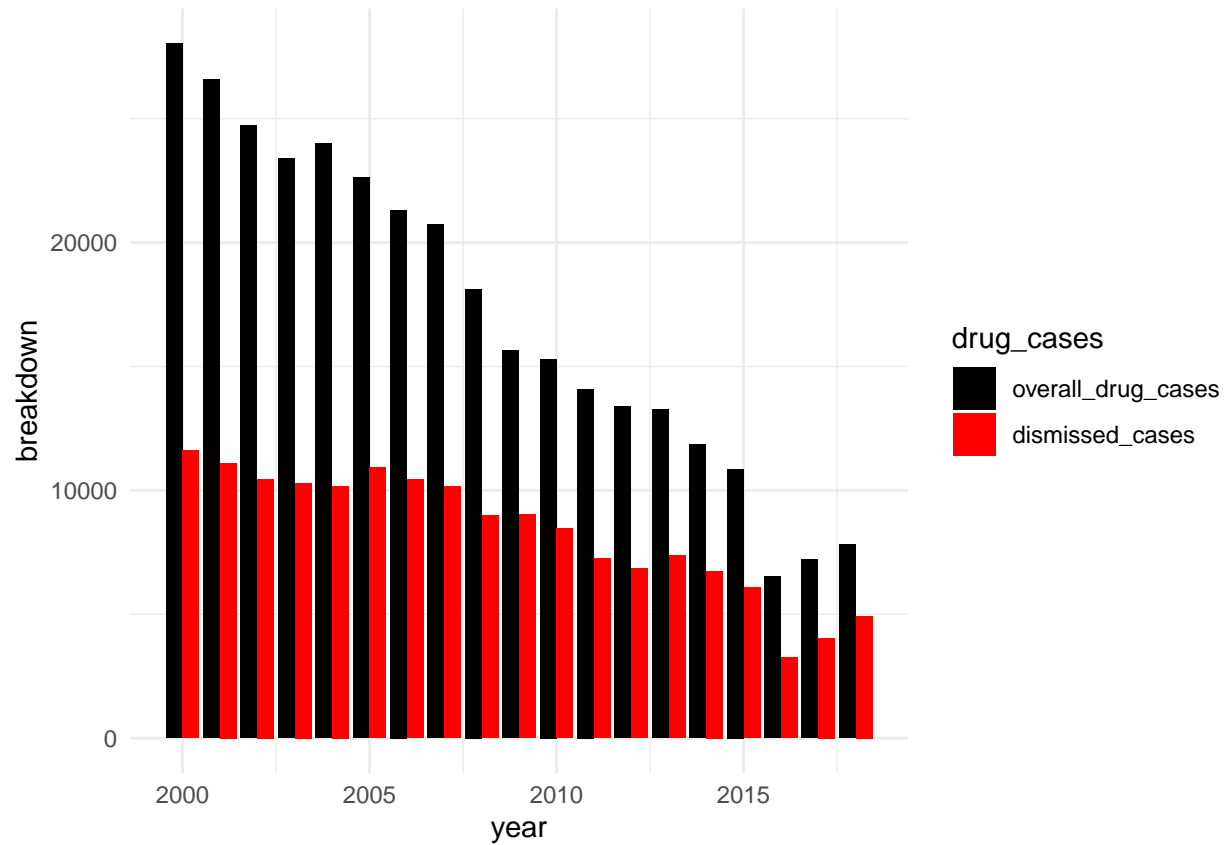
One way to check the methodology is to see if cases we identify as being dismissed nevertheless proceed into criminal court. That can be done by identifying booking numbers for drug cases in the municipal division and checking if those same booking numbers correlate to cases in the criminal division.

Approximately 1.36 % of cases we have identified as not proceeding in the criminal division did in fact proceed into the criminal division. This number can be reduced later on, but a small margin of error is good enough to confirm our general understanding of the drug case dismissal phenomenon.

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## 'summarise()' ungrouping output (override with '.groups' argument)
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## Portion of overall municipal division drug cases dismissed

Four events indicate that a case is dismissed in the municipal division: "NON-SUIT", "FINDING NO PROB CAUSE - DISMSD", "STRICKEN OFF - LEAVE REINSTATE" and 'NOLLE PROSEQUI.' At the municipal division, the yearly breakdown of dismissed cases vs. overall controlled substances cases is as follows:

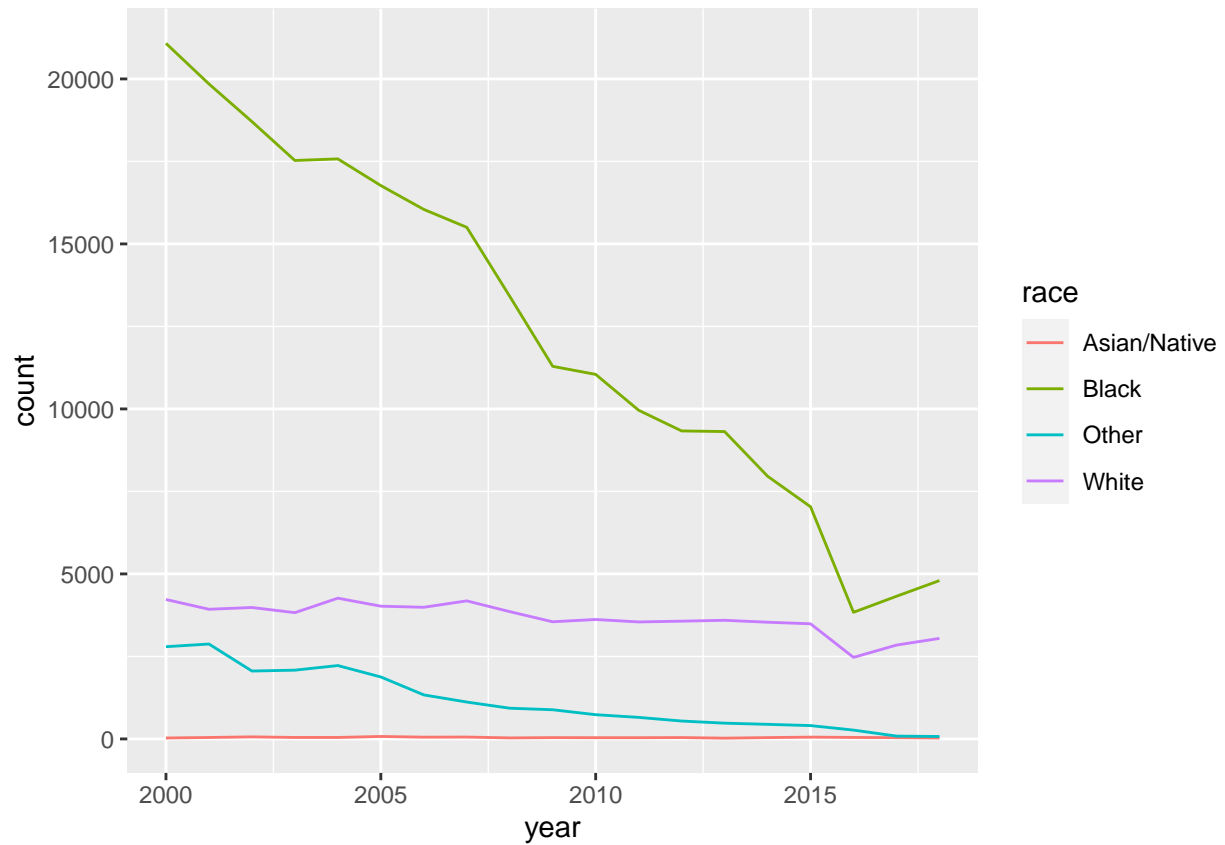


63.06 % to 41.38 % of controlled substance cases are dismissed in municipal division every year. An average of 50.56 % of these cases were dismissed every year from 2000 to 2018.

