



What Moves the Odds at the X: What Decides Who Wins the Next Faceoff or Draw

Two specialists line up. Does the score matter? Does winning the last one help? Does a penalty? We took every faceoff and draw logged in the 2025 Division I season and measured how much each part of the moment changes a team's chance of coming away with the ball.

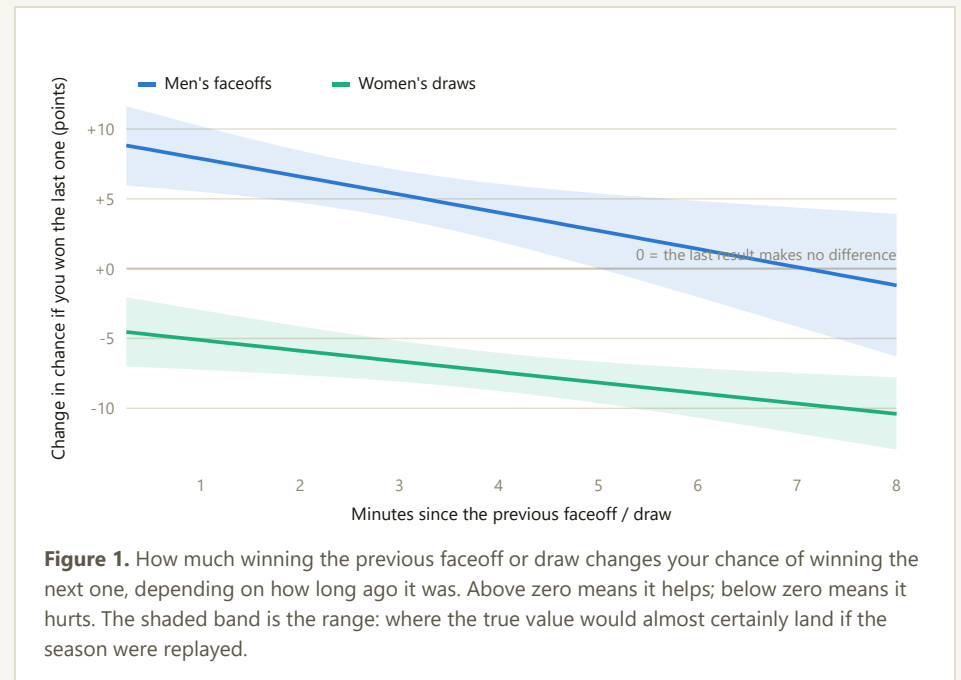
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● Men's: 14,175 faceoffs, 561 games, 77 teams ● Women's: 18,957 draws, 1,094 games, 133 teams Source: NCAA.com play-by-play

1 · THE SHORT VERSION

Five things a coach should take from this

- **Who is taking it matters more than anything else.** In men's, if your specialist's season win rate is 10 points higher than the other guy's, your chance on the next faceoff goes up by about 7 points: from 50 wins in 100 to about 57. In women's, a 10-point gap in the two teams' draw rates is worth about 4 points.
- **In men's, winning the last faceoff helps you win the next one, but only for a few minutes.** Right after a win, the specialist's chance is about 8 points higher than it would be after a loss. Two minutes later it is about 6 points. After six minutes the edge is gone.
- **In women's, the opposite: draws alternate.** A team that just won the draw is about 6 points *less* likely to win the next one, and the longer play runs before the next draw, the bigger that swing gets. This is the single biggest difference between the two sports.
- **A lead helps through three quarters and stops helping in the fourth.** In both sports, each goal you are ahead by adds about half a point of chance before the fourth quarter. In the fourth, that advantage shrinks to nearly nothing. Trailing teams get even at the X late.
- **Most other things do not matter.** Which quarter it is, whether the faceoff follows a goal, conference or non-conference, postseason, and the two teams' records add nothing once you know the specialists and the moment. Penalties matter in women's: an opponent who was just carded is worth about 3 points to you. In men's, faceoffs taken with someone in the box are too rare to say either way.



