

## Relief Pitchers Belong in the Hall of Fame

by Elaina and John Pakutka

“I still think relief pitchers are slighted or faintly patronized in most fans’ and writers’ consideration. Ask somebody to pick an all-time or all-decade lineup for his favorite team or for one of the leagues and the chances are the list will not include a late inning fireman. Even with the best of the short men, the brevity of their patchwork, Band-Aid labors; their habitual confinement in faraway (and often invisible) compounds during the early long stretches and eventful midpassages of the game; their languorous, cap-over-eyes postures of ennui or lassitude—are they asleep out there?—for the first two or three hours of the event; their off-putting predilection for disorder and incipient disaster; the rude intrusiveness of their extroverted pitching mannerisms into the staid game party; their reckless way of seizing glory, or else horridly throwing away a game in hand, all in the space of a few pitches—all these confirm some permanent lesser status for them: scrubs, invisible weavers, paramedics, handymen. The slur persists, I think, in spite of clear evidence that relief men—the best of them, at least—are among the most highly rewarded and most sought after stars of contemporary baseball.”<sup>1</sup>

*Roger Angell*

### Introduction and a Revelation

Much has changed since 1985, when one of our greatest baseball writers penned these words. Still, much has stayed the same. A simple Google search reveals the ongoing, prevailing sentiment among baseball writers and analysts that “relief pitchers are failed starters.”<sup>2</sup> The implication seems to be that Angell’s “firemen” really aren’t that important to team success. True greatness lies elsewhere in baseball.

No reliever has won the Cy Young since 2003. Many of the best of them never make a National Baseball Hall of Fame (HOF) ballot or are summarily dismissed with less than 5% of the vote on their initial appearance. 2012 National Sportswriter of the Year Joe Posnanski does not commit the sin of exclusion Angell regularly encountered. Posnanski includes relief pitcher Mariano Rivera --and only Mariano Rivera-- in *The Baseball 100*, his rich collection of essays on the one hundred greatest baseball players of all time. (Even the Great Rivera, it must be admitted, failed as a starter.)

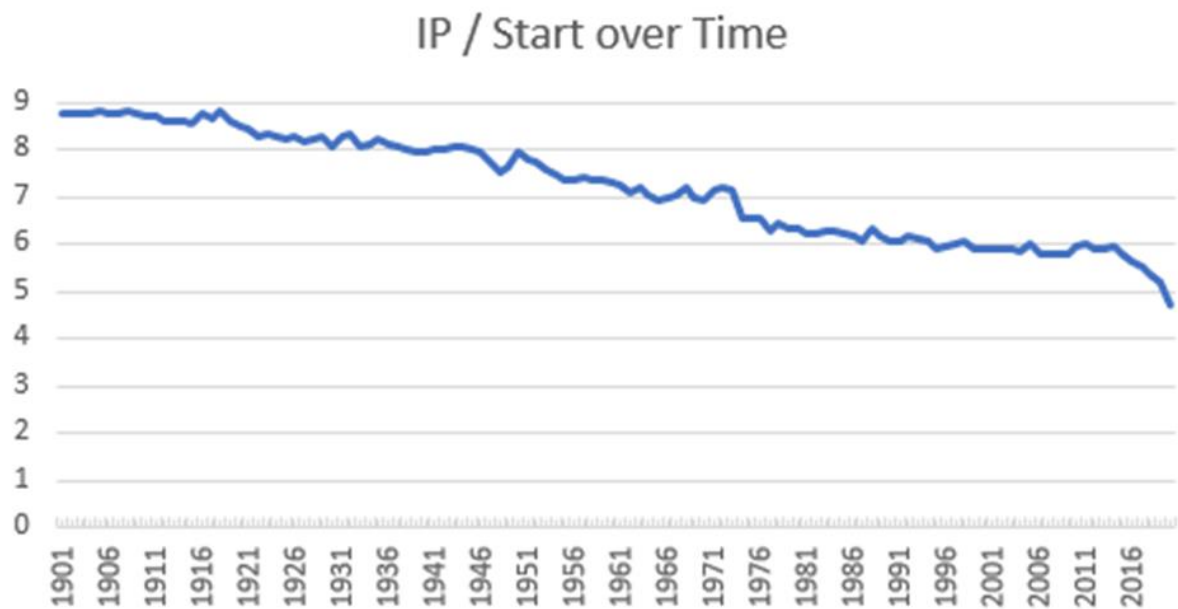
The reliever role has progressively increased in importance since World War I. Then complete games were the norm. See Figure 1.<sup>3</sup> Since then, as each quarter century has passed, starters have pitched on average about an inning less per game. In 2019, Cubs President of Baseball Operations Theo Epstein put it bluntly: “More is being asked out of bullpens.”<sup>4</sup>

Many fans and analysts do not like this development, especially in its more recent iterations: bullpen games and 6<sup>th</sup> and 7<sup>th</sup> inning 3-out specialists. In 2019, Statistician and ABC News Special Correspondent Nate Silver went so far as to claim “relief pitchers have broken

baseball.” His restoration plan includes reducing the twelve or thirteen pitchers on an MLB roster down to ten.<sup>5</sup>

The critics are many, but the importance of relief pitchers has been ever-increasing and never greater than today. We believe the game evolves, but greatness is visible in whatever form the action takes at a given point in time. In the last five decades, greatness has often taken the form of the “fireman.”

**Figure 1 Starting Pitcher Average Innings Pitched per Start 1901-2016**



Source: Graph by Emma Baccellieri from Fangraphs and Baseball-Reference data (NEED PERMISSION or just describe in text.)

Let’s assume for argument’s sake that an implication of the proposition “relief pitchers are failed starters” is true: relief pitching doesn’t much matter for team success. Sabermetrics pioneer Bill James shared that view. He believed that championship teams were “strong up the middle” and required very good players at most positions. In 2017, he put his unexamined beliefs about relief pitchers to a test.<sup>6</sup>

James considered the period 1976 to 2016, when relief pitching assumed its modern form. (Let’s agree for now “bullpen games” are the post-modern form.) For each year, he ranked each team’s position players, top righthanded and lefthanded starters, and closers by regular season performance. Then he calculated the average rankings across positions for each of the forty World Series champions and the percentage of champions with a top ten player at each position.

What James learned was a “shock.” He found top-ten closers on thirty-one World Series champions, a number significantly higher than that for any other position. “The proposition that

to win a World Championship you need a great closer and that a great closer is more important than a great player at other positions,” James concluded, “appears to be true.”<sup>7</sup>

**Figure 2 Bill James World Series Champion Analysis**

Average ranks of the players starting for World Championship teams, by position:		Percentage of teams with Top 10 player at the position:	
Closer	7.9	Closer	78%
Left-Handed Starter	10.2	Left-Handed Starter	68%
Catcher	10.8	First Base	65%
Right-Handed Starter	11.1	Second Base	60%
First Baseman	11.1	Right-Handed Starter	55%
Center Fielder	11.5	Center Field	55%
Second Baseman	11.8	Catcher	55%
Third Basemen	12.4	Shortstop	53%
Shortstop	12.5	Right Field	53%
Left Fielder	12.7	Third Base	48%
Right Fielder	13.2	Left Field	48%

Source: [https://www.billjamesonline.com/the\\_all\\_important\\_closer/](https://www.billjamesonline.com/the_all_important_closer/) (NEED PERMISSION)

Relief pitching presents great challenges: irregular, sometimes-daily usage, multiple bullpen warmups before getting the call (or not), and, of course, entrance into the game in high leverage situations, those with runners already in scoring position or small team leads. Relievers must bounce back quickly from failure. The psychological command necessary is probably unparalleled in baseball.