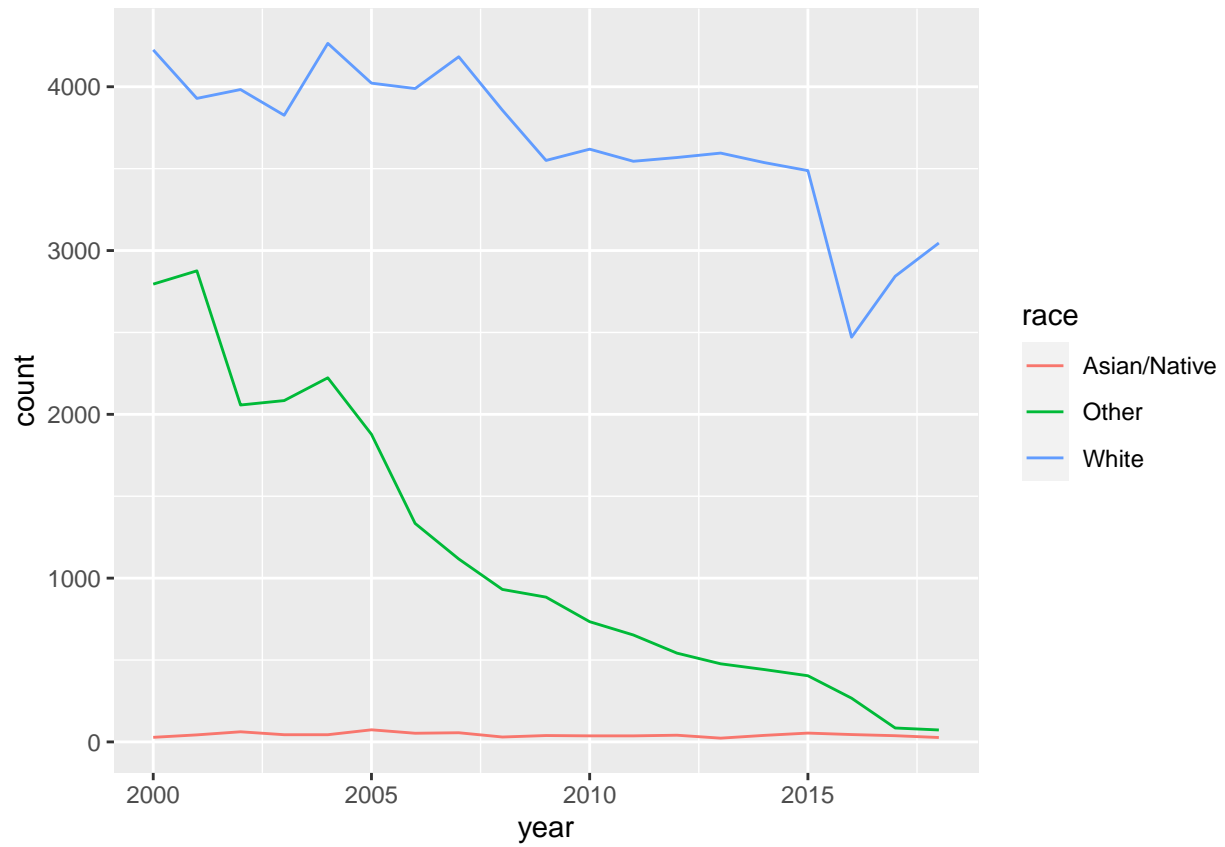
## Possession charges by race

Using our race table, we can chart at the change in possession cases by race over time.

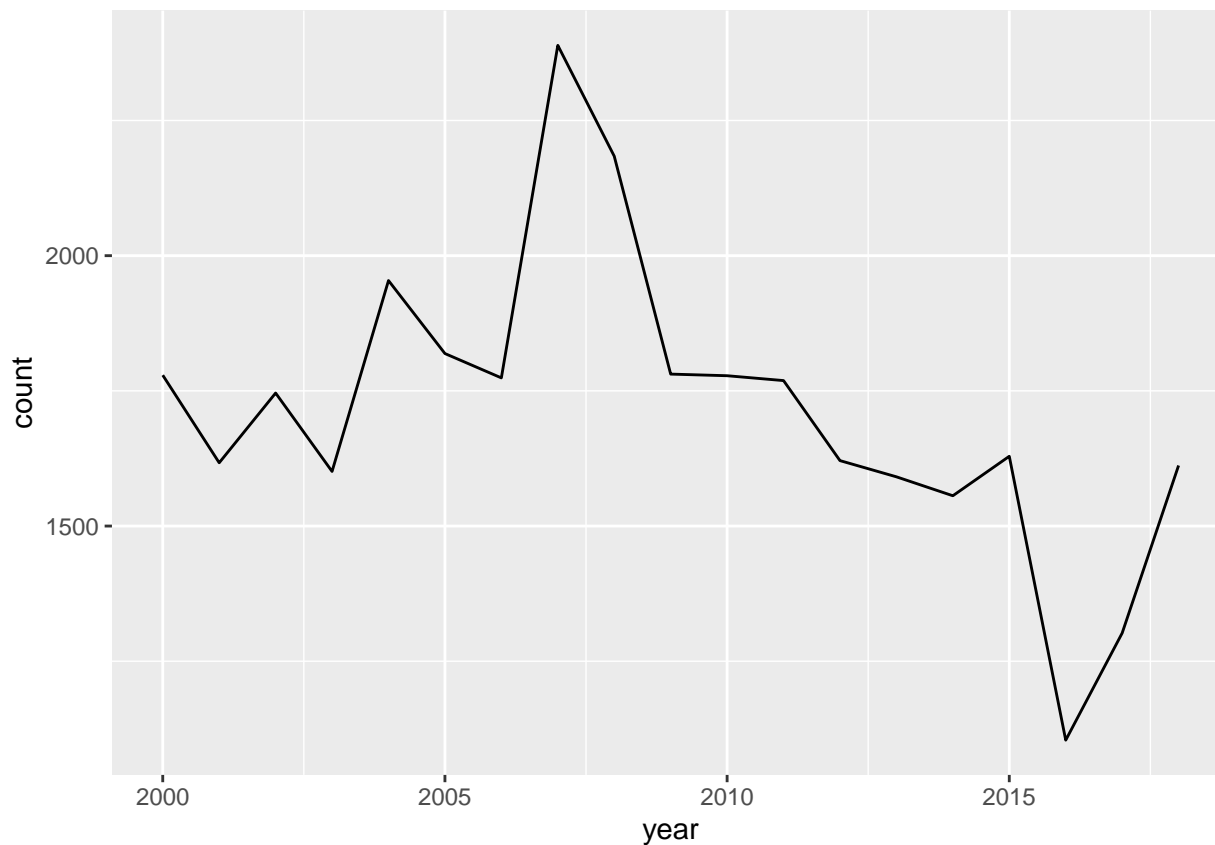
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Black defendants make up an overwhelming number of possession cases, falling from a high of 21078 in 2000 to 4798 in 2018. Similarly, non-black defendants have seen a decrease in possession charges.



