Model Information	on
Data Set	WORK.KOBE
Response Variable	shot_made_flag
Number of Response Levels	2
Model	binary logit
Optimization Technique	Fisher's scoring

Number of Observations Read	25697
Number of Observations Used	25697

	Response Profile	
Ordered Value	shot_made_flag	Total Frequency
1	1	11465
2	0	14232

Probability modeled is shot\_made\_flag='1'.

**Forward Selection Procedure** 

								C	lass	Leve	el Inf	orma	tion														
Class	Value												Des	ign \	/aria	bles											
action_type	Alley Oop Dunk Sh	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Alley Oop Layup s	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cutting Layup Sho	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Driving Bank shot	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Driving Dunk Shot	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Driving Finger Ro	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Driving Floating	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Driving Hook Shot	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Driving Jump shot	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Driving Layup Sho	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Driving Reverse L	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Driving Slam Dunk	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Dunk Shot	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	Fadeaway Bank sho	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
	Fadeaway Jump Sho	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
	Finger Roll Layup	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Finger Roll Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	Floating Jump sho	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	Follow Up Dunk Sh	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	Hook Bank Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	Hook Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	Jump Bank Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	Jump Hook Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	Jump Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	Layup Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0

										Clas	s Lev	el In	form	ation	)									
										D	esig	n Vai	riable	:S										
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

								C	lass	Leve	el Inf	orma	tion														
Class	Value												Des	ign \	/aria	bles											
	Pullup Bank shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	Pullup Jump shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Putback Dunk Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Putback Layup Sho	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Putback Slam Dunk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Reverse Dunk Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Reverse Layup Sho	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Reverse Slam Dunk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Running Bank shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Running Dunk Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Running Finger Ro	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Running Hook Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Running Jump Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Running Layup Sho	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Running Pull-Up J	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Running Reverse L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Running Slam Dunk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Running Tip Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Slam Dunk Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Step Back Jump sh	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Tip Layup Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Tip Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Turnaround Bank s	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Turnaround Fadeaw	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

										Clas	s Lev	el In	form	ation	)									
										D	esig	n Vai	riable	:s										
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0

								(	Class	Lev	el Inf	orma	tion														
Class	Value												Des	ign \	/aria	bles											
	Turnaround Finger	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Turnaround Hook S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Turnaround Jump S	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
shot_zone_area	Back Court(BC)	1	0	0	0	0																					
	Center(C)	0	1	0	0	0																					
	Left Side Center(LC)	0	0	1	0	0																					
	Left Side(L)	0	0	0	1	0																					
	Right Side Center(RC)	0	0	0	0	1																					
	Right Side(R)	-1	-1	-1	-1	-1																					
period	1	1	0	0	0	0	0																				
	2	0	1	0	0	0	0																				
	3	0	0	1	0	0	0																				
	4	0	0	0	1	0	0																				
	5	0	0	0	0	1	0																				
	6	0	0	0	0	0	1																				
	7	-1	-1	-1	-1	-1	-1																				

										Clas	s Lev	el In	form	ation	1									
										D	esig	n Vai	riable	s										
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

## Step 0. Intercept entered:

**Model Convergence Status** Convergence criterion (GCONV=1E-8) satisfied.

> -2 Log L | = | 35325.083

	Analy	sis of Maxii	mum Likelih	ood Estimates	
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-0.2162	0.0125	296.7871	<.0001

Residual (	Chi-Sq	uare Test									
Chi-Square DF Pr > ChiSq											
3940.0538	66	<.0001									

Analysis of E	Effects	s Eligible for E	ntry
Effect	DF	Score Chi-Square	Pr > ChiSq
action_type	51	3641.0049	<.0001
shot_zone_area	5	567.6291	<.0001
attendance	1	239.9584	<.0001
arena_temp	1	45.0689	<.0001
avgnoisedb	1	74.5570	<.0001
period	6	37.8213	<.0001
seconds_remaining	1	24.3835	<.0001

Step 1. Effect action\_type entered:

Model Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics					
Criterion	Intercept Only	Intercept and Covariates			
AIC	35327.083	31527.962			
sc	35335.237	31951.976			
-2 Log L	35325.083	31423.962			

Testing Global Null Hypothesis: BETA=0						
Test	Chi-Square	DF	Pr > ChiSq			
Likelihood Ratio	3901.1213	51	<.0001			
Score	3641.0049	51	<.0001			
Wald	2714.8310	51	<.0001			

Type 3 Analysis of Effects						
Effect DF Chi-Square Pr > ChiSq						
action_type	51	2714.8310	<.0001			

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept		1	1.5806	14.4216	0.0120	0.9127
action_type	Alley Oop Dunk Sh	1	1.3097	14.4286	0.0082	0.9277
action_type	Alley Oop Layup s	1	-0.6539	14.4240	0.0021	0.9638
action_type	Cutting Layup Sho	1	-0.8875	14.4466	0.0038	0.9510
action_type	Driving Bank shot	1	-0.8875	14.4715	0.0038	0.9511
action_type	Driving Dunk Shot	1	2.1531	14.4273	0.0223	0.8814
action_type	Driving Finger Ro	1	0.2866	14.4239	0.0004	0.9841
action_type	Driving Floating	1	-1.5806	14.4549	0.0120	0.9129
action_type	Driving Hook Shot	1	-1.1106	14.4324	0.0059	0.9387
action_type	Driving Jump shot	1	-1.8430	14.4275	0.0163	0.8984
action_type	Driving Layup Sho	1	-0.5274	14.4217	0.0013	0.9708
action_type	Driving Reverse L	1	-0.4980	14.4237	0.0012	0.9725
action_type	Driving Slam Dunk	1	2.1570	14.4557	0.0223	0.8814
action_type	Dunk Shot	1	-0.3219	14.4225	0.0005	0.9822
action_type	Fadeaway Bank sho	1	0.4988	14.4341	0.0012	0.9724
action_type	Fadeaway Jump Sho	1	-1.2802	14.4218	0.0079	0.9293
action_type	Finger Roll Layup	1	-0.0546	14.4297	0.0000	0.9970
action_type	Finger Roll Shot	1	-1.7348	14.4268	0.0145	0.9043
action_type	Floating Jump sho	1	-0.6340	14.4234	0.0019	0.9649
action_type	Follow Up Dunk Sh	1	0.6166	14.4586	0.0018	0.9660
action_type	Hook Bank Shot	1	10.6426	198.3	0.0029	0.9572
action_type	Hook Shot	1	-2.1134	14.4236	0.0215	0.8835
action_type	Jump Bank Shot	1	-0.3434	14.4223	0.0006	0.9810
action_type	Jump Hook Shot	1	-0.5510	14.4306	0.0015	0.9695
action_type	Jump Shot	1	-2.3028	14.4216	0.0255	0.8731
action_type	Layup Shot	1	-2.0476	14.4217	0.0202	0.8871
action_type	Pullup Bank shot	1	-1.3983	14.4338	0.0094	0.9228
action_type	Pullup Jump shot	1	-0.6168	14.4220	0.0018	0.9659
action_type	Putback Dunk Shot	1	-0.8875	14.4715	0.0038	0.9511
action_type	Putback Layup Sho	1	-0.8875	14.4383	0.0038	0.9510
action_type	Putback Slam Dunk	1	-1.5806	14.4881	0.0119	0.9131
action_type	Reverse Dunk Shot	1	0.8353	14.4289	0.0034	0.9538
action_type	Reverse Layup Sho	1	-1.0198	14.4220	0.0050	0.9436
action_type	Reverse Slam Dunk	1	10.6426	115.1	0.0085	0.9263
action_type	Running Bank shot	1	0.0570	14.4273	0.0000	0.9968

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
action_type	Running Dunk Shot	1	0.4988	14.4403	0.0012	0.9724
action_type	Running Finger Ro	1	-1.8038	14.4366	0.0156	0.9006
action_type	Running Hook Shot	1	0.4004	14.4311	0.0008	0.9779
action_type	Running Jump Shot	1	-0.4974	14.4218	0.0012	0.9725
action_type	Running Layup Sho	1	-0.7052	14.4247	0.0024	0.9610
action_type	Running Pull-Up J	1	-0.8875	14.4715	0.0038	0.9511
action_type	Running Reverse L	1	-1.2929	14.4410	0.0080	0.9287
action_type	Running Slam Dunk	1	10.6426	442.5	0.0006	0.9808
action_type	Running Tip Shot	1	-13.8011	441.9	0.0010	0.9751
action_type	Slam Dunk Shot	1	2.4206	14.4273	0.0282	0.8668
action_type	Step Back Jump sh	1	-1.0395	14.4230	0.0052	0.9425
action_type	Tip Layup Shot	1	-1.5806	14.4881	0.0119	0.9131
action_type	Tip Shot	1	-2.1953	14.4226	0.0232	0.8790
action_type	Turnaround Bank s	1	-0.2369	14.4251	0.0003	0.9869
action_type	Turnaround Fadeaw	1	-1.2385	14.4220	0.0074	0.9316
action_type	Turnaround Finger	1	10.6426	313.1	0.0012	0.9729
action_type	Turnaround Hook S	1	-1.5806	14.4383	0.0120	0.9128

Odds Ratio Estimates				
Effect	Point Estimate	95% Wald Confidence Limits		
action_type Alley Oop Dunk Sh vs Turnaround Jump S	12.090	4.864	30.049	
action_type Alley Oop Layup s vs Turnaround Jump S	1.697	0.981	2.935	
action_type Cutting Layup Sho vs Turnaround Jump S	1.343	0.245	7.373	
action_type Driving Bank shot vs Turnaround Jump S	1.343	0.121	14.870	
action_type Driving Dunk Shot vs Turnaround Jump S	28.098	12.367	63.839	
action_type Driving Finger Ro vs Turnaround Jump S	4.346	2.563	7.369	
action_type Driving Floating vs Turnaround Jump S	0.672	0.094	4.790	
action_type Driving Hook Shot vs Turnaround Jump S	1.075	0.349	3.311	
action_type Driving Jump shot vs Turnaround Jump S	0.517	0.224	1.191	
action_type Driving Layup Sho vs Turnaround Jump S	1.926	1.618	2.291	
action_type Driving Reverse L vs Turnaround Jump S	1.983	1.188	3.311	
action_type Driving Slam Dunk vs Turnaround Jump S	28.210	3.865	205.893	
action_type Dunk Shot vs Turnaround Jump S	2.365	1.671	3.347	
action_type Fadeaway Bank sho vs Turnaround Jump S	5.373	1.606	17.978	
action_type Fadeaway Jump Sho vs Turnaround Jump S	0.907	0.750	1.096	

