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*Bayes Theorem applied to predict conditional mortality rates by gender*

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It has been observed that men were more likely than women to die of Covid-19. How much more likely? The Bayes theorem for conditional probabilities answers:

In the United States, as of 4/28/2020 – 7 weeks into the pandemic:

US	Dead	Recovered	Total Closed Cases	% Cases	Prob (Death/ Gender)
<b>Male</b>	<b>35,221</b>	<b>62,892</b>	<b>98,113</b>	<b>50%</b>	<b>36%</b>
<b>Female</b>	<b>21,587</b>	<b>76,526</b>	<b>98,113</b>	<b>50%</b>	<b>22%</b>
<b>Total Closed Cases</b>					
	<b>56,808</b>	<b>139,418</b>	<b>196,226</b>		
<b>% Cases</b>	<b>29%</b>	<b>71%</b>		<b>100%</b>	

Of the males that have tested positive, one is likely to die and two will probably recover. Of infected females, about one in five can expect to die.

The US death probabilities are dire, but they will improve as the pandemic treatment and prophylaxis evolve.

All over the world, the situation was slightly better:

World	Dead	Recovered	Total Closed Cases (k)	% Cases	Prob(Death /Gender)
<b>Male</b>	<b>131.8</b>	<b>441.9</b>	<b>573.7</b>	<b>50%</b>	<b>23%</b>
<b>Female</b>	<b>80.8</b>	<b>492.9</b>	<b>573.7</b>	<b>50%</b>	<b>14%</b>
<b>Total Closed Cases (k)</b>					
	<b>212.6</b>	<b>934.8</b>	<b>1147.4</b>		
<b>% Cases</b>	<b>19%</b>	<b>81%</b>		<b>100%</b>	

Less than one in four infected males and only one in seven women are expected to die.

Caveats: I assumed both men and women get infected at the same rates.

The calculations can be redone for age groups and various health conditions.

Stay home and be safe!

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