This is how charges for Latinx defendants line up over the years.



## Drug charge dismissal by race

Our race data is incomplete, but let's see if there are any differences between charging dismissal rates between black defendants and non-black defendants.

```
## 'summarise()' ungrouping output (override with '.groups' argument)
```

Table 2: breakdown of drug cases by race

race	dismissed_cases	overall_cases	pct_dismissed
Black	37399	67339	56
White	15164	29220	52
Other	2385	3677	65
Asian/Native	162	310	52

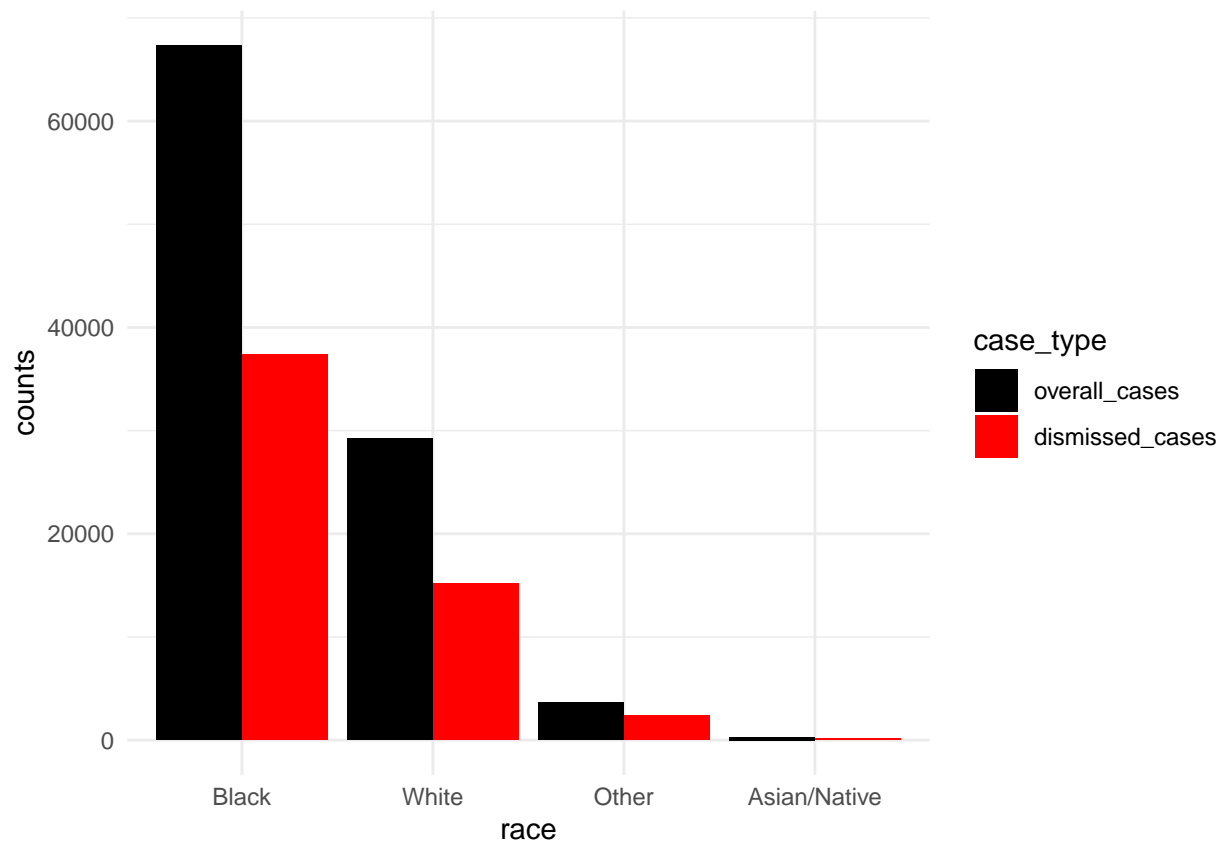
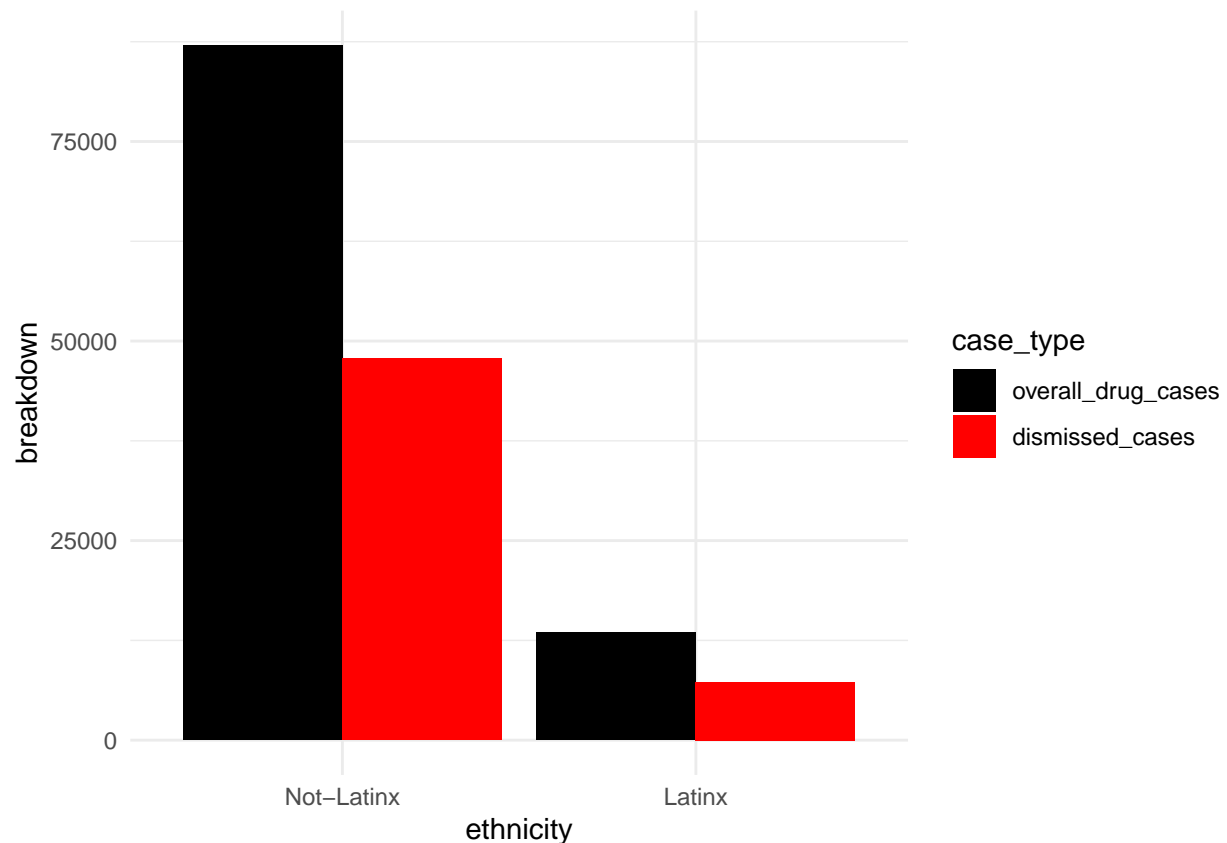