Odds Ratio Estimates				
Effect	Point Estimate		Wald ice Limits	
action_type Finger Roll Layup vs Turnaround Jump S	3.090	1.164	8.202	
action_type Finger Roll Shot vs Turnaround Jump S	0.576	0.263	1.259	
action_type Floating Jump sho vs Turnaround Jump S	1.731	1.079	2.776	
action_type Follow Up Dunk Sh vs Turnaround Jump S	6.045	0.763	47.921	
action_type Hook Bank Shot vs Turnaround Jump S	>999.999	<0.001	>999.999	
action_type Hook Shot vs Turnaround Jump S	0.394	0.241	0.646	
action_type Jump Bank Shot vs Turnaround Jump S	2.315	1.703	3.146	
action_type Jump Hook Shot vs Turnaround Jump S	1.881	0.672	5.267	
action_type Jump Shot vs Turnaround Jump S	0.326	0.284	0.374	
action_type Layup Shot vs Turnaround Jump S	0.421	0.359	0.494	
action_type Pullup Bank shot vs Turnaround Jump S	0.806	0.244	2.661	
action_type Pullup Jump shot vs Turnaround Jump S	1.761	1.363	2.276	
action_type Putback Dunk Shot vs Turnaround Jump S	1.343	0.121	14.870	
action_type Putback Layup Sho vs Turnaround Jump S	1.343	0.334	5.406	
action_type Putback Slam Dunk vs Turnaround Jump S	0.672	0.042	10.773	
action_type Reverse Dunk Shot vs Turnaround Jump S	7.523	2.984	18.963	
action_type Reverse Layup Sho vs Turnaround Jump S	1.177	0.907	1.527	
action_type Reverse Slam Dunk vs Turnaround Jump S	>999.999	<0.001	>999.999	
action_type Running Bank shot vs Turnaround Jump S	3.454	1.520	7.848	
action_type Running Dunk Shot vs Turnaround Jump S	5.373	1.228	23.512	
action_type Running Finger Ro vs Turnaround Jump S	0.537	0.143	2.015	
action_type Running Hook Shot vs Turnaround Jump S	4.870	1.697	13.970	
action_type Running Jump Shot vs Turnaround Jump S	1.984	1.609	2.448	
action_type Running Layup Sho vs Turnaround Jump S	1.612	0.870	2.988	
action_type Running Pull-Up J vs Turnaround Jump S	1.343	0.121	14.870	
action_type Running Reverse L vs Turnaround Jump S	0.896	0.199	4.025	
action_type Running Slam Dunk vs Turnaround Jump S	>999.999	<0.001	>999.999	
action_type Running Tip Shot vs Turnaround Jump S	<0.001	<0.001	>999.999	
action_type Slam Dunk Shot vs Turnaround Jump S	36.718	16.197	83.241	
action_type Step Back Jump sh vs Turnaround Jump S	1.154	0.761	1.751	
action_type Tip Layup Shot vs Turnaround Jump S	0.672	0.042	10.773	
action_type Tip Shot vs Turnaround Jump S	0.363	0.253	0.521	
action_type Turnaround Bank s vs Turnaround Jump S	2.575	1.345	4.928	
action_type Turnaround Fadeaw vs Turnaround Jump S	0.946	0.738	1.211	

Odds Ratio Estimates				
Effect Point 95% Wald Estimate Confidence Limit				
action_type Turnaround Finger vs Turnaround Jump S	>999.999	<0.001	>999.999	
action_type Turnaround Hook S vs Turnaround Jump S	0.672	0.167	2.703	

Association of Predicted Probabilities and Observed Responses						
Percent Concordant 50.2 Somers' D 0.356						
Percent Discordant	14.6	Gamma	0.550			
Percent Tied	<b>Tied</b> 35.2 <b>Tau-a</b> 0.176					
Pairs	163169880	С	0.678			

Residual Chi-Square Test				
Chi-Square DF Pr > ChiSq				
346.1154	15	<.0001		

Analysis of Effects Eligible for Entry					
Effect	DF	Score Chi-Square	Pr > ChiSq		
shot_zone_area	5	64.9051	<.0001		
attendance	1	213.2263	<.0001		
arena_temp	1	38.7014	<.0001		
avgnoisedb	1	60.5631	<.0001		
period	6	24.2856	0.0005		
seconds_remaining	1	23.3586	<.0001		

Step 2. Effect attendance entered:

Model Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics					
Criterion	Intercept Only	Intercept and Covariates			
AIC	35327.083	31316.054			
sc	35335.237	31748.223			
-2 Log L	35325.083	31210.054			

Testing Global Null Hypothesis: BETA=0					
Test	Chi-Square DF Pr > Chi				
Likelihood Ratio	4115.0291	52	<.0001		
Score	3824.0600	52	<.0001		
Wald	2860.8944	52	<.0001		

Type 3 Analysis of Effects						
Effect DF Chi-Square Pr > ChiSq						
action_type	51	2706.5744	<.0001			
attendance	1	211.3279	<.0001			

	Analysis of Maximum Likelihood Estimates					
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept		1	-1.2130	14.4180	0.0071	0.9330
action_type	Alley Oop Dunk Sh	1	1.3365	14.4238	0.0086	0.9262
action_type	Alley Oop Layup s	1	-0.6928	14.4192	0.0023	0.9617
action_type	Cutting Layup Sho	1	-0.7570	14.4418	0.0027	0.9582
action_type	Driving Bank shot	1	-0.8500	14.4673	0.0035	0.9531
action_type	Driving Dunk Shot	1	2.1450	14.4224	0.0221	0.8818
action_type	Driving Finger Ro	1	0.2838	14.4190	0.0004	0.9843
action_type	Driving Floating	1	-1.4870	14.4503	0.0106	0.9180
action_type	Driving Hook Shot	1	-1.1103	14.4277	0.0059	0.9387
action_type	Driving Jump shot	1	-1.8990	14.4227	0.0173	0.8952
action_type	Driving Layup Sho	1	-0.5248	14.4168	0.0013	0.9710
action_type	Driving Reverse L	1	-0.4539	14.4189	0.0010	0.9749
action_type	Driving Slam Dunk	1	2.1533	14.4508	0.0222	0.8815
action_type	Dunk Shot	1	-0.3306	14.4176	0.0005	0.9817
action_type	Fadeaway Bank sho	1	0.5072	14.4293	0.0012	0.9720
action_type	Fadeaway Jump Sho	1	-1.2574	14.4169	0.0076	0.9305
action_type	Finger Roll Layup	1	-0.00830	14.4249	0.0000	0.9995
action_type	Finger Roll Shot	1	-1.7091	14.4219	0.0140	0.9057
action_type	Floating Jump sho	1	-0.6415	14.4185	0.0020	0.9645
action_type	Follow Up Dunk Sh	1	0.7151	14.4538	0.0024	0.9605
action_type	Hook Bank Shot	1	10.5956	197.7	0.0029	0.9573
action_type	Hook Shot	1	-2.1261	14.4187	0.0217	0.8828
action_type	Jump Bank Shot	1	-0.3303	14.4174	0.0005	0.9817

	Analysis of Maximum Likelihood Estimates					
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
action_type	Jump Hook Shot	1	-0.5619	14.4258	0.0015	0.9689
action_type	Jump Shot	1	-2.3014	14.4167	0.0255	0.8732
action_type	Layup Shot	1	-2.0384	14.4168	0.0200	0.8876
action_type	Pullup Bank shot	1	-1.3951	14.4291	0.0093	0.9230
action_type	Pullup Jump shot	1	-0.5922	14.4171	0.0017	0.9672
action_type	Putback Dunk Shot	1	-0.9712	14.4677	0.0045	0.9465
action_type	Putback Layup Sho	1	-0.7690	14.4335	0.0028	0.9575
action_type	Putback Slam Dunk	1	-1.5407	14.4833	0.0113	0.9153
action_type	Reverse Dunk Shot	1	0.8132	14.4240	0.0032	0.9550
action_type	Reverse Layup Sho	1	-1.0180	14.4172	0.0050	0.9437
action_type	Reverse Slam Dunk	1	10.6261	114.7	0.0086	0.9262
action_type	Running Bank shot	1	0.0809	14.4224	0.0000	0.9955
action_type	Running Dunk Shot	1	0.4988	14.4355	0.0012	0.9724
action_type	Running Finger Ro	1	-1.7753	14.4318	0.0151	0.9021
action_type	Running Hook Shot	1	0.3651	14.4262	0.0006	0.9798
action_type	Running Jump Shot	1	-0.4945	14.4169	0.0012	0.9726
action_type	Running Layup Sho	1	-0.7092	14.4199	0.0024	0.9608
action_type	Running Pull-Up J	1	-0.8064	14.4671	0.0031	0.9556
action_type	Running Reverse L	1	-1.4007	14.4363	0.0094	0.9227
action_type	Running Slam Dunk	1	10.3333	442.5	0.0005	0.9814
action_type	Running Tip Shot	1	-13.7387	441.9	0.0010	0.9752
action_type	Slam Dunk Shot	1	2.4058	14.4224	0.0278	0.8675
action_type	Step Back Jump sh	1	-1.0491	14.4181	0.0053	0.9420
action_type	Tip Layup Shot	1	-1.6015	14.4835	0.0122	0.9120
action_type	Tip Shot	1	-2.2090	14.4177	0.0235	0.8782
action_type	Turnaround Bank s	1	-0.2024	14.4202	0.0002	0.9888
action_type	Turnaround Fadeaw	1	-1.2163	14.4171	0.0071	0.9328
action_type	Turnaround Finger	1	10.4599	313.0	0.0011	0.9733
action_type	Turnaround Hook S	1	-1.5703	14.4335	0.0118	0.9134
attendance		1	0.000185	0.000013	211.3279	<.0001

