System Equity Evaluation Tool

Carrie Glaser, Research Analyst at Oregon CJC

Katherine Tallan, Research Analyst at Oregon CJC

Introduction: Raw Differential Representation (RDR)

The RDR is the number of ***additional*** individuals of a particular group receiving an outcome of interest (i.e. school discipline) than would be expected if that particular group and the comparison group were at parity.

Example: Suspension of Black students, RDR = 3

"Three more Black students received suspension than would be expected if white and Black students were at parity."

"Three fewer Black students would need to receive suspension in order for white and Black students to receive suspension at the same rate."

Rate?

Risk Ratio?

Negative RDR Values?

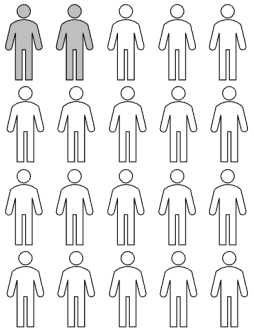
Introduction: Let's say you have 2 groups of people…

Parity: RDR = 0

Minority Group

10% receive a suspension

Majority Group

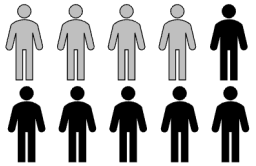


10% receive a suspension

"No more Black students received a suspension than we would expect given parity between Black and white students."

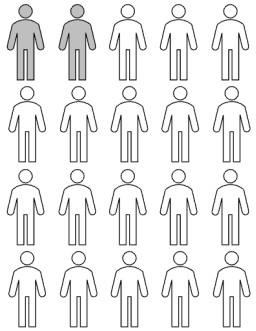
Disparity: RDR = 3

Minority Group



40% receive a suspension

Majority Group



10% receive a suspension

"3 more Black students received a suspension than we would expect given parity between Black and white students."

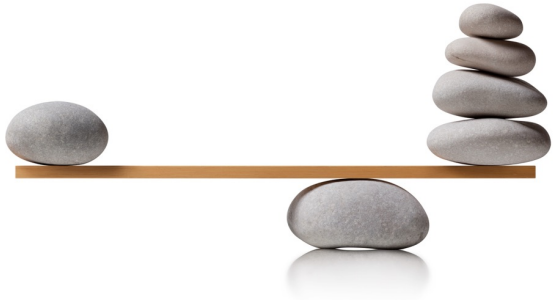
Example: Justice Reinvestment Program (JRP)

Question 1: Is Justice Reinvestment funding benefiting Oregonians in an equitable way?

Question 2: Are there 'missed opportunities' for prison diversion that the Grant Review Committee (GRC) can help address?

The decision that the Justice Reinvestment Program can influence is sentencing for JRP-eligible crimes:

"Will this person go to prison or not?"



The RDR can tell us:

"Does this decision-making process, given existing resources, result in a disparity?"

Example: Justice Reinvestment Program (JRP)

Questions:

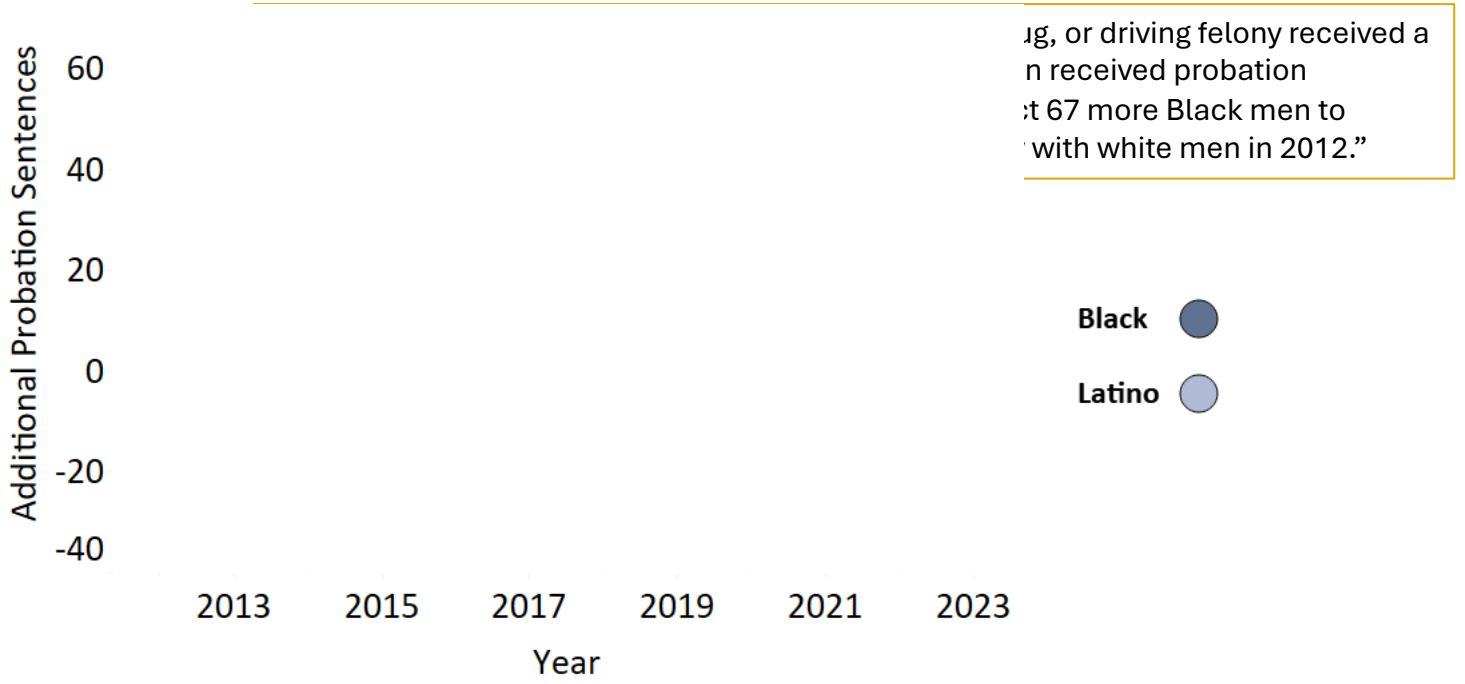
Is Justice Reinvestment funding benefiting Oregonians in an equitable way?

Are there 'missed opportunities' for prison diversion that the JRP Grant Review Committee can help address?

Group Definitions:

- 'Majority' = white, by gender
- 'Minority' = each non-white racial/ethnic group separately, by gender
- 'Total' = all people convicted of a nonviolent felony, by gender
- 'Target' = people sentenced to probation, by gender

RDR Displayed Over Time



Justice Reinvestment

Reducing Recidivism & Incarceration While Protecting Public Safety & Holding Individuals Accountable

Do not use your browser's back button. Use the links below to navigate.

JRP Home

JRP County Programs

JRP Prison Use

JRP Sentencing

JRP Racial Disparity

Recidivism Portal

Incarceration Portal

Help me understand this chart!

Malheur County

Asian/PI
Black
Latinx
Native

Men
Women

Probation Use for Nonviolent (JRP) Crimes

This page examines sentencing and revocations by race and gender so that JRP resources can be allocated in an efficient and equitable manner.
The information presented here is derived from DOC records for prison, jail, and probation intakes, and is limited in scope to sentencing and revocation decisions impacting those **convicted of nonviolent crimes**; it does not represent the overall disparities between racial and ethnic groups among justice-involved individuals.

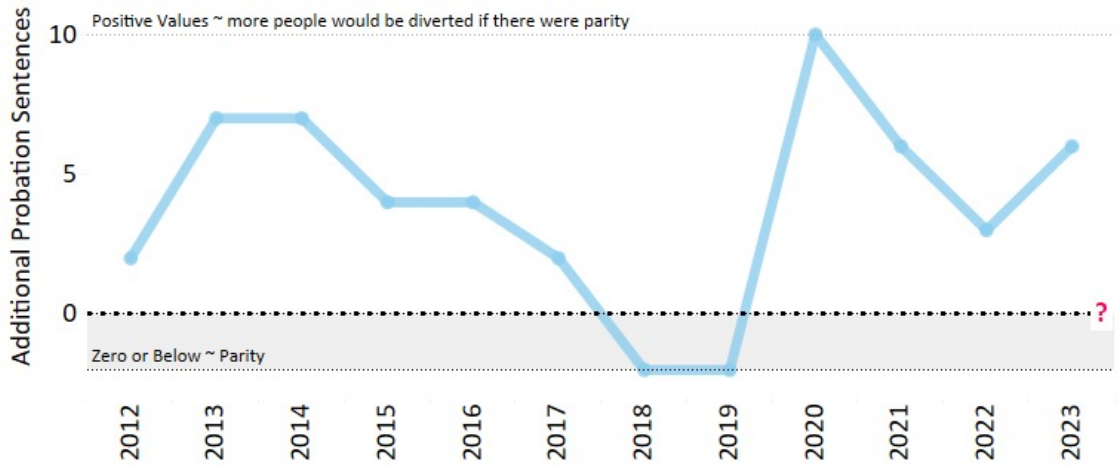
To view general demographics of Oregon's incarcerated population, click **here.**