Table 3: breakdown of drug cases by ethnicity

ethnicity	overall_drug_cases	dismissed_cases	dismissal_rate_pct
Not-Latinx	87046	47834	55
Latinx	13526	7271	54



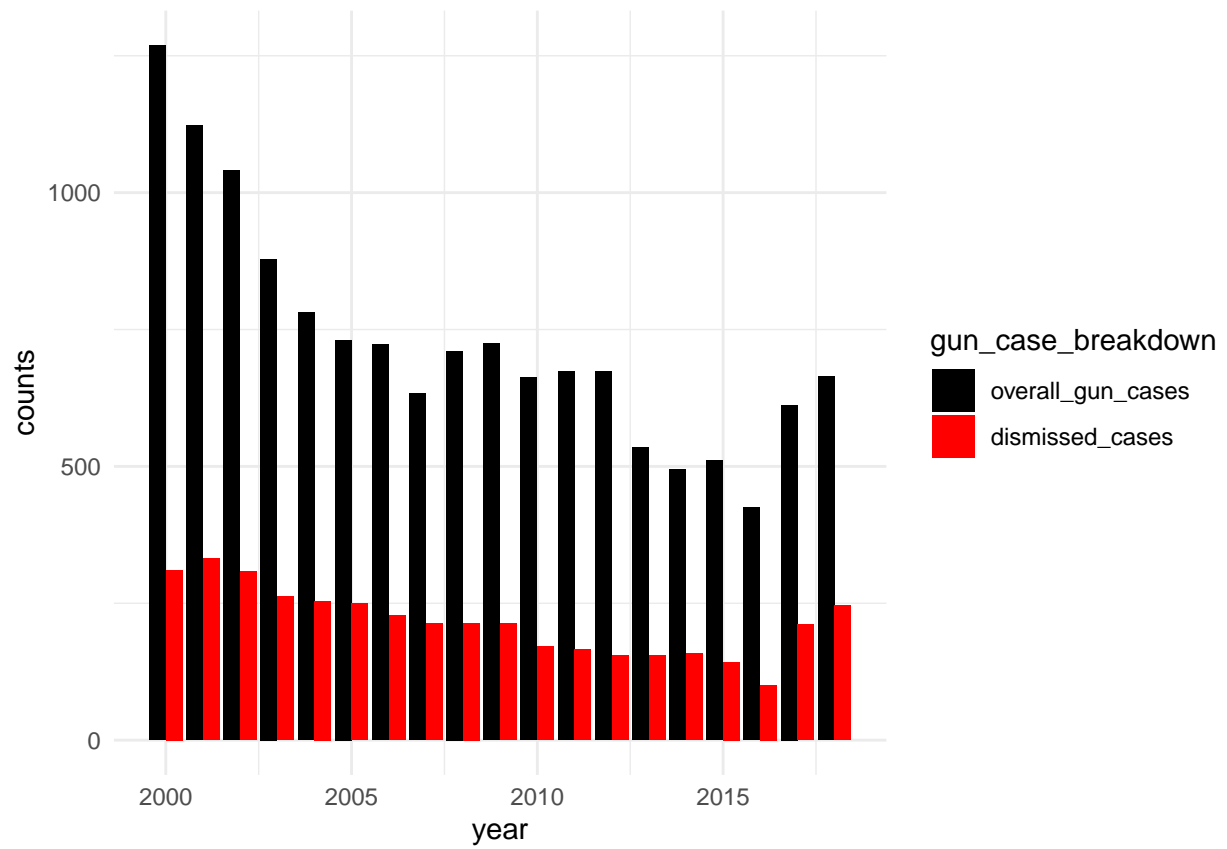


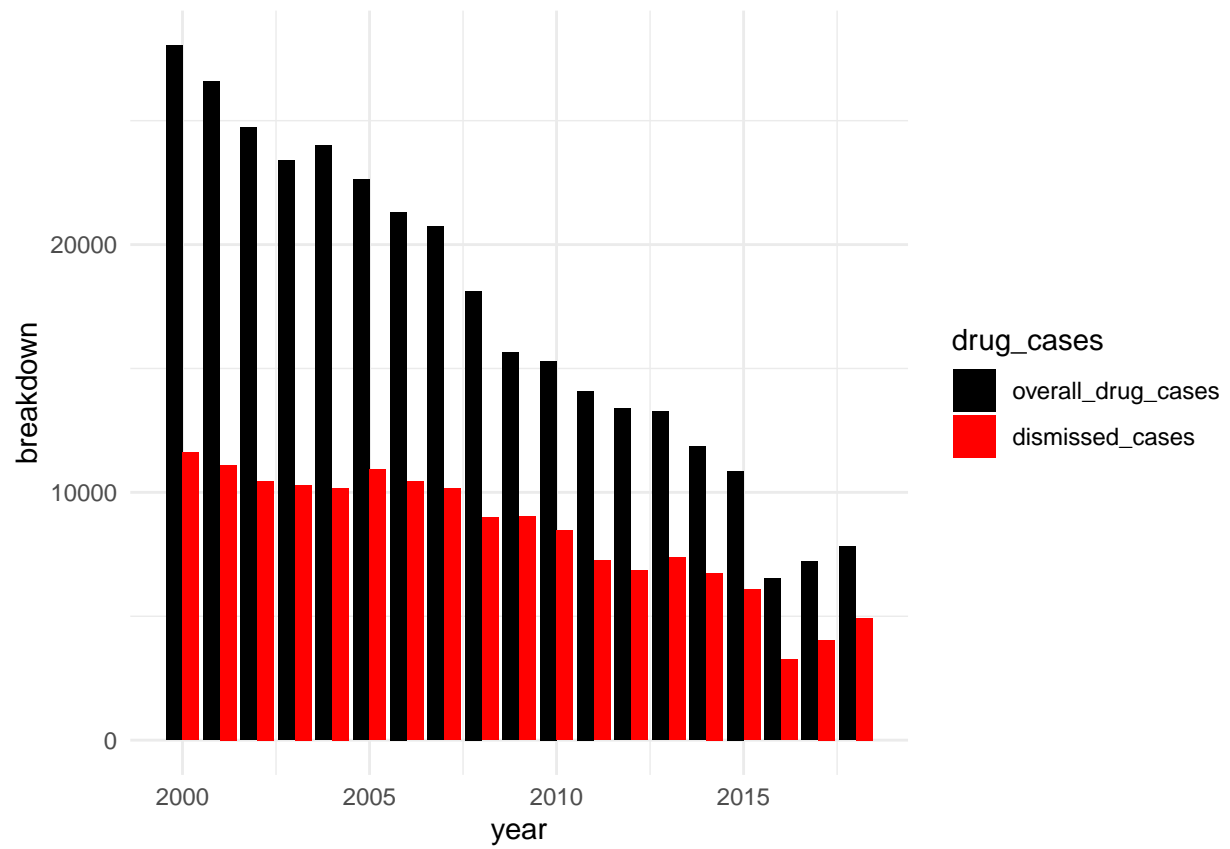
Black defendants, who make up about 23 percent of all people in Cook County according to the most recent census, represented 66.9733256419947 % of possession of a controlled substance charges. White defendants represented 29.0613251646013 % of drug charges, Asian and Native defendants 0.308316591410897 %, and all others 3.65703260199312 %. Approximately 13.4490713120948 percent of drug cases are for Latinx defendants.