2 · WHAT WE LOOKED AT

Every logged faceoff and draw of the 2025 Division I season

We pulled the play-by-play for every completed game on NCAA.com's Division I men's and women's scoreboards from February 1 to May 31, 2025, through the national championships. Each faceoff or draw is one line in our data: who won it, and what was the situation at that moment?

We removed games where the score we rebuilt from the play-by-play did not match the official final, since that is a sign the log had errors. We also removed the opening faceoff of every game, because it has no "previous faceoff" to compare to. What is left is the whole season, not a sample of it. A handful of Division II and III teams who visited D1 opponents are included. Nothing here speaks to other seasons or other divisions.

A word on "strength." When we talk about how good a specialist or a team is, we mean their season win rate in the games played *before* the one in question, the way a coach would actually know it on game day. We never let the model see the future. For a specialist early in the season, with only a few games behind him, we lean the number a little toward 50% so that one hot weekend does not count as a career.

	MEN'S FACEOFFS	WOMEN'S DRAWS
Completed games on the scoreboard	581	1,133
Games with a usable log	578	1,130
Games dropped, score did not match the final	17	33
Opening faceoffs / draws dropped	561	1,097
Faceoffs / draws analyzed	14,175	18,957
Games	561	1,094
Teams	77	133
Specialists identified	390	team level only
Home team won	51.8%	51.2%

BEFORE THE NUMBERS

How to read the numbers in this paper. Every result is written as a change in a team's **chance** of winning the next faceoff or draw. Picture 100 faceoffs between two evenly matched sides: each side expects to win about 50. If we say something is worth **+7 points**, it means that side would now expect to win about 57 of those 100 instead of 50. A minus number means fewer.

Each number describes **one thing at a time**. When we say a lead is worth a certain amount, we are comparing two moments that are alike in every other way (same two specialists, same quarter, same everything) and differ only in the score. That is how we keep one factor from getting credit for another.

Where we say an effect **holds up**, we mean we tested whether a gap that size could show up by luck alone over a season of this length, and it could not. Effects that did not pass that test are still shown, marked as such, because a coach deserves to see the whole picture, but they should not be relied on. Each number also comes with a **range**: the span the true value would almost certainly fall in if the same season were played over again. A range that includes zero means the effect could be nothing at all.

3 · WHAT MOVES THE ODDS

Each factor, in points of chance, men's and women's side by side

Every number below is the change in a team's chance of winning the next faceoff or draw, in points, comparing two moments that are alike in every way except that one factor. Solid, larger marks in the chart and bold numbers in the table are the effects that held up to checking. The rest are shown so you can see everything we tested, but they did not pass, and the honest reading of them is "we could not tell."

Change in your chance of winning the next faceoff / draw, in points of chance. Solid, larger marks are the effects that held up to checking.

