

leading question regarding gun permits example (success = favor permit)

The FREQ Procedure

Frequency Row Pct	Table of group by response		
	response(favor permit)		
group	favor	not	Total
leadingQ	403 68.89	182 31.11	585
neutralQ	463 75.28	152 24.72	615
Total	866	334	1200

sample counts and percentages

sample proportions

Column 1 Risk Estimates						
	Risk	ASE	95% Confidence Limits		Exact 95% Confidence Limits	
Row 1	0.6889	0.0191	0.6514	0.7264	0.6496	0.7262
Row 2	0.7528	0.0174	0.7188	0.7869	0.7168	0.7865
Total	0.7217	0.0129	0.6963	0.7470	0.6954	0.7469
Difference	-0.0640	0.0259	-0.1146	-0.0133		

phat\_1-phat\_2

95% confidence interval for  $p_1 - p_2$

Risk Difference Test	
H0: $P_1 - P_2 = 0$ Wald Method	
Risk Difference	-0.0640
ASE (Sample)	0.0259
Z	-2.4729
One-sided Pr < Z	0.0067
Two-sided Pr >  Z	0.0134
Column 1 (response = favor)	

Z is the test statistic Z\_calc  
 Pr < Z is the P-value for H\_1:  $p_1 < p_2$   
 Pr > |Z| is the P-value for H\_1:  $p_1 \neq p_2$

The FREQ Procedure

Frequency Row Pct	Table of group by response		
	response(HIV status)		
group	positive	negative	Total
vaccine	241 6.70	3357 93.30	3598
control	126 6.98	1679 93.02	1805
Total	367	5036	5403

sample counts and percentages

sample proportions

Column 1 Risk Estimates						
	Risk	ASE	95% Confidence Limits		Exact 95% Confidence Limits	
Row 1	0.0670	0.0042	0.0588	0.0752	0.0590	0.0756
Row 2	0.0698	0.0060	0.0581	0.0816	0.0585	0.0826
Total	0.0679	0.0034	0.0612	0.0746	0.0614	0.0750
Difference	-0.0028	0.0073	-0.0171	0.0115		

phat<sub>1</sub>-phat<sub>2</sub>

95% confidence interval for p<sub>1</sub> - p<sub>2</sub>

Risk Difference Test	
H0: P1 - P2 = 0 Wald Method	
Risk Difference	-0.0028
ASE (Sample)	0.0073
Z	-0.3867
One-sided Pr < Z	0.3495
Two-sided Pr >  Z	0.6990
Column 1 (response = positive)	

Z is the test statistic Z<sub>calc</sub>  
 Pr < Z is the P-value for H<sub>1</sub>: p<sub>1</sub> < p<sub>2</sub>  
 Pr > |Z| is the P-value for H<sub>1</sub>: p<sub>1</sub> not equal p<sub>2</sub>

**West of Scotland coronary prevention study: 5 years (success=yes)**

**The FREQ Procedure**

Frequency Row Pct	Table of drug by response		
	response(has a coronary event)		
drug	yes	no	Total
pravastatin	174 5.27	3128 94.73	3302
placebo	248 7.53	3045 92.47	3293
<b>Total</b>	422	6173	6595

sample counts and percentages

sample proportions

Column 1 Risk Estimates						
	Risk	ASE	95% Confidence Limits		Exact 95% Confidence Limits	
Row 1	0.0527	0.0039	0.0451	0.0603	0.0453	0.0609
Row 2	0.0753	0.0046	0.0663	0.0843	0.0665	0.0849
Total	0.0640	0.0030	0.0581	0.0699	0.0582	0.0702
Difference	-0.0226	0.0060	-0.0344	-0.0108		

95% confidence interval for  $p_1 - p_2$

$\hat{p}_1 - \hat{p}_2$

Difference is (Row 1 - Row 2)

Risk Difference Test	
H0: $P_1 - P_2 = 0$ Wald Method	
Risk Difference	-0.0226
ASE (Sample)	0.0060
Z	-3.7555
One-sided Pr < Z	<.0001
Two-sided Pr >  Z	0.0002
Column 1 (response = yes)	

Z is the test statistic  $Z_{calc}$

$Pr < Z$  is the P-value for  $H_1: p_1 < p_2$

$Pr > |Z|$  is the P-value for  $H_1: p_1 \neq p_2$

**West of Scotland coronary prevention study: 15 years (success=yes)**

**The FREQ Procedure**

Frequency Row Pct	Table of drug by response			
	response(has a coronary event)			
	drug	yes	no	Total
	pravastatin	390 11.81	2912 88.19	3302
	placebo	509 15.46	2784 84.54	3293
	<b>Total</b>	899	5696	6595

sample counts and percentages

sample proportions

Column 1 Risk Estimates						
	Risk	ASE	95% Confidence Limits		Exact 95% Confidence Limits	
Row 1	0.1181	0.0056	0.1071	0.1291	0.1073	0.1296
Row 2	0.1546	0.0063	0.1422	0.1669	0.1424	0.1674
Total	0.1363	0.0042	0.1280	0.1446	0.1281	0.1448

Difference	-0.0365	0.0084	-0.0530	-0.0199		
Difference is (Row 1 - Row 2)						

95% confidence interval for  $p_1 - p_2$

$\hat{p}_1 - \hat{p}_2$

Risk Difference Test	
H0: $P_1 - P_2 = 0$ Wald Method	
Risk Difference	-0.0365
ASE (Sample)	0.0084
Z	-4.3201
One-sided Pr < Z	<.0001
Two-sided Pr >  Z	<.0001
Column 1 (response = yes)	

Z is the test statistic  $Z_{calc}$

$Pr < Z$  is the P-value for  $H_1: p_1 < p_2$

$Pr > |Z|$  is the P-value for  $H_1: p_1 \neq p_2$