Mariano Rivera as a teenager helped his fishboat captain father on an aging boat prone to mechanical failure in the open sea. He saw an uncle die in a horrific shipboard accident. More than once, young Mariano feared for his life as the boat, weighed down by the day’s catch, bobbing up and down in the swells, took on water while his father tinkered with failing pumps and engines. “I wonder if I am going to have to swim for my life,” he recounted, “I wonder how many of us—or if any of us—will make it.” Worse than the possibility of drowning, there were the “hammerheads, reef sharks, tiger sharks...there (were) sharks everywhere.”<sup>8</sup> We suspect for Rivera, facing down the best major league hitters did not provoke comparable anxiety. We know from the legendary career he managed his anxiety masterfully.

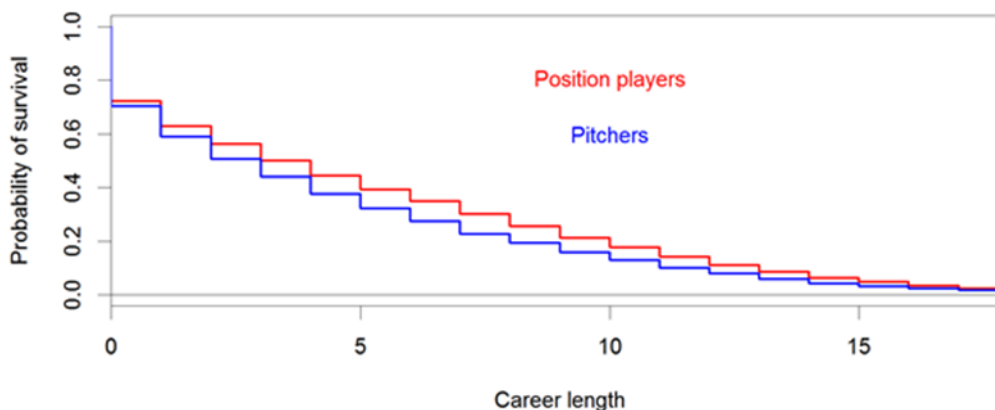
Plaques of only seven relief pitchers grace the walls of the hallowed Baseball Hall of Fame: Richard Gossage, Hoyt Wilhelm, Rollie Fingers, Bruce Sutter, Lee Smith, Trevor Hoffman, and Rivera. Later career converts Dennis Eckersley and John Smoltz also won induction. Billy Wagner—comparably credentialled to his HOF peers--will likely need the full ten years of ballot eligibility to complete the slow climb to the 75% vote summit. One worries as well about the prospects for Craig Kimbrel, Kenley Jansen, and Aroldis Chapman, unquestionably the last decades’ best relief pitchers. More recent shutdown relievers Josh Hader

and Liam Hendricks have merely started the journey to Cooperstown that few have completed. Injuries have derailed many pitching careers that began on HOF trajectories.

The HOFs one-size-fits-all ten-year service requirement surely disadvantages pitchers. It is well understood that pitchers are more likely than position players to get injured. The average pitching career is two to three years shorter than the average position player career.<sup>9</sup> Lowering the HOFs 10-year service requirement for pitchers to seven or eight years seems a logical and fair policy change.

The Pro Football Hall of Fame has no service length requirement.<sup>10</sup> 2022 Inductee Tony Boselli played for six years, before a “severe shoulder injury” ended his career.<sup>11</sup> Sixty-two other inductees had careers shorter than ten seasons. Among them: Gale Sayers (6), Earl Campbell (7), Jimbo Covert (7), Lynn Swan (8), Calvin Johnson (8), Dick Butkus (8) and Jim Brown (8).<sup>12</sup>

**Figure 3 Pitcher vs Position Player Probability of Survival by Career Length**



Source: [https://www.baseballprospectus.com/news/article/23041/attrition-by-position-how-long-do-players-at-each-position-last/\(NEED PERMISSION or just describe in text\)](https://www.baseballprospectus.com/news/article/23041/attrition-by-position-how-long-do-players-at-each-position-last/(NEED PERMISSION or just describe in text))

In this article, we argue the best relief pitchers belong in the HOF and estimate the number of those missing in action. We review the back-of-the-baseball-card relief pitching data and then consider what can be gleaned ex-post from modern advanced analytics. We synthesize informally the old and new school data to produce our estimate of the best relief pitchers. In the concluding section, we profile briefly those we consider HOF worthy, the best of the best relief pitchers.

### **The Missing in Action**

Let's begin by looking at the Hall of Fame voting history. It will underscore how pitchers have been underappreciated by the HOF voters.

HOF Board of Directors Chair Jane Forbes Clark reminds us annually that the HOF contains the top 1% of MLB players.<sup>13</sup> But, that 1% is not evenly distributed across eras or by positions. Approximately 20,000 players have appeared in a major league game.<sup>14</sup> They have

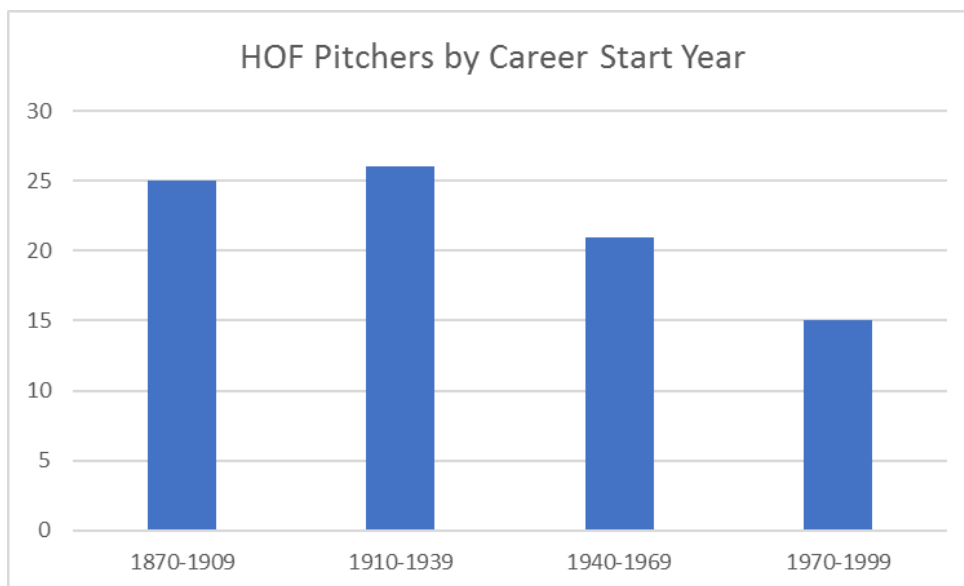
been almost equally split between pitchers and position players. Overall, just under half (49.8%) were pitchers. Since 2000, pitchers have actually outnumbered hitters by close to a 3:2 ratio.<sup>15</sup> Yet, HOF voters have enshrined 184 position players and just 84 pitchers.<sup>16</sup>