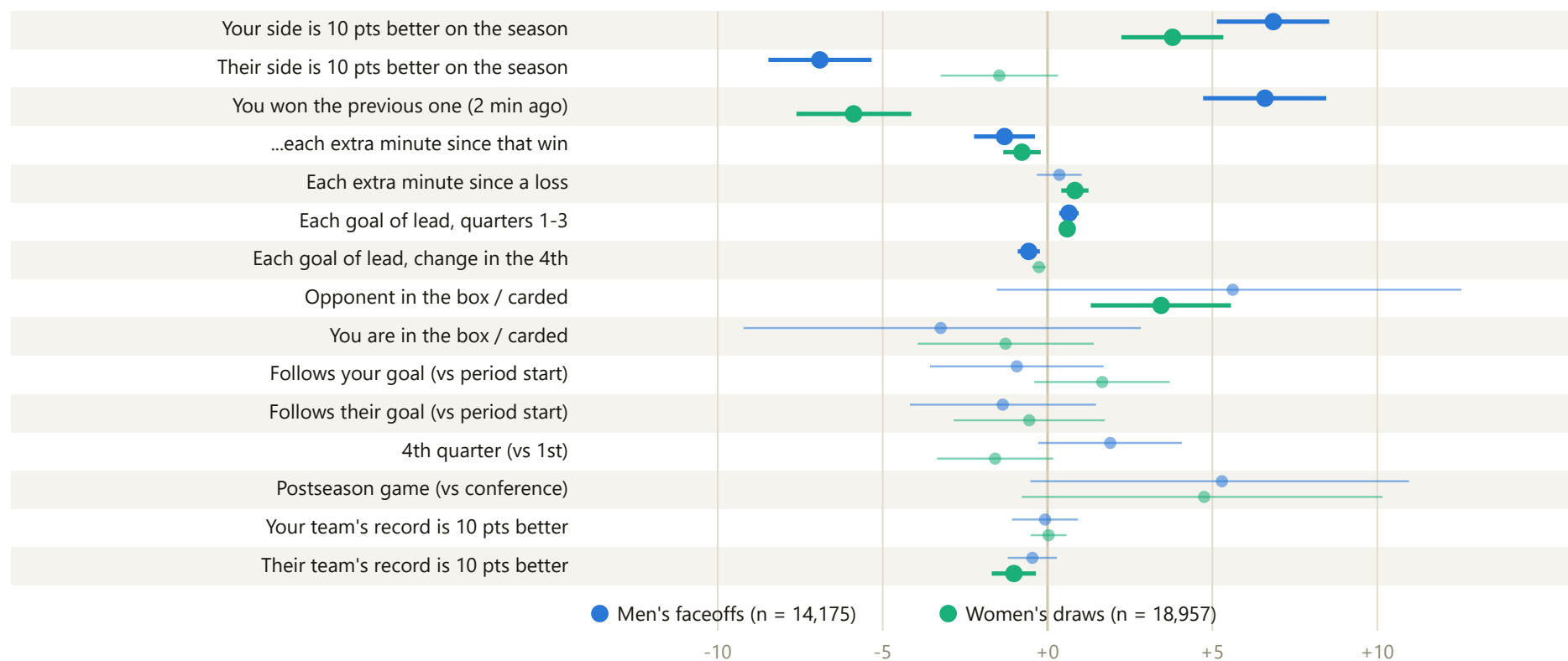


Figure 2. Change in the chance of winning, in points, for each factor. The horizontal line through each mark is the range for that number. When the line crosses zero, the effect could be nothing, which is why those marks are drawn smaller and fainter.

FACTOR	MEN'S: CHANGE IN CHANCE	HOLDS UP?	WOMEN'S: CHANGE IN CHANCE	HOLDS UP?
Your specialist / team is 10 points better on the season	+6.7 pts	Yes	+3.7 pts	Yes
Their specialist / team is 10 points better on the season	-6.7 pts	Yes	-1.4 pts	No
You won the previous faceoff / draw (two minutes ago)	+6.4 pts	Yes	-5.8 pts	Yes
... and each extra minute since that win	-1.3 pts	Yes	-0.8 pts	Yes
Each extra minute since a lost faceoff / draw	+0.3 pts	No	+0.8 pts	Yes
Each goal you lead by, quarters 1 to 3	+0.6 pts	Yes	+0.6 pts	Yes
Each goal you lead by, what changes in the 4th quarter	-0.5 pts	Yes	-0.3 pts	No
Opponent in the box (men's) / opponent carded since last draw (women's)	+5.4 pts	No	+3.4 pts	Yes

FACTOR	MEN'S: CHANGE IN CHANCE	HOLDS UP?	WOMEN'S: CHANGE IN CHANCE	HOLDS UP?
You are in the box / you were carded	−3.1 pts	No	−1.3 pts	No
Faceoff follows your goal (vs start of a period)	−0.9 pts	No	+1.6 pts	No
Faceoff follows their goal (vs start of a period)	−1.3 pts	No	−0.5 pts	No
4th quarter (vs 1st)	+1.8 pts	No	−1.6 pts	No
Postseason game (vs conference)	+5.1 pts	No	+4.7 pts	No
Your team's record is 10 points better	−0.1 pts	No	0.0 pts	No
Their team's record is 10 points better	−0.4 pts	No	−1.0 pts	Yes