Probation Racial Disparity Tool

Compares the rate of probation use for people convicted of JRP-eligible crimes.

Values indicate how many more members of a minority group, convicted of a nonviolent crime, would have been sentenced to or remain in probation (as opposed to prison or jail) if there were parity between the minority and majority groups' probation use rates.

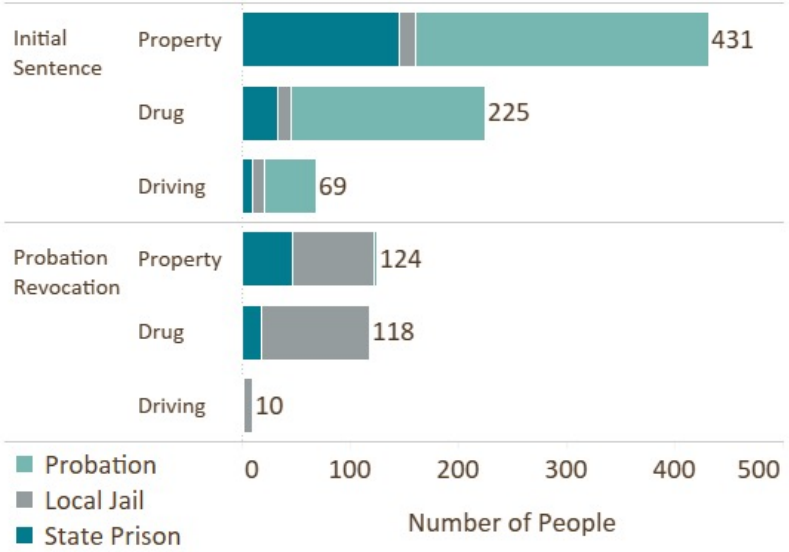
Select a data point to view crime details to the right and to view cases.



Prison & Jail Admissions

***Malheur County**: 2012 to Present, All Races Men*

Hover over a bar to view a comparison of sentence lengths by race.



