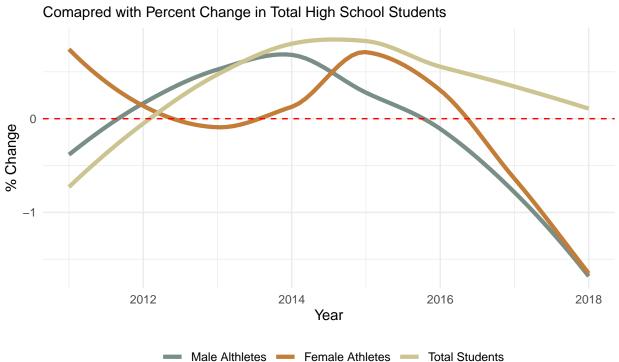
## FinalPresentation

Mason Kellett, Carmen Canedo

December 1, 2020

### Athlete Participation

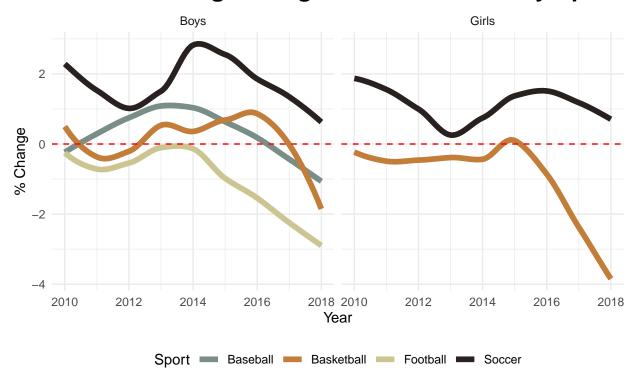
# **Percent Change in Total High School Athletes**



#### Data provided by NFHS

Over the past 10 years there have been changes in the number of students who are participating in sport. As shown in the graph above, from about 2010 to 2015, both male and female participation changed fairly closely with the totla number of high school student in the United States. However, starting in about 2016 we see that the sport participation pulls away from the number of high school students. In this project report, we will analyze what characteristics of sport have caused the decline in sport participation.

# Percent Change in High School Athletes by Sport



Data provided by NFHS

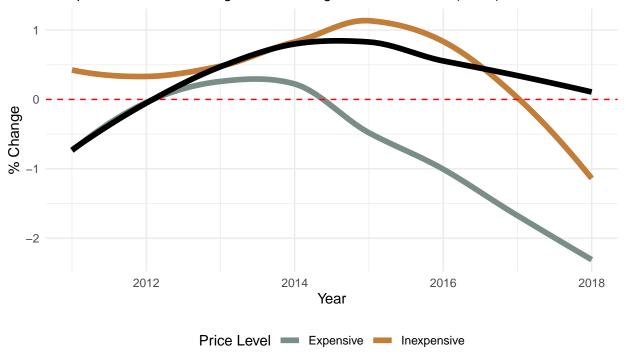
#### Hypothesis 1

The first hypothesis is that participation levels will be different by sport.

As shwon in the graph above, the only sport that showed a constant increase in sport participation was soccer. Football shows a negative trend, where the number of athletes participating is decreasing year over year. This helps support the hypothesis that the participation change is different by sport. This leads us to question which characteristics are common among sports with declining participation versus increasing participation.

## Percent Change in High School Athletes by Cost to Play

Compared to Percent Change in Overall High School Students (Black)



Data provided by NFHS and MetroKids

#### Hypothesis 2

More expensive sports will show a more consistent decline in sport participation.

Sports were split into two factors, expensive or inexpensive, depending on the sports average annual cost according to a MetroKids report. Based on this seperation, it was shown that the more expensive sport strayed significantly from the overall trendline for change in student population. The less expensive sports, even in 2018, followed pretty closely with the changes in student population. This leads to the conclusion that students are participating less frequently in sports that are consistently more expensive, which demonstrates how cost is a huge indicator of the decreasing sport participation.