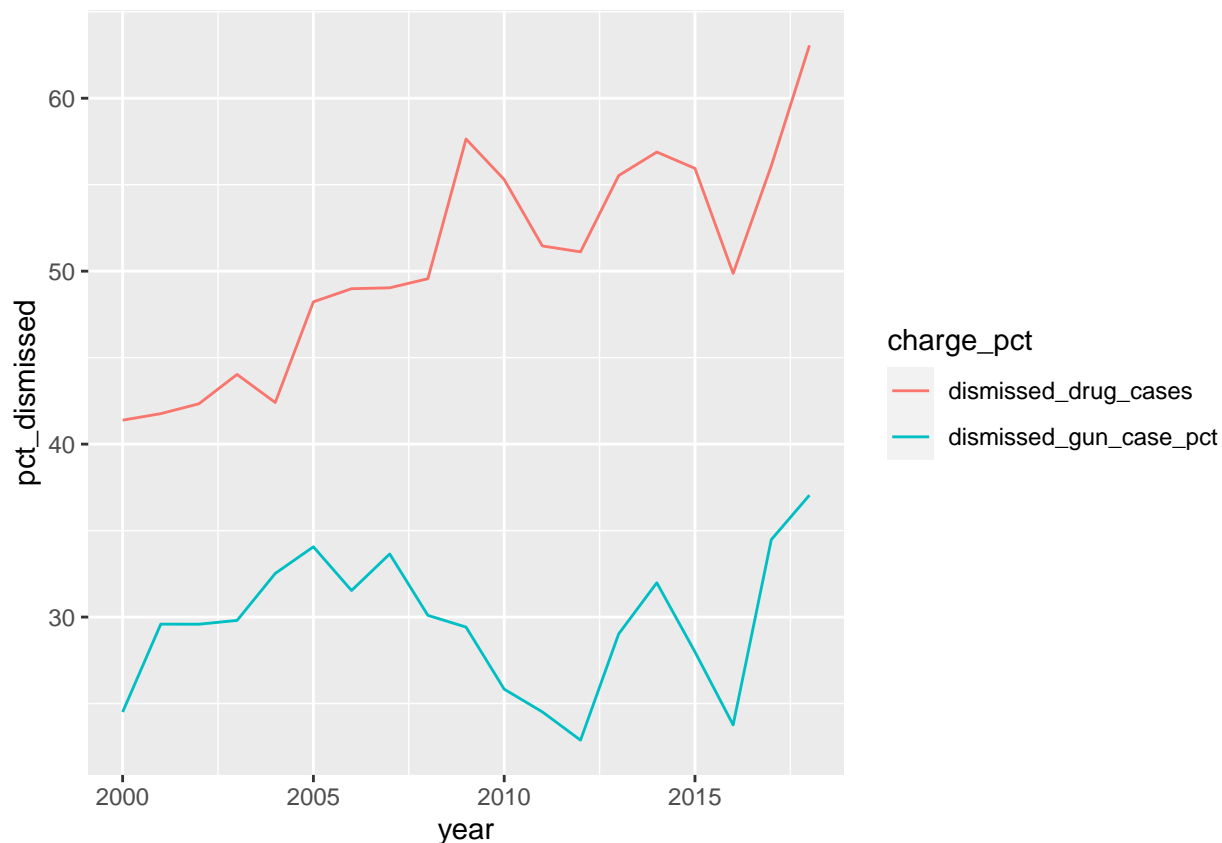
The difference in dismissal rates between different races and ethnicities of defendants seems negligible.

## Gun charges vs drug charges in municipal division

For comparison, let's examine the fate of unlawful use of a weapon charges filed in municipal division. But unlike drug charges, felony gun charges are first reviewed by the state's attorneys office prior to being filed.







These two bar graphs show the difference in gun cases and drug cases that are filed and dismissed in municipal division from 2000 to 2018. The line graph shows the percentage of drug and gun cases that are dismissed from municipal division every year.

In short, 22.88 % to 37.05 % of gun charges were dismissed in municipal division every year from 2000 to 2018, an average of 29.59 %.

Drug charges are 20.97 % more likely to be dismissed in municipal division than gun charges. For the most part, there are more drug cases dismissed every year than there are gun charges.