System Equity Preview

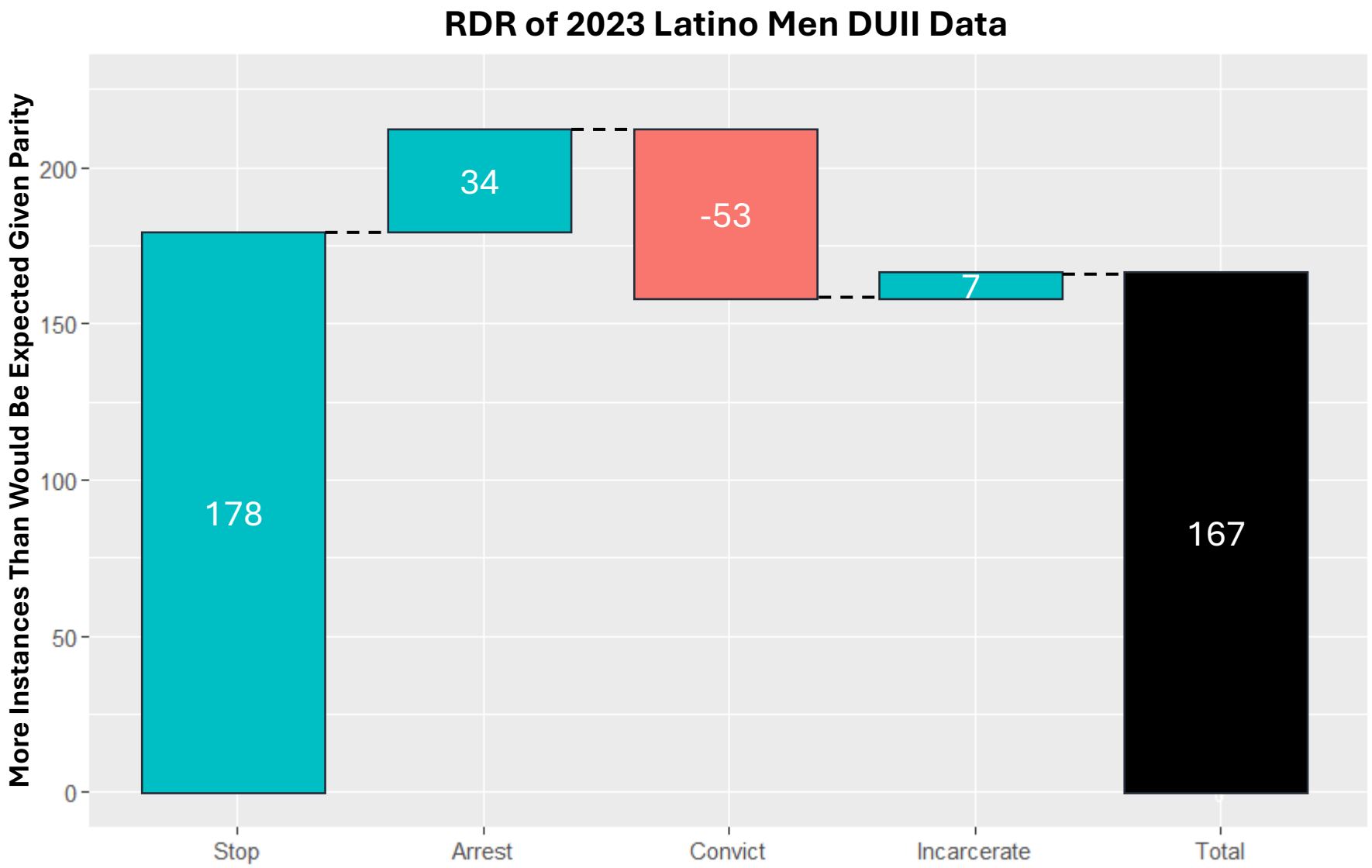
- Apply RDR to multiple points of interaction
- Identify specific points that result in disparity
- Use the results to guide further analysis