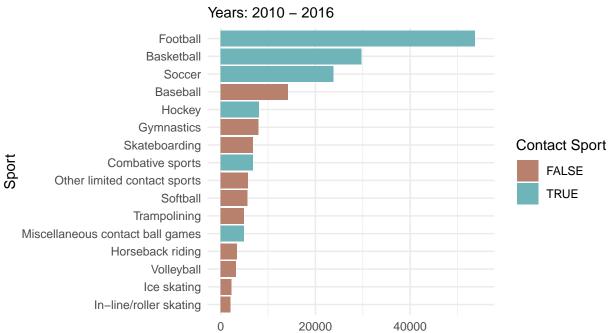
#### Hypothesis 3

Sports with higher rates of injury will show a decline in participation.

## Injuries

## How many kids are getting hurt?

# Youth Emergency Room Visits among US Children for Sports-Related Brain Injuries

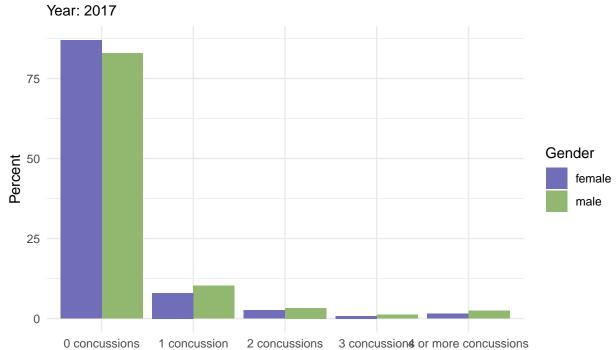


Centers for Disease Control and Prevention (CDC): Morbidity and Mortality Weekly Report (March 2019)

Count

## What demographics are most affected?

# Percent of Concussions in US Youth That Play Sports by Gender

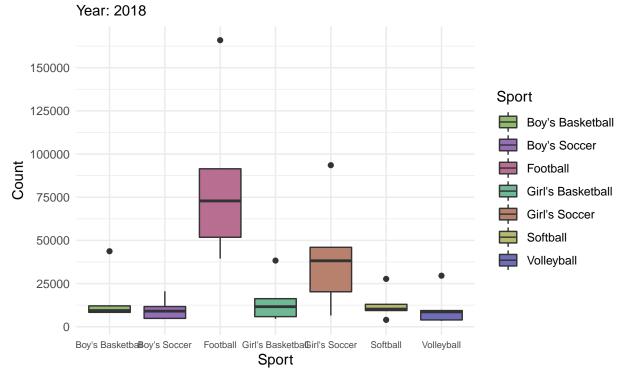


CDC: Self–Reported Concussions from Playing a Sport or Being Physically Active Among High School Students

## What sports have the most injuries?

#### Injuries by sport

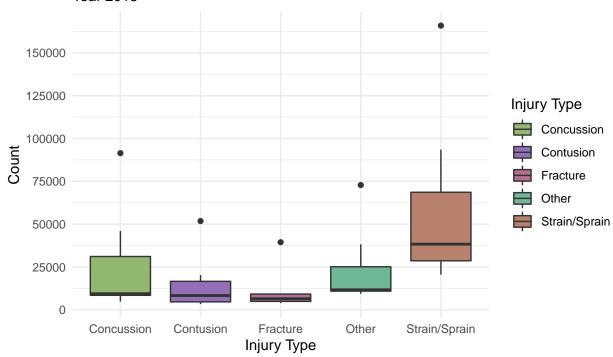
# Variations in Amount of Injuries by Sport



Colorado School of Public Health: Program for Injury Prevention, Education & Research

## Injuries by type

## Variation in Most Common Injury Types Year 2018



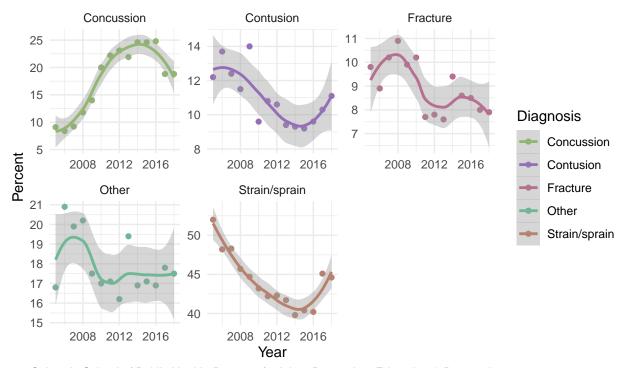
Colorado School of Public Health: Program for Injury Prevention, Education & Research

## How have injuries rates changed over time?

Diagnosis by year, color by type

## Trends in Injury Diagnosis

Years: 2005 - 2018



Colorado School of Public Health: Program for Injury Prevention, Education & Research

# Participation

Who participates in sports?