So, while on the order of 1% of players win induction into the HOF, 1.8% of hitters but only 0.8% of pitchers have done so. Why the structural discrimination? After all, as Casey Stengel famously declared: “Good pitching will always stop good hitting and vice-versa.”<sup>17</sup>

It turns out the discrimination against modern pitchers is much worse than the overall numbers suggest. Figure 4 shows the time period of league entry for HOF pitchers. One cannot help but notice fewer and fewer pitchers—as measured in absolute numbers—are getting in to the HOF. The trend is actually understated by the graph, as the number of MLB players has increased over time with league expansion to new markets.

A greater percentage of pitchers used to win induction. With statistically deserving Roger Clemens and Curt Schilling falling off the ballot this past year, the book on 1970-1999 is mostly complete. Three pitchers of that era remain on the ballot. Only one, Billy Wagner, received over 10% of the vote last year.<sup>18</sup>

**Figure 4 HOF Pitchers by Career Start Year**



Source: Authors’ analysis of Hall of Fame data

While causality is not established, this fall off correlates with the rise of the relief pitcher. Notice how Figures 1 and 4 have similar downward slopes. What if instead of lamenting the rise of the relief pitcher, we embraced it? Our best guess is the HOF is short ten to fifteen pitchers from the 1970-2000 period, and many of those are relievers. Let’s analyze the back of the baseball card data and review advanced analytics to nominate the best of the best.

## Back of the Baseball Card Data

What do we know about the relief pitchers in the HOF? All saved more than 225 games. All but one struck out over 1,000 batters. The seven career relief pitchers had earned run averages less than 3.03 runs per game, and ratios (walks + hits divided by innings pitched) under 1.26. All but two had ratios less than 1.2. Only one played fewer than seventeen years. All made at least six All Star teams.

**Figure 5 Hall of Fame Relief Pitchers**

Name	Yrs	From	To	IP	ERA	RAT	SV	SO	K9	ASG
Hoyt Wilhelm	21	1952	1972	2254	2.52	1.12	228	1610	6.4	8
Rollie Fingers	17	1968	1985	1701	2.90	1.16	341	1299	6.9	7
Rich Gossage	22	1972	1994	1809	3.01	1.23	310	1502	7.5	9
Dennis Eckersley	24	1975	1998	3285	3.50	1.16	390	2401	6.6	6
Bruce Sutter	12	1976	1988	1042	2.83	1.14	300	861	7.4	6
Lee Smith	18	1980	1997	1289	3.03	1.26	478	1251	8.7	7
John Smoltz	21	1988	2009	3473	3.33	1.18	154	3084	8.0	8
Trevor Hoffman	18	1993	2010	1089	2.87	1.06	601	1133	9.4	7
Mariano Rivera	19	1995	2013	1283	2.21	1.00	652	1173	8.2	13
<b>Average of 7 full time relievers</b>	18.1			1495	2.77	1.14	416	1261	7.8	8.1
<b>Average including 2 hybrids</b>	19.1			1914	2.91	1.14	384	1590	7.7	7.9

Source: Authors' analysis of Hall of Fame data

What relief pitchers outside of the HOF had similar numbers? For retired players who played in the 1970's and beyond, we crunched the data. There are only twelve that meet these qualifications: ERA and Ratio better than the worst performance of our seven HOF relievers, more than 600 career strikeouts, and top 200 in saves. (Holds and blown saves were not tracked until late in the period, so could not be included in the analysis. To ensure we did not exclude dominant set up men, we used a low bar for saves.) See Figure 6 for the list of comparables, juxtaposed with the HOF relievers (always highlighted in yellow/gray in our charts and tables).

How about accolades? Sometimes the numbers do not capture the essence of the player, especially in big time spots. Looking at a range of awards tells us how the journalists covering the game viewed the players contemporaneously. (And, in the case of All Star Game appearances, how coaches who selected the staff assessed pitching talent of the period.)

Nine relief pitchers won the Cy Young Award: Mike Marshall (1974 NL), Sparky Lyle (1977 AL), Bruce Sutter (1979 NL), Rollie Fingers (1981 AL), Willie Hernandez (1984 AL), Steve Bedrosian (1987 NL), Mark Davis (1989 NL), Dennis Eckersley (1992 AL), and Eric Gagne (2003 NL). Fingers, Hernandez and Eckersley also won their respective league MVP's in those years, the only times relievers have done so. While John Smoltz in 1996 won as a starter, only three of the nine inducted won the award as relievers.

**Figure 6 Relief Pitchers in the HOF (or its Ballpark)**

PLAYER	YRS	IP	SO	SV	ERA	RAT	K9
Hoyt Wilhelm	21	<b>2254.1</b>	<b>1610</b>	227	2.52	1.12	6.43
Rich Gossage	<b>22</b>	1809.1	1502	310	3.01	1.23	7.47
Rollie Fingers	17	1701.1	1299	341	2.9	1.16	6.87
Lee Smith	18	1290	1251	478	3.03	1.26	8.73
Billy Wagner	16	903	1196	422	2.31	<b>1.00</b>	11.92
Mariano Rivera	19	1283.2	1173	<b>652</b>	<b>2.21</b>	1.00	8.23
Francisco Rodriguez	16	976	1142	437	2.86	1.15	10.53
Trevor Hoffman	18	1089.1	1133	601	2.87	1.06	9.36
Don McMahon	18	1310.2	1003	153	2.96	1.25	6.89
Joe Nathan	16	923.1	976	377	2.87	1.12	9.52
Bruce Sutter	12	1042.1	861	300	2.83	1.14	7.44
Tom Henke	14	789.2	861	311	2.67	1.09	9.82
Jonathan Papelbon	12	725.2	808	368	2.44	1.04	10.03
John Wetteland	12	765	804	330	2.93	1.13	9.46
Robb Nen	10	715	793	314	2.98	1.21	9.98
Kent Tekulve	16	1436.1	779	184	2.85	1.25	4.88
Huston Street	13	680	665	324	2.95	1.07	8.80
Rob Dibble	7	477	645	89	2.98	1.19	<b>12.17</b>
Rafael Soriano	14	636.1	641	207	2.89	1.08	9.07

Source: Authors' analysis of FanGraphs data

Single season performance—no matter how astounding—does not make a player HOF worthy. We looked at the Cy Young voting over time to see how often a reliever appeared on scored ballots, how many first-place votes each received in his career and the total weighted points compiled.<sup>19</sup> See Figure 7. By these measures, two firemen—Mike Marshall and Dan Quisenberry—stand out for their sustained performance. Notice that even our HOF inductees appeared on a similar number of Cy Young ballots. Four to five times is the norm for those in the HOF.