## Drug possession vs intent to deliver rates

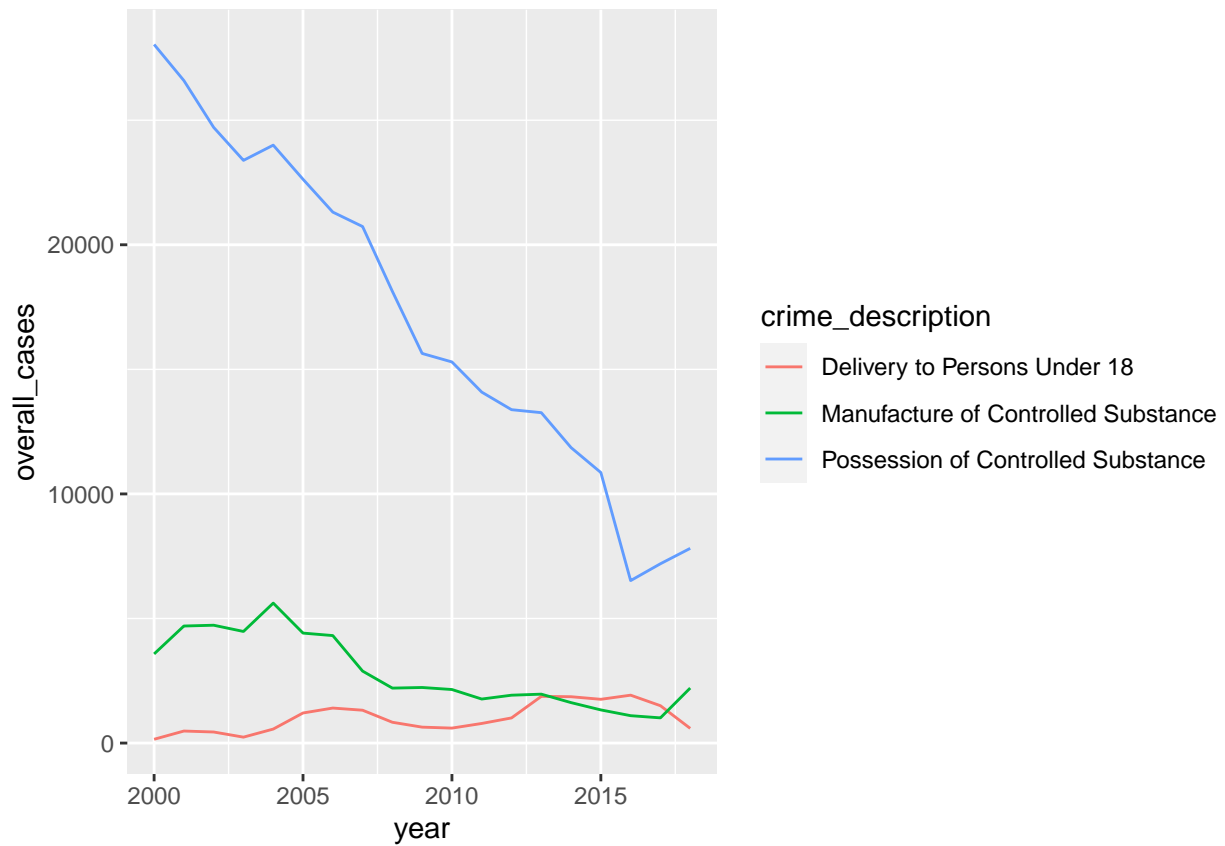
How do dismissal rates vary between possession charges, and intent to deliver charges? To gauge the differences, this analysis counts and then determines the dismissal rate the top three most frequently charged controlled substance crimes: possession of controlled substance, manufacture of controlled substance, and delivery to persons under 18.

```
## 'summarise()' ungrouping output (override with '.groups' argument)

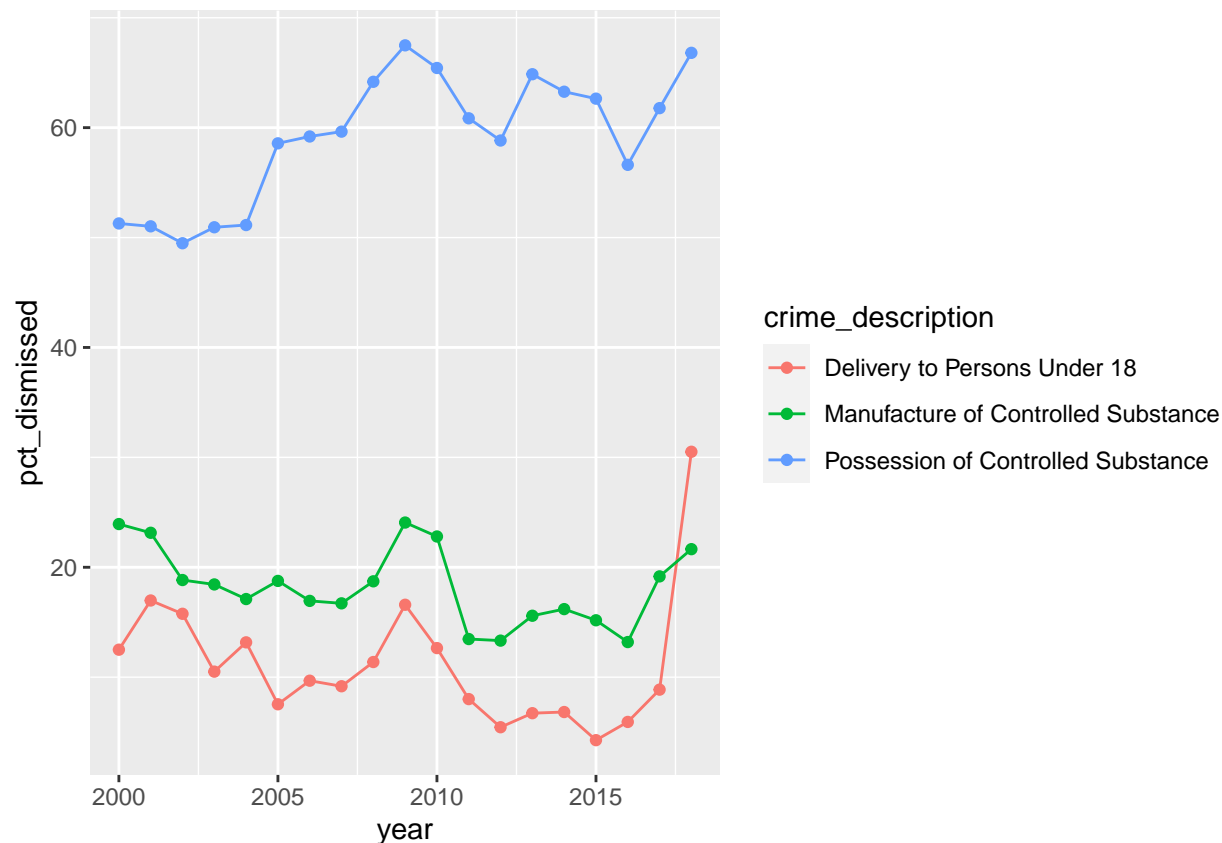
## Selecting by pct_dismissed
```

Table 4: Drug charge counts

drug_crime	total_cases	pct_dismissed
Possession of Controlled Substance	325453	57.6
Manufacture of Controlled Substance	54231	18.8
Delivery to Persons Under 18	19187	9.2
Chemical Breakdown Illicit Controlled Substance	3427	24.3
Licensed Operations	670	30.6
Look-a-Like Controlled Substance	571	43.3
Criminal Drug Conspiracy	264	6.4
Unauthorized Possession Prescription Form	177	27.1
Controlled Substance Trafficking	110	18.2
Failure to Keep Records	5	40.0



Possession of Controlled Substance, with 325453 cases, has more than six times the number of cases of the second most popular drug charge: Manufacture of Controlled Substance.



Overall, 57.61 % of possession cases were dismissed in preliminary hearings compared to 18.78 % percent of manufacturing cases and 9.21 % of delivery to persons under 18 cases.

## Police department drug dismissal rates

Each police agency has its own arrest rates and dismissal rates for possession charges, which can vary based on population, crime rates, and crime enforcement. Using American Community Survey census estimates for the years 2010 through 2019 and Chicago Police Department district population estimates from 2010, this analysis examines per capita possession charge and dismissal rates by police agency.