Boys Participants Map

# Counts of Participation in Boy's Sports by State

Year: 2018

Baseball

Basketball

Count

Football

Soccer

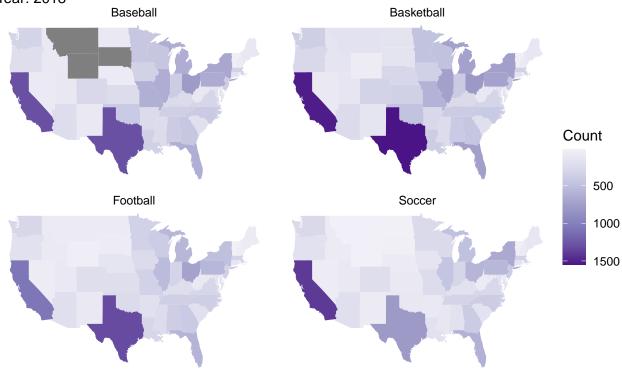
40000
120000
160000

High School Participation Survey Archive

## Boys Programs Availability Map

# Counts of Programs for Boy's Sports by State

Year: 2018

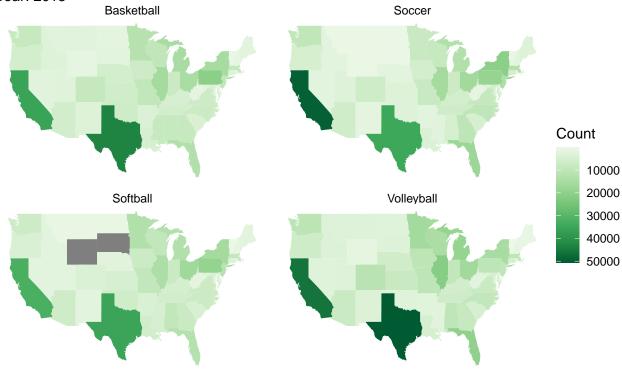


High School Participation Survey Archive

## Girls Participants Map

# Counts of Participation in Girl's Sports by State

Year: 2018

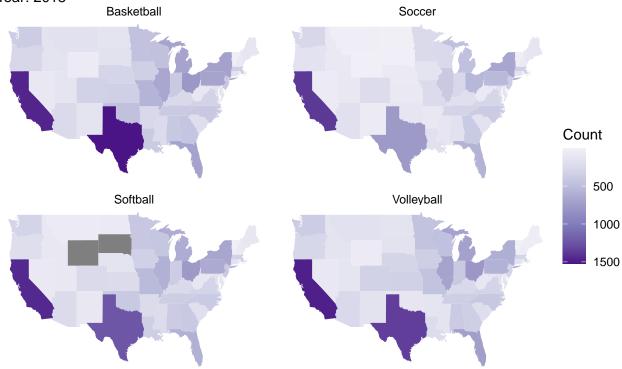


High School Participation Survey Archive

## Girls Progams Map

# Counts of Programs for Girls's Sports by State

Year: 2018

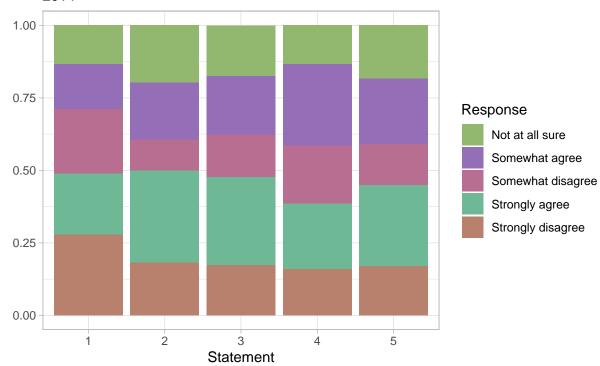


High School Participation Survey Archive

## Conclusion

## Public opinion

# Survey Responses on The Long-Term Effects of Concussions in Sports 2014



Source: Harris Interactive | The Harris Poll #92