Effect	Point Estimate		
action_type Alley Oop Dunk Sh vs Turnaround Jump S	12.389	4.980	30.825
action_type Alley Oop Layup s vs Turnaround Jump S	1.628	0.940	2.822
action_type Cutting Layup Sho vs Turnaround Jump S	1.527	0.277	8.407
action_type Driving Bank shot vs Turnaround Jump S	1.391	0.124	15.659
action_type Driving Dunk Shot vs Turnaround Jump S	27.809	12.234	63.213
action_type Driving Finger Ro vs Turnaround Jump S	4.324	2.546	7.342
action_type Driving Floating vs Turnaround Jump S	0.736	0.102	5.298
action_type Driving Hook Shot vs Turnaround Jump S	1.072	0.346	3.325
action_type Driving Jump shot vs Turnaround Jump S	0.487	0.211	1.128
action_type Driving Layup Sho vs Turnaround Jump S	1.926	1.617	2.294
action_type Driving Reverse L vs Turnaround Jump S	2.068	1.236	3.459
action_type Driving Slam Dunk vs Turnaround Jump S	28.040	3.838	204.835
action_type Dunk Shot vs Turnaround Jump S	2.339	1.650	3.315
action_type Fadeaway Bank sho vs Turnaround Jump S	5.406	1.612	18.136
action_type Fadeaway Jump Sho vs Turnaround Jump S	0.926	0.765	1.120
action_type Finger Roll Layup vs Turnaround Jump S	3.228	1.212	8.603
action_type Finger Roll Shot vs Turnaround Jump S	0.589	0.269	1.292
action_type Floating Jump sho vs Turnaround Jump S	1.714	1.067	2.753
action_type Follow Up Dunk Sh vs Turnaround Jump S	6.656	0.837	52.900
action_type Hook Bank Shot vs Turnaround Jump S	>999.999	<0.001	>999.999
action_type Hook Shot vs Turnaround Jump S	0.388	0.237	0.637
action_type Jump Bank Shot vs Turnaround Jump S	2.340	1.720	3.184
action_type Jump Hook Shot vs Turnaround Jump S	1.856	0.661	5.208
action_type Jump Shot vs Turnaround Jump S	0.326	0.284	0.374
action_type Layup Shot vs Turnaround Jump S	0.424	0.361	0.498
action_type Pullup Bank shot vs Turnaround Jump S	0.807	0.242	2.684
action_type Pullup Jump shot vs Turnaround Jump S	1.801	1.392	2.329
action_type Putback Dunk Shot vs Turnaround Jump S	1.233	0.109	13.981
action_type Putback Layup Sho vs Turnaround Jump S	1.509	0.374	6.094
action_type Putback Slam Dunk vs Turnaround Jump S	0.697	0.043	11.187
action_type Reverse Dunk Shot vs Turnaround Jump S	7.341	2.908	18.532
action_type Reverse Layup Sho vs Turnaround Jump S	1.176	0.906	1.528
action_type Reverse Slam Dunk vs Turnaround Jump S	>999.999	<0.001	>999.999
action_type Running Bank shot vs Turnaround Jump S	3.530	1.550	8.039
action_type Running Dunk Shot vs Turnaround Jump S	5.361	1.222	23.517

Odds Ratio Estimates				
Effect	Point Estimate	95% Wald Confidence Limits		
action_type Running Finger Ro vs Turnaround Jump S	0.552	0.146	2.079	
action_type Running Hook Shot vs Turnaround Jump S	4.690	1.632	13.477	
action_type Running Jump Shot vs Turnaround Jump S	1.985	1.608	2.451	
action_type Running Layup Sho vs Turnaround Jump S	1.602	0.862	2.977	
action_type Running Pull-Up J vs Turnaround Jump S	1.453	0.130	16.260	
action_type Running Reverse L vs Turnaround Jump S	0.802	0.177	3.633	
action_type Running Slam Dunk vs Turnaround Jump S	>999.999	<0.001	>999.999	
action_type Running Tip Shot vs Turnaround Jump S	<0.001	<0.001	>999.999	
action_type Slam Dunk Shot vs Turnaround Jump S	36.095	15.916	81.859	
action_type Step Back Jump sh vs Turnaround Jump S	1.140	0.750	1.734	
action_type Tip Layup Shot vs Turnaround Jump S	0.656	0.041	10.586	
action_type Tip Shot vs Turnaround Jump S	0.357	0.249	0.513	
action_type Turnaround Bank s vs Turnaround Jump S	2.659	1.386	5.101	
action_type Turnaround Fadeaw vs Turnaround Jump S	0.965	0.752	1.237	
action_type Turnaround Finger vs Turnaround Jump S	>999.999	<0.001	>999.999	
action_type Turnaround Hook S vs Turnaround Jump S	0.677	0.167	2.743	
attendance	1.000	1.000	1.000	

Association of Predicted Probabilities and Observed Responses						
Percent Concordant 69.8 Somers' D 0.397						
Percent Discordant	30.1	1 <b>Gamma</b> 0.39				
Percent Tied	0.0 <b>Tau-a</b> 0.196					
Pairs	163169880	с	0.699			

Residual Chi-Square Test					
Chi-Square DF Pr > ChiSq					
133.7196 14 <.0001					

Analysis of Effects Eligible for Entry					
Effect DF Chi-Square Pr > ChiSq					
shot_zone_area	5	64.7280	<.0001		
arena_temp	1	25.9952	<.0001		
avgnoisedb	1	0.1295	0.7189		

Analysis of Effects Eligible for Entry					
Effect DF Chi-Square Pr > ChiSq					
period	6	22.0436	0.0012		
seconds_remaining	1	22.7122	<.0001		

## Step 3. Effect shot\_zone\_area entered:

Model Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics				
Criterion	Intercept Only	Intercept and Covariates		
AIC	35327.083	31244.256		
sc	35335.237	31717.195		
-2 Log L	35325.083	31128.256		

Testing Global Null Hypothesis: BETA=0					
Test	Chi-Square	Pr > ChiSq			
Likelihood Ratio	4196.8273	57	<.0001		
Score	3881.1483	57	<.0001		
Wald	2880.4062	57	<.0001		

Type 3 Analysis of Effects					
Effect	DF	Wald Chi-Square	Pr > ChiSq		
action_type	51	2453.9461	<.0001		
shot_zone_area	5	42.4089	<.0001		
attendance	1	210.7460	<.0001		

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept		1	-1.8206	14.4195	0.0159	0.8995
action_type	Alley Oop Dunk Sh	1	1.3271	14.4242	0.0085	0.9267
action_type	Alley Oop Layup s	1	-0.7022	14.4197	0.0024	0.9612
action_type	Cutting Layup Sho	1	-0.7664	14.4423	0.0028	0.9577
action_type	Driving Bank shot	1	-0.8594	14.4678	0.0035	0.9526

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
action_type	Driving Dunk Shot	1	2.1356	14.4229	0.0219	0.8823
action_type	Driving Finger Ro	1	0.2744	14.4195	0.0004	0.9848
action_type	Driving Floating	1	-1.4517	14.4507	0.0101	0.9200
action_type	Driving Hook Shot	1	-1.1197	14.4281	0.0060	0.9381
action_type	Driving Jump shot	1	-1.8928	14.4231	0.0172	0.8956
action_type	Driving Layup Sho	1	-0.5342	14.4173	0.0014	0.9704
action_type	Driving Reverse L	1	-0.4633	14.4193	0.0010	0.9744
action_type	Driving Slam Dunk	1	2.1439	14.4513	0.0220	0.8821
action_type	Dunk Shot	1	-0.3394	14.4181	0.0006	0.9812
action_type	Fadeaway Bank sho	1	0.5617	14.4298	0.0015	0.9689
action_type	Fadeaway Jump Sho	1	-1.2314	14.4174	0.0073	0.9319
action_type	Finger Roll Layup	1	-0.0177	14.4254	0.0000	0.9990
action_type	Finger Roll Shot	1	-1.7165	14.4224	0.0142	0.9053
action_type	Floating Jump sho	1	-0.6351	14.4190	0.0019	0.9649
action_type	Follow Up Dunk Sh	1	0.7057	14.4543	0.0024	0.9611
action_type	Hook Bank Shot	1	10.5955	197.8	0.0029	0.9573
action_type	Hook Shot	1	-2.1249	14.4192	0.0217	0.8828
action_type	Jump Bank Shot	1	-0.2772	14.4179	0.0004	0.9847
action_type	Jump Hook Shot	1	-0.5656	14.4263	0.0015	0.9687
action_type	Jump Shot	1	-2.3164	14.4172	0.0258	0.8724
action_type	Layup Shot	1	-2.0477	14.4173	0.0202	0.8871
action_type	Pullup Bank shot	1	-1.3533	14.4296	0.0088	0.9253
action_type	Pullup Jump shot	1	-0.6197	14.4176	0.0018	0.9657
action_type	Putback Dunk Shot	1	-0.9806	14.4681	0.0046	0.9460
action_type	Putback Layup Sho	1	-0.7784	14.4339	0.0029	0.9570
action_type	Putback Slam Dunk	1	-1.5501	14.4837	0.0115	0.9148
action_type	Reverse Dunk Shot	1	0.8038	14.4245	0.0031	0.9556
action_type	Reverse Layup Sho	1	-1.0274	14.4176	0.0051	0.9432
action_type	Reverse Slam Dunk	1	10.6167	114.7	0.0086	0.9262
action_type	Running Bank shot	1	0.1207	14.4229	0.0001	0.9933
action_type	Running Dunk Shot	1	0.4894	14.4360	0.0011	0.9730
action_type	Running Finger Ro	1	-1.7787	14.4323	0.0152	0.9019
action_type	Running Hook Shot	1	0.3661	14.4267	0.0006	0.9798
action_type	Running Jump Shot	1	-0.4696	14.4174	0.0011	0.9740
action_type	Running Layup Sho	1	-0.7186	14.4204	0.0025	0.9603

