

## Ebola outbreak: analyzing the data - worksheet

*Directions: Use the infographic and table to answer the following questions and to draw conclusions about the data.*

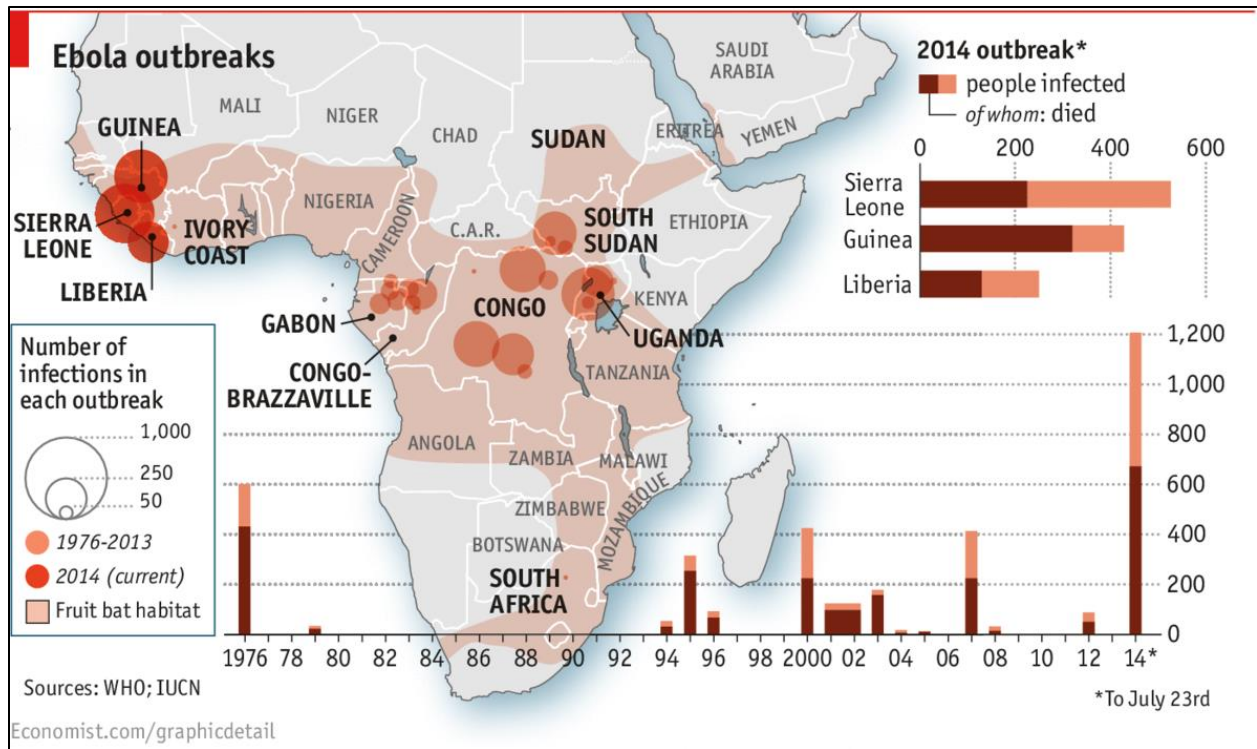
**Table: Number of cases and death by species among outbreaks of hemorrhagic fevers due to Ebola virus in Africa between 1976 and 2014 (Data source: The World Health Organization)**

Country	Year	Number of cases	Number of death	Case fatality rate (%)
Sudan	1976	284	151	
Democratic Republic of Congo	1976	318	280	
Democratic Republic of Congo	1977	1	1	
Sudan	1979	34	22	
Gabon	1994	52	31	
Democratic Republic of Congo	1995	315	254	
South Africa	1996	1	1	
Uganda	2000	425	224	
Congo	2001	59	44	
Gabon	2001	65	53	
Sudan	2004	17	7	
Congo	2005	12	10	
Uganda	2007	149	37	
Democratic Republic of Congo	2007	264	187	
Democratic Republic of Congo	2008	32	14	
Uganda	2011	1	1	
Democratic Republic of Congo	2012	57	29	
Uganda	2012	7	4	
Uganda	2012	24	17	
Liberia-Guinea-Sierra Leone (ongoing)	2014	453	245	

1. The last column, "Case fatality rate (%)," has been left empty. How would you calculate the rate of deaths per case (case fatality rate)?
2. Use your equation and complete the table.
3. Which outbreak(s) had the highest fatality rate? What limitations does the amount of data present when answering that question confidently?
4. What is the range of case fatality rate?
5. Calculate the averages of the case fatality rate?
  - mean:
  - median:
  - mode:

Which average do you think best describes the data? Explain your answer.

**Infographic: *The current Ebola outbreak is the worst on record*** (Source: Economist.com/graphic detail; data source: World Health Organization and International Union for Conservation of Nature)



- Give the bar chart located in the right lower section of the infographic the correct labels for its:
  - title:
  - x axis:
  - y axis:
- The infographic and the table both display nearly the same data. Besides the specific breakdown of the 2014 outbreak by country, what additional set of data is included in the infographic?
- Why do you think this additional set of data is important to understanding the origin of the outbreaks?

**Who does it better?**

*In the table below, decide if the table or infographic does a better job of presenting the data in a clear and organized way that allows you to effectively draw conclusions about the outbreaks and then explain your answer*

Question	Table	Infographic	How did they present the data better?
Which outbreak had/has the highest case fatality rate (%)?			
What patterns do you see in the geography of the outbreaks?			
Which outbreaks infected the most people?			

**Identify which part(s) of the Epidemiologic Triangle this information helps you to explore?  
Agent/Host/Environment?**