Aspirational Example: System Equity

Objective:
Interrogate multiple points in the criminal justice system

Data:
DUII for Latino men in 2023

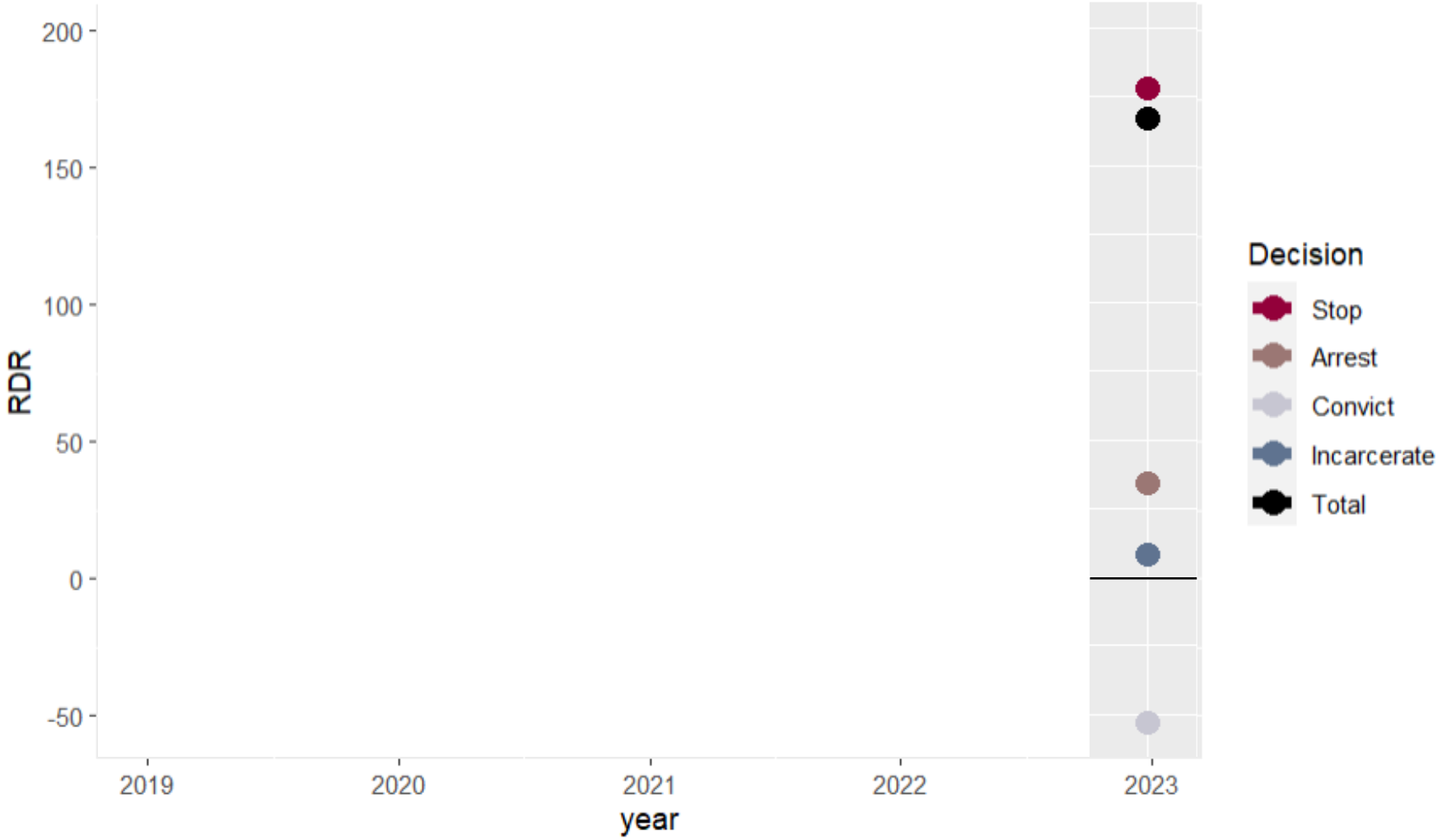
- stops
- arrests
- convictions
- incarcerations



Aspirational Example: System Equity

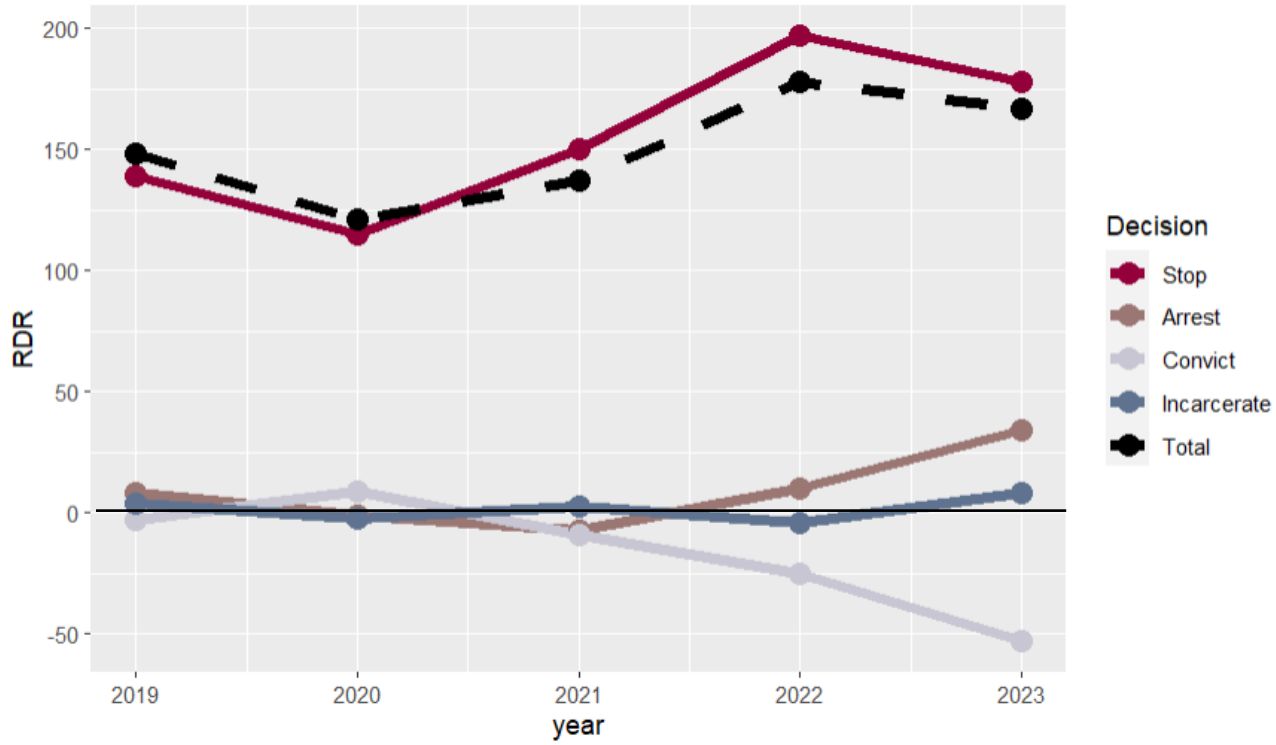
Questions:

1. Is a disparity identified?
2. When does disparity occur?
3. How can the disparity be addressed?
   - Traffic fatalities
   - Spatial analysis
   - Sentencing Guidelines



Summary

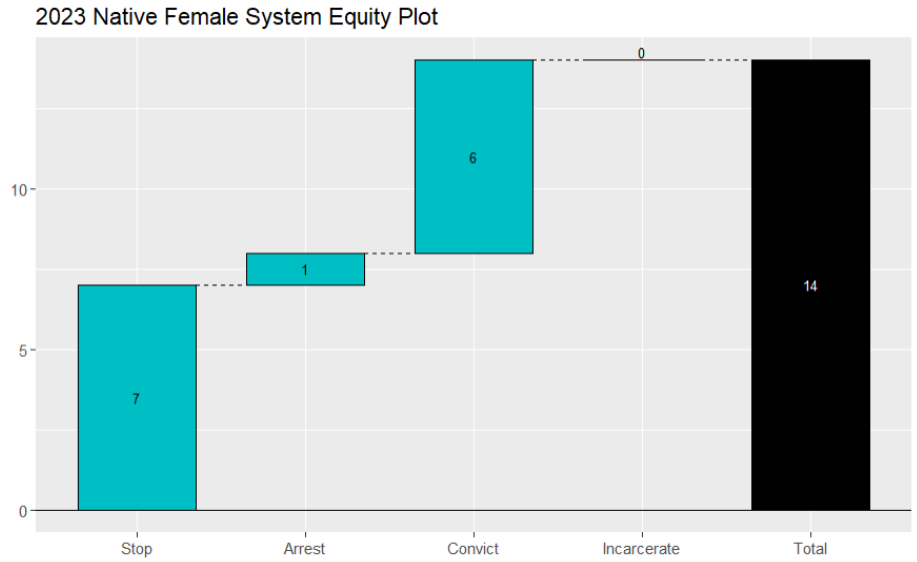
- RDR is useful to state governance because it measures human interactions
  - Scalable to large and small populations
- Careful selection of populations helps isolate specific points in the CJ system
  - Allows individual system actors to have ownership of outcomes
  - Addresses and informs specific policy questions
- RDR does not suggest *cause* of disparity, but can help direct research resources

