Reporting Proportions

A researcher develops a new drug to prevent the common cold in children over the age of two. In his study, 1000 children received placebo and 1000 received the drug. During the six month follow-up period, the researchers diagnosed colds in 650 of the children on placebo and in 500 who received the new drug.

Calculate the odds ratio. Write a sentence using it, using the context of this example.

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"The treatment decreases colds by 15%." Is this correct? Would you change the wording?"

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"The treatment decreases colds by 23%." Is this correct? Would you change the wording?

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Calculate the number needed to treat (NNT). Write a sentence using it.

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Relative risk is the most commonly reported form of risk reduction. That is because it usually makes an effect or result sound more impressive. If you are a researcher seeking funding based on the results of your work, or are trying to get media attention for your discovery, or if you are a drug company trying to convince patients or doctors to prescribe your medication, you are motivated to make the results sound as impressive as possible. For example, consider the following three scenarios, each with a different prevalence of the outcome in question, and calculate the odds ratio, the absolute risk reduction, the relative risk reduction, and the number needed to treat.

	Control Rate	Experimental Rate	OR	ARR	RRR	NNR
Scenario A	1%	0.5%				
Scenario B	10%	5%				
Scenario C	50%	25%				

Which number sounds the most impressive for each scenario? Which treatment would you rather be on?

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Continuing with the cold study... If they developed symptoms of a cold, they were also examined to look for the presence of an ear infection. Ear infection was diagnosed in 300 of the children with colds on active treatment and in 298 of the children with colds on placebo.

Discuss with your group how you would report these results. Keep in mind that this is from the same study as the first example.

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Name: _____

What did you learn today about reporting proportions?

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