Each "change in chance" is the average across every faceoff or draw in the season. Two things worth noticing. In men's, the opponent's specialist matters exactly as much as your own; in women's, your own team's draw rate matters and the opponent's barely registers. And in women's, the longer the ball is in play after a *lost* draw, the better the losing team's chance on the next one, which is the alternation pattern seen from the other side.

A note on the big "No" numbers. Postseason shows +5 points in both sports and a man-up faceoff shows +5.4 in men's, yet neither holds up. That is not a contradiction. Those situations are rare (a few hundred faceoffs each), so the range around them is wide enough to include zero. The true effect may be real, but this season did not contain enough of those moments to prove it.

4 · MEN'S VS WOMEN'S

The same game, one opposite reflex

Looking at two columns of numbers and saying "those look different" is not enough; small differences show up by luck all the time. So for every factor that means the same thing in both sports, we asked a stricter question: how often would a gap this big between the men's and women's numbers appear if the two sports actually behaved the same way? If the answer is "almost never," the difference is real.

Only one factor is really different: what the previous faceoff does. In men's, winning the last one helps you win the next one. In women's, winning the last one makes you *less* likely to win the next one. That gap is far too large to be luck. Everything else we could compare behaves the same way in both sports: the score effect, its fourth-quarter fade, the timing, what set up the faceoff, the quarter, and the type of game.

We do not know *why* women's draws alternate. It holds across the whole season, in close games and blowouts, and after accounting for how good both teams are at the draw. Whether it is tactical, such as who takes the draw or how the circle is set after a win, or something about how the draw itself is contested, is a question for people who coach the women's game. We would want their read before anyone plans around it.

FACTOR	MEN'S	WOMEN'S	REALLY DIFFERENT?
You won the previous faceoff / draw	+6.4 pts	−5.8 pts	Yes
4th quarter vs 1st	+1.8 pts	−1.6 pts	Borderline; does not hold up
Each goal of lead, quarters 1 to 3	+0.6 pts	+0.6 pts	No
Each goal of lead, change in the 4th	−0.5 pts	−0.3 pts	No
Each minute since a lost faceoff	+0.3 pts	+0.8 pts	No
Each minute since a won faceoff	−1.3 pts	−0.8 pts	No
Faceoff follows your goal	−0.9 pts	+1.6 pts	No
Postseason game	+5.1 pts	+4.7 pts	No

Strength and penalties are not compared because they are measured differently in the two sports: individual specialists and true man-down situations in men's, team rates and cards in women's.

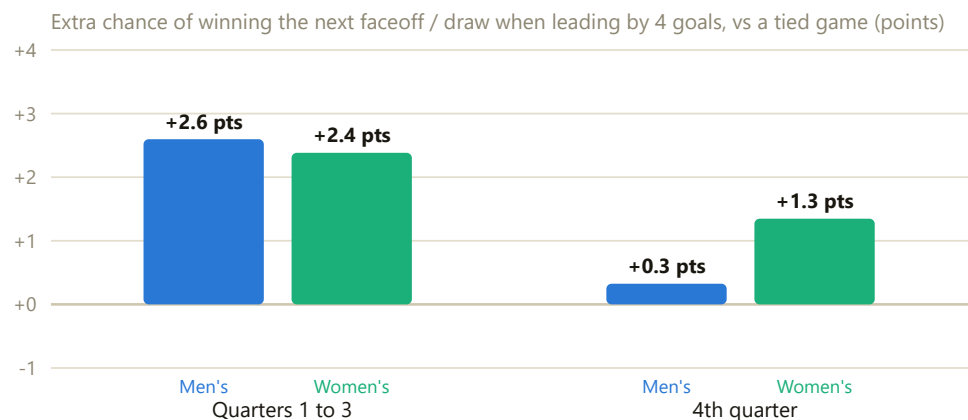


Figure 3. Extra chance of winning the next faceoff or draw when leading by four goals, compared with a tied game. In both sports, the lead's advantage collapses in the fourth quarter.