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
action_type	Running Pull-Up J	1	-0.9206	14.4674	0.0040	0.9493
action_type	Running Reverse L	1	-1.4101	14.4368	0.0095	0.9222
action_type	Running Slam Dunk	1	10.3240	442.5	0.0005	0.9814
action_type	Running Tip Shot	1	-13.7481	441.9	0.0010	0.9752
action_type	Slam Dunk Shot	1	2.3965	14.4229	0.0276	0.8680
action_type	Step Back Jump sh	1	-1.0407	14.4186	0.0052	0.9425
action_type	Tip Layup Shot	1	-1.6108	14.4840	0.0124	0.9114
action_type	Tip Shot	1	-2.2184	14.4182	0.0237	0.8777
action_type	Turnaround Bank s	1	-0.1507	14.4207	0.0001	0.9917
action_type	Turnaround Fadeaw	1	-1.1759	14.4176	0.0067	0.9350
action_type	Turnaround Finger	1	10.4505	313.0	0.0011	0.9734
action_type	Turnaround Hook S	1	-1.5479	14.4340	0.0115	0.9146
shot_zone_area	Back Court(BC)	1	-3.0759	0.8422	13.3384	0.0003
shot_zone_area	Center(C)	1	0.6177	0.1706	13.1073	0.0003
shot_zone_area	Left Side Center(LC)	1	0.6449	0.1716	14.1166	0.0002
shot_zone_area	Left Side(L)	1	0.4916	0.1720	8.1699	0.0043
shot_zone_area	Right Side Center(RC)	1	0.7568	0.1712	19.5460	<.0001
attendance		1	0.000185	0.000013	210.7460	<.0001

Odds Ratio Estimates				
Effect		Point Estimate	95% Confiden	Wald ice Limits
action_type	Alley Oop Dunk Sh vs Turnaround Jump S	11.910	4.780	29.675
action_type	Alley Oop Layup s vs Turnaround Jump S	1.565	0.901	2.719
action_type	Cutting Layup Sho vs Turnaround Jump S	1.468	0.266	8.088
action_type	Driving Bank shot vs Turnaround Jump S	1.338	0.119	15.062
action_type	Driving Dunk Shot vs Turnaround Jump S	26.733	11.742	60.865
action_type	Driving Finger Ro vs Turnaround Jump S	4.156	2.441	7.076
action_type	Driving Floating vs Turnaround Jump S	0.740	0.103	5.312
action_type	Driving Hook Shot vs Turnaround Jump S	1.031	0.332	3.200
action_type	Driving Jump shot vs Turnaround Jump S	0.476	0.205	1.102
action_type	Driving Layup Sho vs Turnaround Jump S	1.852	1.543	2.221
action_type	Driving Reverse L vs Turnaround Jump S	1.988	1.185	3.334
action_type	Driving Slam Dunk vs Turnaround Jump S	26.955	3.687	197.042
action_type	Dunk Shot vs Turnaround Jump S	2.250	1.582	3.200
action_type	Fadeaway Bank sho vs Turnaround Jump S	5.540	1.651	18.591

Effect		Point Estimate	95% Confiden	Wald ice Limits
action_type	Fadeaway Jump Sho vs Turnaround Jump S	0.922	0.762	1.116
action_type	Finger Roll Layup vs Turnaround Jump S	3.104	1.163	8.282
action_type	Finger Roll Shot vs Turnaround Jump S	0.568	0.258	1.247
action_type	Floating Jump sho vs Turnaround Jump S	1.674	1.041	2.692
action_type	Follow Up Dunk Sh vs Turnaround Jump S	6.398	0.804	50.885
action_type	Hook Bank Shot vs Turnaround Jump S	>999.999	<0.001	>999.999
action_type	Hook Shot vs Turnaround Jump S	0.377	0.230	0.620
action_type	Jump Bank Shot vs Turnaround Jump S	2.394	1.758	3.26 <sup>-</sup>
action_type	Jump Hook Shot vs Turnaround Jump S	1.794	0.639	5.040
action_type	Jump Shot vs Turnaround Jump S	0.312	0.271	0.359
action_type	Layup Shot vs Turnaround Jump S	0.408	0.344	0.482
action_type	Pullup Bank shot vs Turnaround Jump S	0.816	0.245	2.718
action_type	Pullup Jump shot vs Turnaround Jump S	1.700	1.313	2.202
action_type	Putback Dunk Shot vs Turnaround Jump S	1.185	0.104	13.448
action_type	Putback Layup Sho vs Turnaround Jump S	1.450	0.359	5.863
action_type	Putback Slam Dunk vs Turnaround Jump S	0.670	0.042	10.759
action_type	Reverse Dunk Shot vs Turnaround Jump S	7.057	2.792	17.84 <sup>-</sup>
action_type	Reverse Layup Sho vs Turnaround Jump S	1.131	0.866	1.476
action_type	Reverse Slam Dunk vs Turnaround Jump S	>999.999	<0.001	>999.999
action_type	Running Bank shot vs Turnaround Jump S	3.564	1.564	8.122
action_type	Running Dunk Shot vs Turnaround Jump S	5.153	1.174	22.627
action_type	Running Finger Ro vs Turnaround Jump S	0.533	0.141	2.01
action_type	Running Hook Shot vs Turnaround Jump S	4.556	1.584	13.101
action_type	Running Jump Shot vs Turnaround Jump S	1.975	1.597	2.443
action_type	Running Layup Sho vs Turnaround Jump S	1.540	0.827	2.868
action_type	Running Pull-Up J vs Turnaround Jump S	1.258	0.113	14.024
action_type	Running Reverse L vs Turnaround Jump S	0.771	0.170	3.495
action_type	Running Slam Dunk vs Turnaround Jump S	>999.999	<0.001	>999.999
action_type	Running Tip Shot vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type	Slam Dunk Shot vs Turnaround Jump S	34.699	15.276	78.820
action_type	Step Back Jump sh vs Turnaround Jump S	1.116	0.733	1.698
action_type	Tip Layup Shot vs Turnaround Jump S	0.631	0.039	10.182
action_type	Tip Shot vs Turnaround Jump S	0.344	0.238	0.495
action_type	Turnaround Bank s vs Turnaround Jump S	2.717	1.416	5.214
action type	Turnaround Fadeaw vs Turnaround Jump S	0.975	0.760	1.250

Odds Ratio Estimates					
Effect	Point Estimate	95% Confiden	Wald nce Limits		
action_type Turnaround Finger vs Turnaround Jump S	>999.999	<0.001	>999.999		
action_type Turnaround Hook S vs Turnaround Jump S	0.672	0.166	2.722		
shot_zone_area Back Court(BC) vs Right Side(R)	0.026	0.004	0.190		
shot_zone_area Center(C) vs Right Side(R)	1.054	0.964	1.153		
shot_zone_area Left Side Center(LC) vs Right Side(R)	1.083	0.980	1.198		
shot_zone_area Left Side(L) vs Right Side(R)	0.929	0.839	1.029		
shot_zone_area Right Side Center(RC) vs Right Side(R)	1.212	1.101	1.334		
attendance	1.000	1.000	1.000		

Association of Predicted Probabilities and Observed Responses					
Percent Concordant	nt 70.2 <b>Somers' D</b> 0.				
Percent Discordant	29.8 <b>Gamma</b> 0.4				
Percent Tied	0.0	Tau-a	0.200		
Pairs	163169880	с	0.702		

Residual Chi-Square Test					
Chi-Square DF Pr > ChiSq					
68.9800	9	<.0001			

Analysis of Effects Eligible for Entry						
Effect DF Score Chi-Square Pr > ChiSo						
arena_temp	1	25.8253	<.0001			
avgnoisedb	1	0.1543	0.6945			
period	6	24.1806	0.0005			
seconds_remaining	1	18.7073	<.0001			

Step 4. Effect arena\_temp entered:

Model Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics					
Criterion	Intercept and Covariates				
AIC	35327.083	31220.421			
sc	35335.237	31701.514			
-2 Log L	35325.083	31102.421			

Testing Global Null Hypothesis: BETA=0						
Test Chi-Square DF Pr > ChiSq						
Likelihood Ratio	4222.6624	58	<.0001			
Score	3903.2280	58	<.0001			
Wald	2897.6413	58	<.0001			

Type 3 Analysis of Effects						
Effect	Wald DF Chi-Square Pr > ChiS					
action_type	51	2453.1083	<.0001			
shot_zone_area 5		42.3693	<.0001			
attendance	1	198.2932	<.0001			
arena_temp	1	25.7983	<.0001			

Analysis of Maximum Likelihood Estimates							
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq	
Intercept		1	-4.1501	14.4250	0.0828	0.7736	
action_type	Alley Oop Dunk Sh	1	1.3251	14.4225	0.0084	0.9268	
action_type	Alley Oop Layup s	1	-0.6902	14.4179	0.0023	0.9618	
action_type	Cutting Layup Sho	1	-0.7157	14.4406	0.0025	0.9605	
action_type	Driving Bank shot	1	-0.8495	14.4662	0.0034	0.9532	
action_type	Driving Dunk Shot	1	2.1409	14.4212	0.0220	0.8820	
action_type	Driving Finger Ro	1	0.2726	14.4177	0.0004	0.9849	
action_type	Driving Floating	1	-1.4296	14.4493	0.0098	0.9212	
action_type	Driving Hook Shot	1	-1.1135	14.4264	0.0060	0.9385	
action_type	Driving Jump shot	1	-1.8933	14.4214	0.0172	0.8955	
action_type	Driving Layup Sho	1	-0.5307	14.4156	0.0014	0.9706	
action_type	Driving Reverse L	1	-0.4679	14.4176	0.0011	0.9741	
action_type	Driving Slam Dunk	1	2.1729	14.4496	0.0226	0.8805	
action_type	Dunk Shot	1	-0.3351	14.4164	0.0005	0.9815	