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##
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##   town_upper = col_character(),
##   population = col_double(),
##   error_margin = col_double(),
##   year = col_double()
## )

## 'summarise()' ungrouping output (override with '.groups' argument)
```

For reference, there were 83617 drug cases in Chicago and 13500 outside Chicago from 2010 to 2018, meaning that Chicago police are responsible for most drug cases in Cook County. More than a third of all drug cases came from these three Chicago police districts:

```
## 'summarise()' ungrouping output (override with '.groups' argument)
```

```
## Selecting by pct_of_cases
```

Table 5: top three charging police agencies for drug crimes

agency_name	total_dismissed_cases	total_overall_cases	pct_of_cases
11	10336	20470	20.4
15	5676	8929	8.9
10	4138	7627	7.6

```
## 'summarise()' ungrouping output (override with '.groups' argument)
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## 'summarise()' ungrouping output (override with '.groups' argument)
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The top 10 Chicago police districts agencies with the highest drug possession cases per capita:

```
## Selecting by per_capita_drug_charges
```

```
## Selecting by per_capita_drug_charges
```

Table 6: possession cases per capita in Chicago

agency_name	total_pop	per_capita_possession_charges
11	70474	3227
15	59458	1669
7	71071	773
10	118093	718
6	90841	491
5	74396	454
3	75235	364
9	165201	258
4	123575	253
25	200391	250

The top 10 suburban police agencies with the highest drug possession cases per capita.

Table 7: possession cases per capita in Chicago

agency_name	total_pop	per_capita_possession_charges
EVERGREEN PARK	19841	299
CICERO	83806	288
ROSEMONT	4142	276
CHICAGO HEIGHTS	30337	254

agency_name	total_pop	per_capita_possession_charges
FOREST PARK	14180	250
MAYWOOD	24111	234
SUMMIT	11245	227
HARVEY	25257	216
LYNWOOD	9138	207
BROADVIEW	7920	189

The top 10 Chicago police districts with the highest dismissal rates for drug possession cases.

```
## Selecting by per_capita_drug_charges
## Selecting by per_capita_drug_charges
```

Table 8: case dismissals by Chicago district

agency_name	pct_dismissed	per_capita_drug_charges
5	68	454
6	64	491
4	63	253
15	62	1669
25	62	250
7	62	773
9	62	258
3	59	364
10	53	718
11	51	3227

The top 10 suburban police agencies with the highest dismissal rates for drug possession cases.

Table 9: case dismissals by suburban agency

agency_name	pct_dismissed	per_capita_drug_charges
LYNWOOD	57	207
CICERO	52	288
SUMMIT	48	227
MAYWOOD	43	234
EVERGREEN PARK	40	299
FOREST PARK	39	250
BROADVIEW	37	189
HARVEY	35	216
ROSEMONT	30	276
CHICAGO HEIGHTS	29	254

## Racial analysis of possession charges by agency

Our earlier analysis showed that black people are disproportionately prosecuted for drug crimes. Now's let's see how this breaks down for each police agency by using census records to contrast the racial makeup of municipalities or police districts with those charged with possession crimes.



```
##
## -- Column specification -----
## cols(
##   .default = col_double(),
##   id = col_character(),
##   Municipal_name = col_character()
## )
## i Use 'spec()' for the full column specifications.

## 'summarise()' regrouping output by 'year' (override with '.groups' argument)

## 'summarise()' ungrouping output (override with '.groups' argument)

## Adding missing grouping variables: 'year'

## 'summarise()' ungrouping output (override with '.groups' argument)

## Selecting by racial_disparity
## Selecting by racial_disparity
```

Our data analysis shows that black defendants represent 66.97 % of all possession charges despite representing 23.8 % of Cook County. Approximately 55.54 % of possession cases against black people are dismissed in preliminary hearings, versus 51.9 % of all possession cases against white dependents.

Here are the top 15 Chicago police districts with the highest disparities between black population and black people arrested for possession charges from from 2010 to 2018. Racial disparity is calculated by taking average black population of a district or a municipality and subtracting that from the average percent of possession cases with black defendants. For example, nine percent of District 18 is black but 75 percent of the possession cases were for black defendants.

Table 10: racial disparities in possession arrests in chicago

agency_name	avg_total_cases	avg_pct_black_pop	avg_pct_black_cases	racial_disparity
18	117	9.3	77	68
10	851	33.9	72	38
12	90	18.6	57	38
24	99	18.5	53	34
20	69	11.2	45	34
9	429	12.0	43	31
19	25	6.8	38	31
1	70	21.8	52	30
2	196	69.8	98	28
25	504	17.8	45	27
22	160	61.3	87	26
4	313	62.6	82	19
8	408	21.6	41	19
14	121	8.0	24	16
16	81	1.2	13	12

Likewise, these are the top 15 suburban police departments with the highest disparities between black population and black people arrested for possession charges from 2010 to 2018.

Table 11: racial disparities in possession arrests in suburban cook county

agency_name	avg_total_cases	avg_pct_black_pop	avg_pct_black_cases	racial_disparity
EVANSTON	26	17.68	61	43
CHICAGO HEIGHTS	77	41.96	73	31
OAK FOREST	14	4.43	25	21
SUMMIT	25	8.85	29	20
MIDLOTHIAN	20	8.01	27	19
DES PLAINES	24	1.65	17	16
HOMewood	15	36.30	51	15
PALATINE	25	2.96	17	14
BLUE ISLAND	22	29.45	43	13
SCHAUMBURG	21	3.70	17	13
NORTHLAKE	12	3.27	16	13
FRANKLIN PARK	13	0.57	13	13
SKOKIE	20	6.75	19	13
MELROSE PARK	15	5.82	18	13
STREAMWOOD	10	3.51	16	12

## Per capita rates for possession charges by race

To get a better understanding of these possession charges by race, let's examine how police agencies compare against one another on a per capita basis.

```
## 'summarise()' ungrouping output (override with '.groups' argument)
## 'summarise()' ungrouping output (override with '.groups' argument)

## Selecting by avg_other_population
## Selecting by avg_other_population
```

The top 15 Chicago districts with the highest number of possession charges per capita for black people:

Table 12: chicago district possession charges per capita by race

agency	per_cap_black_charges	per_cap_other_charges	avg_black_pop	avg_other_pop
10	1530	305.2	40080	78013
9	1012	156.8	19860	145341
18	843	23.9	10875	106166
25	658	163.7	35629	164762
16	392	36.1	2438	197038
4	335	115.7	77303	46272
20	326	43.7	10230	81049
8	323	121.1	53462	193911
14	312	84.1	9448	108290
1	264	68.3	13657	49124
17	229	51.5	5625	138471
12	220	36.3	23781	104088

agency	per_cap_black_charges	per_cap_other_charges	avg_black_pop	avg_other_pop
24	202	40.5	26057	114981
19	69	8.1	13753	187033
CHICAGO	41	11.3	865371	1845527

The top 15 suburban departments with the highest number of possession charges per capita for black people:

Table 13: suburban possession charges per capita by race

agency	per_cap_black_charges	per_cap_other_charges	avg_black_pop	avg_other_pop
CICERO	956	264	3090	80716
DES PLAINES	483	34	966	57493
OAK LAWN	374	123	2940	53638
ORLAND PARK	251	53	1461	56076
PALATINE	214	32	2029	66596
BERWYN	158	66	3658	52654
HOFFMAN	144	35	2234	49580
ESTATES				
MOUNT	143	28	1240	53190
PROSPECT				
SCHAUMBURG	125	25	2750	71489
EVANSTON	122	16	13247	61715
STREAMWOOD	110	22	1415	38908
ARLINGTON	97	16	1146	74355
HEIGHTS				
SKOKIE	92	27	4365	60267
TINLEY PARK	80	28	2087	54490
OAK PARK	40	39	10539	41377

## Individual police officers

Now that the case dismissal rate has been calculated for police departments, let's see if any individual police officers stick out.