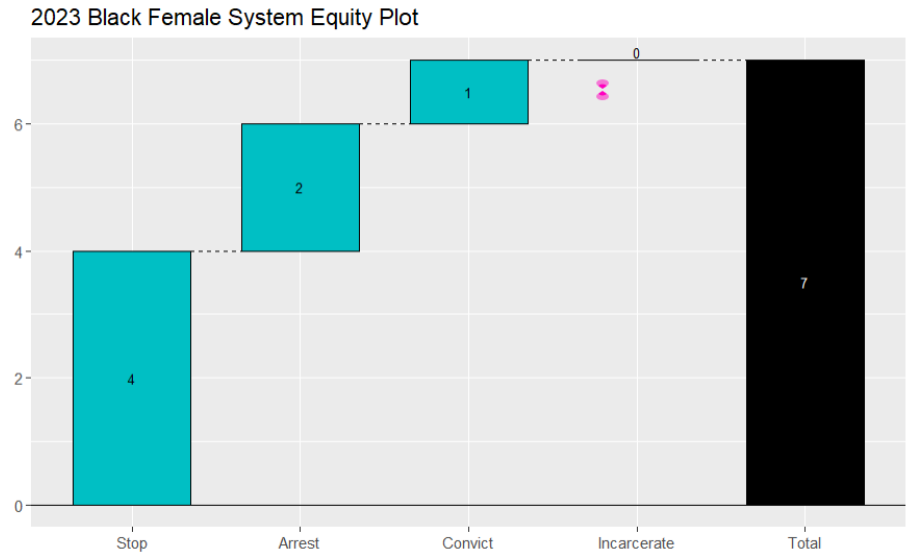


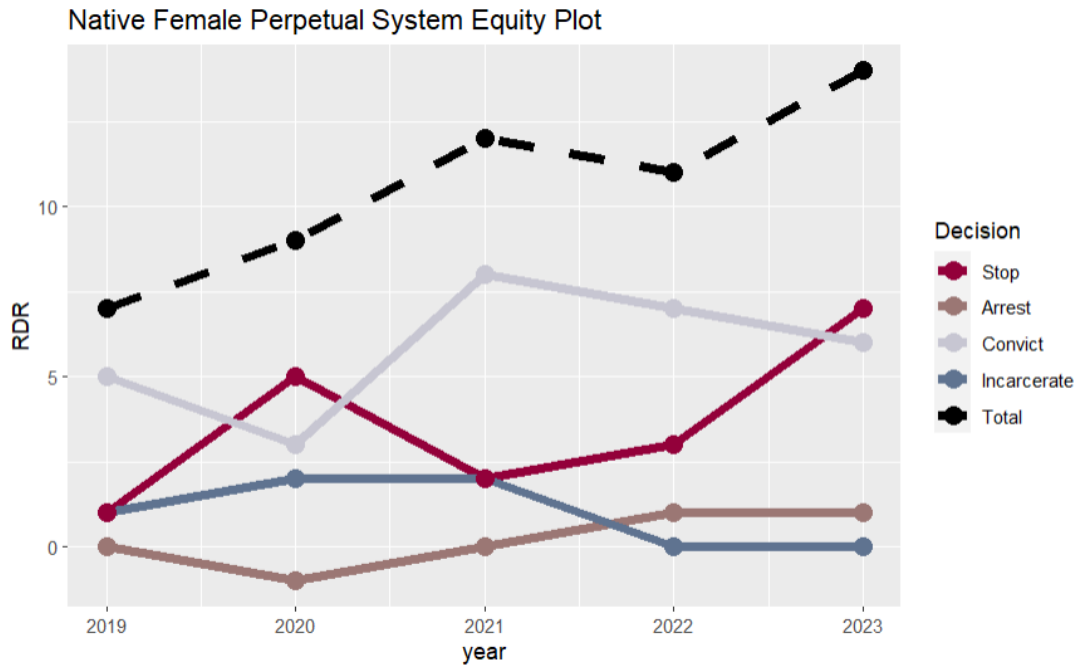
Thank you!

