Course VI-2, 2015



http://www.openepi.com

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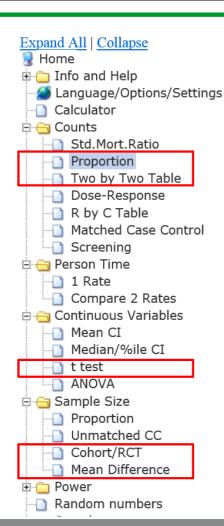


SLIDE 1

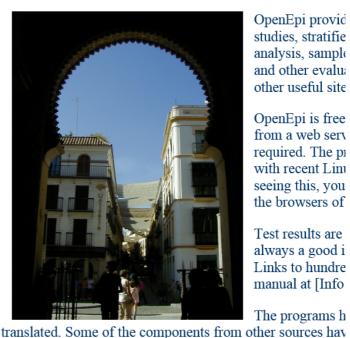
Useful when...

- 1. You want to calculate 95%CI of a proportion.
- 2. You have a filled contingency table and want to perform a statistical test.
- 3. You know mean (SD) of your data and want to perform a statistical test.
- 4. You want to calculate a sample size.









OpenEpi provid studies, stratifie analysis, sample and other evalua other useful site

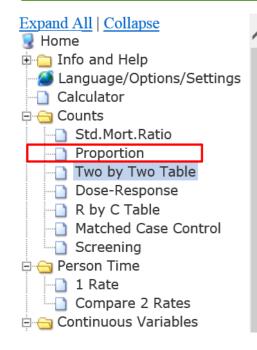
OpenEpi is free from a web serv required. The pr with recent Lin seeing this, you the browsers of

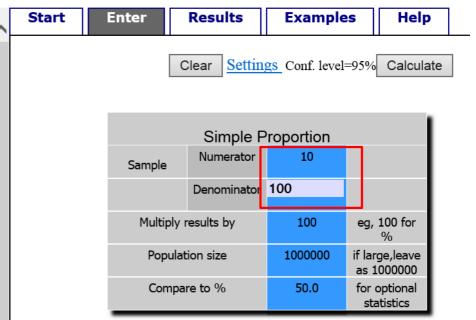
Test results are always a good i Links to hundre manual at [Info FUKUSHIMA

MEDICAL The programs h

SLIDE 3

Proportion







Start Enter Results Examples Help

95% Confidence Limits for Proportion 10/100 Multiplier=100

Large population size or sample with replacement.

Lower CL Per 100 Upper CL

	Lond CL IV	Too opper on
Proportion as Percent		10
Mid-P Exact	5.193	17.1
Fisher Exact(Clopper-Pearson)	4.9	17.62
Wald (Normal Approx.)	4.12	15.88
Modified Wald(Agresti-Coull)	5.349	17.61
Score(Wilson)*	5.523	17.44
Score with Continuity		
Correction (Fleiss Quadratic)	5.163	18.04
*LookFirst items: Editor's choice	of items to exam	nine first.

One-Sample Test for Binomial Proportion, Normal-Theory Method Does proportion 0.1 differ from 0.5?

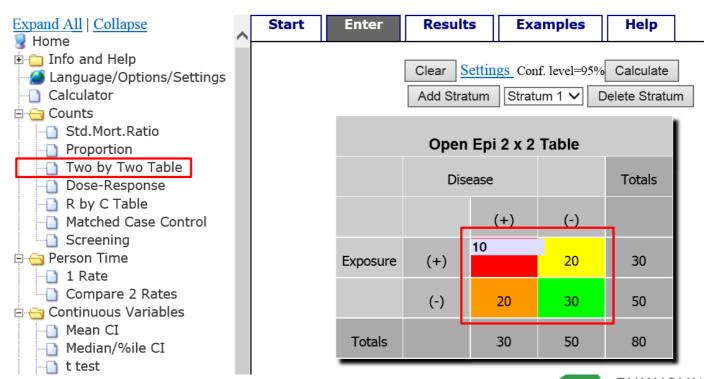
z-value = -8 Two-sided p-value=<0.0000001

Results from OpenEpi, Version 3, open source calculator--Proportion Print from the browser with ctrl-P or select text to copy and paste to other programs.



SLIDE 5

Two by Two



Start Enter Results Examples Help

2 x 2 Table Statistics

Single Table Analysis

Disease (+) (-) (+) 10 2030

Exposure (-) 20 3050 30 5080

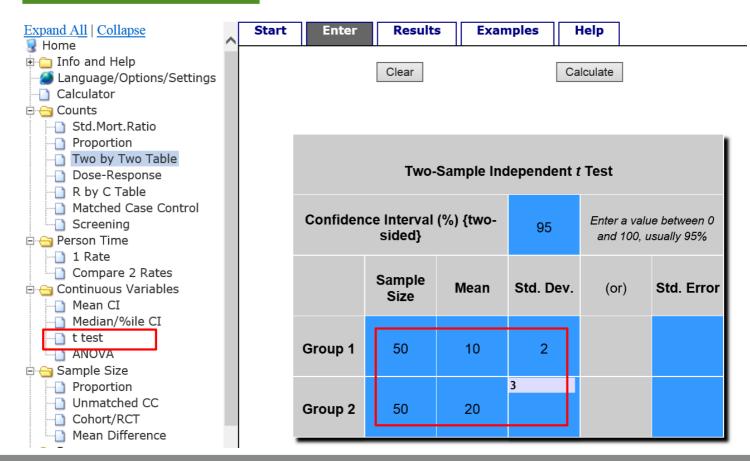
Chi Square and Exact Measures of Association