Two other MLB reliever awards warrant some consideration. First, all of our HOF relievers made at least six All Star teams. Four retired relievers not in the HOF—Billy Wagner, Joe Nathan, Jonathan Papelbon and Francisco Rodriguez—meet that standard.<sup>20</sup> Second, between 1976 and 2012, relievers in each league had the opportunity to win an end-of-season honor known as the Rolands Relief Man Award. It used a rudimentary formula that evolved over time but always awarded points for saves and wins, while deducting points for losses and starting in 1988, blown saves.<sup>21</sup> In 2005, it was superseded by the Delivery Man of the Year Award,<sup>22</sup> later called the Baseball Reliever of the Year Award.<sup>23</sup> The former tallied fan votes of an expert pre-screened list; the latter let the HOF relievers do the voting. Eight of our nine HOF relievers won such award recognition, six of them multiple times. Nine relievers outside of the HOF won multiple times, but only Dan Quisenberry stands out from the pack with five awards.

**Figure 7 Cy Young Award Voting Performance by Relief Pitchers**

Reliever	1st Place Votes	Reliever	Cumulative Points	Years w Votes
Eric Gagne	28	Dan Quisenberry	208	5
Mike Marshall	28	Trevor Hoffman	170	4
Trevor Hoffman	25	Mike Marshall	166	5
Rollie Fingers	24	Dennis Eckersley	164	4
Dan Quisenberry	22	Eric Gagne	157	3
Dennis Eckersley	20	Rollie Fingers	153	4
Mark Davis	19	Mariano Rivera	147	6
Bruce Sutter	12	Bruce Sutter	136	5
Willie Hernandez	12	Mark Davis	107	1
Mariano Rivera	9	Willie Hernandez	88	1
Sparky Lyle	9	Zack Britton	72	1
Steve Bedrosian	9	Lee Smith	65	4
Zack Britton	5	Sparky Lyle	59	2
Lee Smith	4	Steve Bedrosian	57	1
Al Hrabosky	2	Jose Mesa	54	1
Bobby Thigpen	2	Rich Gossage	49	5
Jose Mesa	2	Al Hrabosky	42	2
Rich Gossage	2	Fernando Rodney	38	1
Robb Nen	2	Francisco Rodriguez	38	3

Source: Authors' compilation of Cy Young voting data

We examined a final set of accolades: All Star Game,<sup>24</sup> League Championship<sup>25</sup> and World Series MVPs.<sup>26</sup> It was rare for a reliever not named Mariano Rivera to win such awards. He won one of each, for a total of three. Hall of Famers Fingers (1974 WS) and Eckersley (1988 ALCS) each won one. Five relievers outside the HOF did as well: Randy Myers and Rob Dibble (1990 NLCS co-MVP), John Wetteland (1996 WS MVP), Koji Uehara (2013 ALCS MVP) and Andrew Miller (2016 ALCS MVP).



**Figure 8 Relief Pitcher Career Honors**

Relief Pitcher	Roloids/MLB Relief Awards	Relief Pitcher	Seasons on ASG Roster
Mariano Rivera	6	Mariano Rivera	13
Dan Quisenberry	5	Rich Gossage	9
Bruce Sutter	4	John Smoltz	8
Rollie Fingers	4	Hoyt Wilhelm	8
Lee Smith	3	Rollie Fingers	7
Bill Campbell	2	Trevor Hoffman	7
Dave Righetti	2	Lee Smith	7
Éric Gagné	2	Billy Wagner	7
Francisco Rodriguez	2	Jonathan Papelbon	6
Heath Bell	2	Joe Nathan	6
John Franco	2	Francisco Rodriguez	6
José Valverde	2	Dennis Eckersley	6
Randy Myers	2	Bruce Sutter	6
Dennis Eckersley	2	Doug Jones	5
Trevor Hoffman	2		
Rich Gossage	1		
John Smoltz	1		

Source: Authors' analysis of award data from Wikipedia and Baseball-Reference.com

## Advanced Analytics

What can modern statistics tell us about the best of the best relievers? These metrics were mostly unavailable for 20<sup>th</sup> Century sportswriters to examine. Sabermetricians designed the measures in part to enable fairer comparisons within and across different eras of baseball (the “raised mound,” “live ball,” “PED,” etc.). Many of the metrics control for the role of luck in the back of the baseball card numbers. We will examine four salient advanced analytic metrics: FIP, ERA- (ERA minus), WAR and JAWS.

**Fielding Independent Pitching (FIP)** is an attempt to take the randomness of team defense out of the equation when comparing pitchers. FIP calculations consider only at-bats that result in a strikeout, walk or home run, ignoring all other batted balls. “Think of it as what the pitcher’s ERA should be,” one ESPN analyst explained, “if the defense behind him turned batted balls into outs at a major-league average rate.”<sup>27</sup> FIP rewards with lower adjusted earned run averages those pitchers with below average defense behind them (or just plain bad luck).

Only twenty-two relief pitchers have thrown at least 450 innings and maintained a FIP under three runs per game. Five of our nine HOF relievers meet this standard. Three active pitchers--Kimbrel, Chapman and Jansen—and retired Rob Dibble actually post better career FIP than Mariano Rivera.

