Personal Product Reflection

I feel that our product (Collision Detection Helmet) can assist youth athletes in detection and treatment of concussions. As youth football games usually lack the appropriate amount of medical staff or staff that are knowledgeable with regards to concussions. Youth athletes can suffer concussions that go unnoticed. By having an alert system that can alert staff through the phones or devices they already carry, we can relieve burden from the medical staff that could potentially miss a collision due to a lapse in attention and allocate their efforts to property diagnose and treat high risk youth athletes.

However, I do have concerns regarding our product and the level of success it can achieve. The first is cost. With football helmets already ranging from $100 to $200, the addition of specialized equipment and support could increase the cost beyond the budget of youth league teams or parents of youth athletes. With our calculations, we estimate that the cost would need to be around $100 more than the helmet in order to breakeven/cover cost including time spent developing the product. This would make our potential margins very thin as any further increase in price would deter most of our targeted audience.

Second concern that I have is acceptance and reluctance of implantation by coaching staff. Coaching staff might be reluctant to make accommodations or allocate staff to pay attention to alerts sent out by the program. The deployment of the helmets would need an initial setup and personalization of the helmet to the wearer which also might deter coaching staff from implantation as they might feel that it would be “too tedious”.

From a technical perspective, the maintenance of applications might be a problem in the future. If the alert via application route is taken, the application needs to be updated and maintained to ensure proper functionality with the devices current operating system and software. A lapse in this might cause the program to not function as intended and not alert the appropriate staff.

Another concern is how we can accurately detect and compare waveforms of the collisions, as our team currently lacks experience with Machine learning/Artificial Intelligence, we cannot currently deploy a program that can analyze waveforms and learn to detect patterns and similarities. This would result in us needing to hardcode parameters and thresholds which might not be as accurate as concussions can occur in varying conditions with varying factors. AI solution would be a long term solution if the initial setup is completed appropriately.