Test	Value	p-value(1-tail)	p-value(2-tail)
Uncorrected chi square	0.3556	0.2755	0.5510
Yates corrected chi square	0.128	0.3603	0.7205
Mantel-Haenszel chi square	0.3511	0.2767	0.5535
Fisher exact		0.3621(P)	0.7243
Mid-P exact		0.2823(P)	0.5647



SLIDE 7

T test



Start	Enter	Results	Examples	Help
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Two-Sample Independent t Test

Input Data

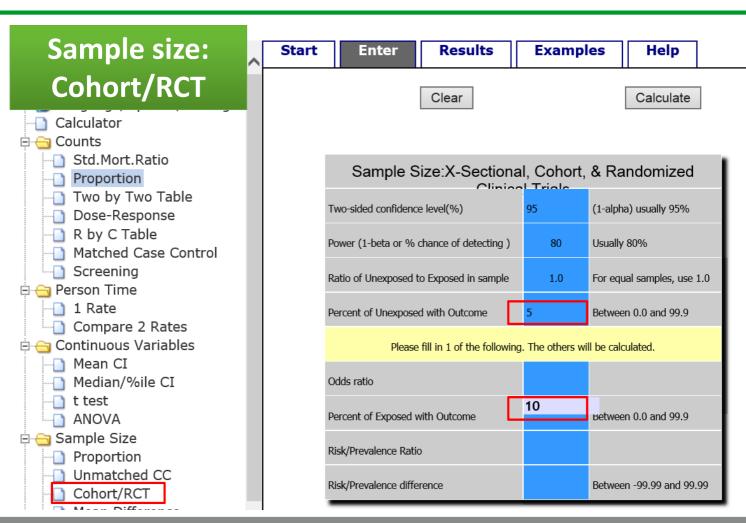
Two-sided con	fidence interval	95%	o	
	Sample size		Std. Dev.	Std. Error
Group-1	50	10	2	
Group-2	50	12	3	

Result	t statistics	df	p-value¹	Mean Differen	ceLower Limit	Upper Limi
Equal variance	-3.92232	98	0.0001628	-2	-3.01188	-0.988123
Unequal variance	-3.92232	85	0.0001772	-2	-3.01382	-0.98618

F statistics df(numerator, denominator) p-value¹ Test for equality of variance² 2.25 49,49 0.005325



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¹ p-value (two-tailed)

² Hartley's f test for equality of variance

Start Enter Results Examples Help

Two-sided significance level(1-alpha):	95
Power(1-beta, % chance of detecting):	80
Ratio of sample size, Unexposed/Exposed:	1
Percent of Unexposed with Outcome:	5
Percent of Exposed with Outcome:	10
Odds Ratio:	2.1
Risk/Prevalence Ratio:	2
Risk/Prevalence difference:	5

	Kelsey	Fleiss	Fleiss with CC
Sample Size - Exposed Sample Size-Nonexposed	437 437	436 436	475 475
Total sample size:	874	872	950



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Sample size: Mean Difference



Std.Mort.Ratio
Proportion

Two by Two Table
Dose-Response

R by C Table

Matched Case Control

Screening

□ ⊖ Person Time
□ 1 Rate

Compare 2 Rates

□ 👝 Continuous Variables

Mean CI

Median/%ile CI

t test
ANOVA

□ 🕣 Sample Size

Proportion

Unmatched CC

Cohort/RCT

Mean Difference

Start Enter

Results

Examples

Help

Clear

Calculate

Sample Size For Comparing Two Means						
Confidence Interval % (two-sided)			95	Enter a value between 0 and 100, usually 95%		
Power			80	Enter a value between 0 and 100, usually 80%		
	o of sample oup 2/Grou		1			
Group 1						
	Group 1		Group 2	Enter means OR difference on next line		
Mean	Group 1	and	Group 2			
Mean Std. Dev.		and		next line		

1/

Start	Enter	Results	Examples	Help	
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Sample Size For Comparing Two Means

Input Data

Confidence Interval (2-side Power Ratio of sample size (Group		95% 80% l) 1		
Mean Standard deviation Variance	Group 1 10 3 9	C	Froup 12 4 16	2 Difference* -2
Sample size of Group 1 Sample size of Group 2 Total sample size		50 50 100		



SLIDE 13

Sample data

	Mean (SE					
	City A N=200	City B N=200	p-value*			
Systolic blood pressure	123 (20)	120 (25)				
Hypertension						
Yes	20 (10%)	12 (6%)				
No	180 (90%)	188 (94%)				
* T-test or Chi-square test was used.						



Assignments

- Calculate 95% confidence interval of a prevalence of hypertension in each city. "Proportion"
- 2. Select and perform an appropriate statistical test for each item (BP and HT). "Two by Two" or "t test"
- The sample data is from a pilot test. Calculate a sample size for the main survey. "Cohort/RCT" or "Mean Difference"



SLIDE 15