

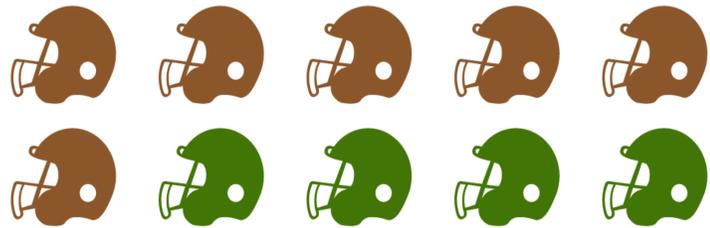


Flag on the Play: Using Technology to Tackle Self Reporting of Concussions in Collegiate Football



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Problem



43% of college football players fail to report their concussions in order to remain in a game, resulting in mental and physical impairments that can lead to death

Impact on Players

Decrease in Cognitive and Motor Activity

Long Term Mental Illness and Suicide



Multiplied Risk of another Concussion

Solution: Sensors and Tests Take Self Reporting Out of Play



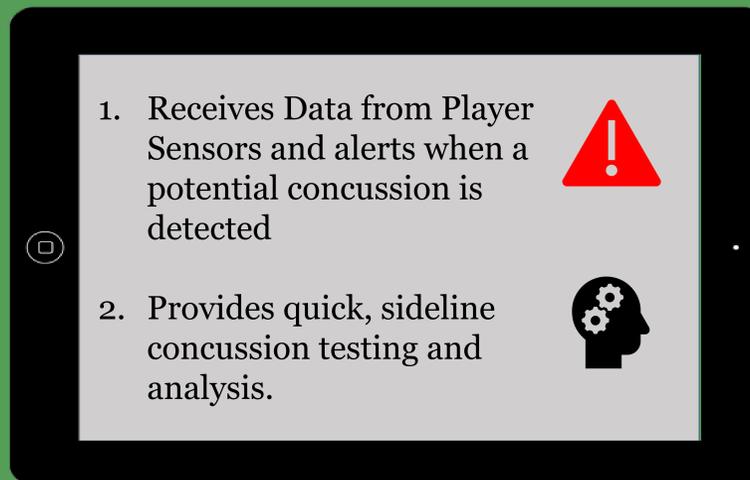
1. OPTICAL IMPACT MONITOR

The optical impact monitor uses an accelerometer to measure impact velocity. The OIM also monitors eye movement to mimic how the brain moves during impact.

2. NANO COMPOSITE FOAM

Nano composite foam uses triboelectric response to measure impact and the amount of energy transferred to the head upon impact.

App: The Concussion Playbook



Baseline Testing

Visual, and Short-Term Memory Tests (Memorizing words, recite)

Tests will provide scores, used for analysis in the event of brain trauma.

Sideline Testing

Similar to baseline, quick short-term and visual memory tests

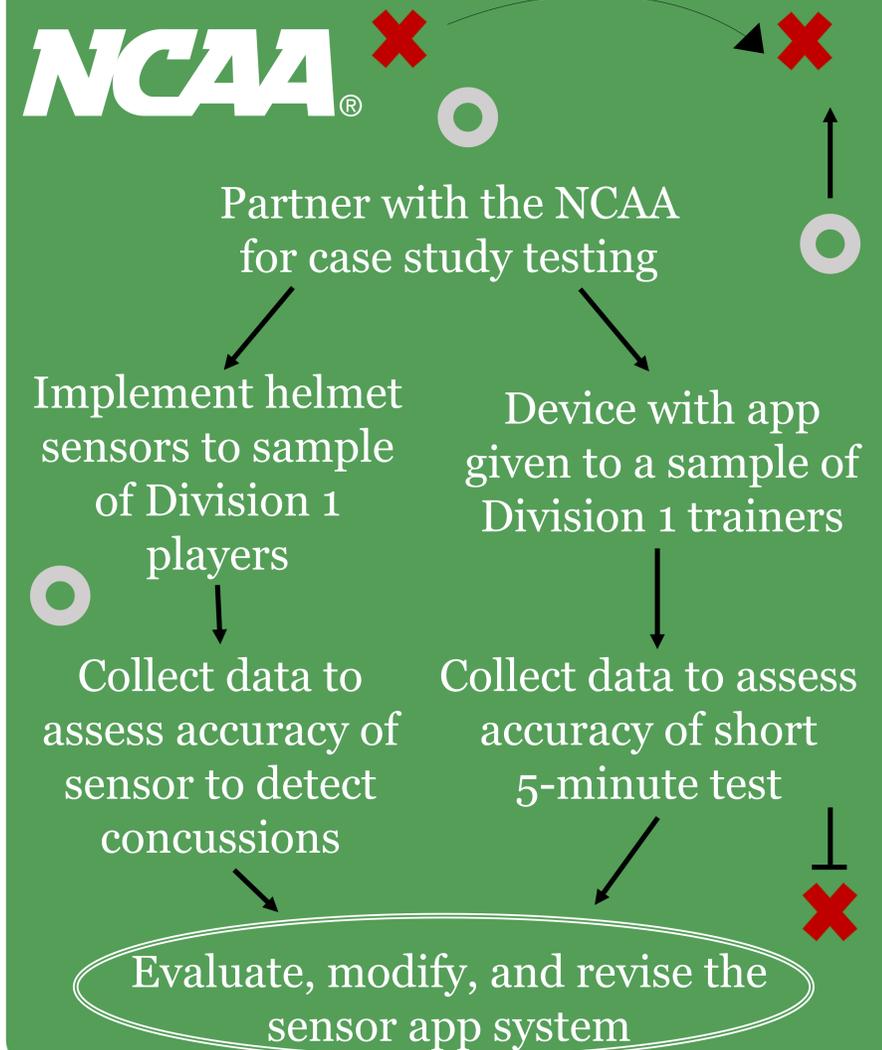
Will immediately recommend taking a player out or not

Post-Test Analysis

Compares baseline and post sideline test scores

Recommends a doctor visit if deemed necessary

Implementation and Assessment: The Playbook



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Key References

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