5 · HOW TO USE IT, AND WHAT IT CANNOT DO

For the sideline

Setting expectations. Two men's specialists 20 points apart in season win rate should split faceoffs about 62-38. Two women's teams 20 points apart in draw rate, about 58-42 (Figure 4). Judge your specialist against that number, not against 50-50.

In the game. In men's, the first minute or two after your specialist wins one is his best window of the game; after a loss, there is no hangover. In women's, the team that just *lost* the draw is the favorite on the next one, and more so the longer play runs before it.

Late. Do not count on a lead to keep winning you faceoffs in the fourth quarter. It does not, in either sport.

What this is not. A faceoff is close to a coin flip, tilted by the matchup. These numbers tell you which way the coin is weighted and by how much. They do not tell you who wins any single faceoff. And they come from one season: a pattern this clear is worth acting on, but nothing here is settled until the 2026 season shows the same thing. Try the numbers yourself at falconeyefaceoff.com/calculator.

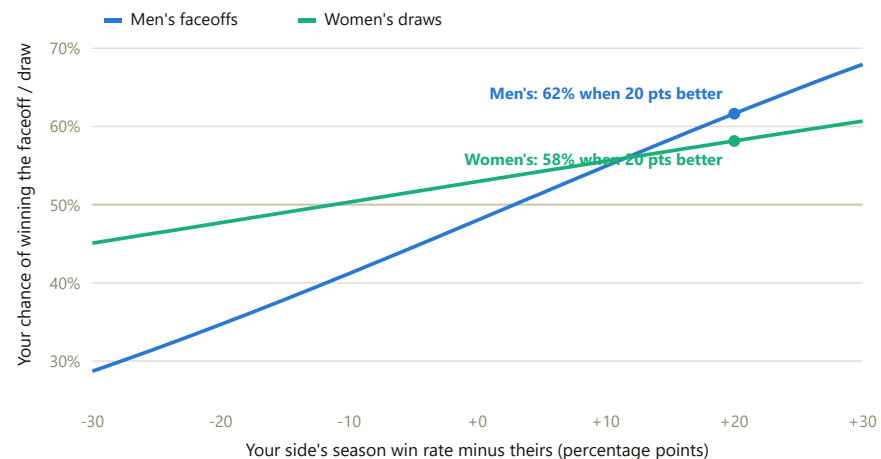


Figure 4. Your chance of winning the faceoff or draw depending on how much better or worse your side is than the opponent's, with nothing else about the moment favoring either team.

Methods

Nothing above depends on this section. It is here so that a reader with statistical training can check the work.

Data. Play-by-play from NCAA.com's game-center API (`sdataproduct.ncaa.com`), operation `NCAA_GetGamecenterPbpGenericById_web`; games enumerated from the daily scoreboard feed. One row per faceoff or draw control, home-team perspective. Excluded: games whose reconstructed running score disagreed with the scoreboard final (17 men's, 33 women's) and the first faceoff of each game.

Predictors. Own and opponent strength: the specialist's (men's) or team's (women's) season win rate in games strictly before the current one, shrunk toward 0.5 with 20 phantom attempts, per 10 points. Previous result; minutes since it (centred at 2) and their interaction. Score differential and its interaction with a 4th-quarter indicator. Penalty status (men's: active penalties, releasable ones released by an opposing goal, non-releasable by rule type or duration $\geq 2:00$; women's: card issued since previous draw), coded opponent / even / own. Trigger (period start, after own goal, after opponent goal, other; 90-second window). Period (OT pooled). Game type. Both teams' winning % to date, shrunk with 5 phantom games. Women's draw times are approximated from the last clocked play.