	Analysis of Ma	ximun	n Likelihood	Estimates		
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
action_type	Fadeaway Bank sho	1	0.5534	14.4280	0.0015	0.9694
action_type	Fadeaway Jump Sho	1	-1.2314	14.4156	0.0073	0.9319
action_type	Finger Roll Layup	1	-0.0470	14.4237	0.0000	0.9974
action_type	Finger Roll Shot	1	-1.7091	14.4207	0.0140	0.9057
action_type	Floating Jump sho	1	-0.6350	14.4173	0.0019	0.9649
action_type	Follow Up Dunk Sh	1	0.6872	14.4525	0.0023	0.9621
action_type	Hook Bank Shot	1	10.6019	197.6	0.0029	0.9572
action_type	Hook Shot	1	-2.1268	14.4174	0.0218	0.8827
action_type	Jump Bank Shot	1	-0.2809	14.4161	0.0004	0.9845
action_type	Jump Hook Shot	1	-0.5920	14.4245	0.0017	0.9673
action_type	Jump Shot	1	-2.3143	14.4155	0.0258	0.8725
action_type	Layup Shot	1	-2.0429	14.4155	0.0201	0.8873
action_type	Pullup Bank shot	1	-1.3501	14.4279	0.0088	0.9254
action_type	Pullup Jump shot	1	-0.6112	14.4159	0.0018	0.9662
action_type	Putback Dunk Shot	1	-0.9996	14.4667	0.0048	0.9449
action_type	Putback Layup Sho	1	-0.7543	14.4322	0.0027	0.9583
action_type	Putback Slam Dunk	1	-1.5771	14.4820	0.0119	0.9133
action_type	Reverse Dunk Shot	1	0.8189	14.4228	0.0032	0.9547
action_type	Reverse Layup Sho	1	-1.0233	14.4159	0.0050	0.9434
action_type	Reverse Slam Dunk	1	10.6099	114.5	0.0086	0.9262
action_type	Running Bank shot	1	0.1322	14.4212	0.0001	0.9927
action_type	Running Dunk Shot	1	0.5136	14.4343	0.0013	0.9716
action_type	Running Finger Ro	1	-1.7902	14.4306	0.0154	0.9013
action_type	Running Hook Shot	1	0.3473	14.4250	0.0006	0.9808
action_type	Running Jump Shot	1	-0.4652	14.4157	0.0010	0.9743
action_type	Running Layup Sho	1	-0.7070	14.4186	0.0024	0.9609
action_type	Running Pull-Up J	1	-0.8728	14.4657	0.0036	0.9519
action_type	Running Reverse L	1	-1.3488	14.4352	0.0087	0.9256
action_type	Running Slam Dunk	1	10.2720	442.5	0.0005	0.9815
action_type	Running Tip Shot	1	-13.8100	441.9	0.0010	0.9751
action_type	Slam Dunk Shot	1	2.4025	14.4211	0.0278	0.8677
action_type	Step Back Jump sh	1	-1.0364	14.4169	0.0052	0.9427
action_type	Tip Layup Shot	1	-1.6534	14.4828	0.0130	0.9091
action_type	Tip Shot	1	-2.2223	14.4164	0.0238	0.8775
action_type	Turnaround Bank s	1	-0.1485	14.4190	0.0001	0.9918

Analysis of Maximum Likelihood Estimates							
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq	
action_type	Turnaround Fadeaw	1	-1.1743	14.4159	0.0066	0.9351	
action_type	Turnaround Finger	1	10.4294	313.0	0.0011	0.9734	
action_type	Turnaround Hook S	1	-1.5830	14.4323	0.0120	0.9127	
shot_zone_area	Back Court(BC)	1	-3.0691	0.8419	13.2888	0.0003	
shot_zone_area	Center(C)	1	0.6138	0.1706	12.9521	0.0003	
shot_zone_area	Left Side Center(LC)	1	0.6458	0.1716	14.1648	0.0002	
shot_zone_area	Left Side(L)	1	0.4904	0.1719	8.1349	0.0043	
shot_zone_area	Right Side Center(RC)	1	0.7555	0.1711	19.4893	<.0001	
attendance		1	0.000180	0.000013	198.2932	<.0001	
arena_temp		1	0.0343	0.00675	25.7983	<.0001	

Odds Ratio Estimates				
Effect	1 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Wald nce Limits	
action_type	Alley Oop Dunk Sh vs Turnaround Jump S	11.851	4.755	29.531
action_type	Alley Oop Layup s vs Turnaround Jump S	1.579	0.909	2.745
action_type	Cutting Layup Sho vs Turnaround Jump S	1.540	0.279	8.487
action_type	Driving Bank shot vs Turnaround Jump S	1.347	0.119	15.221
action_type	Driving Dunk Shot vs Turnaround Jump S	26.795	11.768	61.009
action_type	Driving Finger Ro vs Turnaround Jump S	4.137	2.429	7.044
action_type	Driving Floating vs Turnaround Jump S	0.754	0.104	5.456
action_type	Driving Hook Shot vs Turnaround Jump S	1.034	0.333	3.212
action_type	Driving Jump shot vs Turnaround Jump S	0.474	0.204	1.100
action_type	Driving Layup Sho vs Turnaround Jump S	1.853	1.544	2.223
action_type	Driving Reverse L vs Turnaround Jump S	1.973	1.176	3.310
action_type	Driving Slam Dunk vs Turnaround Jump S	27.668	3.785	202.256
action_type	Dunk Shot vs Turnaround Jump S	2.253	1.583	3.205
action_type	Fadeaway Bank sho vs Turnaround Jump S	5.478	1.632	18.390
action_type	Fadeaway Jump Sho vs Turnaround Jump S	0.919	0.760	1.113
action_type	Finger Roll Layup vs Turnaround Jump S	3.005	1.125	8.029
action_type	Finger Roll Shot vs Turnaround Jump S	0.570	0.260	1.253
action_type	Floating Jump sho vs Turnaround Jump S	1.669	1.038	2.685
action_type	Follow Up Dunk Sh vs Turnaround Jump S	6.262	0.788	49.751
action_type	Hook Bank Shot vs Turnaround Jump S	>999.999	<0.001	>999.999
action_type	Hook Shot vs Turnaround Jump S	0.376	0.228	0.618
action_type	Jump Bank Shot vs Turnaround Jump S	2.378	1.746	3.240

Effect		Point Estimate	95% Confiden	Wald ice Limits
action_type    Jump Hook Shot vs Turnaround Jum	p S	1.742	0.620	4.893
action_type    Jump Shot    vs Turnaround Jump S	5	0.311	0.270	0.358
action_type Layup Shot vs Turnaround Jump S	5	0.408	0.345	0.483
action_type Pullup Bank shot vs Turnaround Jump	S	0.816	0.245	2.722
action_type Pullup Jump shot vs Turnaround Jump	s S	1.709	1.320	2.214
action_type Putback Dunk Shot vs Turnaround Jun	np S	1.159	0.102	13.228
action_type Putback Layup Sho vs Turnaround Jur	np S	1.481	0.367	5.988
action_type Putback Slam Dunk vs Turnaround Jur	np S	0.651	0.041	10.442
action_type Reverse Dunk Shot vs Turnaround Jun	np S	7.143	2.826	18.059
action_type Reverse Layup Sho vs Turnaround Jur	np S	1.132	0.867	1.478
action_type Reverse Slam Dunk vs Turnaround Jur	np S	>999.999	<0.001	>999.999
action_type Running Bank shot vs Turnaround Jun	ıp S	3.595	1.577	8.196
action_type Running Dunk Shot vs Turnaround Jur	np S	5.264	1.198	23.133
action_type Running Finger Ro vs Turnaround Jum	ıp S	0.526	0.140	1.981
action_type Running Hook Shot vs Turnaround Jur	np S	4.458	1.550	12.821
action_type Running Jump Shot vs Turnaround Ju	np S	1.978	1.599	2.447
action_type Running Layup Sho vs Turnaround Jur	np S	1.553	0.834	2.893
action_type Running Pull-Up J vs Turnaround Jum	s S	1.316	0.118	14.649
action_type Running Reverse L vs Turnaround Jun	ıp S	0.817	0.180	3.712
action_type Running Slam Dunk vs Turnaround Jur	np S	>999.999	<0.001	>999.999
action_type Running Tip Shot vs Turnaround Jum	s S	<0.001	<0.001	>999.999
action_type Slam Dunk Shot vs Turnaround Jump	S	34.807	15.323	79.069
action_type Step Back Jump sh vs Turnaround Jun	np S	1.117	0.734	1.700
action_type Tip Layup Shot vs Turnaround Jump	S	0.603	0.037	9.824
action_type Tip Shot vs Turnaround Jump S		0.341	0.237	0.492
action_type Turnaround Bank s vs Turnaround Jun	np S	2.715	1.415	5.211
action_type Turnaround Fadeaw vs Turnaround Ju	mp S	0.973	0.759	1.248
action_type Turnaround Finger vs Turnaround Jum	ıp S	>999.999	<0.001	>999.999
action_type Turnaround Hook S vs Turnaround Jur	np S	0.647	0.159	2.627
shot_zone_area Back Court(BC) vs Right Side(R)		0.026	0.004	0.192
shot_zone_area Center(C) vs Right Side(R)		1.051	0.961	1.150
shot_zone_area Left Side Center(LC) vs Right Side(I	₹)	1.086	0.982	1.200
shot_zone_area Left Side(L) vs Right Side(R)		0.929	0.839	1.030
shot_zone_area Right Side Center(RC) vs Right Side	(R)	1.211	1.101	1.334

Odds Ratio Estimates					
Point 95% Wald Effect Estimate Confidence Limit					
attendance	1.000	1.000	1.000		
arena_temp	1.035	1.021	1.049		

Association of Predicted Probabilities and Observed Responses							
Percent Concordant	cordant 70.3 <b>Somers' D</b> 0.406						
Percent Discordant	29.7	Gamma	0.406				
Percent Tied	ed 0.0 <b>Tau-a</b> 0.201						
Pairs	163169880	с	0.703				

Residual Chi-Square Test						
Chi-Square DF Pr > ChiSq						
43.2096	8	<.0001				

Analysis of Effects Eligible for Entry						
Effect DF Chi-Square Pr > ChiSq						
avgnoisedb	1	0.1515	0.6971			
period	6	24.2827	0.0005			
seconds_remaining	1	18.6790	<.0001			

# Step 5. Effect seconds\_remaining entered:

Model Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics					
Criterion	Intercept Only	Intercept and Covariates			
AIC	35327.083	31203.738			
sc	35335.237	31692.986			
-2 Log L	35325.083	31083.738			

Testing Global Null Hypothesis: BETA=0						
Test Chi-Square DF Pr > ChiSq						
Likelihood Ratio	4241.3445	59	<.0001			
Score	3919.1963	59	<.0001			
Wald	2910.5231	59	<.0001			

Type 3 Analysis of Effects							
Effect DF Chi-Square Pr > ChiSq							
action_type	51	2454.2544	<.0001				
shot_zone_area	5	42.1995	<.0001				
attendance	1	197.7424	<.0001				
arena_temp	1	25.7697	<.0001				
seconds_remaining	1	18.6687	<.0001				

