1. **CSW%** is one of the most informative single metrics for evaluating pitchers because it captures a pitcher's ability to produce positive outcomes. It also scales well across different pitch types and game contexts. It goes hand and hand with ERA due to the relationship it had Some physical qualities that influence CSW% include rotational power, rate of force development, and lower-body braking and propulsive impulse. These support velocity, repeatability, and pitch quality and can be assessed using technologies like force plates, and ball tracking systems like Trackman.

2. **Barrel %** is a great stat to measure the quality of contact with exit velocity and launch angle. Hitters who consistently barrel the ball tend to produce good results. This stat also drives the expected statistics which focuses on the quality of what's going on rather than the outcome. Bat speed and rotational acceleration are two physical qualities that can be measured using bat sensors and motion capture devices.

3. I would prefer **Player B,** despite Player A having stronger swing-and-miss indicators. While Player A's strikeout and walk rates suggest strong underlying skills, run prevention still matters. Player B has demonstrated a much stronger ability to convert that performance into results, as shown by the 1.75 ERA and slightly better FIP.
The gap between the two players' FIP is relatively small, suggesting comparable true talent levels, while the difference in ERA is larger. This may indicate that Player B is better at managing contact quality skills that aren't fully seen in K% and BB%.
It's easier to incrementally improve strikeout and walk rates through training than it is to dramatically improve a pitcher's ability to prevent runs. I would go after the player who is already translating performance into outcomes, with room to further optimize his weaknesses.

3a. In-game biomechanics (like reductions in arm speed and increased elbow torque) can indicate fatigue before performance drops are visible in outcomes. Coaches could use this data to adjust pitch selection, mound visits, or timing of removal to prevent damage. By using biomechanical monitoring to improve repeatability and fatigue management, Player A's contact quality allowed could be reduced.

4 **Age, Experience, Progression of Stats, Health history, and who coaches them.**
All of these factors play a key role in athletic assessment. A young talent with a lot of experience in the game is only a good player to look at if they are healthy and continue to improve. It is hard to dismiss a player who has an extensive history of health since this could mean that they are injury prone. It won't matter how talented the player is if they are not playing. Coaching is also a big factor in the upbringing of an athlete. If a coach repeatedly has athletes who climb the charts in their stats under their wing, then you can feel more confident in the player that you are looking into.

5. I would prioritize those traits in this order: **pitch calling, throwing, blocking, framing**. This order makes sense when looking at what they do most often. Having a catcher who can call pitches is important since that action occurs every pitch. Catchers have a large impact on the

outcome of the game with just pitch calling and throwing alone. With the way technology is improving and the changes in rules happening in the MLB, framing is becoming less important.

5a. **Reaction time testing** can be implemented to measure how quickly the catcher responds to the pitch hitting the glove, which directly affects transfer time leading to more effective and efficient pop times