Estimation and inference. Logistic regression (statsmodels 0.15), identical specification in both sports, SEs clustered by home team (77 and 132 clusters). Effects reported as average marginal effects in percentage points. Each of 13 variables tested as a block by likelihood-ratio test; Benjamini-Hochberg at 5% within each sport's 13 tests ("holds up" in the main text = survives). Cross-sport differences tested in a pooled model with sport $\times$ term interactions, reported as ratios of odds ratios; the eight comparable constructs corrected with BH. Robustness: nested models compared by AIC; men's refit excluding violation wins (every established effect moves < 0.03 in OR terms); men's supplement splitting releasable and non-releasable penalties. Full tables in the appendix.

Bias and limits

Things we fixed before trusting the numbers

- **No peeking at the future.** A specialist's "strength" only uses games played before the one being predicted, the way a coach would actually know it. That made the matchup effect a bit smaller and more honest.
- **Good teams lead.** Both teams' records are in the model, so the lead effect is not just "the better team is ahead."
- **Bad logs.** Any game whose play-by-play could not reproduce the final score was thrown out rather than patched.
- **Violation wins** (one in six men's faceoffs) are counted as wins; the results are the same without them.

Things we cannot fix, and say so

- **Momentum might be matchup.** A fading previous-result effect fits "confidence" and fits "the same two players just tested each other" equally well. We cannot tell them apart.
- **The women's alternation is unexplained.** It is large and solid, but we do not know the mechanism.
- **Women's timing is approximate,** because the log does not record a clock on draws. That makes the women's time effects look weaker than they may be.
- **Men's penalty faceoffs are rare** (483 of 14,175), so a real effect could be hiding. Whether a penalty is releasable is inferred from its type.
- **Women's strength is team-level** because the log names only the player who came up with the ball, not who took the draw.
- **One season, one division, one rule book.** Nothing is confirmed until 2026 repeats it.

Full model tables

OR = odds ratio (1 = no effect); CI = 95% confidence interval; p = raw p-value; effect = average marginal effect in percentage points; crude OR = from a model with that predictor alone.

● A1. Men's faceoffs, full model (n = 14,175; pseudo-R² = .024; AIC = 19,204)

TERM	LOG-ODDS	P (RAW)	OR	95% CI	EFFECT, PCT PTS	CRUDE OR
Own strength, per +10 pts	+0.276	<.0001	1.317	1.229 to 1.412	+6.7	1.335
Opponent strength, per +10 pts	−0.278	<.0001	0.757	0.711 to 0.807	−6.7	0.740
Won previous faceoff (2-min gap)	+0.265	<.0001	1.304	1.208 to 1.407	+6.4	1.439
Minutes since, per +1 (after a loss)	+0.014	.30	1.014	0.987 to 1.042	+0.3	0.987
Won previous x minutes since	−0.052	.0058	0.949	0.915 to 0.985	−1.3	
Score differential, per goal (Q1 to 3)	+0.026	<.0001	1.026	1.014 to 1.039	+0.6	1.027
Score differential x 4th quarter	−0.023	.0008	0.978	0.965 to 0.991	−0.5	
Opponent penalized vs even	+0.225	.12	1.253	0.940 to 1.670	+5.4	1.350
Own team penalized vs even	−0.130	.30	0.878	0.689 to 1.120	−3.1	0.809
After own goal vs period start	−0.037	.49	0.963	0.867 to 1.070	−0.9	1.068
After opponent goal vs period start	−0.054	.35	0.947	0.846 to 1.061	−1.3	0.878
Other restart vs period start	+0.127	.54	1.135	0.754 to 1.709	+3.1	1.154
Period 2 vs 1	−0.005	.92	0.995	0.902 to 1.097	−0.1	1.008
Period 3 vs 1	−0.036	.45	0.965	0.880 to 1.058	−0.9	0.993
Period 4 vs 1	+0.076	.087	1.079	0.989 to 1.177	+1.8	1.078
Overtime vs period 1	−0.026	.94	0.974	0.500 to 1.900	−0.6	0.901
Non-conference vs conference	+0.026	.56	1.026	0.941 to 1.119	+0.6	1.023
Postseason vs conference	+0.212	.074	1.237	0.979 to 1.562	+5.1	1.277
Own team win % to date, per +10 pts	−0.003	.88	0.997	0.958 to 1.038	−0.1	1.047
Opponent team win % to date, per +10 pts	−0.018	.23	0.982	0.953 to 1.011	−0.4	0.937
Intercept	−0.079	.28	0.924	0.800 to 1.066		