**Figure 9 Relief Pitcher Career FIP Leaders**

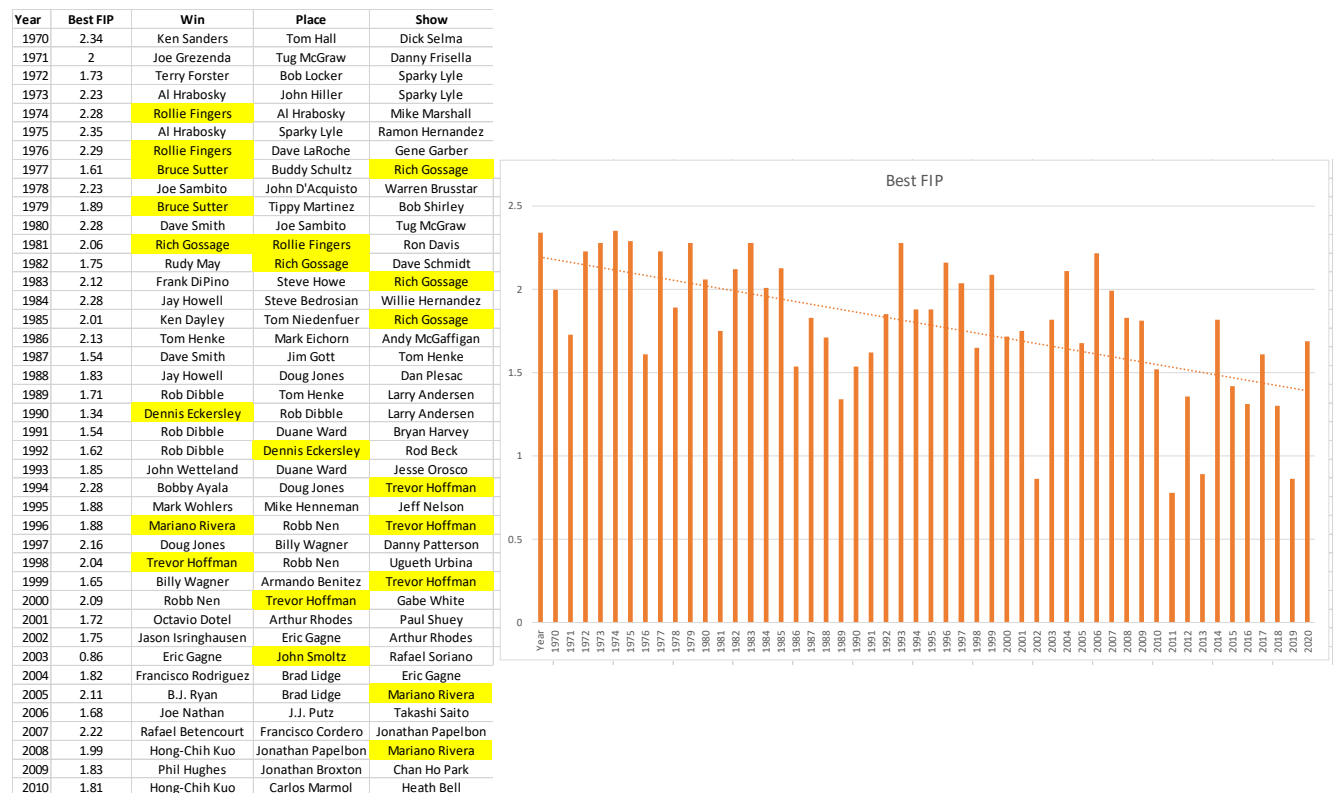
Relief Pitcher	G	IP	ERA	FIP	RP	FIP123
Craig Kimbrel	675	655.2	2.28	2.25	Rob Dibble	18
Aroldis Chapman	644	619.2	2.41	2.29	Aroldis Chapman	14
Kenley Jansen	733	737.2	2.43	2.36	Al Hrabosky	13
Rob Dibble	384	477	2.98	2.43	Craig Kimbrel	13
Mariano Rivera	1105	1233.2	2.06	2.67	Rollie Fingers	13
Tom Henke	642	789.2	2.67	2.72	Doug Jones	11
Billy Wagner	853	903	2.31	2.73	Rich Gossage	11
Duane Ward	460	664.1	3.17	2.75	Robb Nen	11
Jonathan Papelbon	686	709.2	2.45	2.76	Trevor Hoffman	11
Dennis Eckersley	710	807.1	2.85	2.77	Bruce Sutter	10
Bob Locker	576	879	2.75	2.81	Dave Smith	10
Joe Nathan	758	761	2.5	2.85	Hong-Chih Kuo	10
David Robertson	702	708	2.89	2.87	Jay Howell	10
Rollie Fingers	899	1553.1	2.84	2.88	Eric Gagne	9
Robb Nen	639	697	2.94	2.88	Kenley Jansen	9
Lee Smith	1015	1252.1	2.98	2.93	Tom Henke	9
Don Mossi	273	459.1	3.08	2.93	Billy Wagner	8
Bruce Sutter	661	1042	2.83	2.94	Dennis Eckersley	8
Andrew Miller	546	504	2.95	2.95	Joe Sambito	8
Sean Doolittle	463	450.2	3.2	2.95	Jonathan Papelbon	7
Steve Hamilton	421	663	3.05	2.96	Mariano Rivera	7
Mark Melancon	702	699	2.88	2.97		

Source: Author's analysis of FanGraphs data

We also examined season by season FIP data from the last five decades. See Figure 10. League-leading FIP has been falling over time, as the use of relievers and strikeout percentages have increased. What was most interesting to us was the short duration of relief success. Few relievers have been able to maintain league FIP dominance over more than a four or five year stretch.

In an attempt to quantify career FIP dominance, we used a rudimentary scale that awarded five points for league leading FIP, three points for the runner up, and one point for a 3<sup>rd</sup> place “show.” We then summed each relievers’ career points and calculated what we call “FIP123.” The results, presented in the chart above, show six of our nine Hall of Famers had dominant, league-leading stretches, as did a handful of relievers outside of Cooperstown.

**Figure 10 Relief Pitcher FIP Leaders by Season**



Source: Author's analysis of FanGraphs data

**ERA- (ERA Minus)**<sup>28</sup> is calculated to enable comparisons between pitchers of different eras. Each pitcher's ERA data is adjusted and scaled for the scoring environment of his career. A score of 100 is average. An ERA Minus of 80 implies the pitcher was 20% better than MLB average. An ERA Minus of 120 implies the pitcher was 20% worse.

Think about it as a way of equating excellence of pitching performance across eras. A career ERA of 3.00 during the PED era is much better than one of 3.00 during the dead ball era. ERA- scores will account for the higher average ERA of the PED era and lower average ERA of the dead ball era.

The data here are somewhat perplexing. Mariano Rivera is safely at the top of the list, but other HOF relievers do not fare as well. They are still excellent, with ERA's 20-30% below MLB averages. But many of the best ERA- performers failed to impress the HOF voters. One can assume that they either did not consider or weigh heavily the ERA Minus metric. Since the game is at its most basic about scoring and preventing runs, this seems like a significant oversight.

**Figure 11 Relief Pitcher Career ERA- Leaders**

	Relief Pitcher	IP	ERA-				
				17	Mark Melancon	670.2	69
1	Mariano Rivera	1233.2	46	18	Mark Eichhorn	847.2	69
2	Craig Kimbrel	628.1	53	19	Francisco Rodriguez	976	69
3	Billy Wagner	903	54	20	Pat Neshek	488	69
4	Aroldis Chapman	603.2	57	21	Troy Percival	707.2	69
5	Jonathan Papelbon	709.2	58	22	David Robertson	674.2	70
6	Joe Nathan	761	59	23	Andrew Miller	504	70
7	Darren O'Day	587.1	59	24	Dan Quisenberry	1043.1	70
8	John Wetteland	683	60	25	John Hiller	877.1	70
9	Kenley Jansen	705	62	26	Scot Shields	613.2	70
10	Tom Henke	789.2	64	27	Jesse Crain	532	70
11	Scott Downs	504	64	28	Robb Nen	697	71
12	Rafael Soriano	594	67	29	Trevor Hoffman	1089.1	71
13	Blake Treinen	462	68	54	Bruce Sutter	1042	75
14	Hoyt Wilhelm	2254.1	68	66	Lee Smith	1289.1	76
15	Brad Ziegler	717.1	68	67	Rich Gossage	1578	76
16	Keith Foulke	749.1	68	102	Rollie Fingers	1433	79

Source: Authors' analysis of FanGraphs data

Of all the advanced analytic metrics, **Wins Above Replacement (WAR)** has probably made the most penetration into today's popular baseball vernacular. This is surely explained by the combination of its powerful TLA (three letter acronym) and comprehensive nature. WAR is a one-size-fits-all gage of comparative player performance within a season or across time. We will leave its detailed description to others,<sup>29</sup> but highlight a problem of interpretation when it comes to relief pitching. (For no particular reason, in our analysis we use Fangraphs rather than Baseball Reference WAR data. Thanks to Steve Gardner of USA Today for alerting us that the methodologies are somewhat different.)