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept		1	-4.2302	14.4244	0.0860	0.7693
action_type	Alley Oop Dunk Sh	1	1.3248	14.4218	0.0084	0.9268
action_type	Alley Oop Layup s	1	-0.7004	14.4173	0.0024	0.9613
action_type	Cutting Layup Sho	1	-0.7301	14.4399	0.0026	0.9597
action_type	Driving Bank shot	1	-0.8936	14.4657	0.0038	0.9507
action_type	Driving Dunk Shot	1	2.1405	14.4205	0.0220	0.8820
action_type	Driving Finger Ro	1	0.2792	14.4171	0.0004	0.9845
action_type	Driving Floating	1	-1.4372	14.4487	0.0099	0.9208
action_type	Driving Hook Shot	1	-1.1161	14.4258	0.0060	0.9383
action_type	Driving Jump shot	1	-1.8951	14.4208	0.0173	0.8954
action_type	Driving Layup Sho	1	-0.5272	14.4149	0.0013	0.9708
action_type	Driving Reverse L	1	-0.4600	14.4169	0.0010	0.9745
action_type	Driving Slam Dunk	1	2.1814	14.4489	0.0228	0.8800
action_type	Dunk Shot	1	-0.3349	14.4157	0.0005	0.9815
action_type	Fadeaway Bank sho	1	0.5624	14.4274	0.0015	0.9689
action_type	Fadeaway Jump Sho	1	-1.2293	14.4150	0.0073	0.9320
action_type	Finger Roll Layup	1	-0.0456	14.4230	0.0000	0.9975
action_type	Finger Roll Shot	1	-1.7085	14.4200	0.0140	0.9057
action_type	Floating Jump sho	1	-0.6271	14.4166	0.0019	0.9653
action_type	Follow Up Dunk Sh	1	0.7009	14.4519	0.0024	0.9613

Analysis of Maximum Likelihood Estimates							
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq	
action_type	Hook Bank Shot	1	10.6131	197.7	0.0029	0.9572	
action_type	Hook Shot	1	-2.1212	14.4168	0.0216	0.8830	
action_type	Jump Bank Shot	1	-0.2784	14.4155	0.0004	0.9846	
action_type	Jump Hook Shot	1	-0.5776	14.4239	0.0016	0.9681	
action_type	Jump Shot	1	-2.3117	14.4148	0.0257	0.8726	
action_type	Layup Shot	1	-2.0426	14.4149	0.0201	0.8873	
action_type	Pullup Bank shot	1	-1.3748	14.4272	0.0091	0.9241	
action_type	Pullup Jump shot	1	-0.6038	14.4152	0.0018	0.9666	
action_type	Putback Dunk Shot	1	-1.0162	14.4659	0.0049	0.9440	
action_type	Putback Layup Sho	1	-0.7285	14.4315	0.0025	0.9597	
action_type	Putback Slam Dunk	1	-1.6269	14.4814	0.0126	0.9106	
action_type	Reverse Dunk Shot	1	0.8186	14.4221	0.0032	0.9547	
action_type	Reverse Layup Sho	1	-1.0213	14.4152	0.0050	0.9435	
action_type	Reverse Slam Dunk	1	10.6187	114.6	0.0086	0.9262	
action_type	Running Bank shot	1	0.1249	14.4205	0.0001	0.9931	
action_type	Running Dunk Shot	1	0.4984	14.4336	0.0012	0.9725	
action_type	Running Finger Ro	1	-1.7794	14.4299	0.0152	0.9019	
action_type	Running Hook Shot	1	0.3459	14.4243	0.0006	0.9809	
action_type	Running Jump Shot	1	-0.4603	14.4150	0.0010	0.9745	
action_type	Running Layup Sho	1	-0.7123	14.4180	0.0024	0.9606	
action_type	Running Pull-Up J	1	-0.8555	14.4652	0.0035	0.9528	
action_type	Running Reverse L	1	-1.3394	14.4345	0.0086	0.9261	
action_type	Running Slam Dunk	1	10.3373	442.5	0.0005	0.9814	
action_type	Running Tip Shot	1	-13.8362	441.9	0.0010	0.9750	
action_type	Slam Dunk Shot	1	2.4098	14.4205	0.0279	0.8673	
action_type	Step Back Jump sh	1	-1.0346	14.4162	0.0052	0.9428	
action_type	Tip Layup Shot	1	-1.6947	14.4825	0.0137	0.9068	
action_type	Tip Shot	1	-2.2191	14.4158	0.0237	0.8777	
action_type	Turnaround Bank s	1	-0.1377	14.4183	0.0001	0.9924	
action_type	Turnaround Fadeaw	1	-1.1674	14.4152	0.0066	0.9355	
action_type	Turnaround Finger	1	10.4184	312.9	0.0011	0.9734	
action_type	Turnaround Hook S	1	-1.5846	14.4317	0.0121	0.9126	
shot_zone_area	Back Court(BC)	1	-2.9901	0.8421	12.6071	0.0004	
shot_zone_area	Center(C)	1	0.5980	0.1706	12.2873	0.0005	
shot_zone_area	Left Side Center(LC)	1	0.6311	0.1716	13.5239	0.0002	

Analysis of Maximum Likelihood Estimates							
Parameter DF Estimate Standard Wald Chi-Square Pr > ChiSq							
shot_zone_area	Left Side(L)	1	0.4735	0.1720	7.5808	0.0059	
shot_zone_area	Right Side Center(RC)	1	0.7407	0.1712	18.7240	<.0001	
attendance		1	0.000180	0.000013	197.7424	<.0001	
arena_temp	_	1	0.0343	0.00675	25.7697	<.0001	
seconds_remaining		1	0.00337	0.000781	18.6687	<.0001	

	Odds Ratio Estimates			
Effect		Point Estimate		Wald ice Limits
action_type	Alley Oop Dunk Sh vs Turnaround Jump S	11.822	4.744	29.462
action_type	Alley Oop Layup s vs Turnaround Jump S	1.560	0.898	2.712
action_type	Cutting Layup Sho vs Turnaround Jump S	1.514	0.274	8.358
action_type	Driving Bank shot vs Turnaround Jump S	1.286	0.114	14.568
action_type	Driving Dunk Shot vs Turnaround Jump S	26.727	11.738	60.857
action_type	Driving Finger Ro vs Turnaround Jump S	4.155	2.440	7.07
action_type	Driving Floating vs Turnaround Jump S	0.747	0.103	5.425
action_type	Driving Hook Shot vs Turnaround Jump S	1.030	0.331	3.198
action_type	Driving Jump shot vs Turnaround Jump S	0.472	0.204	1.095
action_type	Driving Layup Sho vs Turnaround Jump S	1.855	1.546	2.226
action_type	Driving Reverse L vs Turnaround Jump S	1.984	1.183	3.329
action_type	Driving Slam Dunk vs Turnaround Jump S	27.841	3.808	203.550
action_type	Dunk Shot vs Turnaround Jump S	2.248	1.580	3.19
action_type	Fadeaway Bank sho vs Turnaround Jump S	5.516	1.643	18.520
action_type	Fadeaway Jump Sho vs Turnaround Jump S	0.919	0.759	1.113
action_type	Finger Roll Layup vs Turnaround Jump S	3.003	1.123	8.02
action_type	Finger Roll Shot vs Turnaround Jump S	0.569	0.259	1.25
action_type	Floating Jump sho vs Turnaround Jump S	1.679	1.043	2.70 <sup>-</sup>
action_type	Follow Up Dunk Sh vs Turnaround Jump S	6.335	0.797	50.362
action_type	Hook Bank Shot vs Turnaround Jump S	>999.999	<0.001	>999.999
action_type	Hook Shot vs Turnaround Jump S	0.377	0.229	0.620
action_type	Jump Bank Shot vs Turnaround Jump S	2.379	1.746	3.242
action_type	Jump Hook Shot vs Turnaround Jump S	1.764	0.628	4.957
action_type	Jump Shot vs Turnaround Jump S	0.311	0.271	0.358
action_type	Layup Shot vs Turnaround Jump S	0.408	0.344	0.482
action_type	Pullup Bank shot vs Turnaround Jump S	0.795	0.239	2.64
action_type	Pullup Jump shot vs Turnaround Jump S	1.718	1.326	2.226

Odds Ratio Estimates					
Effect	Point Estimate		Wald nce Limits		
action_type Putback Dunk Shot vs Turnaround Jump S	1.138	0.100	12.963		
action_type Putback Layup Sho vs Turnaround Jump S	1.517	0.376	6.125		
action_type Putback Slam Dunk vs Turnaround Jump S	0.618	0.038	9.916		
action_type Reverse Dunk Shot vs Turnaround Jump S	7.126	2.818	18.018		
action_type Reverse Layup Sho vs Turnaround Jump S	1.132	0.867	1.478		
action_type Reverse Slam Dunk vs Turnaround Jump S	>999.999	<0.001	>999.999		
action_type Running Bank shot vs Turnaround Jump S	3.561	1.562	8.119		
action_type Running Dunk Shot vs Turnaround Jump S	5.174	1.177	22.743		
action_type Running Finger Ro vs Turnaround Jump S	0.530	0.141	1.996		
action_type Running Hook Shot vs Turnaround Jump S	4.442	1.544	12.775		
action_type Running Jump Shot vs Turnaround Jump S	1.984	1.603	2.454		
action_type Running Layup Sho vs Turnaround Jump S	1.542	0.828	2.872		
action_type Running Pull-Up J vs Turnaround Jump S	1.336	0.119	14.965		
action_type Running Reverse L vs Turnaround Jump S	0.823	0.181	3.747		
action_type Running Slam Dunk vs Turnaround Jump S	>999.999	<0.001	>999.999		
action_type Running Tip Shot vs Turnaround Jump S	<0.001	<0.001	>999.999		
action_type Slam Dunk Shot vs Turnaround Jump S	34.987	15.401	79.481		
action_type Step Back Jump sh vs Turnaround Jump S	1.117	0.734	1.700		
action_type	0.577	0.035	9.487		
action_type Tip Shot vs Turnaround Jump S	0.342	0.237	0.492		
action_type Turnaround Bank s vs Turnaround Jump S	2.739	1.426	5.258		
action_type Turnaround Fadeaw vs Turnaround Jump S	0.978	0.763	1.254		
action_type Turnaround Finger vs Turnaround Jump S	>999.999	<0.001	>999.999		
action_type Turnaround Hook S vs Turnaround Jump S	0.644	0.159	2.616		
shot_zone_area Back Court(BC) vs Right Side(R)	0.029	0.004	0.211		
shot_zone_area Center(C) vs Right Side(R)	1.053	0.962	1.151		
shot_zone_area	1.088	0.984	1.203		
shot_zone_area Left Side(L) vs Right Side(R)	0.929	0.839	1.030		
shot_zone_area Right Side Center(RC) vs Right Side(R)	1.214	1.103	1.336		
attendance	1.000	1.000	1.000		
arena_temp	1.035	1.021	1.049		
seconds_remaining	1.003	1.002	1.005		