● A2. Women's draws, full model (n = 18,957; pseudo-R² = .010; AIC = 26,046)

TERM	LOG-ODDS	P (RAW)	OR	95% CI	EFFECT, PCT PTS
Own team draw strength, per +10 pts	+0.152	<.0001	1.164	1.094 to 1.239	+3.7
Opponent team draw strength, per +10 pts	−0.059	.11	0.943	0.878 to 1.013	−1.4
Won previous draw (2-min gap)	−0.236	<.0001	0.790	0.736 to 0.847	−5.8
Minutes since, per +1 (after a loss)	+0.033	.0001	1.034	1.017 to 1.051	+0.8
Won previous x minutes since	−0.031	.0076	0.970	0.948 to 0.992	−0.8
Score differential, per goal (Q1 to 3)	+0.024	<.0001	1.024	1.017 to 1.031	+0.6
Score differential x 4th quarter	−0.010	.013	0.990	0.982 to 0.998	−0.3
Opponent carded since last draw vs none	+0.138	.0016	1.148	1.054 to 1.251	+3.4
Own team carded since last draw vs none	−0.051	.35	0.950	0.854 to 1.058	−1.3
After own goal vs period start	+0.066	.11	1.069	0.984 to 1.160	+1.6
After opponent goal vs period start	−0.022	.63	0.978	0.892 to 1.072	−0.5
Other restart vs period start	+0.064	.71	1.067	0.756 to 1.504	+1.6
Period 2 vs 1	−0.055	.13	0.946	0.881 to 1.016	−1.4
Period 3 vs 1	−0.030	.43	0.971	0.901 to 1.046	−0.7
Period 4 vs 1	−0.064	.077	0.938	0.874 to 1.007	−1.6
Overtime vs period 1	+0.383	.32	1.467	0.691 to 3.113	+9.3
Non-conference vs conference	+0.030	.26	1.030	0.978 to 1.086	+0.7
Postseason vs conference	+0.191	.092	1.210	0.969 to 1.510	+4.7
Own team win % to date, per +10 pts	+0.001	.91	1.001	0.980 to 1.023	0.0
Opponent team win % to date, per +10 pts	−0.041	.0027	0.960	0.935 to 0.986	−1.0
Intercept	+0.118	.038	1.126	1.006 to 1.259	

A3. Variable-level tests with Benjamini-Hochberg correction (one family per sport, 13 tests each)

VARIABLE	MEN'S LRT X ² (DF)	P RAW	P BH	SURVIVES	WOMEN'S LRT X ² (DF)	P RAW	P BH	SURVIVES
Own strength	126.1 (1)	<.0001	<.0001	Yes	15.3 (1)	.0001	.0003	Yes
Opponent strength	120.7 (1)	<.0001	<.0001	Yes	2.2 (1)	.14	.16	No
Previous result (with interaction)	59.6 (2)	<.0001	<.0001	Yes	93.6 (2)	<.0001	<.0001	Yes
Minutes since (with interaction)	12.7 (2)	.0018	.0033	Yes	18.3 (2)	.0001	.0003	Yes