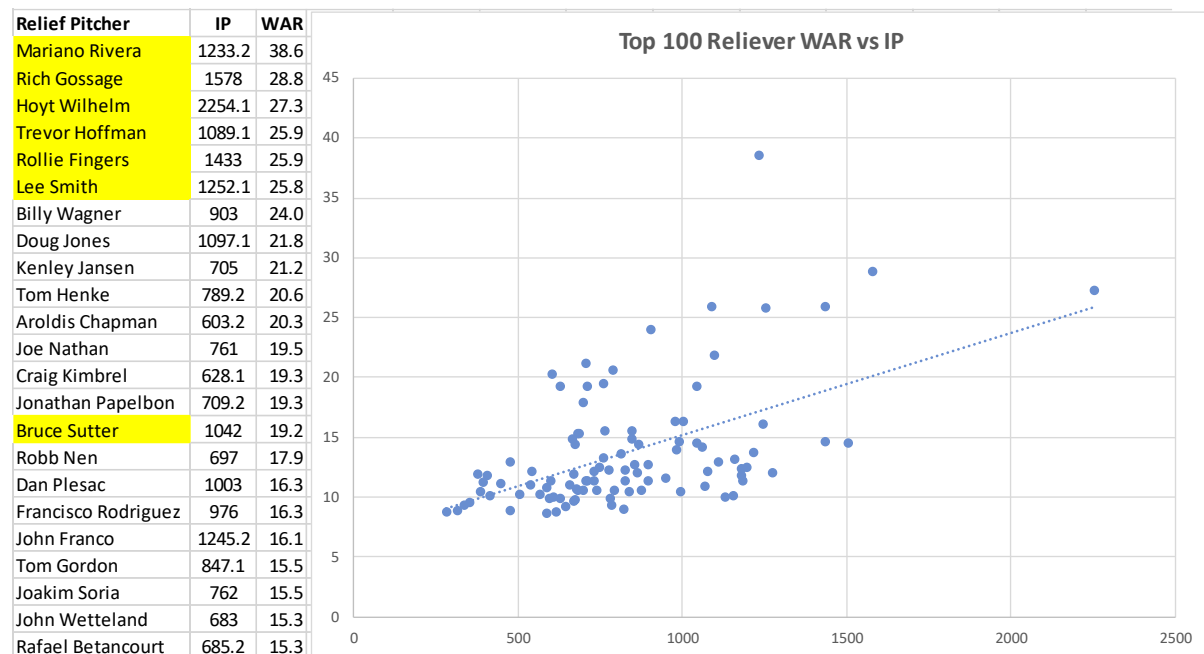
The table below provides the raw career numbers for relief pitchers. As would be predicted, the Hall of Famers mostly lead the race. (We leave Eckersley and Smoltz, with career wars of 61.8 and 79.5 respectively, off the charts as not to distort the pure reliever data.)

Those hybrid data are suggestive of a shortcoming of WAR. It is positively correlated with number of innings pitched. An average starting pitcher will compile two points of WAR per year, an All-Star around five. But an average reliever will compile less than one point of WAR per year, an All-Star only two to three. Thus, the best relievers will never compile WAR in line with an average starter. Modern one-inning closers will not approach the WAR of earlier generation multi-inning relievers. (In the Appendix, we calculate reliever WAR leaders across five year stretches. One can see just how rare extended relief pitching dominance has been.)

Relief pitchers generate about 10% of league WAR annually,<sup>30</sup> but constitute only 3% of HOF membership (9/268 players). We view WAR as a good way of comparing relief pitchers,

but a poor way of comparing relief pitchers to starting pitchers or position players who compile more innings.

**Figure 12: Relief Pitcher Career WAR**



Source: Authors' analysis of FanGraphs data

The final advanced analytic metric we consider is probably the most important one: **JAWS, the Jaffe War Score**. Influential sabermetrician Jay Jaffe created the metric in 2004 with the explicit purpose of “measuring a candidate’s Hall of Fame worthiness by comparing him to the players at his position who are already enshrined.”<sup>31</sup> Jaffe painstakingly demonstrated the great variation among Hall of Famer credentials. He suggested the average JAWS score would be a reasonable bar for new entrants to clear. That way HOF quality would only improve over time.

One of baseball’s most esteemed writers takes Jaffe’s analysis seriously. Three-time National Sportswriter of the Year Peter Gammons keeps Jaffe’s seminal tome *The Cooperstown Casebook* on his “essentials desk right through the end of December when (his) ballot is mailed.”<sup>32</sup> We assume many baseball writers consult Jaffe’s work similarly.

Reliever JAWS scores—a WAR derived measure--will be lower than those of innings-eating starters. But, Jaffe’s insight was in creating a measure that encourages comparisons within rather than across positions. Not all, of course, will use JAWS this way. Relievers will be disadvantaged.

The central issue with JAWS for relievers is that prevailing attitudes over time have kept the HOF bar of entry very high. An average of the inducted group’s scores will be similarly very high. To use it as a standard is to keep in place the overly restrictive barriers to induction that have confounded many of the best relievers across time. Consider the JAWS data for relievers

(and a refined measure R-JAWS that attempts to adjust the results for the problem of the interspersing of reliever with hybrid reliever/starter data):

**Figure 12: Relief Pitcher Career JAWS**

Relief Pitcher	R-JAWS	JAWS
Mariano Rivera	48.8	42.5
Dennis Eckersley	39.6	49.9
Hoyt Wilhelm	34.5	36.7
<i>Average of HOFers</i>	29.7	32.5
Rich Gossage	29.5	36.4
Trevor Hoffman	27.1	23.7
Billy Wagner	24.9	23.7
Joe Nathan	24.4	24.2
Tom Gordon	23.6	29.1
Jonathan Papelbon	21.7	21.4
Francisco Rodriguez	21.1	20.9
Lee Smith	21	24.8
Kenley Jansen	20.2	17.4
Craig Kimbrel	19.4	20.3
Tom Henke	19.4	20.2
Dan Quisenberry	19.3	23.5
Rollie Fingers	19	22.2
Tug McGraw	18.8	20.9
John Hiller	18.1	28.4
Bruce Sutter	18	24.2

Source: [https://www.baseball-reference.com/leaders/jaws\\_RP.shtml](https://www.baseball-reference.com/leaders/jaws_RP.shtml)

Using the current 29.7 R-JAWS average as the standard keeps out not only some of the top historical candidates, but also could block the last decades' best: Kimbrel, Jansen and Chapman. We would argue that a better application of R-JAWS would be to use the lower end Hall of Famer performance--the 18-21 range of Sutter/Fingers/Smith--as the bar to clear. This would still weigh heavily against the vast majority of relief pitching candidates to the HOF, but would lead to enshrinement of some well-deserving candidates.