Association of Predicted Probabilities and Observed Responses						
Percent Concordant	70.4	Somers' D	0.408			
Percent Discordant	29.6	Gamma	0.408			
Percent Tied	0.0	Tau-a	0.202			
Pairs	163169880	С	0.704			

Residual Chi-Square Test					
Chi-Square DF Pr > ChiSq					
24.5480	7	0.0009			

Analysis of Effects Eligible for Entry							
Effect	Effect DF Chi-Square Pr > ChiSo						
avgnoisedb	1	0.1522	0.6964				
period	6	24.4422	0.0004				

## **Step 6. Effect period entered:**

Model Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics						
Intercept and Criterion Only Covariates						
AIC	35327.083	31191.238				
sc	35335.237	31729.411				
-2 Log L	35325.083	31059.238				

Testing Global Null Hypothesis: BETA=0							
Test	Chi-Square	DF	Pr > ChiSq				
Likelihood Ratio	4265.8449	65	<.0001				
Score	3939.9390	65	<.0001				
Wald	2926.6661	65	<.0001				

Type 3 Analysis of Effects								
Effect	DF	Wald Chi-Square	Pr > ChiSq					
action_type	51	2448.0171	<.0001					
shot_zone_area	5	42.9820	<.0001					
attendance	1	195.5185	<.0001					
arena_temp	1	25.8649	<.0001					
period	6	24.4210	0.0004					
seconds_remaining	1	18.8297	<.0001					

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept		1	-4.2864	14.4263	0.0883	0.7664
action_type	Alley Oop Dunk Sh	1	1.3319	14.4231	0.0085	0.9264
action_type	Alley Oop Layup s	1	-0.6892	14.4185	0.0023	0.9619
action_type	Cutting Layup Sho	1	-0.7252	14.4413	0.0025	0.9599
action_type	Driving Bank shot	1	-0.8959	14.4675	0.0038	0.9506
action_type	Driving Dunk Shot	1	2.1472	14.4217	0.0222	0.8816
action_type	Driving Finger Ro	1	0.2782	14.4183	0.0004	0.9846
action_type	Driving Floating	1	-1.3984	14.4502	0.0094	0.9229
action_type	Driving Hook Shot	1	-1.1076	14.4270	0.0059	0.9388
action_type	Driving Jump shot	1	-1.8798	14.4220	0.0170	0.8963
action_type	Driving Layup Sho	1	-0.5222	14.4161	0.0013	0.9711
action_type	Driving Reverse L	1	-0.4646	14.4182	0.0010	0.9743
action_type	Driving Slam Dunk	1	2.1844	14.4502	0.0229	0.8798
action_type	Dunk Shot	1	-0.3284	14.4169	0.0005	0.9818
action_type	Fadeaway Bank sho	1	0.5672	14.4286	0.0015	0.9686
action_type	Fadeaway Jump Sho	1	-1.2207	14.4162	0.0072	0.9325
action_type	Finger Roll Layup	1	-0.0692	14.4242	0.0000	0.9962
action_type	Finger Roll Shot	1	-1.6956	14.4213	0.0138	0.9064
action_type	Floating Jump sho	1	-0.6260	14.4178	0.0019	0.9654
action_type	Follow Up Dunk Sh	1	0.6911	14.4531	0.0023	0.9619
action_type	Hook Bank Shot	1	10.5758	197.8	0.0029	0.9574
action_type	Hook Shot	1	-2.1358	14.4180	0.0219	0.8822
action_type	Jump Bank Shot	1	-0.2796	14.4167	0.0004	0.9845
action_type	Jump Hook Shot	1	-0.5870	14.4252	0.0017	0.9675
action_type	Jump Shot	1	-2.3056	14.4161	0.0256	0.8729
action_type	Layup Shot	1	-2.0392	14.4161	0.0200	0.8875

	Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq	
action_type	Pullup Bank shot	1	-1.3773	14.4285	0.0091	0.9240	
action_type	Pullup Jump shot	1	-0.5975	14.4165	0.0017	0.9669	
action_type	Putback Dunk Shot	1	-1.0059	14.4670	0.0048	0.9446	
action_type	Putback Layup Sho	1	-0.7292	14.4328	0.0026	0.9597	
action_type	Putback Slam Dunk	1	-1.6389	14.4826	0.0128	0.9099	
action_type	Reverse Dunk Shot	1	0.8242	14.4233	0.0033	0.9544	
action_type	Reverse Layup Sho	1	-1.0280	14.4165	0.0051	0.9432	
action_type	Reverse Slam Dunk	1	10.6136	114.7	0.0086	0.9263	
action_type	Running Bank shot	1	0.1402	14.4218	0.0001	0.9922	
action_type	Running Dunk Shot	1	0.5060	14.4349	0.0012	0.9720	
action_type	Running Finger Ro	1	-1.7933	14.4311	0.0154	0.9011	
action_type	Running Hook Shot	1	0.3642	14.4256	0.0006	0.9799	
action_type	Running Jump Shot	1	-0.4520	14.4163	0.0010	0.9750	
action_type	Running Layup Sho	1	-0.7132	14.4192	0.0024	0.9606	
action_type	Running Pull-Up J	1	-0.8879	14.4664	0.0038	0.9511	
action_type	Running Reverse L	1	-1.3293	14.4358	0.0085	0.9266	
action_type	Running Slam Dunk	1	10.3901	442.5	0.0006	0.9813	
action_type	Running Tip Shot	1	-13.8409	441.9	0.0010	0.9750	
action_type	Slam Dunk Shot	1	2.4165	14.4217	0.0281	0.8669	
action_type	Step Back Jump sh	1	-1.0186	14.4174	0.0050	0.9437	
action_type	Tip Layup Shot	1	-1.7027	14.4837	0.0138	0.9064	
action_type	Tip Shot	1	-2.2120	14.4170	0.0235	0.8781	
action_type	Turnaround Bank s	1	-0.1486	14.4196	0.0001	0.9918	
action_type	Turnaround Fadeaw	1	-1.1640	14.4164	0.0065	0.9356	
action_type	Turnaround Finger	1	10.3473	312.9	0.0011	0.9736	
action_type	Turnaround Hook S	1	-1.6247	14.4329	0.0127	0.9104	
shot_zone_area	Back Court(BC)	1	-3.0221	0.8423	12.8723	0.0003	
shot_zone_area	Center(C)	1	0.6041	0.1706	12.5327	0.0004	
shot_zone_area	Left Side Center(LC)	1	0.6406	0.1717	13.9237	0.0002	
shot_zone_area	Left Side(L)	1	0.4802	0.1720	7.7916	0.0052	
shot_zone_area	Right Side Center(RC)	1	0.7477	0.1712	19.0739	<.0001	
attendance		1	0.000179	0.000013	195.5185	<.0001	
arena_temp		1	0.0344	0.00676	25.8649	<.0001	
period	1	1	0.1278	0.1336	0.9157	0.3386	
period	2	1	0.0675	0.1340	0.2539	0.6144	

Analysis of Maximum Likelihood Estimates							
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq	
period	3	1	0.0600	0.1335	0.2022	0.6529	
period	4	1	-0.0593	0.1338	0.1964	0.6576	
period	5	1	0.00478	0.1728	0.0008	0.9779	
period	6	1	-0.2019	0.3687	0.2999	0.5839	
seconds_remaining		1	0.00339	0.000782	18.8297	<.0001	

Odds Ratio Estimates						
Effect		Point Estimate	95% Wald Confidence Limits			
action_type	Alley Oop Dunk Sh vs Turnaround Jump S	11.891	4.771	29.637		
action_type	Alley Oop Layup s vs Turnaround Jump S	1.576	0.906	2.739		
action_type	Cutting Layup Sho vs Turnaround Jump S	1.520	0.275	8.414		
action_type	Driving Bank shot vs Turnaround Jump S	1.281	0.112	14.707		
action_type	Driving Dunk Shot vs Turnaround Jump S	26.869	11.799	61.186		
action_type	Driving Finger Ro vs Turnaround Jump S	4.146	2.434	7.061		
action_type	Driving Floating vs Turnaround Jump S	0.775	0.106	5.667		
action_type	Driving Hook Shot vs Turnaround Jump S	1.037	0.333	3.224		
action_type	Driving Jump shot vs Turnaround Jump S	0.479	0.206	1.112		
action_type	Driving Layup Sho vs Turnaround Jump S	1.862	1.552	2.234		
action_type	Driving Reverse L vs Turnaround Jump S	1.972	1.175	3.310		
action_type	Driving Slam Dunk vs Turnaround Jump S	27.889	3.815	203.888		
action_type	Dunk Shot vs Turnaround Jump S	2.260	1.588	3.217		
action_type	Fadeaway Bank sho vs Turnaround Jump S	5.535	1.647	18.594		
action_type	Fadeaway Jump Sho vs Turnaround Jump S	0.926	0.765	1.121		
action_type	Finger Roll Layup vs Turnaround Jump S	2.929	1.096	7.829		
action_type	Finger Roll Shot vs Turnaround Jump S	0.576	0.262	1.266		
action_type	Floating Jump sho vs Turnaround Jump S	1.678	1.043	2.702		
action_type	Follow Up Dunk Sh vs Turnaround Jump S	6.265	0.788	49.799		
action_type	Hook Bank Shot vs Turnaround Jump S	>999.999	<0.001	>999.999		
action_type	Hook Shot vs Turnaround Jump S	0.371	0.225	0.610		
action_type	Jump Bank Shot vs Turnaround Jump S	2.373	1.741	3.234		
action_type	Jump Hook Shot vs Turnaround Jump S	1.745	0.620	4.910		
action_type	Jump Shot vs Turnaround Jump S	0.313	0.272	0.360		
action_type	Layup Shot vs Turnaround Jump S	0.408	0.345	0.483		
action_type	Pullup Bank shot vs Turnaround Jump S	0.792	0.238	2.637		
action_type	Pullup Jump shot vs Turnaround Jump S	1.727	1.333	2.238		