VARIABLE	MEN'S LRT X ² (DF)	P RAW	P BH	SURVIVES	WOMEN'S LRT X ² (DF)	P RAW	P BH	SURVIVES
Previous result x minutes	10.1 (1)	.0015	.0032	Yes	8.8 (1)	.0030	.0079	Yes
Score differential (with interaction)	26.0 (2)	<.0001	<.0001	Yes	49.2 (2)	<.0001	<.0001	Yes
Score x 4th quarter	10.8 (1)	.0010	.0026	Yes	4.2 (1)	.040	.065	No
Penalty / card status	3.7 (2)	.16	.22	No	10.8 (2)	.0044	.0082	Yes
Trigger	1.6 (3)	.66	.71	No	6.7 (3)	.082	.11	No
Period	5.6 (4)	.23	.27	No	4.5 (4)	.35	.37	No
Game type	4.3 (2)	.11	.19	No	5.7 (2)	.058	.084	No
Own team win %	0.0 (1)	.83	.83	No	0.0 (1)	.93	.93	No
Opponent team win %	1.7 (1)	.20	.26	No	8.3 (1)	.0039	.0082	Yes

A4. Cross-sport comparison from the pooled model (ratio of odds ratios, women's over men's)

COMPARABLE FACTOR	MEN'S OR	WOMEN'S OR	RATIO W/M	95% CI	P RAW	P BH
Won previous faceoff / draw	1.30	0.79	0.61	0.55 to 0.67	<.0001	<.0001
4th quarter vs 1st	1.08	0.94	0.87	0.78 to 0.97	.014	.10
After own goal vs period start	0.96	1.07	1.11	0.97 to 1.27	.13	.45
Each goal x 4th quarter	0.98	0.99	1.01	1.00 to 1.03	.12	.45
Per minute since a lost faceoff	1.01	1.03	1.02	0.99 to 1.05	.24	.68
Won previous x per minute	0.95	0.97	1.02	0.98 to 1.07	.34	.74
Each goal of lead, quarters 1 to 3	1.03	1.02	1.00	0.98 to 1.01	.75	.94
Postseason vs conference	1.24	1.21	0.98	0.71 to 1.35	.89	.94

A5. Nested models

MODEL	MEN'S AIC	PSEUDO-R ²	WOMEN'S AIC	PSEUDO-R ²
1. Matchup only (2 terms)	19,299	.017	26,221	.002
2. + previous result and timing (5)	19,226	.021	26,143	.005
3. + score, 4th quarter, penalties (9)	19,195	.023	26,049	.009
4. + trigger, period, game type, records (20)	19,204	.024	26,046	.010

A7. Men's sensitivity: violation wins excluded (n = 11,969)

TERM	OR, ALL	OR, NO VIOLATION WINS	P
Own strength, per +10 pts	1.317	1.338	<.0001
Opponent strength, per +10 pts	0.757	0.753	<.0001
Won previous faceoff	1.304	1.331	<.0001
Won previous x minutes since	0.949	0.950	.014
Score differential, per goal	1.026	1.035	<.0001
Score x 4th quarter	0.978	0.975	.0005

A6. Men's penalty supplement (releasable vs non-releasable)

LEVEL VS EVEN	N	OR	95% CI	P
Man-up, releasable	162	1.237	0.871 to 1.758	.24
Man-up, non-releasable	78	1.285	0.790 to 2.090	.31
Man-down, releasable	176	0.889	0.667 to 1.185	.42
Man-down, non-releasable	67	0.851	0.538 to 1.346	.49

A8. Odds ratio for having won the previous faceoff / draw, by minutes since

MINUTES SINCE	0.5	1	2	3	4	6	8
Men's faceoffs	1.41	1.37	1.30	1.24	1.17	1.06	0.95
Women's draws	0.83	0.81	0.79	0.77	0.74	0.70	0.66

FalconEye Research. Data: NCAA.com game-center play-by-play, 2025 Division I season. Code: `scrapers/pbp_scraper.py`, `analysis/faceoff_features.py`, `analysis/faceoff_model.py`.
Tables and calculator coefficients: `data/analysis/v3/`. Python 3.12, statsmodels 0.15, pandas 3.0. Interactive calculator: falconeyefaceoff.com/calculator.