**Initial Visualization Questionnaire**

**Bar Charts**

Quickly identify the highest or the lowest variable, including the incremental differences between bars.

* Which sport had the most hospital visits? Basketball
* Which injury had the most hospital visits? Strain/Sprain
* At which age had the most hospital visits? Minors from the age of 15 had more hospital E.D. visits than the sum of E.D. visits of adults from the age of 18 to 24.
* Which disposition had the most hospital visits? Treated and examined.
* Which race had the most hospital visits? Whites and blacks were the top two races with the most E.D. visits from 2010 to 2019.

**Line chart**

Show trends or progress over time and highlight accelerations and decelerations in data.

* What are the trends of total E.D. visits by sport over the past ten years? Basketball had the highest number of E.D. visits. Track and field have the highest deceleration of E.D. visits from 2018-2019.
* What are the trends of total E.D. visits over the past ten years by age? Ages 15, 16, and 17 have the highest rate of deceleration of E.D. visits from 2018-2019.
* What are the trends of total E.D. visits by injury over the past ten years? Most injuries were caused by an ankle injury followed by knee injuries. Both of the top two injuries E.D. visits are decelerating.
* What are the trends of total E.D. visits by disposition over the past ten years? Overall, there is a downward trend in patients being treated, examined, and released. There is a slight increase in the rate of hospitalizations.
* What are the trends of total E.D. visits over the past ten years by gender? Men visit the E.D. more than women. Over the past ten years, there has been an overall decrease in E.D. visits.
* What are the trends of total E.D. visits by race over the past ten years? The difference between white and black E.D. visits is decreasing.

**Line chart**

* What is the injury percentage by sport? As we can see Soccer is the sport with the most amount of concussions and fractures, Basketball have the higher amount of fractures and Trak & field the strain or sprain of our athletes.

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| Injury % by Sport | CONCUSSIONS | DISLOCATION | FRACTURE | STRAIN/SPRAIN |
| BASKETBALL | 5.07% | 7.50% | 20.57% | 66.86% |
| SOCCER | 12.76% | 5.39% | 26.72% | 55.13% |
| TRAK &FIELD | 4.26% | 3.48% | 20.03% | 72.23% |

* What was the disposition percentage by sport? With an average of 97% of the total injuries could be treated and released the same day in all 3 sports.

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| Disposition by Sport | HELD FOR OBSERVATION | LEFT WITHOUT BEING SEEN | TREATED AND ADMITTED/  HOSPITALIZED | TREATED AND TRANSFERRED | TREATED / EXAMINED AND RELEASED |
| BASKETBALL | 0.17% | 0.25% | 1% | 0.17% | 98.41% |
| SOCCER | 0.45% | 0.13% | 2.15% | 0.19% | 97.08% |
| TRAK &FIELD | 0.19% | 0.10% | 2.23% | 0.19% | 97.29% |

* What was the disposition percentage by gender? Women had a higher rate of treated and released, held for observations than man.

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| Disposition by Gender | HELD FOR OBSERVATION | LEFT WITHOUT BEING SEEN | TREATED AND ADMITTED/  HOSPITALIZED | TREATED AND TRANSFERRED | TREATED / EXAMINED AND RELEASED |
| MALE | 0.20% | 0.22% | 1.44% | 0.17% | 97.96% |
| FEMALE | 0.37% | 0.17% | 0.95% | 0.18% | 98.33% |
| NOTRECORDED | N/A | N/A | N/A | N/A | 100% |

* what was the disposition percentage by location?

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Disposition by Location | HOME | INDUSTRIAL | NOT RECORDED | OTHER PUBLIC PROPERTY | PLACE OF RECRATION OR SPORTS | SCHOOL/  DAYCARE | STREET/  HIGHWAY | MOBILE/  MANUFACTURED  HOME |
| BASKETBALL | 3.86% | N/A | 29.41% | 1.38% | 52.56% | 12.46 | 0.33% | N/A |
| SOCCER | 1.25% | N/A | 17.96% | 0.53% | 71.90% | 8.28% | 0.08% | 0.01% |
| TRAK & FIELD | 0.58% |  | 7.45% | 1.79% | 48.14% | 40.69% | 1.35 | N/A |

* What was the disposition percentage by body part? As it was expected the location of the injury is directly related to the kind of moves performed on each sport

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| Disposition by Body Part | BASKETBALL | SOCCER | TRAK & FIELD |
| NULL | 12.57% | 6.49% | 1.45% |
| ANKLE | 40.60% | 28.26% | 26.56% |
| ELBOW | 1.20% | 1.14% | 2.32% |
| EYEBALL | N/A | N/A | N/A |
| FACE | 2.55% | 2.80% | 0.92% |
| FOOT | 4.39% | 3.87% | 6.97% |
| HAND | 2.51% | 1.37% | 0.82% |
| HEAD | 5.10% | 12.78% | 4.40% |
| KNEE | 11.93% | 12.24% | 15.82% |
| LOWER ARM | 1.56% | 12.78% | 2.23% |
| LOWER LEG | 2.33% | 4.62% | 6.05% |
| LOWER TRUNK | 2.74% | 3.28% | 13.30% |
| NECK | 0.76% | 1.14% | 1.11% |
| NOT STATED/UNK | N/A | 0.03% | 0.24% |
| PUBIC REGION | 0.01% | 0.01% | N/A |
| SHOULDER | 5.50% | 6.81% | 4.11% |
| UPPER ARM | 0.19% | 0.26% | 0.24% |
| UPPER LEG | 0.48% | 1.15% | 7.64% |
| UPPER TRUNK | 1% | 0.90% | 1.89% |
| WRIST | 4.56%6 | 6.80% | 3.92% |

* What was the disposition percentage by race? Black/African American has the greatest number of injuries in Basketball. while the White category has the most Soccer and Track & Field injuries related

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| Disposition by Race | AMERICAN INDIAN/ ALASKA NATIVE | ASIAN | BLACK/ AFRICAN AMERICAN | N.S | NATIVE HAWAIIAN /PACIFIC | OTHER | WHITE |
| BASKETBALL | 0.30% | 1.52% | 32.52% | 31.34% | 0.13% | 6.08% | 28.12% |
| SOCCER | 0.12 | 1.87% | 3.64% | 33.45% | 0.15% | 14.13% | 43.65% |
| TRAK & FIELD | 0.19% | 1.69% | 25.59% | 33.58% | 0.10% | 4.11% | 34.74% |