	Point	95%	Wald
Effect	Estimate		ice Limits
action_type Putback Dunk Shot vs Turnaround Jump S	1.148	0.101	13.035
action_type Putback Layup Sho vs Turnaround Jump S	1.514	0.374	6.119
action_type Putback Slam Dunk vs Turnaround Jump S	0.610	0.038	9.789
action_type Reverse Dunk Shot vs Turnaround Jump S	7.157	2.830	18.097
action_type Reverse Layup Sho vs Turnaround Jump S	1.123	0.860	1.466
action_type Reverse Slam Dunk vs Turnaround Jump S	>999.999	<0.001	>999.999
action_type Running Bank shot vs Turnaround Jump S	3.611	1.583	8.239
action_type Running Dunk Shot vs Turnaround Jump S	5.206	1.184	22.895
action_type Running Finger Ro vs Turnaround Jump S	0.522	0.139	1.966
action_type Running Hook Shot vs Turnaround Jump S	4.518	1.571	12.996
action_type Running Jump Shot vs Turnaround Jump S	1.997	1.614	2.471
action_type Running Layup Sho vs Turnaround Jump S	1.538	0.824	2.870
action_type Running Pull-Up J vs Turnaround Jump S	1.292	0.116	14.435
action_type Running Reverse L vs Turnaround Jump S	0.831	0.182	3.785
action_type Running Slam Dunk vs Turnaround Jump S	>999.999	<0.001	>999.999
action_type Running Tip Shot vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Slam Dunk Shot vs Turnaround Jump S	35.173	15.482	79.908
action_type Step Back Jump sh vs Turnaround Jump S	1.133	0.744	1.726
action_type	0.572	0.035	9.394
action_type Tip Shot vs Turnaround Jump S	0.344	0.238	0.496
action_type	2.705	1.408	5.196
action_type	0.980	0.764	1.257
action_type	>999.999	<0.001	>999.999
action_type Turnaround Hook S vs Turnaround Jump S	0.618	0.152	2.511
shot_zone_area Back Court(BC) vs Right Side(R)	0.028	0.004	0.204
shot_zone_area Center(C) vs Right Side(R)	1.056	0.966	1.155
shot_zone_area	1.095	0.991	1.211
shot_zone_area Left Side(L) vs Right Side(R)	0.933	0.842	1.034
shot_zone_area Right Side Center(RC) vs Right Side(R)	1.219	1.108	1.342
attendance	1.000	1.000	1.000
arena_temp	1.035	1.021	1.049
period 1 vs 7	1.135	0.230	5.600
period 2 vs 7	1.069	0.217	5.273
period 3 vs 7	1.061	0.215	5.233
period 4 vs 7	0.941	0.191	4.645

Odds Ratio Estimates						
Effect		Point Estimate		Wald nce Limits		
period	5 vs 7	1.004	0.199	5.051		
period	6 vs 7	0.816	0.137	4.860		
seconds_r	emaining	1.003	1.002	1.005		

Association of Predicted Probabilities and Observed Responses								
Percent Concordant 70.6 Somers' D 0.412								
Percent Discordant 29.4 Gamma 0.4								
Percent Tied 0.0 Tau-a 0.204								
Pairs	163169880	С	0.706					

Residual Chi-Square Test					
Chi-Square DF Pr > ChiSq					
0.1060	1	0.7447			

Analysis of Effects Eligible for Entry							
Score Effect DF Chi-Square Pr > ChiSq							
avgnoisedb	1	0.1060	0.7447				

 $\textbf{Note:} \ \ \text{No (additional) effects met the 0.35 significance level for entry into the model.}$ 

Summary of Forward Selection								
Step	Effect Entered	DF	Number In	Score Chi-Square	Pr > ChiSq			
1	action_type	51	1	3641.0049	<.0001			
2	attendance	1	2	213.2263	<.0001			
3	shot_zone_area	5	3	64.7280	<.0001			
4	arena_temp	1	4	25.8253	<.0001			
5	seconds_remaining	1	5	18.6790	<.0001			
6	period	6	6	24.4422	0.0004			

	Partition for the Hosmer and Lemeshow Test										
		shot_mad	e_flag = 1	shot_mad	e_flag = 0						
Group	Total	Observed	Expected	Observed	Expected						
1	2570	644	626.50	1926	1943.50						
2	2570	730	740.83	1840	1829.17						
3	2570	793	799.03	1777	1770.97						
4	2570	849	850.39	1721	1719.61						
5	2570	906	904.34	1664	1665.66						
6	2570	992	969.92	1578 1600.0							
7	2571	1050	1079.70	1521 1491.3							
8	2570	1460	1463.88	1110 1106.1							
9	2570	1836	1834.04	734 735.9							
10	2566	2205	2196.36	361	369.64						

Hosmer and Lemeshow Goodness-of-Fit Test							
Chi-Square DF Pr > ChiSq							
3.4261 8 0.9048							

	Classification Table										
	Correct Incorrect				Percentages						
Prob Level	Event	Non- Event	Event	Non- Event	Correct	Sensi- tivity	Speci- ficity	False POS	False NEG		
0.000	11465	0	14232	0	44.6	100.0	0.0	55.4			
0.020	11464	69	14163	1	44.9	100.0	0.5	55.3	1.4		
0.040	11464	69	14163	1	44.9	100.0	0.5	55.3	1.4		
0.060	11464	70	14162	1	44.9	100.0	0.5	55.3	1.4		
0.080	11464	72	14160	1	44.9	100.0	0.5	55.3	1.4		
0.100	11464	72	14160	1	44.9	100.0	0.5	55.3	1.4		
0.120	11464	72	14160	1	44.9	100.0	0.5	55.3	1.4		
0.140	11463	72	14160	2	44.9	100.0	0.5	55.3	2.7		
0.160	11463	72	14160	2	44.9	100.0	0.5	55.3	2.7		
0.180	11462	77	14155	3	44.9	100.0	0.5	55.3	3.8		
0.200	11454	114	14118	11	45.0	99.9	0.8	55.2	8.8		
0.220	11416	229	14003	49	45.3	99.6	1.6	55.1	17.6		
0.240	11320	538	13694	145	46.1	98.7	3.8	54.7	21.2		
0.260	11069	1218	13014	396	47.8	96.5	8.6	54.0	24.5		
0.280	10665	2276	11956	800	50.4	93.0	16.0	52.9	26.0		

Classification Table										
	Coi	rrect	Inco	rrect		Per	centages	;		
Prob Level	Event	Non- Event	Event	Non- Event	Correct	Sensi- tivity	Speci- ficity	False POS	False NEG	
0.300	10091	3686	10546	1374	53.6	88.0	25.9	51.1	27.2	
0.320	9305	5453	8779	2160	57.4	81.2	38.3	48.5	28.4	
0.340	8473	7167	7065	2992	60.9	73.9	50.4	45.5	29.5	
0.360	7635	8693	5539	3830	63.5	66.6	61.1	42.0	30.6	
0.380	6928	9872	4360	4537	65.4	60.4	69.4	38.6	31.5	
0.400	6356	10748	3484	5109	66.6	55.4	75.5	35.4	32.2	
0.420	5967	11367	2865	5498	67.5	52.0	79.9	32.4	32.6	
0.440	5694	11758	2474	5771	67.9	49.7	82.6	30.3	32.9	
0.460	5513	11977	2255	5952	68.1	48.1	84.2	29.0	33.2	
0.480	5401	12117	2115	6064	68.2	47.1	85.1	28.1	33.4	
0.500	5296	12222	2010	6169	68.2	46.2	85.9	27.5	33.5	
0.520	5213	12325	1907	6252	68.2	45.5	86.6	26.8	33.7	
0.540	5104	12414	1818	6361	68.2	44.5	87.2	26.3	33.9	
0.560	4968	12510	1722	6497	68.0	43.3	87.9	25.7	34.2	
0.580	4787	12626	1606	6678	67.8	41.8	88.7	25.1	34.6	
0.600	4584	12771	1461	6881	67.5	40.0	89.7	24.2	35.0	
0.620	4351	12897	1335	7114	67.1	38.0	90.6	23.5	35.6	
0.640	4153	13040	1192	7312	66.9	36.2	91.6	22.3	35.9	
0.660	3927	13150	1082	7538	66.5	34.3	92.4	21.6	36.4	
0.680	3697	13269	963	7768	66.0	32.2	93.2	20.7	36.9	
0.700	3418	13375	857	8047	65.4	29.8	94.0	20.0	37.6	
0.720	3075	13502	730	8390	64.5	26.8	94.9	19.2	38.3	
0.740	2644	13666	566	8821	63.5	23.1	96.0	17.6	39.2	
0.760	2196	13836	396	9269	62.4	19.2	97.2	15.3	40.1	
0.780	1737	13996	236	9728	61.2	15.2	98.3	12.0	41.0	
0.800	1374	14101	131	10091	60.2	12.0	99.1	8.7	41.7	
0.820	1147	14139	93	10318	59.5	10.0	99.3	7.5	42.2	
0.840	1023	14167	65	10442	59.1	8.9	99.5	6.0	42.4	
0.860	951	14176	56	10514	58.9	8.3	99.6	5.6	42.6	
0.880	876	14184	48	10589	58.6	7.6	99.7	5.2	42.7	
0.900	815	14197	35	10650	58.4	7.1	99.8	4.1	42.9	
0.920	765	14204	28	10700	58.3	6.7	99.8	3.5	43.0	
0.940	712	14210	22	10753	58.1	6.2	99.8	3.0	43.1	
0.960	651	14216	16	10814	57.9	5.7	99.9	2.4	43.2	

	Classification Table										
	Correct Incorrect Percentages										
Prob Level	Event	Non- Event	Event	Non- Event	Correct	Sensi- tivity	Speci- ficity	False POS	False NEG		
0.980	336	14223	9	11129	56.7	2.9	99.9	2.6	43.9		
1.000	0	14232	0	11465	55.4	0.0	100.0		44.6		