# Introducing the New Era of Pitching Statistics

# Part 2: Improving WHIP

It is time to stop using WHIP to evaluate pitchers' success at limiting baserunners. A new way has finally emerged.

Note: All Statistics were gathered from Baseball Savant unless otherwise stated.

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This article is the second in a two-part series focused on improving the current benchmarks of pitching statistics, ERA and WHIP, so that fans and baseball staff members can more accurately judge players. The focus of Part 1 was Fixing ERA, while the focus of this article will be Improving WHIP. First, for those that are reading that do not know what WHIP is, it is a pitching statistic designed to show how many baserunners a pitcher allows for every inning they pitch. It is an average, and it can be calculated by adding a pitcher's walks and hits and then dividing by their total number of innings. That is where the name, WHIP, comes from: **W**alks and **H**its per **I**nnings **P**itched. At first glance, this statistic looks useful enough. It accurately shows how many baserunners a pitcher allows in a given inning, yet its problem lies in the fact that not all hits are equal. A single is very different from a homerun, not only in its scale, but in its impact on the game. This is the important distinction that needs to be made, and where WHIP can be greatly improved.

The key to unlocking the full potential of WHIP, comes from using Bases, instead of simply Walks and Hits. Total Bases, or just Bases, represent how far a hitter gets through their hits. Each base is worth their number, meaning a Single is worth 1 base, a Double worth 2 bases, Triples are worth 3 bases, and finally, a Home Run is worth 4 bases. A player can only add to their bases through hits, and not through stealing bases, or advancing on other players' hits. This shows that not all hits are created equal, in that it weighs each hit differently. Pitchers who give up a lot of home runs, give up a lot more bases than pitchers who give up a lot of singles.

Enter the two newest pitching statistics that focus on more accurately representing a pitcher's success on allowing baserunners, and the strength of those baserunners per inning: PBAB and PBAIP. Similar to ERIP and ERG, from the Fixing ERA article, these two stats focus on the same thing, but show

them on a different scale. Starting with PBAB, it stands for **P**itching **B**ases **A**llowed per **B**atter faced. An important note: it starts with Pitching Bases, and not simply Bases, because I altered it to include walks and hit-by-pitches, which are not typically included in the Total Bases formula. PBAB is calculated by taking a pitcher's Total Bases Allowed, adding their walks and hit-by-pitches, then dividing by the total number of batters they faced. This statistic shows how many bases a pitcher allows per batter they face.

| | Relief Pitchers | PBAB |
|---|---|---|
| 1 | Aroldis Chapman | 0.250 |
| 2 | Adrian Morejon | 0.276 |
| 3 | Tyler Rogers | 0.304 |
| 4 | Andrés Muñoz | 0.315 |
| 5 | Matt Svanson | 0.321 |
| | Minimum: 50 innings | |

| | Starting Pitchers | PBAB |
|---|---|---|
| 1 | Yoshinobu Yamamoto | 0.346 |
| 2 | Tarik Skubal | 0.352 |
| 3 | Paul Skenes | 0.352 |
| 4 | Cristopher Sánchez | 0.359 |
| 5 | Hunter Brown | 0.376 |
| | Qualified Starters: 162 innings | |

Shown above are the leaders from the 2025 MLB Regular Season in PBAB. Focusing on Aroldis Chapman who, as shown in the Fixing ERA article, had a phenomenal season, he allowed only 0.25 bases per batter he faced. Meaning it would take, on average, four batters just to reach first base. For a pitcher that normally only pitches one inning at a time, this is an incredibly efficient and impressive number. Staying with the relievers, Adrian Morejon (SDP), Tyler Rogers (NYM) and Matt Svanson (STL) were all not closers. Morejon had a great season as an all-purpose reliever in the Padres bullpen. Rogers was one of the most effective setup men in all of baseball, earning 32 holds, good for 4th in the MLB.[1] Svanson was a player that started the year on the taxi-squad, getting optioned to Triple-A four times throughout the beginning of the season. However, he finally was able to stick on the Big League roster after getting called up on July 28th.[2] Moving to the starters, as always, the stats are going to be slightly higher since they pitch more innings per game, they are more likely to give up more runners and runs over the course of the game. The same pattern emerged with ERIP and ERG. Cristopher Sánchez (PHI) had a phenomenal season, yet somehow was not an All-Star in 2025. Had Rob Manfred been using PBAB to help make his decision on who would replace Matthew Boyd at the All Star Game, Sánchez would have been a no-brainer over Jacob Misiorowski. Both of the presumptive Cy Young Award winners are represented in the top 5, Tarik Skubal (DET) and Paul Skenes (PIT). Yet, it is Yoshinobu Yamamoto (LAD) that is able to claim the top spot. If you saw his postseason complete game in Game 2 of NLCS, you are not surprised.