First, let's get a handle on the number of police officers, who are identified by their star number in the database.

There are 3360580 star numbers and 21940 distinct star numbers. This could mean a few things: the data is bad, the same officers are using the same star number to enter in charges, or a tiny fraction of all police officers are responsible for entering charges into the system.

Now let's do a similar count of star numbers, but just for possession charges from 2010 to 2018. This will drastically reduce the size of the universe of police officers.

For these, there are 89612 total stars, 7027 or 7.84 %, of those are distinct. There are 10663 controlled substance charges with no star number identified, or about 10.63 % of all possession of a controlled substance charges.

```
## Selecting by pct_dismissed
```

```
## 'summarise()' ungrouping output (override with '.groups' argument)
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```
## Selecting by dismissal_pct
```

```
## Selecting by pct_dismissed
## Selecting by pct_dismissed
```

For all Chicago officers with more than 50 drug arrests from 2010 to 2018, these officers have the highest percentages of dismissed cases.

Table 14: Chicago cops with the highest drug charge dismissal rates

agency_name	star	dismissed_cases	overall_drug_cases	pct_dismissed
9	17117	65	74	88
10	10805	67	79	85
15	13539	97	115	84
23	13734	50	60	83
2	65170	64	77	83
15	13248	43	52	83
11	13851	47	58	81
15	78460	190	237	80
10	19863	54	68	79
10	35930	45	57	79

For all Chicago officers with more than 50 drug arrests from 2010 to 2018, these officers have the highest percentages of dismissed cases without grouping them by the districts they entered into the court data.

Table 15: Chicago police with the highest dismissal rates, ungrouped by district

star	overall_drug_cases	dismissed_cases	dismissal_pct
17223	55	50	91
17117	79	70	89
14419	57	49	86
10805	81	68	84
10669	55	46	84
17108	55	46	84
13539	128	107	84
65170	97	81	84
13248	52	43	83
81380	52	43	83

For all suburban officers with 15 or more drug arrests from 2010 to 2018, these officers have the highest percentages of dismissed cases.

Table 16: Suburban cops with the highest drug charge dismissal rates

agency_name	star	dismissed_cases	overall_drug_cases	pct_dismissed
LYNWOOD	00109	13	16	81
COOK COUNTY SHERIFF	38800	13	17	76
COOK COUNTY SHERIFF	71600	12	17	71
FOREST PARK	00261	14	20	70
SUMMIT	00141	12	18	67
MAYWOOD	00305	16	26	62

agency_name	star	dismissed_cases	overall_drug_cases	pct_dismissed
MELROSE PARK	22000	9	15	60
MAYWOOD	00302	10	17	59
ORLAND PARK	00718	10	17	59
SAUK VILLAGE	00130	17	29	59
COOK COUNTY SHERIFF	56600	26	45	58
COOK COUNTY SHERIFF	00699	8	15	53
COOK COUNTY SHERIFF	16100	8	15	53
COOK COUNTY SHERIFF	52600	8	15	53
MAYWOOD	30500	8	15	53
TINLEY PARK	00068	8	15	53
OAK LAWN	00325	10	19	53
ROBBINS	00003	12	23	52
FRANKLIN PARK	11800	14	27	52
FOREST PARK	00260	10	20	50
HOFFMAN ESTATES	21500	8	16	50
SAUK VILLAGE	13000	16	34	47
STONE PARK	12260	7	15	47
MAYWOOD	00298	16	35	46
NORTHLAKE	13000	10	22	45

For all Cicero officers with 20 or more drug arrests from 2010 to 2018, these officers have the highest percentages of dismissed cases.

Table 17: Cicero cops with the highest drug charge dismissal rates

agency_name	star	dismissed_cases	overall_drug_cases	pct_dismissed
CICERO	00251	20	27	74
CICERO	00202	14	20	70
CICERO	00297	14	20	70
CICERO	00262	17	25	68
CICERO	00293	19	28	68
CICERO	00214	17	26	65
CICERO	00280	16	27	59
CICERO	00240	13	22	59
CICERO	00215	35	62	56
CICERO	00283	36	64	56

## Most targeted single defendants

Another interesting story angle is the “conveyor belt” angle of drug crimes. Meaning, taking a look at defendants who cycle in and out of the system repeatedly. This analysis shows the single defendants who have been charged with possession of a controlled substance the most in municipal court from 2010 to 2018.

```
## 'summarise()' ungrouping output (override with '.groups' argument)
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Table 18: separate drug cases per defendant

cases	count	pct_count
1	50466	73.96
2	11513	16.87
3	3934	5.77
4	1402	2.05
5	543	0.80
6	211	0.31
7	91	0.13
8	42	0.06
9	15	0.02
10	9	0.01
11	3	0.00
13	2	0.00

A vast majority of defendants, 73.96 % of all defendants in drug cases, appeared once in eight years.

## Remaining questions, methodology concerns

Our data uses three Chicago police divisions that are no longer divisions: 23,21,13. Thus, there are no population totals for those divisions. Similarly, there CHICAGO is listed as a police agency distinct from the Chicago police divisions that are identified so we will need to deal with that. How do we categorize those cases? Should we just use the division data as a guidepost and indicate it as such?

Cook County also is listed as an agency and it's unclear how to adjust for per capita based the sheriff's office, who work in unincorporated areas but also assist with a number of other incorporated matters.

These queries are operating under the assumption that the cases are tossed out at the municipal division level if the events of 'NON-SUIT', 'FINDING NO PROB CAUSE - DISMSD', 'STRICKEN OFF - LEAVE REINSTATE', 'NOLLE PROSEQUI' appear in the final date of a municipal division. This will need to be double checked and refined.

For the agencies where there is a high dismissal rate or extraordinary high per capita rate, we will need to identify the race of the defendants.

It would also be wise to calculate other rates of felony cases that are dismissed from municipal division.

Finally, we should use the State's Attorney's data to check our assumptions.

## Appendix: Additional code for this report

To reduce the cost of queries needed for this report, I created four virtual tables to identify possession cases. The first identifies case numbers and years for all cases filed in municipal division where possession of a controlled substance is the top charge

The second virtual table identifies cases that proceed to criminal division. Some of these cases may have been filed directly into criminal division through grand jury indictments, but most of them were first municipal cases.

The third virtual table identifies cases that were filed in municipal division, but did not proceed to felony division to the best of our knowledge.

The fourth virtual table reclassifies Chicago police departments and suburban departments, and identifies defendants as "black" or "other"

Table that shows race for possession charges

This table identifies all Unlawful Use of a Weapon charges filed in municipal division between 2000 and 2018.

This code generates a table from the Cook County State's Attorney's case initiation data to show all PSC cases filed in Cook County since 2011.