

NTS ILO 1: Interpret data about the natural world.

1. The assignment prompt: a Final Exam question about infectious disease cases pre-and post-vaccine.

**TABLE 1-1 Cases of selected infectious disease in the United States before and after the introduction of effective vaccines**

	ANNUAL CASES/ YR	CASES IN 2016	CASES IN 2019	
Disease	Prevaccine	Postvaccine	Postvaccine	Increase from 2016 to 2019 (%)
Smallpox	48,164	0	0	–
Diphtheria	175,885	0	2	+
Measles	503,282	79^	1275	1614
Mumps	152,209	145*	3780	2607
Pertussis (“whooping cough”)	147,271	964*	18,617	1931
Paralytic polio	16,316	0	0	–
Rubella (German measles)	47,745	0*	6	+
Tetanus (“lockjaw”)	1,314 (deaths)	1* (case)	26 (cases)	2600

44) (10 pts) Evaluate the data on the table above and answer the questions A, B and C below.

A) Which 4 diseases show the greatest increase in cases from 2016 to 2019?

B) Name the vaccine that can prevent each of these 4 infections? (as discussed in class)

C) What do these data tell us about the trend in vaccine prevention in the U.S.? Why is this concerning?