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[1] MLB.com: Expanded Pitching Statistics: Holds
[2] MLB.com: Svanson 'could never have imagined' breakout rookie season

The second improved WHIP statistic is PBAIP, which stands for **P**itching **B**ases **A**llowed per **I**nnings **P**itched. This is measuring the same thing as before, pitching bases allowed, but now it is on the scale of innings pitched rather than per batter. When the scale is changed, the top 5 for relievers and starts changes slightly:

| | Relief Pitchers | PBAIP |
|---|---|---|
| 1 | Aroldis Chapman | 0.929 |
| 2 | Adrian Morejon | 1.072 |
| 3 | Tyler Rogers | 1.182 |
| 4 | Shawn Armstrong | 1.257 |
| 5 | Matt Svanson | 1.271 |
| | Minimum: 50 innings | |

| | Starting Pitchers | PBAIP |
|---|---|---|
| 1 | Tarik Skubal | 1.346 |
| 2 | Yoshinobu Yamamoto | 1.365 |
| 3 | Paul Skenes | 1.375 |
| 4 | Cristopher Sánchez | 1.477 |
| 5 | Hunter Brown | 1.478 |
| | Qualified Starters: 162 innings | |

Starting with the relievers, Shawn Armstrong (TEX) was able to slide into the fourth spot, with Abner Uribe (MIL) falling out of the top 5 altogether. As for the starters, Skubal was able to supplant Yamamoto for the top spot , while all else stayed the same. It is not surprising to see many of the same names as PBAB, due to the fact that it is the same statistic, just measured on a slightly different scale (per inning vs per batter). Now, it is time to directly compare PBAIP to WHIP. Below is a table that shows the top starting pitchers, ranked by WHIP, from last season, and also shows their PBAIP and HR/9 along with their respective rank among qualified starters.

| | Starting Pitchers | WHIP | Rank | PBAIP | Rank | HR/9 | Rank |
|---|---|---|---|---|---|---|---|
| 1 | Tarik Skubal | 0.891 | 1 | 1.346 | 1 | 0.830 | 16 |
| 2 | Jacob deGrom | 0.921 | 2 | 1.512 | 8 | 1.359 | 71 |
| 3 | Bryan Woo | 0.927 | 3 | 1.511 | 7 | 1.257 | 64 |
| 4 | Paul Skenes | 0.948 | 4 | 1.375 | 3 | 0.529 | 1 |
| 5 | Nick Pivetta | 0.985 | 5 | 1.492 | 6 | 1.093 | 39 |
| 6 | Yoshinobu Yamamoto | 0.990 | 6 | 1.365 | 2 | 0.727 | 9 |
| 7 | Hunter Brown | 1.025 | 7 | 1.478 | 5 | 0.827 | 15 |
| 8 | Garrett Crochet | 1.028 | 8 | 1.549 | 9 | 1.053 | 30 |
| 9 | Joe Ryan | 1.035 | 9 | 1.749 | 20 | 1.368 | 73 |
| 10 | Carlos Rodón | 1.049 | 10 | 1.572 | 11 | 1.015 | 25 |
| 12 | Cristopher Sánchez | 1.064 | 12 | 1.477 | 4 | 0.535 | 2 |
| | Qualified Starters: 162 innings | | | | | | |

The table above does a fantastic job of showing the major difference between WHIP and PBAIP, and Jacob deGrom (TEX) and Cristopher Sánchez are the perfect examples. Jacob deGrom ranked 2nd in WHIP, but only 8th in PBAIP. The major difference, his HR/9 (how many home runs he allows per 9 innings) is 71st among 107 qualified starters for the 2025 season. Joe Ryan (MIN) is another great example of showcasing of PBAIP is more indicative of success compared to WHIP. Ryan finished in 20th in PBAIP, largely in part to his high HR/9. Now, look at Cristopher Sánchez. He finished the season all the way down in 12th in WHIP, yet he was 4th in PBAIP. The reason he ranked much higher in PBAIP? He allowed the second fewest home runs per 9 innings, only behind Paul Skenes, the probable NL Cy Young Award Winner. Yoshinobu Yamamoto is another great example of how limiting home runs will lower their PBAIP compared to their WHIP.

As showcased throughout this article, WHIP is a very incomplete statistic. Not all hits are created equal, and there is significant value in being able to prevent hitters from earning extra base hits. As was the case with ERIP and ERG from the previous article, both PBAB and PBAIP are created to allow both casual fans and baseball statisticians to accurately understand a pitcher's value. WHIP does matter when evaluating pitchers, but PBAIP is far more tangible and does a much better job at highlighting a pitcher's true value and success.