### The Terrific Ten

There is no straightforward formula for synthesizing the available data. Any relief pitcher that made the lists above had a stellar major league career. Here's our attempt to distill out the top ten relief pitchers not (yet) in the HOF. The countdown to most deserving:

**Honorable Mentions** (in alphabetical order): Steve Bedrosian, Francisco Cordero, Mark Davis, Eric Gagne, Tom Gordon, Willie Hernandez, John Hiller, Al Hrabosky, Sparky Lyle, Tug

McGraw, Don McMahon, Randy Myers, Robb Nen, Troy Percival, Dan Plesac, Jeff Reardon, B.J. Ryan, Rafael Soriano, Huston Street, Kent Tekulve, Duane Ward, John Wetteland

10. **John Franco** - “Johnny B Good”: Four-time All-Star, ranked second in all-time career saves upon retirement (424), still owns record for most saves by a left-handed pitcher. 1<sup>st</sup> in National League and 4<sup>th</sup> in MLB history for games pitched (1,119). Two-time National League Rolaids Relief Man of the Year Award, 1.88 ERA in 15 postseason appearances, career ERA of 2.89, 19<sup>th</sup> ranked reliever for career WAR (19.1).<sup>33</sup> Only 5’ 10,” 170 pounds, he won the Lou Gehrig Memorial Award in 2001 for his work in support of the first responders at the World Trade Center site. “He helped us get through a very difficult time,” said NYC Fire Commissioner Sal Cassano.<sup>34</sup> In 2011, he was named on 4.6% of HOF ballots, just below the 5% threshold required to remain eligible.

9. **Doug Jones** - “The Sultan of Slow”: Five time All Star, ranked 12<sup>th</sup> in saves (303) when he retired. 8<sup>th</sup> ranked reliever in career WAR (21.8), three time top three reliever in FIP. Released by the Brewers at age 27, he paid his own way to Indians’ camp the following Spring. Developed a devastating changeup there that saved his career.<sup>35</sup> (His fastball topped out in the mid-eighties.) Died of COVID-19 complications in 2021 at the age of 64.<sup>36</sup> First year on the HOF ballot was 2006, when he received 0.4% of the vote.

8. **Rob Dibble** – “The Nasty Boy”: Two time All Star, 1990 World Series champion with the Reds, 1990 NLCS MVP. Injuries and the 1994 strike limited his playing career to seven years, but his dominance over that period was HOF worthy. Struck out 12.17 batters per game, more than any reliever in the Hall of Fame, and at a time well before strikeout rates across the league exploded. Career ERA of 2.98 and ratio of 1.19. Among retired relievers with at least 450 innings pitched, the all-time leader in FIP (2.43). In 1989, did not receive a NL Cy Young vote, but had comparable numbers to the relief pitcher who won, Mark Davis: 2.09 vs 1.85 ERA, 1.02 vs 1.04 ratio, 141 vs 92 strikeouts, 1.71 vs 2.69 FIP, 3.9 vs 4.4 WAR. Davis saved 44 games, while Dibble--pitching mostly in the 8<sup>th</sup> inning--saved only two. (His 1990 numbers were even better and included 29 saves, but still no Cy Young votes.) One might say Dibble established the prototype for the shutdown set-up man role. His short but stellar career is an argument against the HOF one-size-fits-all 10-year career length requirement.

7. **Jonathan Papelbon** – “The Strangler”<sup>37</sup>: Six time All-Star, 2007 World Series champion with the Red Sox. 10th on all time saves list (368). One of two pitchers (with Craig Kimbrell) to record 25 saves in first five seasons. Among relievers, 9th best FIP (2.76), 5th best ERA- (58), 14th best WAR (19.3), 9th best R-JAWS (21.7). Set MLB postseason record with 26 consecutive scoreless innings to start his career.<sup>38</sup> Mostly relied on his fastball, but splitter worked as an effective strikeout pitch. Papelbon danced the Irish Jig at Fenway after the Red Sox clinched the AL East title in 2007, earning forever the enmity of Yankee fans.<sup>39</sup> A hotheaded competitor, Papelbon earned multiple suspensions, including one for a clubhouse fight with Bryce Harper and another for throwing at the head of Manny Machado. Those (and other incidents)<sup>40</sup> did not help his HOF case. Received only 1.3% of the vote in 2022.

6. **Tom Henke** - “The Terminator”: Two time All-Star, winner of the 1995 NL Rolands Relief Man Award, 1992 World Series champion with the Blue Jays. When he retired, his 311 saves ranked seventh on the All Time list. Same number of strikeouts (871) as Hall of Famer Sutter, but lower career ERA (2.67) and Ratio (1.09). Among all relievers, 6<sup>th</sup> best FIP (2.72), 10<sup>th</sup> best ERA- (67), 10<sup>th</sup> best WAR (20.6), 14<sup>th</sup> best R-JAWS (19.4). Henke relied mostly on his fastball, but used a forkball as his strikeout pitch. Since retirement, he has hosted an annual golf tournament to raise money for The Special Learning Center, a school for handicapped children.<sup>41</sup> In 2001, on his first HOF Ballot, Henke received only 1.2% of the vote. Asked if Henke deserved induction, Tony La Russa declared, “Absolutely. Tom had everything you want in a Hall of Famer.”<sup>42</sup>

5. **Joe Nathan** – “Stand Up and Shout”: Six time All-Star, won AL Rolands Relief Man Award in 2009. At retirement, 8<sup>th</sup> on the All Time saves list (377). Has highest save percentage (89.1%) of any pitcher with 250 or more saves. Among relievers, 12<sup>th</sup> best FIP (2.85), 6<sup>th</sup> best ERA- (59), 12<sup>th</sup> best WAR (19.5), 7<sup>th</sup> best R-JAWS (24.4). Nathan acknowledged he was “not a good high school athlete.” Didn’t throw a single pitch in high school or college at Division III Stony Brook, where he played shortstop and was a two-time Academic All American.<sup>43</sup> He finished with only 4.3% of the vote on HOF ballot. “This is above and beyond what I dreamt about,” Nathan said in response, “My dreams were, ‘I’d love to play in the big leagues someday.’ To be on this ballot is an honor in itself. That’s baseball heaven.”<sup>44</sup>

4. **Mike Marshall** – “Iron Mike”: First reliever to win the Cy Young (1974 NL), among the five relievers who received Cy Young votes in five or more seasons, two-time All-Star, three-time league saves leader. Primary pitch was an elusive screwball. In his Cy Young season, set a major league record for most games pitched (106), throwing 208 innings. In 1978, earned PhD in exercise physiology from Michigan State. Pioneered innovative training methods at his Florida pitching academy (weighted balls, use of video, focus on spin) that now inform velocity improvement training. Dropped off HOF ballot in 1987, when he received 1.5% of the vote. Died in 2021 at the age of 78. “He lived long enough to see some of his most foundational ideas,” ESPN’s Jeff Passan reported, “co-opted by major league organizations and spread to the masses.”<sup>45</sup>