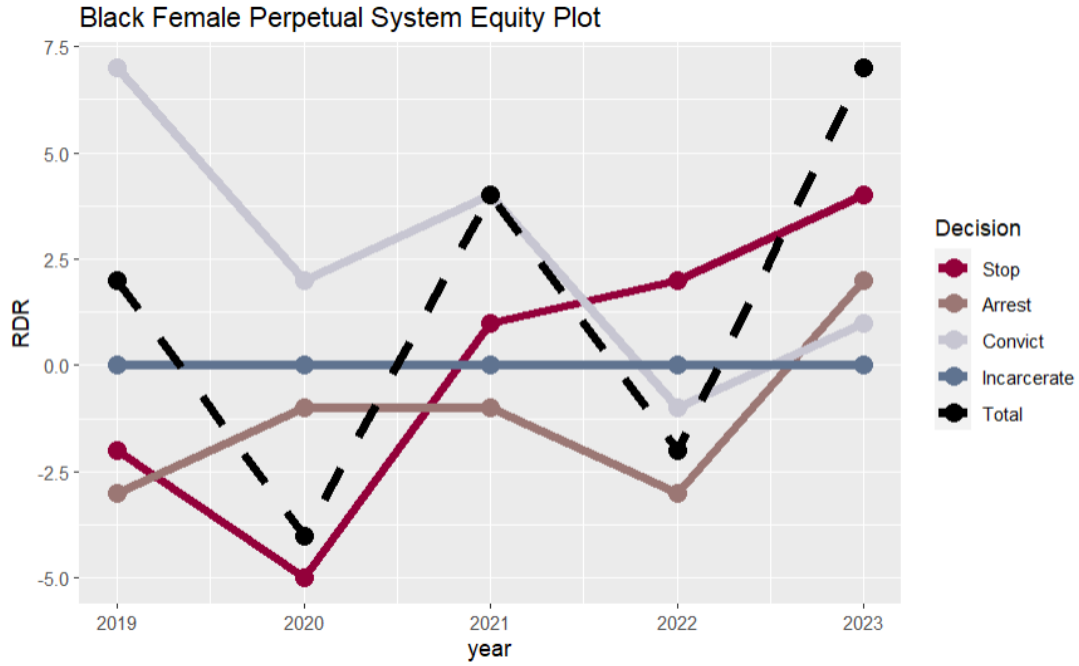
Carrie Glaser
Research Analyst
Oregon Criminal Justice Commission
carrie.glaser@cjc.oregon.gov

Katherine Tallan
Research Analyst
Oregon Criminal Justice Commission
katherine.tallan@cjc.oregon.gov


2023 Native Female System Equity Plot
10
5
0
7
1
6
0
14
Stop
Arrest
Convict
Incarcerate
Total


2023 Black Female System Equity Plot
6
4
2
0
4
2
1
0
7
Stop
Arrest
Convict
Incarcerate
Total

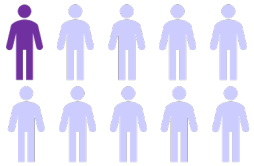

Native Female Perpetual System Equity Plot
RDR
10
5
0
2019
2020
2021
2022
2023
year
Decision
Stop
Arrest
Convict
Incarcerate
Total


Black Female Perpetual System Equity Plot
RDR
7.5
5.0
2.5
0.0
-2.5
-5.0
2019
2020
2021
2022
2023
year
Decision
Stop
Arrest
Convict
Incarcerate
Total

Introduction: Let's say you have 2 groups of people…

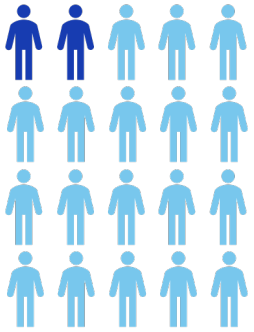
Parity: RDR = 0

Minority Group



10% receive a prison sentence

Majority Group

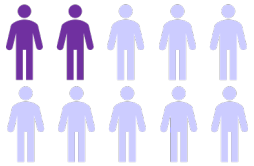


10% receive a prison sentence

"No more Purple people received a prison sentence than we would expect given parity between Purple and Blue."

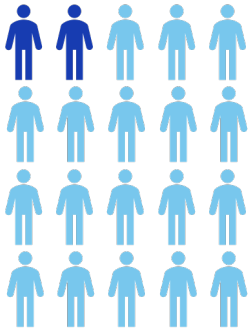
Disparity: RDR > 0

Minority Group



20%

Majority Group



10%

"1 more Purple person received a prison sentence than we would expect given parity between Purple and Blue."

Parity Condition:

$$\frac{Majority\ Prison\ (2)}{Majority\ Total\ (20)} = \frac{m_i}{Minority\ Total\ (10)}$$

RDR To Achieve Parity:

$$RDR = Minority\ Prison\ (2) - m_i$$

$$RDR = 2\ -\ 10 * \frac{2}{20} = 1$$

$$\boldsymbol{RDR = 1\ Person}$$