3. **Dan Quisenberry** – “Quis”: Despite being undrafted, won five Rolands Relief Man Awards. Only Mariano Rivera won more. One of five relievers who received Cy Young votes in five or more seasons. A three-time All Star, 1985 World Series champion with the Royals. Among relievers, 15<sup>th</sup> best R-JAWS (19.3), 22<sup>nd</sup> best ERA-(70). In 1983, set MLB record—now eclipsed—with 45 saves, a record 35 of them—still uneclipsed—more than one inning.<sup>46</sup> A submariner lacking high-end velocity but possessing pinpoint control, he relied on a devastating sinker. “The pressures on him are so tough - you have no idea, because he doesn’t let it show,” teammate Paul Splittorff said in 1984, “his job is the toughest on the roster, because this club is going to sink or swim with him.”<sup>47</sup> Known for his clubhouse wit, quipped when accepting the 1982 Rolands Award: “I want to thank all the pitchers who couldn’t go nine innings and manager Dick Howser who wouldn’t let them go.”<sup>48</sup> Died (like Howser) from brain cancer at the age of 45



in 1998. In the 1996 HOF balloting, received 3.7% of the vote. Failed to gain 12/16 votes of the Expansion Era Committee in 2013.

**2. Francisco Rodriguez** – “K-Rod”: Six time All-Star, 2002 World Series champion with the Angels, two-time Rolands Relief Man Award Winner, three-time Cy Young vote-getter, holds the MLB single season saves record with 62. Among relievers, 4th best saves (437), 7th most strike outs (1142), 2nd best ERA- (54), 10th best R-JAWS (21.1). During his rookie season in 2002, as the youngest pitcher in the American League, collected a record five postseason wins (shared with Randy Johnson).<sup>49</sup> Two off-the-field domestic incidents—one that led to a two-game suspension, but neither of which led to criminal convictions—will dissuade some HOF voters.<sup>50</sup> 2023 will be the first appearance on the ballot for this Venezuelan phenom.

**1. Billy Wagner** - “Billy the Kid”: Seven time All-Star, won NL Rolands Relief Man award in 1999. Among retired relievers, best ratio (1.0), 6<sup>th</sup> most saves (422), 5<sup>th</sup> most strike outs (1196), 17th best ERA- (54), 7<sup>th</sup> best WAR (24.0), 6<sup>th</sup> best R-JAWS (24.9). Only 5’ 11” tall and a southpaw, Wagner played Division III baseball at Ferrum College in the Blue Ridge Mountains. In his sophomore year set a NCAA record averaging 19.1 strikeouts per nine innings.<sup>51</sup> Wagner’s charity, Second Chance Learning Center provides at-risk youths with counseling and other assistance.<sup>52</sup> In the most recent HOF voting, Wagner’s 7<sup>th</sup> ballot, 51% of voters backed him.

## **Conclusion**

We estimate 6,000-7,000 relief pitchers have taken the MLB mound. Were we to apply the “best 1%” standard, 60-70 relief pitchers would be in the Hall of Fame. Only nine have won induction. Surely the standard has been set too high for those excelling in this crucial role.

In 1985, Roger Angell reminded his readers of the “clear evidence that relief men—the best of them, at least—are among the most highly rewarded and most sought after stars of contemporary baseball.”<sup>53</sup> With the ever-expanding dominion of the relief pitcher, his argument seems even more salient today.

We hope those who can right historic wrongs-- the HOF Veterans Committee, now known as the Era Committees-- will induct some of these relief pitchers into their ranks. We hope as well that the current crop of HOF-worthy closers will receive warmer welcomes from the Baseball Writers Association of America.

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## Appendix: Relief Pitcher 5-Year Stretches w WAR > 10

5 Seasons starting	# Relievers w 5 year WAR > 10	Reliever	Reliever	Reliever	Reliever
1970	0				
1971	1	Fingers			
1972	1	Fingers			
1973	1	Fingers			
1974	2	Fingers	Gossage		
1975	4	Fingers	Gossage	Sutter	Kern
1976	4	Fingers	Gossage	Sutter	Kern
1977	2		Gossage	Sutter	
1978	2		Gossage	Sutter	
1979	1		Gossage		
1980	1		Gossage		
1981	2	Smith	Gossage		
1982	2	Smith	Gossage		
1983	1	Smith			
1984	1	Smith			
1985	2	Smith	Henke		
1986	4	Smith	Henke	Eckersley	Jones
1987	4	Smith	Henke	Eckersley	Dibble
1988	2			Eckersley	Dibble
1989	3		Ward	Eckersley	Dibble
1990	2		Ward	Eckersley	
1991	0				
1992	0				
1993	0				
1994	1	Hoffman			
1995	1	Hoffman			
1996	3	Hoffman	Rivera	Nen	
1997	3	Hoffman	Rivera	Nen	
1998	2	Hoffman		Nen	
1999	2		Rivera	Foulke	
2000	2		Rivera	Gagne	
2001	2		Rivera	Gagne	
2002	3	Ryan	Rivera	Gagne	
2003	4	Ryan	Rivera	Krod	Nathan
2004	4	Lidge	Rivera	Krod	Nathan
2005	3	Papelbon	Rivera		Nathan
2006	2	Papelbon	Rivera		
2007	2	Papelbon	Rivera		
2008	1	Papelbon			
2009	0				
2010	1	Kimbrell			
2011	3	Kimbrell	Chapman	Holland	
2012	3	Kimbrell	Chapman	Jansen	
2013	3	Kimbrell	Chapman	Jansen	
2014	3		Chapman	Jansen	Betances
2015	1		Chapman		
2016	0				
2017	0				

Source: Authors' analysis of Fangraphs data

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- <sup>9</sup> Robert Arthur, "Attrition by Position: How Long Do Players at Each Position Last?" Accessed July 6, 2022: <https://www.baseballprospectus.com/news/article/23041/attrition-by-position-how-long-do-players-at-each-position-last/>. See also Sam Roberts, "Just How Long Does the Average Baseball Career Last?" *The New York Times*, July 15, 2007, Accessed July 28, 2022: <https://www.nytimes.com/2007/07/15/sports/baseball/15careers.html>. See also: Accessed July 28, 2022: <https://www.sciencedaily.com/releases/2007/07/070709131254.htm>.
- <sup>10</sup> Accessed August 16, 2022: <https://www.profootballhof.com/hall-of-famers/becoming-a-hall-of-famer-faqs/>.
- <sup>11</sup> Accessed August 16, 2022: <https://www.profootballhof.com/news/2022/2/pro-football-hall-of-fame-to-enshrine-eight-in-class-of-2022/>.
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- <sup>13</sup> John and Elaina attended the 2022 HOF Induction. Transcript accessed July 25, 2022: <https://collection.baseballhall.org/objects/21660/2022-baseball-hall-of-fame-induction-ceremony-transcript?ctx=3edd374352a89ee351d3edb0f5d903521b22b77d&idx=0>.
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